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INTERDISCIPLINARY MANAGEMENT RESEARCH XIII
INTERDISZIPLINÄRE MANAGEMENTFORSCHUNG XIII

Dražen Barković   Bodo Runzheimer

THE JOSIP JURAJ STROSSMAYER UNIVERSITY OF OSIJEK
FACULTY OF ECONOMICS IN OSIJEK - CROATIA
HOCHSCHULE PFORZHEIM UNIVERSITY

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Vorwort

Es ist uns ein Vergnügen, das Konferenzband "Interdisciplinary Management Research XIII/ Interdisziplinäre Managementforschung XIII" vorstellen zu können. Ein Buch aus dieser Reihe ist zum ersten Mal 2005 erschienen, als Resultat der Zusammenarbeit zwischen der Wirtschaftsfakultät in Osijek, Kroatien und der Hochschule Pforzheim, Deutschland, und insbesondere durch das Magisterstudium des Management. Die Zusammenarbeit der zwei genannten Partnerinstitutionen ist unter anderem durch jährliche wissenschaftliche Symposien gekennzeichnet, auf welchen interessante Themen aus verschiedenen Bereichen der Wirtschaft und des Managements vorgestellt und folglich in einem Band veröffentlicht werden. Jedes Jahr ziehen die wissenschaftlichen Symposien Akadamiker anderer kroatischer, sowie ausländischer Universitäten, einschließlich Australien, Deutschland, Ungarn, Polen, Rumänien, Slovenien, Montenegro, Bosnien und Herzegovina, Serbien, Kosovo, Indien, Irland, Czechien, Israel, Italien, Sudafrica, Belgien, Schweiz, USA, Slowakei, Dänemark, Mazedonien, Mexico, Zypern und Großbritannien an, die ihren wissenschaftlichen und profesionellen Beitrag zur Diskussion über zeitgenössische Fragen aus dem Bereich des Managements leisten. Die Aktualität der behandelten Fragen, der internationale Charakter im Hinblick auf Themen und Autoren, die höchsten Standards der Forschungsmethodologie sowie die Kontinuität dieser Konferenzreihe wurden auch von der internationalen akademischen Gemeinde erkannt, weswegen sie auch in internationalen Datenbanken, wie Web of Science, Thomson ISI, RePEc, EconPapers und Socionet, zu finden ist.

Die neueste Ausgabe von "Interdisciplinary Management Research XIII/ Interdisziplinäre Managementforschung XIII" umfasst 93 Arbeiten geschrieben von 183 Autoren. Der Erfolg früherer Ausgaben ging über die Grenzen der Länder hinaus, deren Autoren schon traditionell Teil der Reihe waren. Jedes der Autoren leistete einen bedeutenden Beitrag zu diesem fachübergreifenden Managementforum.

Als Herausgeber dieses Bandes hoffen wir, dass diese Reihe auch weiterhin Akademiker und Profesionelle dazu bewegen wird, in Forschung und Beruf die höchsten Standards zu beanspruchen, und dass es weiterhin als Ansporn zu weiteren Formen von Zusammenarbeit unter Teilnehmern dieses Projektes dienen wird.

Dražen Barković, Professor Emeritus

Prof. Dr. Bodo Runzheimer

Foreword

It is our pleasure to introduce the book "Interdisciplinary Management Research XIII/ Interdisziplinäre Managementforschung XIII" to you. The first volume appeared in 2005 as a result of co-operation between the Faculty of Economics in Osijek (Croatia) and Pforzheim University (Germany), particularly through the postgraduate programme "Management". The co-operation between these partnering institutions has been nurtured, amongst else, through annual scientific colloquiums at which interesting topics in various fields of economics and management have been presented and later published in the proceedings. Over the years, the scientific colloquiums have drawn the attention of academic scholars from other Croatian universities, as well as from other countries including Australia, Germany, Hungary, Poland, Romania, Slovenia, Montenegro, Bosnia and Herzegovina, Serbia, Kosovo, India, Ireland, Czech Republic, Israel, Italy, South Africa, Belgium, Switzerland, USA, Slovakia, Denmark, Macedonia, Mexico, Cyprus and the United Kingdom each making a contribution in academic and professional discussion about contemporary management issues. Actuality and importance of the issues discussed, the international character of the book in terms of authors and topics, the highest standards of research methodology and continuity in publishing have been recognized by the international academic community, resulting in the book now being indexed in world-known data bases such as Web of Science, Thomson ISI, RePEc, EconPapers, and Socionet.

The latest edition, i.e. ""Interdisciplinary Management Research XIII/ Interdisziplinäre Managementforschung XIII" encompasses 83 papers written by 183 authors. The success of former editions has echoed beyond the traditionally participative countries and authors.

As editors we hope that this book will continue to encourage academic scholars and professionals to pursue excellence in their work and research, and to provide an incentive for developing various forms of co-operation among all involved in this project.

Dražen Barković, Professor Emeritus

Prof. Dr. Bodo Runzheimer

Management

FACTORS WHICH AFFECT MANAGERS' DECISIONS ON DELEGATION IN COMPANIES

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Abstract

Delegation is one of the numerous managerial functions. All manager functions are equally important and they logically follow one another. Managers are unable to perform all the duties and tasks in the companies by themselves. A lot of working tasks need to be delegated to their employees. The purpose of this paper is, through research conducted on a selected sample of respondents (managers of enterprises), to obtain data which will contribute to making conclusions about the factors which help managers to decide which employees should be delegated or entrusted with the execution of working tasks in order to ensure efficient and effective business of the company they lead. The conducted research will provide the data which will give the information on whether the business managers decide to entrust the working tasks with their employees based on their previous working experience, the level of knowledge they possess, their professional qualification, the trust the managers have in their employees, the personal effort and engagement of every employee or the amount of work that needs to be done.

In order to accomplish the success of the company and the speed of providing services to customers, as well as customer satisfaction, managers need to make the division of work in the best possible manner, that is, the manner which will *contribute to the success of the company and to the satisfaction of the buyer, as well as the satisfaction of the employees.*

Keywords: *delegation, companies, knowledge, employees, managers, success of the company*

JEL Classification: H12, J5, M15

1. HUMAN RESOURCES IN COMPANIES AND MANAGEMENT SYSTEM

Humans are the only economic and business resource which can self-develop and whose developing expenses (in time, energy and money) can be completely transferred to an individual by an organization, or they can be shared between them; by the rule the organizations never pay for the expenses by themselves. Besides, human potentials, their knowledge and skills are the only resource which does not decrease with the usage, but it increases instead. Human potentials are the carriers of all business activities in a company; they are responsible for growth and development of a company, improvement of business processes, and satisfaction of final customers. Management of human resources is one of the primary, but not infrastructural managerial and business function (such as, for example, marketing, accounting, procurement, etc.) Along with planning, organizing, management and control, it represents the essence of manager business, and it also defines overall and individual managerial success. It is separated as an individual business function due to its crucial role in the overall success, but it holds completely different position and role when compared with traditional business function.

Management systems include organizational structure, control management, global banking relationships and, of course, human resources management systems for recruitment, selection, training, evaluation and compensation of its employees abroad. (Dessler, G; 2015, 658). Managers are responsible for organizing the function of human resources, and also for its management. They take care of the procurement of human resources, employees' satisfaction and efficiency of each employee.

Those at higher levels were better educated, and the first impression about a company was actually gained when meeting the doorman or attendant – who usually have the lowest salaries, lowest level of education and usually never attend seminars. Nowadays, the pyramid has reversed. The most important one is at the top of the pyramid: the client, the customer. (Marušić, S; 2006, 15). Managers and employees give most of their attention to the buyers of their product, without them companies would not exist, so managers and employees make great efforts to attract as many satisfied customers as they can with their business activities.

2. THE CONCEPT OF DELEGATION AND THE IMPACT OF DELEGATION ON BUSINESS

Managers of all levels delegate a part of their tasks to their employees. To what extent will they delegate the tasks depends entirely on their assessment, and chapter 3 will, based on a research, discover which factors affect managers' decisions on delegation. The determination of managerial tasks and functions which are performed in organizations encompasses the human resource management function (often referred to as "staffing"). Provision of high-quality staff, their motivation, education and development so they would achieve high results and contribute to accomplishing organizational goals is becoming the main managerial task and function. Without it, neither the best plans nor the organization have effect. (Bahtijarević Siber, F, 1999, 9). Surely, delegation affects the employees' motivation. By taking more responsibilities, employees feel more involved in the business processes. Only satisfied employees will contribute to the business success of a company. Numerous factors affect the satisfaction of employees, such as salaries, benefits, reward system and so on, but this paper focuses on delegation through which employees take responsibility for business processes, as well as the factors crucial to managers in making decisions on the delegation. Managers cannot perform all the tasks by themselves; part of the activities must be delegated to their employees. To what extent will they delegate the tasks depends entirely on their assessment. When business is delegated by leader or manager to their employees, a larger amount of business will be accomplished in a shorter period of time and business processes will be accelerated. The needs of the end customers will be met more quickly, and it is assumed that, if all the employees do the work that they have been given, there will be less production stagnation, but also overall business stagnation.

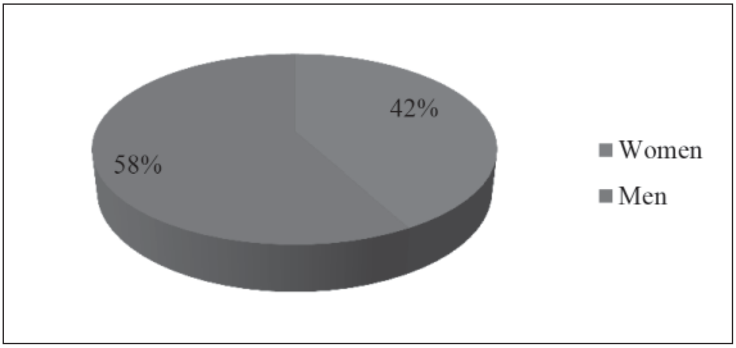
The directors are becoming the executives, the executives are becoming managers and managers are becoming leaders. Managers, for example, still have the tendency to make decisions based on the directives, they emphasize rationally, maximize their sources, they plan. Leaders already have the vision of the future, they emphasize the instinct and intuition, they spread their influence even beyond currently available sources, they function according to the current needs. (Marušić, S; 2006, 15). Delegating tasks by managers to their employees contributes to greater efficiency of companies, greater division of business, quicker customers' needs satisfaction, and it also increases the employees' motivation in their workplace. By taking over the working tasks, the employees feel a greater degree of motivation in their workplace, more responsibility for business processes and for the success of the company.

3. RESEARCH ON FACTORS WHICH AFFECT MANAGERS' DECISIONS ON DELEGATION OF WORKING TASKS TO THEIR EMPLOYEES

Research is conducted on a sample of 50 leader and managers via an online survey. The request to fill out the survey was sent to random email addresses and 50 participants responded. The graphical representations of each question and the results of the research are given below.

3.1. The demographic characteristics of the participants

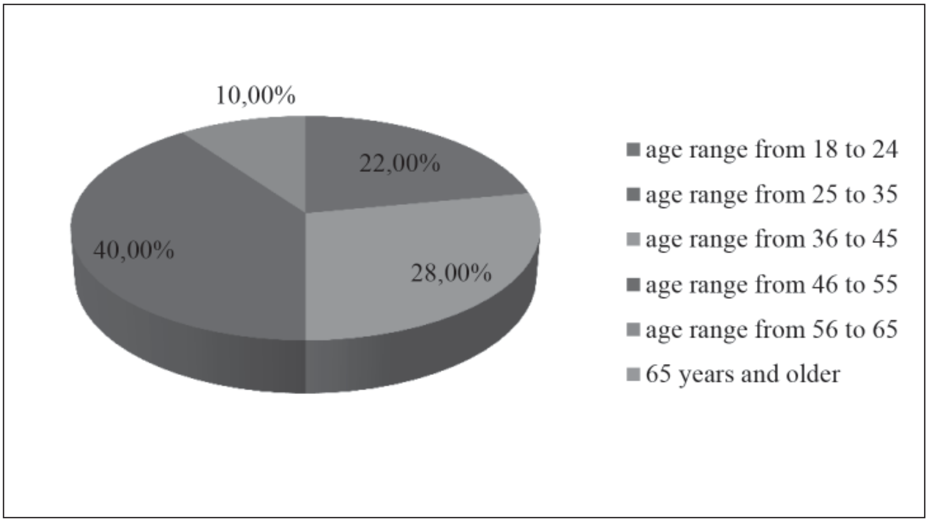
Diagram 1:



Source: made by authors based on the research results

The share of female leaders and managers in this research is a smaller number, 42%, while the share of male leaders and managers is 58%.

Diagram 2:



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The largest number of the participants is in the 46-55 age range (40,00%). They are followed by the participants in the 36-45 age range with 28,00%. 22,00% of participants is in the 25-35 age range. There are no participants in the 18-24 age range or older than 65 years.

3.2. Analysis of the results of the research on factors which affect the managers' decisions on delegation in companies

Via an online survey, which contained the total of 14 questions, managers have been asked about the implementation of delegation in their working companies, about the factors which affect the managers' decisions on delegation, about the possible negative experiences during the delegation and numerous other questions which will be demonstrated in the diagrams that follow. The conclusion will be given and the set hypotheses will be confirmed or rejected based on the conducted research.

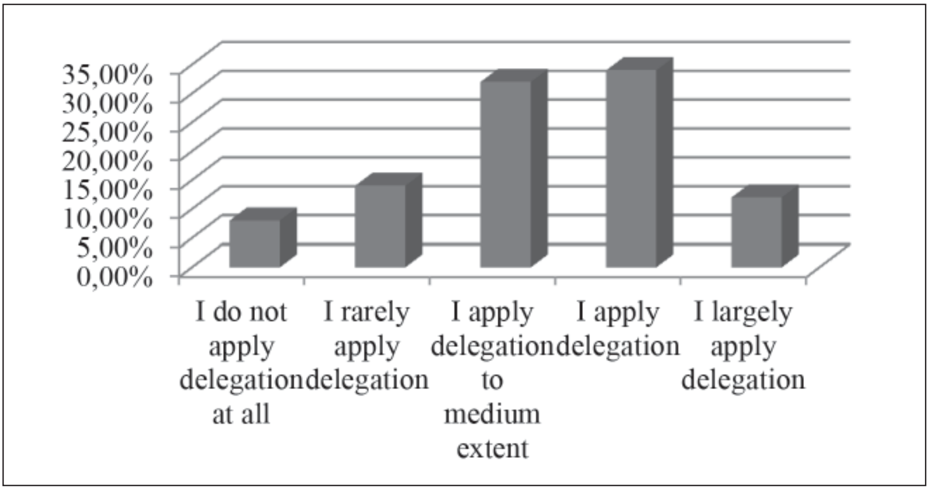
In short: management includes the responsibility for performances; the responsibility for achieving organizational goals by employing the resources which exceed the limits of personal resources. Organizations exist to perform tasks which cannot be implemented without coordinated effort; and management has been developed in order to make an individual or a group of people responsible for performances and success of coordinated effort in the organization. (Pfeifer, S; 2006, 2). The carriers and starters of all business activities in a company are managers who direct the business, engage all available resources and delegate businesses to their employees in order to achieve the best possible business result of the company.

This paper sets the following hypotheses:

H1: managers and leaders largely apply delegation in companies

H2: the most important criterion by which managers and leaders in companies decide on delegation of tasks to their employees is the level of knowledge of the employees.

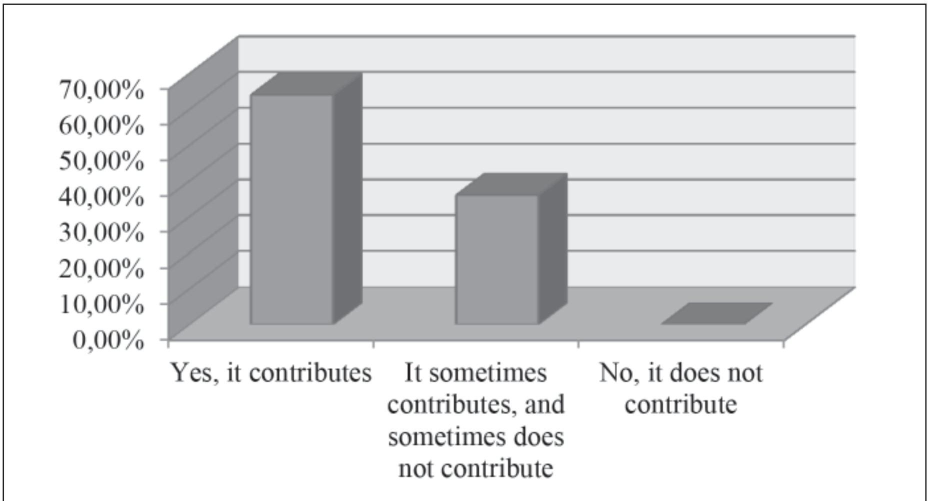
Diagram 3: Implementation of delegation in companies



Source: made by authors based on the research results

The participants were asked to what extent do they implement delegation of the work tasks, score 1-5 was offered to them, where 1 stands for the situation in which manager does not apply delegation, 2 stands for small amount of delegation applied, 3 means that managers apply delegation to medium extent, 4 means that managers apply delegation and 5 stands for largely applied delegation. Most participants circled number 4 with the percentage of 34,00%, number 3 follows with 32,00%, which means that 34,00% of managers apply delegation, while 32,00% apply delegation to medium extent. Number 5, which stands for largely applied delegation, was circled by 12,00% of the participants. 14,00% of the participants circled number 2 (small amount of delegation applied), and 8,00% of the participants does not apply delegation at all. The conclusion is that delegation in companies can be implemented to a greater extent. The set hypothesis H1: "managers and leaders largely apply delegation in companies" is rejected because a small percentage, 12,00% of managers and leaders largely applies delegation of work tasks to their employees. This percentage should have been much higher in order to accept the hypothesis. The highest percentage of managers and leaders apply or apply to medium extent the delegation in companies.

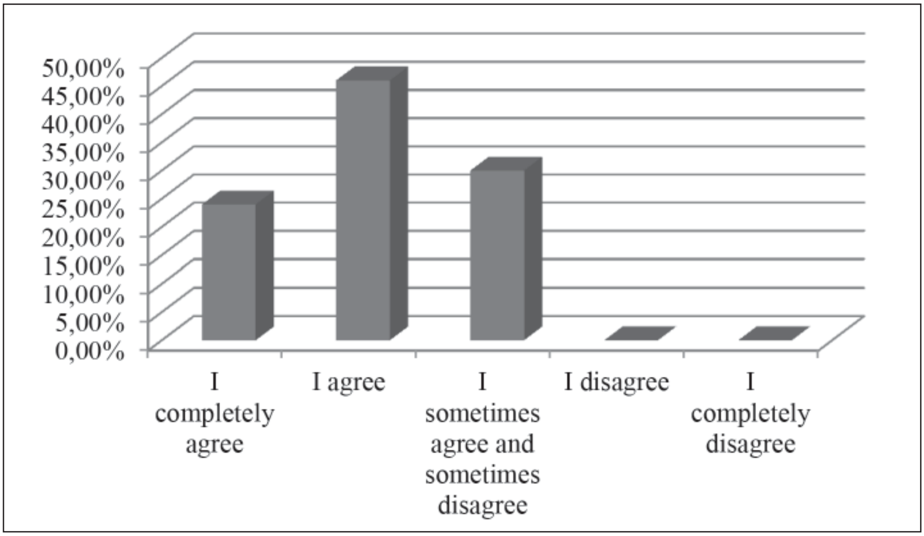
Diagram 4: The impact of delegation on achievement of better business results in a company



Source: made by authors based on the research results

Whether managers and leaders' delegation affects the business results is examined by this question in the online survey. A large number of leaders and managers think that delegation contributes to better business results (64,00%), while 36,00% of the participants states that it sometimes contributes and sometimes does not. None of the participants stated that delegation does not contribute to achieving better business results. According to managers' perception, the delegation of working tasks largely contributes to achieving better business results in a company.

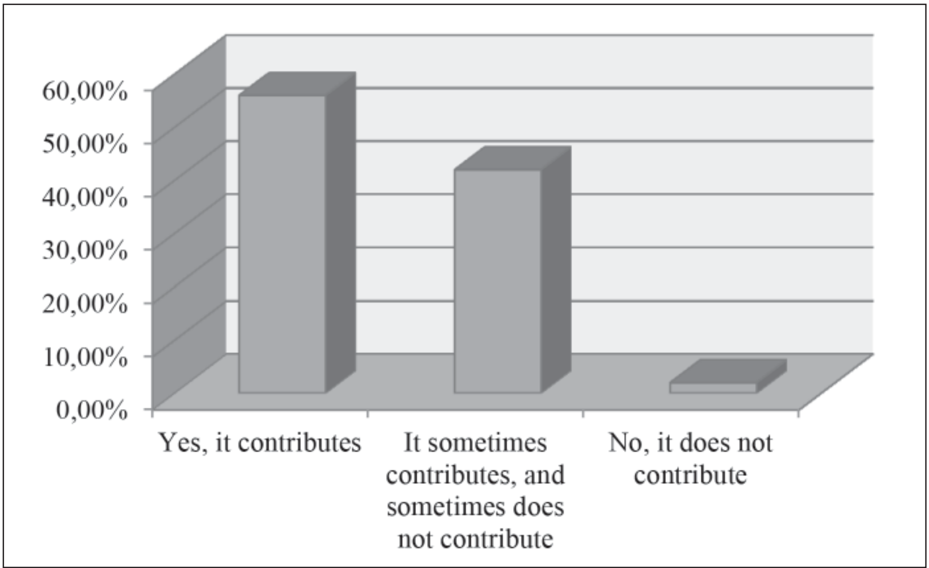
Diagram 5: The impact of delegation to the efficiency of the organization of a company and to achieving business aims



Source: made by authors based on the research results

Leaders and managers of companies were asked to express their opinion on the subject of the impact of delegation on the efficiency of a company's organization and on achieving business aims, and the vast majority of the participants agrees with the statement that delegation impacts company's efficiency, that is, 46% of them. 24,00% of the participants completely agrees with the statement while 34,00% of the participant occasionally agree and occasionally disagrees with this statement.

Diagram 6: The impact of delegation on employees' motivation

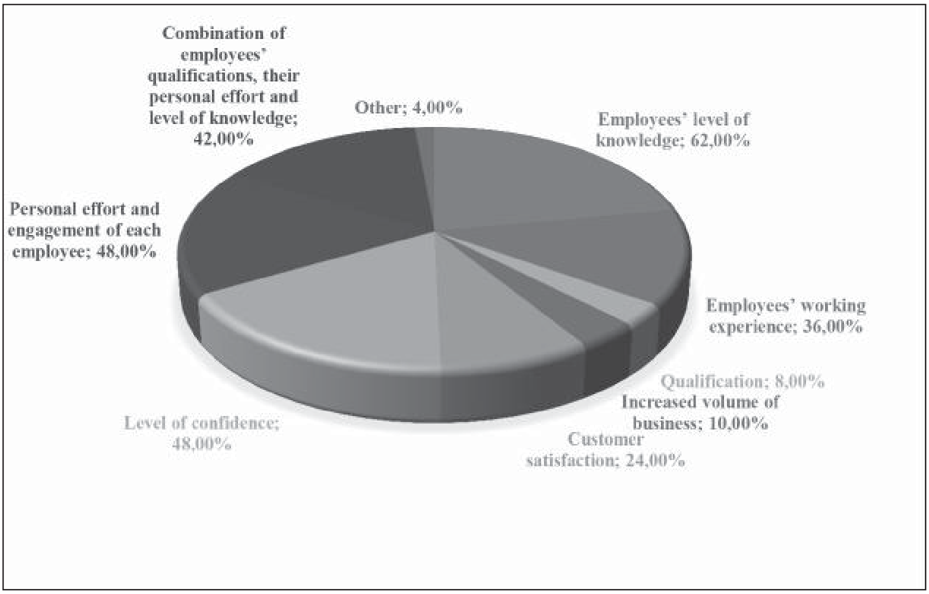


Source: made by authors based on the research results

Leaders and managers are asked to give their opinion on the manner in which delegation influences the level of employees' motivation and the vast majority of participants, that is 56,00 % of leaders and managers think that delegation contributes to greater employees' motivation. 42,00% of the participants believe that delegation sometimes contributes, and sometimes does not contribute to employees' motivation. A very small number of the participants, (2,00%) think that delegation does not contribute to greater employees' motivation.

Maximum use of all human potentials (knowledge, creativity, initiative and etc.) requires, above all, social changes in the whole organization: changes in value, climate and culture, management philosophy and style, overall relations, decentralization, employees' participation and authorization, development of mutual confidence and respect, and etc. It is sufficient, sometimes, to change the style and attitude of management towards associates in order to get a totally different working and economic effect with the same staff and knowledge. Behavior and success of people do not just depend on their knowledge and skills, but also on their motivation which often plays a decisive role.

Diagram 7: The criteria which are the basis for managers' decisions on delegation of tasks

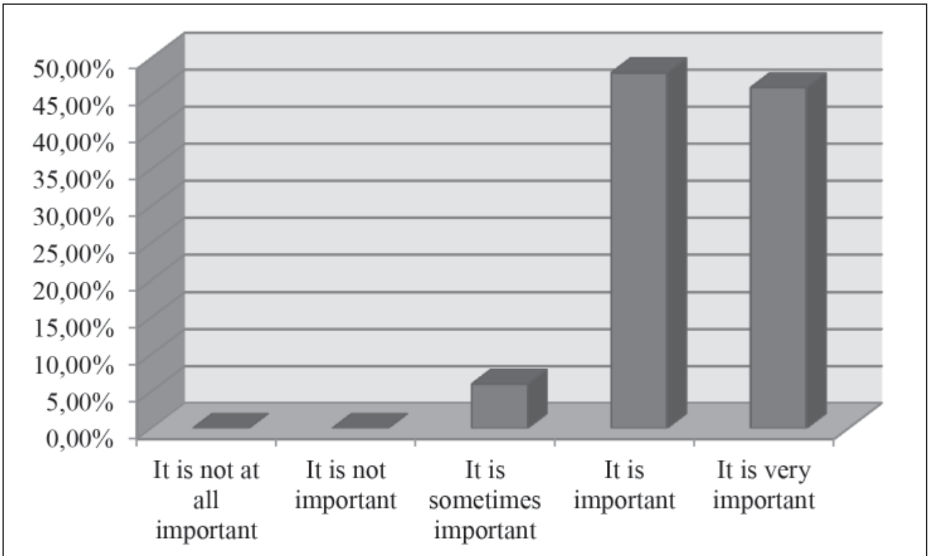


Source: made by authors based on the research results

One of the most important questions in the online survey is: "Which is, in your opinion, the most important criterion by which you decide whether you will delegate working tasks to your employees?" Most of the participants, 62,00% of leaders and managers decide on the basis of the level of knowledge of their employees. This confirms the set hypothesis H1 that the most important criterion by which they decide whether they will delegate working tasks to their employees is the level of knowledge of the employees. Further criterion is the level of confidence which managers have for their employees (48,00%) and personal effort and commitment of every employee (48.00%). Next is the working experience of employees (36,00% of the participants), customer satisfaction (24,00% of the participants), increased volume of business (10,00% of the participants) and qualification of employees (8,00% of the participants). The combination of employees' qualifications, their personal effort and level of knowledge was chosen by 42,00% of the participants. Managers make decisions on delegation primarily based on employees' level of knowledge which is followed by the level of confidence, personal effort and engagement of each individual employee, in the same percentage. Further criterion by which the managers and leaders decide on delegation is employees' working experience. Managers decide on the delegation by the criterion of increased volume of business and qualifications of employees.

Knowledge becomes corporate assets without which it is impossible to achieve success. Only the companies that are based on knowledge have a competitive advantage over others, and the knowledge ensures their continued progress. Knowledge is the only resource that is not diminished by dividing. Sharing, transferring and spreading knowledge in an organization increases the overall knowledge of the organization. (Bahtijarević-Šiber, F., Sikavica, P., Pološki-Vokić, N.; 2008, 596). Delegation of tasks in a company increases the overall knowledge of all employees. The knowledge becomes the most important resource that companies have at their disposal, and through which they can gain competitive advantage.

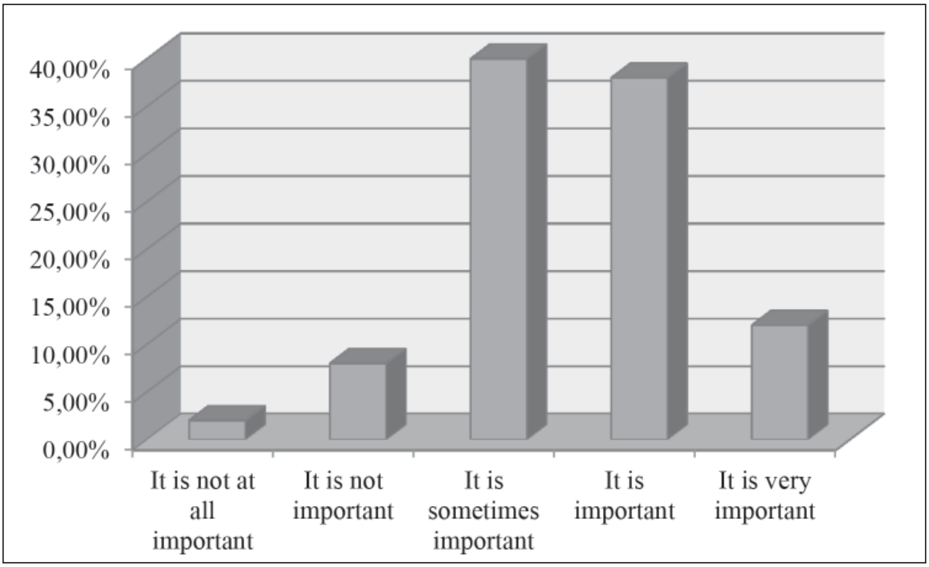
Diagram 8: The importance of the level of knowledge of employees in managers' decisions on delegation



Source: made by authors based on the research results

The importance of the level of knowledge of employees in managers' deciding on delegation is examined by this question, in which the majority of employees (48,00%) answered that the level of employees' knowledge is important, but also a high percentage (46,00%) of the participants believes that the level of employees' knowledge is very important. Only 6,00% of the participants answered that the level of employees' knowledge is only occasionally important. None of the participants answered that the level of knowledge is not or not at all important (0,00%). Managers largely decide on delegation of tasks to their employees on the basis of their employees' level of knowledge.

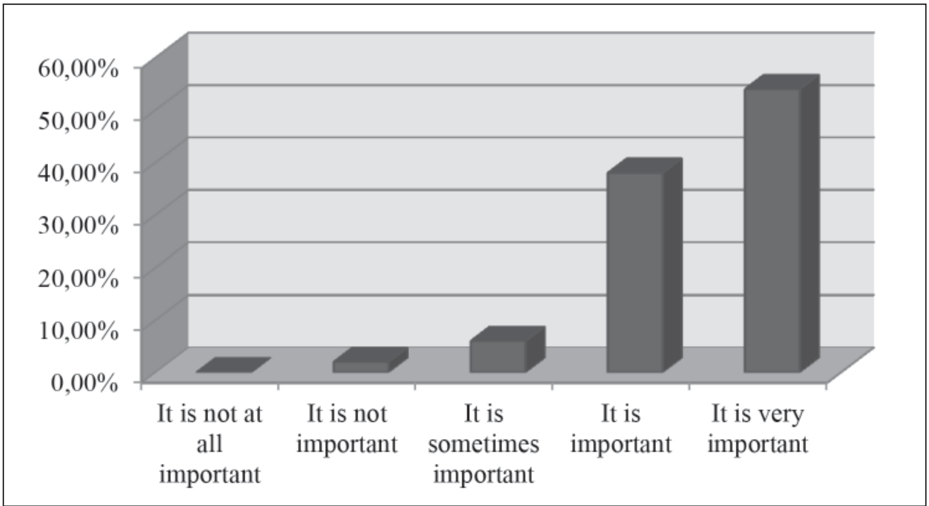
Diagram 9: The importance of employees' work experience in managers' decisions on delegation



Source: made by authors based on the research results

Work experience in making decisions on delegation is very important to a smaller number of leaders and managers (12,00%). 38,00% of the participants think that working experience is important to managers when deciding on delegation, while 40,00% of the participants think that working experience is occasionally important. A smaller number of participants believe that working experience is not important when deciding on delegation (8,00%), while the smallest number of participants believe that the experience is not at all important (2,00%). Working experience is not as important factor which influences managers' decisions on delegation.

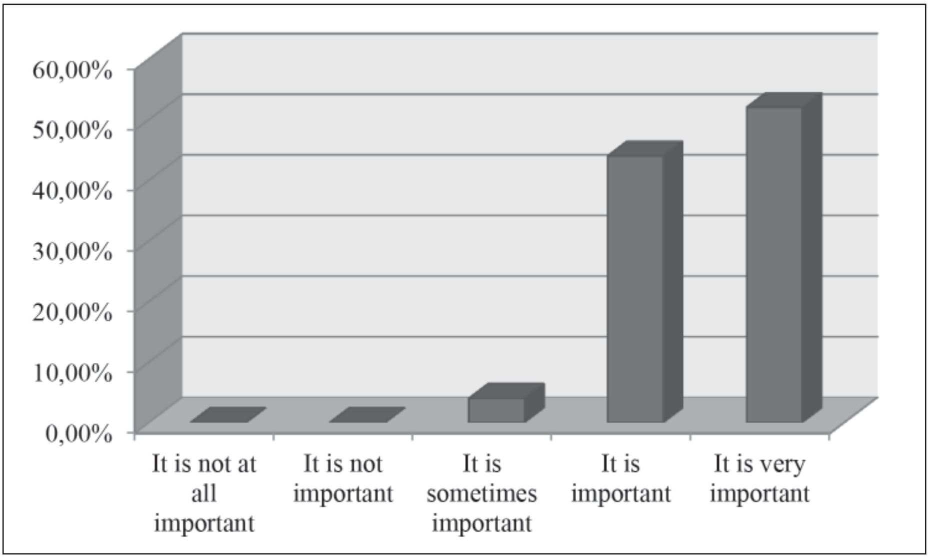
Diagram 10: The importance of the level of confidence in employees on managers' decisions on delegation



Source: made by authors based on the research results

Confidence is a very important factor based on which managers and leaders decide on delegation, and 54,00% of the participants who think that the confidence that managers have for their employees is very important when it comes to delegation agree with that. 38,00% of the participants think that confidence is important, while only 6,00% of the participants think that confidence is occasionally important. Very few participants, 2,00%, think that confidence is not important when deciding on delegation, and none of the participants (0,00%) have chosen the answer which states that the level of confidence is not at all important when managers decide on delegation.

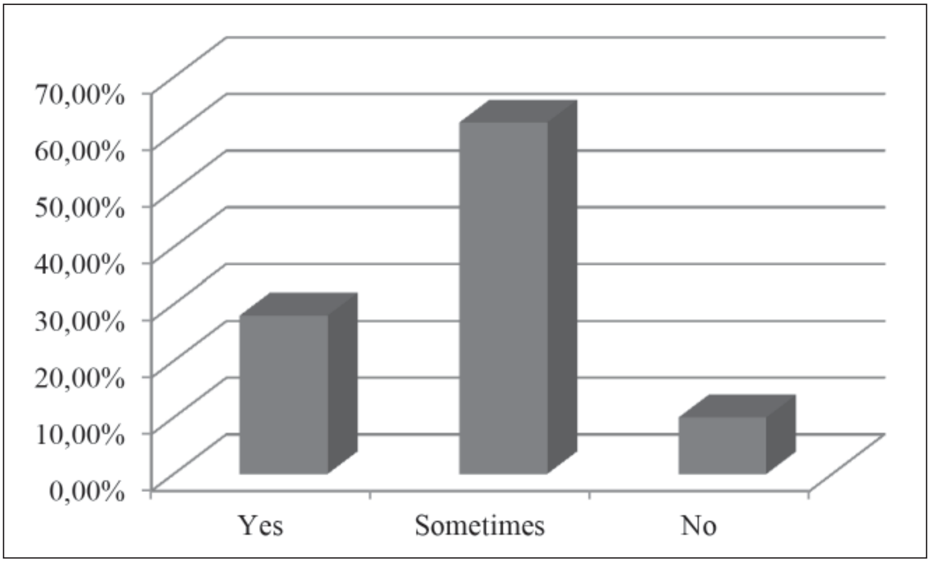
Diagram 11: The importance of employees' personal effort and engagement on managers' decisions on delegation



Source: made by authors based on the research results

Employees' personal effort and engagement in making decisions on delegation is very important to 52,00% of leaders and managers, while 44,00% think it is important. A small number of managers and leaders think that employees' personal effort and engagement are occasionally important (4,00%), and none of the participants (0,00%) think that it is not or not at all important. If managers notice that the employee is trying hard in his workplace and that he is engaged and dedicated to his work tasks, a large percentage will certainly delegate work tasks to those employees.

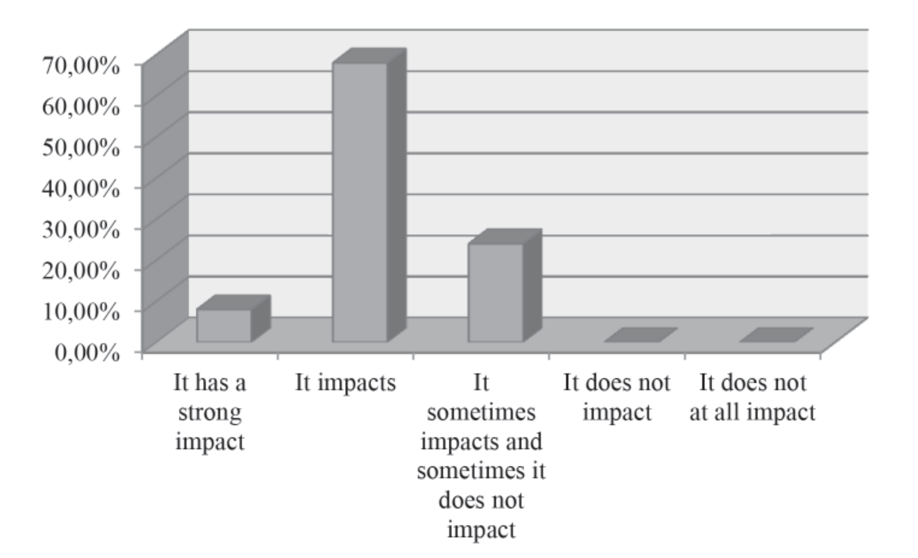
Diagram 12: Negative experiences when delegating work tasks



Source: made by authors based on the research results

Managers and leaders were asked if they had any negative experiences when delegating work tasks. A vast majority (62,00%) of managers said that they sometimes had negative experiences when delegation work tasks. 28,00% of managers had negative experiences when delegating work tasks, and a very small percentage of managers (10,00%) did not have negative experiences with delegation.

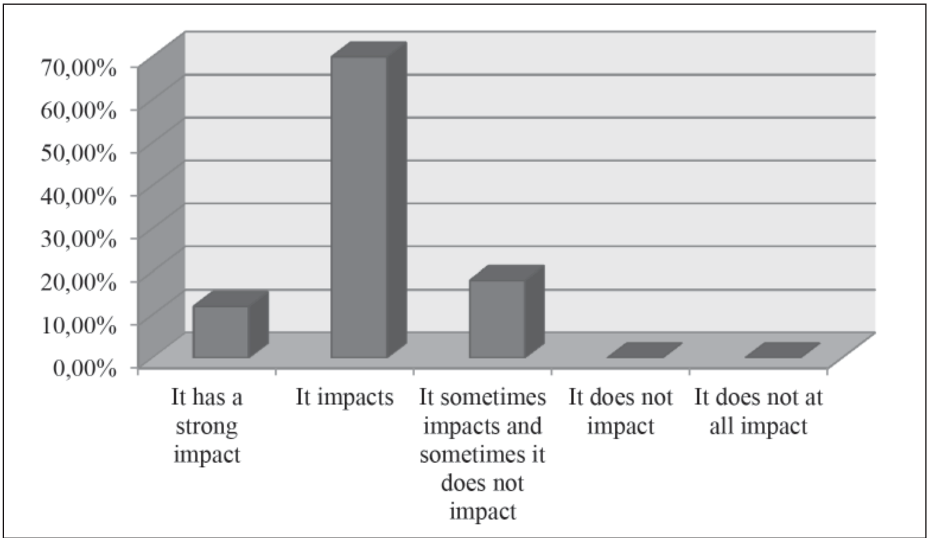
Diagram 13: Impact of delegation on employees' motivation



Source: made by authors based on the research results

What do managers and leaders think about the impact of delegation of working tasks on employees' motivation is shown in the diagram 12. A small percentage of participants (8,00%) think that delegation of work tasks strongly impacts on employees, while the largest percentage (68,00%) thinks that it has got an impact on the employees. 24,00% of the participants think that it occasionally impacts, and occasionally does not impact the employees' motivation. None of the participants think that delegation of tasks does not or does not at all impact employees' motivation.

Diagram 14: The impact of delegation on improvement of company's results and the division of work



Source: made by authors based on the research results

The participants were asked to express their opinion on the impact of delegation on the improvement of the company's results and the division of work. 12,00% of the participants think that delegation has got a very strong impact on the improvement of the company's results and the division of work. Most of the participants, 70,00% think that delegation impacts the improvement of the company's results and the division of work. A smaller number of the participants, 18,00%, consider that delegation sometimes impacts and sometimes does not impact the improvement of the company's results and the division of work, and none of the participants are of the view that delegation has not got, or has absolutely none influence on the improvement of the company's results and the division of work.

4. CONCLUSION

Based on the conducted research, it can be concluded that managers and leaders in companies apply in medium amount (32,00% of managers assigned rating number 3 for this statement in the conducted online research) and apply delegation of working tasks on their employees (34,00% of managers assigned rating number 4 for this statement in the conducted online research). A small percentage of managers and leaders, 12,00%, highly apply delegation of working tasks to their employees. A large number of managers and leaders (64,00%) think that delegation of working tasks contributes to the achievement of better business results in a company, while 46,00% of managers agrees with the statement that delegation affects the efficiency of the organization of a company and achievement of business aims. More than half of participants, that is, managers and leaders (56,00%) think that delegation contributes to greater employees' motivation. Level of employees' knowledge is mostly factor based on which managers and leaders decide on delegation of tasks to their employees (62.00% of participants), and it is followed by level of confidence and personal effort and commitment of every employee. Employees' qualification is the least represented criterion based on which managers make decisions on delegation (8,00%). Work experience of the employees is not very important to a smaller percentage of managers, while 38,00% of managers thinks that work experience is important when deciding on delegation of work tasks to their employees. The level of confidence that managers have for their employees is important to a large percentage of managers, thus, 54,00% of participants think it is very important while 38,00% thinks it is important. Personal effort and engagement of each employee is also important to a high percentage of managers in making decisions on delegation, therefore, 52,00% of participants think it is very important, while 44,00% of managers think it is important. A large number of managers, 68,00%, think that delegation has an impact on employees' motivation, while 70% of managers and leaders consider that delegation has an impact on the improvement of the company's results and the division of work.

One of the most pragmatic reasons for turning to human resources and their better management are working costs, which are becoming more and more significant in the overall cost structure of modern companies. The only way to reduce them is full development and their better use. Therefore, good management is trying to extract new and higher profit from intelligence, education, interests, and even emotions of employees and thus achieve a higher return on investment (Bahtijarević Šiber, F; 1999, 69). Managers are the main starters of all organizational activities in a company who take care of procurement, the measurements of effectiveness and motivation of human resources in companies. Employees' motivation increases because they feel involved in business processes via delegation of working tasks by managers, and managers make decisions on delegation of working tasks based on the employees' level of knowledge.

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COST ANALYSIS AND PROJECT DURATION SHORTENING IN NETWORK PLANNING TECHNIQUE WITH PERT / COST METHOD

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Abstract

The process of planning and management is very complex in organizational systems in which also belongs an overhaul of complex technical systems (overhaul in the processing and chemical industry, repair of vehicles, machinery and equipment, etc.). There are numerous examples of projects that have been called into question by reason of exceeding the set deadline of completion and thus the project price increase made this investment irrational even before the beginning of its implementation. Classical methods of planning and management are inadequate to such requirements of development so the technique of network planning has become an indispensable technique for planning and management of a very complex projects.

The nature of such projects is not often compatible with the assumption of the estimated duration of activities and thus the total duration of the project as a deterministic size, so in such cases, the duration of the activity should be observed as random variables, to which should be adapted and the procedure for calculating time parameters.

By using data from the existing technical documentation, available literature and practical experience, in this paper was made the analysis of duration time in relation to costs and cost analysis in relation to the duration of the project by using PERT / COST method.

Keywords: *planning, management, project duration, costs*

JEL Classification: C4, C41, C54

1. INTRODUCTION

Modern approaches to the organization of overhaul of technical systems sets the task for companies rationalization of organization maintenance functions in order to shorten the cycle time of preparation and consumption of time and energy per unit of time, but also in the total cost. These approaches improve the quality of specific work increase the utilization of resources through a system of planning and monitoring of overhaul.

Today, the management of companies is required to adopt the more reliable decisions in shortest possible period. The importance of making timely and valid decisions can not arise from unreliable and incomplete data, as well as from inadequate management model. Today's decisions and the possibility of meeting the deadlines generally are made by: duration assessment, customer demands and competitive offerings, without taking into account the actual situation and the possibilities of its own resources and capacities.

There are numerous examples of large investment projects, which are called in question by reason of exceeding the set deadline of construction and thus the price increase of the project of this investment seemed irrational and even before the beginning of implementation. Classical methods of planning and management are inadequate to such requirements of development and the technique of network planning has become an indispensable technique of planning and management a very complex project.

Technique of network planning does not break the relationship with classical methods of planning, but seeks to make it fraught, more resilient so that it can provide a more complex picture of the project and thus enable more efficient management of the process.

One of the methods of network planning techniques (TPM) was developed in 1957 under the name Critical Path Method – CPM according to which are estimated times of duration of the deterministic size activity. Maintenance and general overhaul in the chemical (processing) industry planning system was first developed with CPM method.

However, there are many projects (scientific investigative, developmental,...), the nature of which was not consistent with the assumption of the estimated duration time of activities as deterministic size. In such cases, the duration of the activities should be viewed as random variables, which should be adapted the procedure itself for calculating time parameters..

The procedure is known as PERT - Program Evaluation and Review Techniqe (method of evaluation and revision of the program) and was developed in 1958, and makes maximum use of the calculus of probability and mathematical statistics in determining duration time of certain of activities and other network parameters.

This paper presents analysis of the time and cost with activity duration as random variables with PERT-COST method on the example of overhaul of a complex technical system with the use of the information program POM-QM for windows.

Analysis of the time and cost is performed by the following steps:

- The collection of basic data on activities,
- Assessment of the activity duration and calculation of variances of the expected duration time,
- analysis of time and determination of the critical path,
- Determination of time reserve and probability of occasion occurrence
- Determination the optimum direct costs.

2. COLLECTION OF BASIC ACTIVITY DATA

During the organization of the production process of overhaul, special significance is attached to the time factor. Therefore, the basic task of the organization during the of overhaul is to choose such a variant of an organization that allows entrepreneurship (Jukić, 2000).

For each type of STS is determined the time duration and extent of overhaul, which is usually expressed in hours.

Technological process of overhaul is also elaborated for each asset. Elaboration of the technological process of overhaul STS is implemented as follows (Jukić, 2000):

- making the general scheme of the technological process with separating into its constituent elements (phases, operations, procedures),
- determination of necessary tools, equipment and instruments,
- determination of the machining parameters (eg. for machines, welding, metallization, etc..)
- determining the qualification structure of employees (for each operation),
- determination of normatives for each phase, operation and procedure,
- determining the order of quality control of work,
- making the plan variants of overhaul and selecting the most favorable versions of the plan.

3. ASSESSMENT OF DURATION ACTIVITIES AND CALCULATION OF VARIANCES OF THE EXPECTED DURATION TIME

As it was concluded in the introductory part that there are many projects whose nature was not consistent with the assumption of the estimated duration time of activities as deterministic size, and such projects includes the overhaul, especially when its done for the first time, can be started from the fact that for each activity and in stochastic terms, can be estimated ultimate limits (minimum and maximum duration) and the most probably duration of the activities(Stojiljković, M., Vukadinović, S., 1984). In Table 3.1. are indicated the estimated duration time of the main activities for the development of time schedule of overhaul of a complex technical system.

Table 3.1. Estimated duration time of the main activities for the development of time schedule of overhaul(POM-QM for windows)

		Start node	End node	Optimistic time	Most Likely time	Pessimistic time	Activity time	Standard Deviation	Variance
		i	j	a_{ij}	m_{ij}	b_{ij}	t_e	σ	σ^2
A	Task 1	1	2	10	12	16	12,33	1	1
B	Task 2	1	3	20	24	30	24,33	1,67	2,78
C	Task 3	2	3	0	0	0	0	0	0
D	Task 4	2	5	16	16	20	16,67	,67	,44
E	Task 5	2	7	14	14	20	15	1	1
F	Task 6	3	4	18	20	22	20	,67	,44
G	Task 7	3	6	25	30	40	30,83	2,5	6,25
H	Task 8	4	8	0	0	0	0	0	0
J	Task 9	4	10	13	16	22	16,5	1,5	2,25
I	Task 10	5	12	4	4	6	4,33	,33	,11
K	Task 11	6	7	0	0	0	0	0	0
L	Task 12	6	8	0	0	0	0	0	0
M	Task 13	6	9	8	8	12	8,67	,67	,44
N	Task 14	7	12	8	8	21	10,17	2,17	4,69
O	Task 15	8	9	13	16	20	16,17	1,17	1,36
P	Task 16	9	10	0	0	0	0	0	0
Q	Task 17	9	11	8	10	14	10,33	1	1
R	Task 18	10	11	14	18	25	18,5	1,83	3,36
T	Task 19	11	12	20	22	28	22,67	1,33	1,78
	Total of critical Activities								15,53
	Square root of total							3,94	

Where markings mean (Barković, 2001; Barković, 2011):

a_{ij} - optimistic time

m_{ij} – most probably time

b_{ij} – pesimistic time

t_e – expected time of duration

σ_{te}^2 – variance

$$t_e = \frac{a_{ij} + 4m_{ij} + b_{ij}}{6}$$

$$\sigma_{te}^2 = \left(\frac{b-a}{6}\right)^2$$

When speaking of optimistic duration of some activity it goes with the assumption that all conditions for activity enforcement are fulfilled.

The pessimistic duration is estimated under the assumption of some disturbance during performance of activities (waiting on parts, hidden defects, weather conditions, etc.).

For some activities the expected time and optimistic time are equal, ie, some activities can not be carried out for a shorter time than prescribed (test pressure, inquiry, etc.)

4. OPTIMIZATION OF THE PROJECT DURATION

Very often the question arises about possibilities of reducing the duration of the project in the technique of network planning, and the same applies to shortening of critical path. The reasons for reducing the duration may be (Majdandžić,2001):

- requisite time of project shortening that the initial plan does not allow,
- the need of project shortening due to the application for the same capacities on other projects,
- the need of shortening the time of new product development, because of the earlier release of a new product on the market,

Shortening of overhaul plans for the earliest possible facilities commissioning.

It is possible to affect the project duration in several ways (without reducing the quality of the system):

- reducing delays in the work,
- reducing the active work time introducing sophisticated equipment (mechanization and automatization),
- with higher quality training of an implementer,
- increasing the number of implementer (parallel activities)
- changing the method of implementation,
- with better planning and monitoring.

Also, apart from these direct ways, it is possible, while maintaining quality, significantly affect the project duration by increasing the motivation and stimulation of an implementer.

Depending on what you have available and what are the limits we can implement following optimization of the project (Majdandžić, 2001):

- optimization of the time duration compared to the cost,
- costs optimizationin in relation to the project duration,
- optimal allocation of limited resources, in particular, capacity as a function of time,
- factors ranking that affect the course of the project and optimization from the most influential factors to the less influential.

Each activity in network diagram has a duration which is estimated in given conditions of available resources and with technological capabilities of activity perform. These activity are called activities of normal project enforcement. Through additional resources investments it is possible to shorten the normal duration of the activities which are termed accelerated duration or shortened duration. Shortening can be done up to a certain lenght of duration after which any additional investment of labor and resources can not shorten more the total duration of the project.

In further considerations it is defined following:

$(b_{ij}=n_{ij})$ pessimistic time equals the normal project enforcement Table 3.1

$(a_{ij}=u_{ij})$ optimistic time equals accelerated project enforcement Table 3.1

Table 4.2. shows an example in which each activity is analyzed individually, the plan is defined also for each activity, the normal and accelerated duration of activity is determined and costs for normal enforcement and acceleration costs for each activity are defined.

Depending on the technological process of certain activity shortening costs are varied and depend on the following: an increase in the number of employees, the introduction of modern technology, the use of additional tools and devices, ...)

Table 4.2 Project costs

		Start node	End node	Normal time	Crash time	Normal Cost	Crash Cost	Crash cost/pd
		i	j	n_{ij}	u_{ij}	C_{nij}	C_{uij}	ΔC_{ij}
	Project			143	92			
A	Task 1	1	2	16	10	1600	2500	150
B	Task 2	1	3	30	20	3600	5600	200
C	Task 3	2	3	0	0	0	0	0
D	Task 4	2	5	20	16	2000	2600	150
E	Task 5	2	7	20	14	2800	4000	200
F	Task 6	3	4	22	18	2640	3440	200
G	Task 7	3	6	40	25	3600	5100	100
H	Task 8	4	8	0	0	0	0	0
J	Task 9	4	10	22	13	2200	3550	150
I	Task 10	5	12	6	4	1200	1700	250
K	Task 11	6	7	0	0	0	0	0
L	Task 12	6	8	0	0	0	0	0
M	Task 13	6	9	12	8	1600	2600	250
N	Task 14	7	12	21	8	1600	4850	250
O	Task 15	8	9	20	13	2000	3400	200
P	Task 16	9	10	0	0	0	0	0
Q	Task 17	9	11	14	8	1680	2580	150
R	Task 18	10	11	25	14	3000	4650	150
T	Task 19	11	12	28	20	4200	5800	200
	TOTALS					33720	52370	

Where markings mean:

u_{ij} - accelerated activity duration

n_{ij} – normal activity duration

C_{ij} – costs per TJ for normal activity enforcement

C_{nij} – costs per activities for normal enforcement

C_{uij} – costs per activities for accelerated enforcement

ΔC_{ij} – costs of acceleration by TJ

$$\Delta C_{ij} = \frac{C_{uij} - C_{nij}}{n_{ij} - u_{ij}}$$

From Table 4.2 in the example is:

The sum of activity on the critical path is also the total project duration.

UVZ (total time stock) activity on the critical path = 0

Critical path (KP):1-3; 3-6; 6-8; 8-9; 9-10; 10-11; 11-12 (B – G – L – O – P – R – T)

If we mark accelerated duration with [m], and with [M] normal duration, it can be calculated:

$$m = \sum u_{ijkr} = (20 + 25 + 0 + 13 + 0 + 14 + 20) = 92\ TJ$$

$\sum_i^j C_{uij} = 52370\ NJ$ - total project cost for accelerated duration

$$M = \sum n_{ijkr} = (30 + 40 + 0 + 20 + 0 + 25 + 28) = 143\ TJ$$

$\sum_i^j C_{nij} = 33720\ NJ$ - total project costs for normal duration

4.1. Shortening to the required durability period of the project

Duration of activity (completion deadline of the project) can be a value in the interval between the accelerated duration $\boldsymbol{u}_i$ and normal duration $\boldsymbol{n}_i$. Activity duration less than accelerated duration is not possible, and if the duration is higher than the normal length of the costs will not be lower.

As it is indicated with [m] an accelerated duration, and with [M] normal duration, it can be written:

$$m \le T_n \le M,$$

where T_n we call allowable duration.

At the request of investors the project duration is necessary to shorten for about 20% (earlier commissioning of the drive).

Based on this requirement it is necessary to:

- Create a network diagram (new plan)
- Calculate the costs of shortening and
- Calculate the total cost of the project.

$$T_n = 0{,}8 \cdot M = 0{,}8 \cdot 143 = 114{,}4\ TJ$$

Duration of the activity in this case can only be an integer, we choose: T_n = 114 *TJ*, and shortening of the project is 20,3 % ie., the project is necessary to shorten for 29 TJ according to the following rules (Petrić, 1974; Majdandžić 2001.):

- It starts with shortening of activities on the critical path that has the the lowest costs of shortening by forward unit, and it is necessary to shorten by the order to the activities with higher costs
- Shortening is performed to the emergence of a new critical path or to the the realization of the desired shortening time and achieving anticipated accelerated activity duration,
- If there is a more critical paths, shortening should be done on the activities with different critical paths, only for the same value of forward units (if there is a critical path where we can not shorten any activity, then we can not shorten any other activity on other critical paths),
- If two actions have the same cost of shortening, and they are on their way for shortening or they are selected for shortening, first shorten the activity that has a higher possibility of shortening (for a number of forward units)
- Shortening of activities by these rules shall be carried out until it achieves the desired objectives:
    - required shelf life of the entire project
    - Utilization of foreseen (planned) financial resources for the project
    - all activity shortened to the accelerated activity duration (all activity that could be shortened)

List of abbreviated activities and reducing by the individual activities are listed in Table 4.3 and total direct costs of shortening (acceleration of the project duration).

Table 4.3. Direct costs of acceleration

		Start node	End node	Normal time	Crash time	Normal Cost	Crash Cost	Crash cost/pd	Crash by	Crashing cost
		i	j	n_{ij}	u_{ij}	C_{nij}	C_{uij}	ΔC_{ij}	$n_{ij} - u_{ij}$	C_d
	Project			143	114					
A	Task 1	1	2	16	16	1600	1600	0	0	0
B	Task 2	1	3	30	27	3600	4200	200	3	1400
C	Task 3	2	3	0	0	0	0	0	0	0
D	Task 4	2	5	20	20	2000	2000	0	0	0
E	Task 5	2	7	20	20	2800	2800	0	0	0
F	Task 6	3	4	22	22	2640	2640	0	0	0
G	Task 7	3	6	40	25	3600	5100	100	15	1500
H	Task 8	4	8	0	0	0	0	0	0	0
J	Task 9	4	10	22	22	2200	2200	0	0	0
I	Task 10	5	12	6	6	1200	1200	0	0	0
K	Task 11	6	7	0	0	0	0	0	0	0
L	Task 12	6	8	0	0	0	0	0	0	0
M	Task 13	6	9	12	12	1600	1600	0	0	0
N	Task 14	7	12	21	21	1600	1600	0	0	0
O	Task 15	8	9	20	20	2000	2000	0	0	0
P	Task 16	9	10	0	0	0	0	0	0	0
Q	Task 17	9	11	14	14	1680	1680	0	0	0
R	Task 18	10	11	25	14	3000	4650	150	11	1650
T	Task 19	11	12	28	28	4200	4200	0	0	0
	TOTALS					33720	37470			4550

The project duration after shortening of the individual activities.

T_n = 27+25+20+14+28 = 114 TJ

Critical path:1-3; 3-6; 6-8; 8-9; 9-10; 10-11; 11-12

Direct costs for each activity can be calculated according to:

$$C_d = \begin{cases} \infty & \text{For} \quad t_i < u_i \\ \frac{n_i - t_i}{n_i - u_i} \cdot C_u + \frac{t_i - u_i}{n_i - u_i} \cdot C_n & \text{For} \quad u_i \leq t_i \leq n_i \\ C_n & \text{For} \quad t_i \geq n_i \end{cases}$$

The total direct costs of the project after shortening amounts: C_d = 37470 NJ

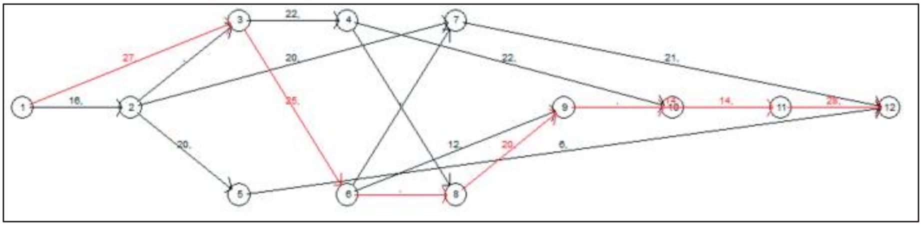

Figure 4.1. Network diagram for T_n=114 TJ

4.2. Shortening to the utilization of the planned additional financial investments

During the planning of activities and the project duration it is necessary to plan financial investments in the completion of the planned project. The aim is always to have the lowest costs and also to complete the project in shortest time. The presence of several criteria (time and costs) has the consequence that only in rare cases you can determine the so-called perfect solution that would ensure extreme, ie ideal values simultaneously for all criteria functions. When the perfect solution does not exist, the optimum solution is considered to be a collection of all efficient solutions among which selects one final solution (sub-optimal solution or the preferred solution). In the example that is processed in the paper, for accelerated project duration (m = 92 TJ) it is necessary to take additional 18650 NJ, and on disposal there is 10000 NJ. From the cost restrictions the following question arises:

What is the optimal project duration after additional investment of 10000 NJ ?

Abiding by the rules of shortening it begins with the shortening of those activities on the critical path that has the lowest costs of shortening and we shorten to the funds utilization.

After shortening of the activities according to the table 4.4. the total duration of the project is 98 TJ, consumption is 6950 NJ, but another critical path appeared and network diagram; Figure 4.2.:

KP1: 1-3; 3-6; 6-8; 8-9; 9-10; 10-11; 11-12

KP2: 1-3; 3-4; 4-10; 10-11; 11-12

Table 4.4. Shortening to the new KP (POM-QM for windows)

		Start node	End node	Normal time	Crash time	Normal Cost	Crash Cost	Crash cost/ pd	Crash by	Crashing cost
		i	j	n_{ij}	u_{ij}	C_{nij}	C_{uij}	ΔC_{ij}	$n_{ij} - u_{ij}$	C_d
	Project			143	98					
A	Task 1	1	2	16	16	1600	1600	0	0	0
B	Task 2	1	3	30	20	3600	5600	200	10	2000
C	Task 3	2	3	0	0	0	0	0	0	0
D	Task 4	2	5	20	20	2000	2000	0	0	0
E	Task 5	2	7	20	20	2800	2800	0	0	0
F	Task 6	3	4	22	22	2640	2640	0	0	0
G	Task 7	3	6	40	25	3600	5100	100	15	1500
H	Task 8	4	8	0	0	0	0	0	0	0
J	Task 9	4	10	22	22	2200	2200	0	0	0
I	Task 10	5	12	6	6	1200	1200	0	0	0
K	Task 11	6	7	0	0	0	0	0	0	0
L	Task 12	6	8	0	0	0	0	0	0	0
M	Task 13	6	9	12	12	1600	1600	0	0	0
N	Task 14	7	12	21	21	1600	1600	0	0	0
O	Task 15	8	9	20	19	2000	2200	200	1	200
P	Task 16	9	10	0	0	0	0	0	0	0
Q	Task 17	9	11	14	14	1680	1680	0	0	0
R	Task 18	10	11	25	14	3000	4650	150	11	1650
T	Task 19	11	12	28	20	4200	5800	200	8	1600
	TOTALS					33720	40670			6950

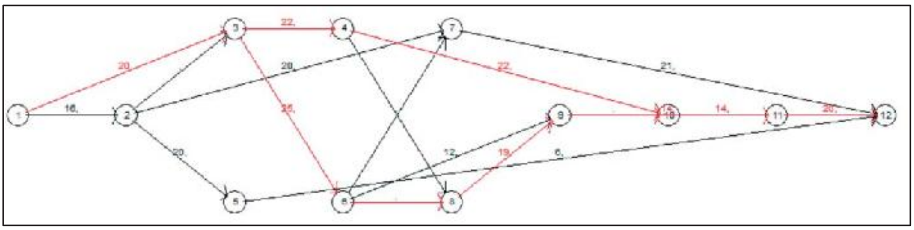

Figure 4.2. Network diagram for T_n=98 TJ (POM-QM for windows)

In accordance with the rules of shortening, if more critical paths occures, shortening should be done on the activities of the different critical paths, only for the same value of forward unit (if there is a critical path where we can not shorten any activity, then we can not shorten any activity in other critical paths).

Shortening of the activities O (8-9) and J (4-10) for per 6 TJ was done in the example because in the previous shortening the total project duration amounted 98 TJ and accelerated duration is 92 TJ and the final result of reduction is shown in the Table 4.5. and the network diagram in Figure 4.3.

Table 4.5. The final result of shortening (POM-QM for windows)

		Start node	End node	Normal time	Crash time	Normal Cost	Crash Cost	Crash cost/ pd	Crash by	Crashing cost
		i	j	n_{ij}	u_{ij}	C_{nij}	C_{uij}	ΔC_{ij}	$n_{ij} - u_{ij}$	C_d
	Project			143	92					
A	Task 1	1	2	16	16	1600	1600	0	0	0
B	Task 2	1	3	30	20	3600	5600	200	10	2000
C	Task 3	2	3	0	0	0	0	0	0	0
D	Task 4	2	5	20	20	2000	2000	0	0	0
E	Task 5	2	7	20	20	2800	2800	0	0	0
F	Task 6	3	4	22	22	2640	2640	0	0	0
G	Task 7	3	6	40	25	3600	5100	100	15	1500
H	Task 8	4	8	0	0	0	0	0	0	0
J	Task 9	4	10	22	16	2200	3100	150	6	900
I	Task 10	5	12	6	6	1200	1200	0	0	0
K	Task 11	6	7	0	0	0	0	0	0	0
L	Task 12	6	8	0	0	0	0	0	0	0
M	Task 13	6	9	12	12	1600	1600	0	0	0
N	Task 14	7	12	21	21	1600	1600	0	0	0
O	Task 15	8	9	20	13	2000	3400	200	7	1400
P	Task 16	9	10	0	0	0	0	0	0	0
Q	Task 17	9	11	14	14	1680	1680	0	0	0
R	Task 18	10	11	25	14	3000	4650	150	11	1650
T	Task 19	11	12	28	20	4200	5800	200	8	1600
	TOTALS					33720	42770			9050

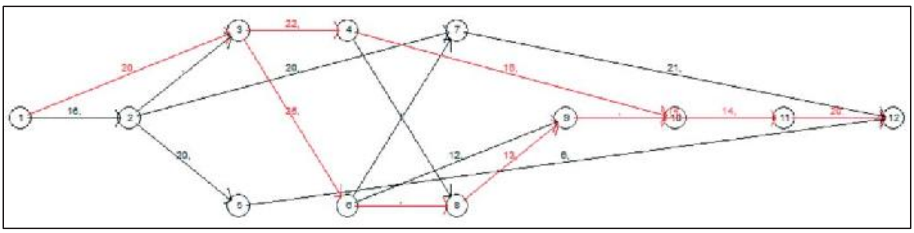

Figure 4.3. Network diagram for T_n=92 TJ (POM-QM for windows)

Although it was available 10000 NJ, after the maximum acceleration of activities on the critical path it has been spent total 9050 NJ, and the total project duration is equal to accelerated duration ie. ***Tn = m***.

Through further investment in the acceleration of certain activities total project duration would remain the same and the funds would be used for shortening activities which have time reserve and that is not advisable.

5. CONCLUSION

In the plan of overhaul of the complex technical system (the project), in which is conducted the deployment of resources and time on the level of scheduling according to tasks of overhaul, which was created by the method of network planning, parameters and also the boundary conditions and constraints are defined.

This paper explores the possibility of connecting the impact disorder (extension / shortening of the duration and / or reduction / cost increase) in designing and implementing the plan using the PERT / COST method.

It is logical that any shortening increases the cost of by forward unit, increases costs of operations, which grow with the increase of forward units because the normal length of days for normal working conditions: increasing the capacity of the performance of the operation leads to lower capacity utilization.

Since there is no perfect solution (min. cost = min. duration), a final solution based on defined parameters was elected.

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POM-QM for windows, informacijski sustav

DIE NULLZINSPOLITIK DER EZB UND DEREN FOLGEN FÜR DEN DEUTSCHEN BÜRGER UND DESSEN VORSORGESYSTEME

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Abstract

The aim of this work is to illuminate the dilemma of zero-interest rates on the German citizens and their savings and pre-retirement system.

The coordinated zero-interest policy of the most important central banks entails distortions on the money and capital markets. As existing assets such as shares, real estate and art are traded on the asset markets, the "cheaper" money is directed to these goods. Their prices are inflated by inflation and a bubble formation is not excluded

The zero-interest policy shifts the coordination system for investment forms and their risks. There are winners and losers. The traditional savings and pre-occupancy systems yields an oblique position.

The idea of boosting loans through low interest rates and thus investment is fundamentally praiseworthy, yet too simple. In the international credit market, the German lending rate has been very low for very long time (Bacher, 2015). What is right is that low-interest loans are becoming cheaper and the annual interest rate is thus becoming more affordable.

Keywords: *Zero-interest rate policy, Interest rate decisions, Money policy, Savings and pre-occupancy systems*

JEL Classification: G2

1. PROBLEMSTELLUNG

Money for nothing! Die Zinsentscheidungen der EZB machen den Traum vom kapitalistischen Schlaraffenland wahr. Ein Leitzins von Null-Prozent bietet den Banken zunächst einmal kostenloses Zentralbankgeld. Auch Staaten können sich fast endlos verschulden, ohne dass sie dafür bezahlen müssen. Der Dumme ist der Sparer. Er erhält für seinen Konsumverzicht keinen Ertrag mehr. Im Gegenteil: Wer viel spart und sein Vermögen auf seinem Giro- oder Festgeldkonto lässt, wird bestraft. Institutionelle Investoren wie Versicherungen, Pensionskassen und Firmenkunden müssen für ihre Kontoguthaben Strafzinsen bezahlen.

Mario Draghi, Chef der EZB, hat am 28. September 2016 vor Bundestagsabgeordneten seine Nullzinspolitik gerechtfertigt. Seine Argumente:[1] Die Geldpolitik der EZB gewährleiste Preisstabilität und wirke einer Depression entgegen. Nach Ansicht von Draghi greifen die Maßnahmen der EZB seit Jahren: Die Wirtschaft hätte sich erholt, durch den niedrigen Zins werde der Export und die Bauwirtschaft angekurbelt, Arbeitsplätze entstehen und die Staatshaushalte werden dadurch direkt entlastet. Es entstehe also Wohlstand. Die Zinspolitik wirke wie ein verstecktes Rettungspaket, von dem auch Rentner und Sparer profitieren. Durch die lang anhaltende Niedrigzinsphase geraten Banken – gerade Einlageninstitute – in eine Ertragsfalle. Mit Hinblick auf die Ertragssituation bei den Banken stellt Mario Draghi lapidar fest: „Die Geldpolitik der EZB ist nicht der Hauptfaktor für deren geringe Rentabilität."

Ziel dieser Arbeit ist das Dilemma von Nullzinsen auf den deutschen Normalbürger und dessen Spar- und Vorsorgesystem zu beleuchten.

2. DAS VERMÖGEN DER DEUTSCHEN

Deutschland ist ein reiches Land. Die Bundesbank ermittelt regelmäßig das Vermögen der deutschen Haushalte:[2] Das private Volksvermögen beläuft sich auf etwa 13 Billionen € und ist damit etwa 4 Mal so groß wie das Bruttosozialprodukt. Etwa die Hälfte ist in Immobilien, also in Grundstücke, Häuser,

[1] Vgl. *Draghi*, Introductory remarks at Deutscher Bundestag, Berlin 18.09.2016.

[2] Vgl. *Bundesbank*, Vermögen und Finanzen der privaten Haushalte in Deutschland, in: Monatsberichte der Bundesbank 3/2016, S. 61-89; *Allianz*, Das Geldvermögen privater Haushalte in Deutschland, Economic Research, München 2016; *Bacher*, Bankmanagement, 2015, S. 197.

Wohnungen, Wiesen und Wälder gebunden. Etwa 10 Prozent machen Gebrauchsgegenstände aus – vor allem sind das Autos, Möbel, Schmuck und Kunstgegenstände. Die verbleibenden 40 Prozent sind Geld- und Wertpapiervermögen. Von diesen 40 Prozent sind wieder 40 Prozent Bargeld und Einlagen bei Banken, 30 Prozent Ansprüche gegenüber Versicherungen, 20 Prozent Wertpapiere, 10 Prozent sind Pensionsansprüche gegenüber der Firma und Sonstiges. Durchgerechnet machen Aktien und Aktienfonds nur etwa 6 Prozent des Volksvermögens aus.

Das Vermögen der Deutschen ist sehr ungleich verteilt: 30 Prozent der Haushalte haben gar kein Vermögen, 5 Prozent besitzen mehr als die Hälfte des Gesamtvermögens. Das Vermögen sitzt vorwiegend bei älteren Menschen in den alten Bundesländern in den Ballungszentren München und Oberbayern, Stuttgart, Frankfurt, Düsseldorf und Hamburg. Männer besitzen durchschnittlich ein Drittel mehr als Frauen.

Die abgestimmte Nullzinspolitik der wichtigsten Zentralbanken bringt Verwerfungen auf den Geld- und Kapitalmärkten mit sich. Da an den Vermögensmärkten bereits bestehende Vermögensgegenstände wie Aktien, Immobilien und Kunst gehandelt werden, wird das billige Geld auf diese Güter gelenkt. Deren Preise werden inflatorisch in die Höhe getrieben, eine Blasenbildung ist dabei nicht ausgeschlossen.

Die Aktienmärkte sind seit dem scharfen Einbruch in 2007/2008 stark gestiegen, lediglich in 2011 und 2015 gab es Korrekturen. In den USA verzeichnen Anfang 2017 die Aktienindizes Allzeithochs, in Deutschland fehlt hierzu noch ein letzter Schub. Gemessen am Kurs-Gewinn-Verhältnis sind Aktien in Deutschland nicht überteuert! Ganz anders ist es auf dem Immobilienmarkt. Bereits im Februar 2014 gab es eine erste Warnmeldung der Bundesbank für Wohnimmobilien in Ballungszentren:[3] In der Summe gäbe es Überbewertungen, in Ballungszentrum seien die Preise um rund 25 Prozent zu hoch. Seither sind die Preise noch weiter gestiegen. An vielen Orten wird für eine Immobilie das 25-fache, teilweise sogar das 40-fache der Nettokaltmiete bezahlt. Übersetzt heißt das: Ohne Wertsteigerungen und Zinseszinseffekte braucht man 25 bzw. 40 Jahre bis die Anschaffung einer Immobilie über Mieterträge zurückfließt.

[3] *Bundesbank*, Preise für Wohnimmobilien, in: Monatsbericht der Bundesbank 2/2014, S. 65-67.

3. SPAR- UND VORSORGESYSTEM DER DEUTSCHEN

3.1 Seit mehr als zwanzig Jahre fallende Zinsen

Lange Zeit lagen in Deutschland die Renditen für langfristige erste Adressen (Staatsanleihen, Pfandbriefe, Anleihen von Landesbanken etc.) bei 6 bis 9 Prozent. Der Zins für kurzfristiges Geld – der Geldmarktsatz – lag üblicherweise 1 bis 2 Prozentpunkte darunter. 1990 ist der Zins für zehnjährige Staatsanleihen unter die Schwelle von 6 Prozent gefallen, 2010 unter 3 Prozent. Seit 2015 pendelt die Rendite der deutschen Staatsanleihen um die Nullmarke (vgl. Abb1). In 2016 hatte über die Hälfte der Staatspapiere sogar eine negative Rendite.

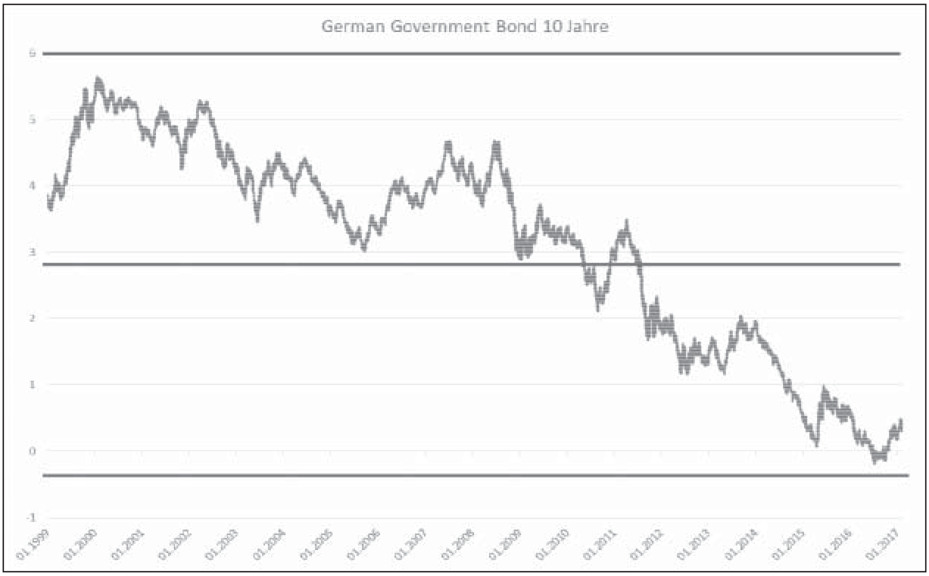

Abb. 1: Rendite der 10 jährigen deutschen Staatsanleihen seit 1999 (Quelle Bloomberg Febr. 2017)

Gewöhnlich wird auf dem Geldmarkt noch weniger bezahlt als für langfristige Kapitalmarktanleihen. Seit Jahren gibt es am Geldmarkt weniger als 1 Prozent Zins, seit 2012 steht dort die Null und seit 2014 herrschen dort für den Euro negative Zinsen vor. Grund hierfür ist, dass der Geldmarktzins maßgeblich vom Leitzins und den weiteren geldpolitischen Instrumenten der Zentralbank abhängt. Infolge der Finanzkrise senkten die Zentralbanken weltweit ihre Zinsen, seit zwei Jahren verlangt die EZB sogar eine Strafgebühr, wenn Banken bei ihr Gelder einlegen (vgl. Abb. 2). Aktuell beträgt diese Gebühr -0,4 Prozent. Noch dramatischer ist die Zinssituation mit -0,75 Prozent in der Schweiz. In den USA ist seit einem Jahr eine vorsichtige Zinswende erkennbar. Offen bleibt, ob und wann die europäischen Zentralbanken diese Zinswende mitgehen.

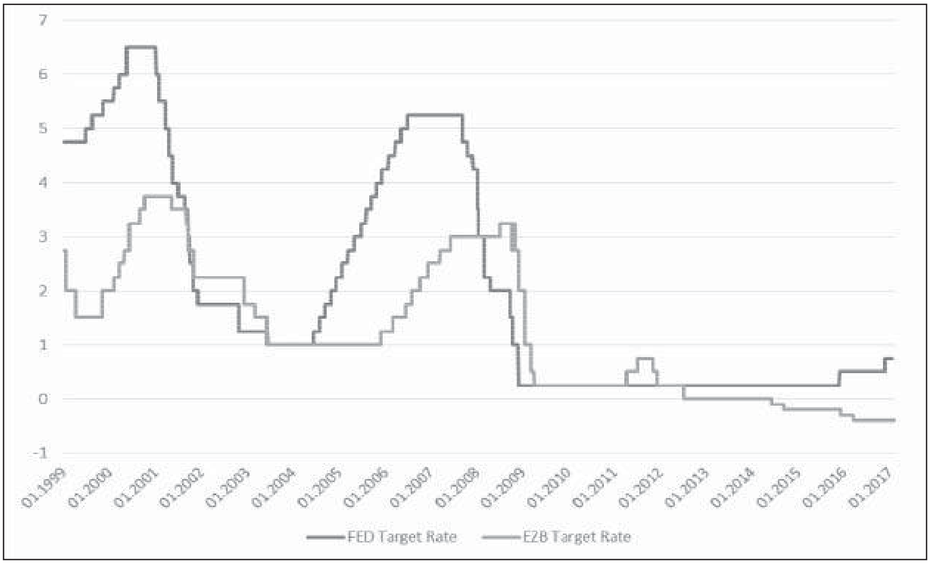

Abb. 2: Leitzinsen der EZB („€") und der FED („$") seit 1999 (Quelle Bloomberg 2/2017)

3.2 Die Verlierer der Nullzinspolitik

Durch die Nullzinspolitik verschiebt sich das Koordinatensystem für Anlageformen und deren Risiken. Es gibt Gewinner und Verlierer. Die traditionellen Spar- und Vorsorgesysteme geraten in eine Schieflage. Private Haushalte („Sparer") sind die Dummen dieser Zinspolitik und werden langfristig ihr Sparverhalten anpassen. Sie werden in andere, riskantere Anlageformen gedrängt oder werden künftig weniger oder schlichtweg nicht mehr sparen. Wichtige Verlierer dieser Politik werden nachfolgend kurz beschrieben.

3.2.1 Verlierer: Die Kapitallebens- und Rentenversicherung

Die private Altersvorsorge der Deutschen baut auf Lebensversicherungen auf (Kapitallebens- bzw. Rentenversicherungen). Lange Zeit konnten Lebensversicherungen ihren Kunden gute Zinsen auf den Sparanteil der Lebensversicherung garantieren. Meist bezifferte sich die Garantie in der Vergangenheit auf 3 bis 4 Prozent. Bei einem Zinsniveau von 6 Prozent und mehr konnte dieses Versprechen auch leicht umgesetzt werden. Bis weit in die 90er Jahre hinein gab es für Versicherungen von der Zinsseite her auch wenig Grund zur Sorge. Doch seit zwanzig Jahren wird die Situation von Jahr zu Jahr enger.[4] Alte Anleihen mit hohen Kupons laufen aus und müssen mit Schuldscheinen mit ganz niedrigen Kupons ersetzt werden. Seit Jahren fällt die laufende Verzinsung um etwa 0,2 Prozent pro Jahr und liegt 2016 nicht einmal mehr bei 3 Prozent. Nur durch Hebung von Bewertungsreserven, Umschichtungen oder durch Neubewertungen können die Lebensversicherungen in der Kapitalanlage noch ein Nettoergebnis von mehr als drei Prozent darstellen. Für Neuverträge werden die Garantiezinsen immer weiter gesenkt, ab 2017 beträgt diese Garantie nur noch 0,9 Prozent. Die Aufsicht verlangt, dass für die alten Zinsgarantien bilanzielle Vorsorge getroffen wird. Diese Zinszusatzreserve bringt ein Drittel aller Lebensversicherer in wirtschaftliche Bedrängnis. Das Neukundengeschäft von Kapitallebensversicherungen alter Prägung ist praktisch nicht mehr existent, je länger die Niedrigzinsphase andauert, desto mehr Lebensversicherer werden infiziert. Immer deutlicher wird, dass die ganze Branche unter dem Druck der fallenden Zinsen leidet. Für Pensions- und Unterstützungskassen stellt sich das gleiche Problem. Mehr noch: Weil diese Kassen nicht der Aufsicht bzw. dem strengen Aufsichtsregime unterliegen und eher wenig Eigenkapital haben, ist deren Situation noch dramatischer.

3.2.2 Verlierer: Die Pensionszusage (betriebliche Altersvorsorge)

In der Nachkriegszeit hat sich die deutsche Industrie erfolgreich über Pensionszusagen an Mitarbeiter finanziert. Ideal sind die Effekte in der Einführungsphase dieses Pensionssystems, die bis zu 30 Jahre dauert:[5] Die Mitarbeiter erhalten ein Versprechen auf eine Betriebsrente, das Unternehmen hat dadurch

[4] Vgl. *Bafin*, Jahresbericht der Bundesanstalt für Finanzdienstleistungsaufsicht, Bonn und Frankfurt 2016, S. 17/18 und 205 ff.

[5] Zum Finanzierungssystem der betrieblichen Altersversorgung grundlegend *Bundesbank*, Die betriebliche Altersversorgung in Deutschland, in: Monatsbericht der Bundesbank 3/2001, S. 45-61 und *Bundesbank*, Effekte der zinsbedingten Erhöhung der Pensionsrückstellungen, in: Monatsbericht der Bundesbank 12/2016, S. 60-63; zur Finanzierung aus Pensionsrückstellungen vgl. *Bacher*, BWL kompakt, 2016, S. 278-282.

Finanzmittel in unvorstellbarer Höhe steuerfrei zur Verfügung. Spätestens nach einer Generation hat sich das System eingeschwungen. In dieser Konsolidierungsphase gibt es keine Finanzierungseffekte mehr: Mitarbeiter gehen in Rente und werden durch neue Mitarbeiter ersetzt, die jährliche Zuführung für die neuen Mitarbeiter entspricht in etwa den Pensionszahlungen. Das System kann dann in eine Schieflage kommen, wenn Personal abgebaut wird und/oder sich die Bedingungen ändern. Mittlerweile haben die Großunternehmen reagiert und die Neuzusagen reduziert und versuchen die Altersversprechen aus der eigenen Bilanz „auszulagern". Mittelständische Unternehmen haben dieses Instrument meist nur für ihre Geschäftsführer eingesetzt und sind von dem Finanzierungsrisiko nur schwach betroffen.

Bilanztechnisch müssen für diese Pensionszusagen Rückstellungen gebildet werden, die handels- und steuerrechtlich lange Zeit mit 6 bzw. 5,5 % Prozent abgezinst wurden. Da diese Zinssätze nicht mehr realistisch sind, müssen die Rückstellungen neu bewertet werden. Durch die fallenden Zinsen sind enorme Aufstockungen für die Zusagen aus der Vergangenheit fällig. Da jede Rückstellung mit einer Aufwandsbuchung einhergeht, sind der Gewinn und damit auch das Eigenkapital des Unternehmens (= Arbeitgeber) direkt betroffen.

An einem einfachen Beispiel erklärt es sich so: Nehmen wir einen 45jährigen Geschäftsführer, dem die Gesellschaft ab Pensionierung eine kleine lebenslange Rente in Höhe von 500 € zusagt. Gehen wir davon aus, dass der Geschäftsführer noch etwa 20 Jahre nach seinem Ausscheiden lebt, brauchen wir ab Rentenbeginn – vereinfacht – ein Kapital von 120.000 € (20 Jahre * 500 € pro Monat). Zur Anschauung des Problems verdichten wir das Rückstellungsproblem stark vereinfacht auf ein Jahr. Zeitpunkt soll der 55. Geburtstag des Geschäftsführers sein, also 10 Jahre vor Rentenbeginn. Bei 6 Prozent Zins müssen für diese 120.000 € - vereinfacht mittels Abzinsung - etwa 67 T€ zurückgestellt werden. Ändert sich der Zins von 6 auf 3 Prozent, so muss die Rückstellung um ein Drittel auf mehr als 89 T€ aufgestockt werden. Bei einem Null-Zins müsste man die ganzen 120.000 € zurückstellen. Ergo: Die Zinsen wirken bei langen Laufzeiten wie ein Hebel.

3.2.3 Verlierer: Private Krankenversicherung

Auch die Private Krankenversicherung basiert auf guten Zinsen. Im Alter benötigt der Mensch eine höhere medizinische Versorgung. Gerade die Zeit vor dem Tod bindet einen Großteil der Versicherungsleistung. Die Beiträge der 9 Millionen Krankenversicherten mit privater Vollversicherung sind hierauf ausgerichtet und auf Lebenszeit kalkuliert. Konkret muss ein junger Versicherter viel höhere Beiträge leisten als er momentan braucht. Ein wesentlicher Teil des Beitrages wird für das Risiko in Alterungsrückstellungen gebunkert – aktuell sind das 220 Mrd. €. Der Rechnungszins betrug lange Zeit 3 Prozent und mehr. Tatsächlich werden sogar höhere Zinsen erwirtschaftet, die über das Kapitalergebnis der Versichertengemeinschaft zufließt. Analog der Problematik bei den Lebensversicherungen fällt aber die Verzinsung stetig, jetzt auch unter den Rechnungszins, der bei Neutarifen jetzt unter 3 Prozent liegt.[6] Anfang 2017 wurden für viele private Krankentarife enorme Beitragsanpassungen fällig. Grund hierfür sind steigende Medizinkosten, höhere Lebenserwartungen als kalkuliert und fallende Zinsen. Berechnungen zeigen, dass bald die Hälfte der Beitragserhöhungen auf das niedrige Zinsniveau zurückgeht. Insgesamt schlechte Aussichten für die Zukunft für die Versicherten.

3.2.4 Verlierer: Bausparkasse

Das Bausparmodell basiert auf einem kollektiven Zwecksparen mit einer Option auf einen kostengünstigen Kredit.[7] Das Modell hat ein festes Tarifwerk mit garantierter Zinsmarge und funktionierte auch dank einer ausgefeilten Sparförderung über Jahrzehnte hinweg glänzend. Man spart über die Jahre 50 oder 60 Prozent einer Zielsumme an (Bausparsumme), beispielsweise zu einem Guthabenzins von 2 Prozent. Nach einigen Jahren erfolgt dann die Zuteilung des Bausparvertrages. Bei Zuteilung kann der Bausparer über das angesparte Guthaben samt den staatlichen Prämien verfügen, er hat zudem das Recht, einen Kredit bis zur Höhe der Bausparsumme zu beanspruchen - im Beispielsfall einen Kredit zu etwa 4 Prozent Nominalzins. Die Kreditkondition des Bausparmodells war über Jahrzehnte hinweg für einen Kreditnehmer eine attraktive Darlehenskondition. Auch die Bausparkasse hatte mit der garantierten Marge von 2 Prozent und weiteren Gebühren ein sehr gutes Auskommen. Nachdem die Zinsen heute auf ein nie vorstellbares Null-Niveau gefallen sind, geht das

[6] Vgl. Bafin, Jahresbericht der Bundesanstalt für Finanzdienstleistungsaufsicht, Bonn und Frankfurt 2016, S. 207-209.

[7] Vgl. *Bacher*, Bankmanagement, 2015, S. 328-329.

Modell nicht mehr auf.[8] Der Bausparkredit ist zu teuer, weil man heute Geldmittel für sein Eigenheim für etwa 1 bis 1,5 % am Markt problemlos besorgen kann. Niemand nimmt mehr bei diesen historischen Niedrigzinsen von seinem Optionsrecht auf einen Kredit Gebrauch. Ergo: Das Bausparmodell erledigt sich mit dem Zinsniveau von Null immer mehr von selbst.

3.2.5 Verlierer: Sparkassen und Kreditgenossenschaften

Das einmalig deutsche Banksystem mit flächendeckend starken Sparkassen und Kreditgenossenschaften und dem privaten Kreditgewerbe hat sich in der Banken- und Eurokrise bewährt. Die Nullzinspolitik der EZB zerstört dieses stabilisierende System in ihren Grundfesseln. Sparkassen und Volksbanken leben von der Zinsmarge. Etwa die Hälfte der Zinsmarge erwirtschaften sie durch die Steilheit der Zinskurve bei einem angemessenen absoluten Zinsniveau. Das flache Zinsniveau um die Nullachse treibt die regional verankerten Bankenverbünde immer mehr in eine Zinsfalle.[9] Die S-Finanzgruppe („Sparkassen") und die genossenschaftliche Finanzgruppe Volksbanken Raiffeisenbanken sind durch ihr realwertbezogenes Geschäftsmodell (Einlagen- und Kreditinstitut für die regionale Realwirtschaft) von der lang anhaltenden Niedrigzinspolitik systemisch betroffen. Wenn der Chef der EZB Mario Draghi und der EZB-Direktor Yves Mersch den Sparkassen und Kreditgenossenschaften antwortet[10], sie sollen ihr Geschäftsmodell anpassen, klingt das wie Hohn. Sollen diese bodenständigen, dezentral organisierten Institute der Bürgerinnen und Bürger sowie des Mittelstandes vielleicht wie Großbanken oder Investmentbanken agieren? Ein Strategiewechsel weg von hergebrachten Erfolgsfaktoren „Filialen und Kundennähe" brächte für sie viel mehr Risiken als Chancen.

Das Geschäftsmodell einer Einlagen- und Kreditbank geht wie folgt: Bürger sparen in der Regel kurzfristig und legen ihr Geld in klassischen Bankprodukten wie Tages-, Fest- oder Spargelder an. Der deutsche Sparer liebt diese Produkte, weil er sich dabei nicht lange binden muss und jederzeit auf das Ersparte

8 Vgl. Bafin, Jahresbericht der Bundesanstalt für Finanzdienstleistungsaufsicht, Bonn und Frankfurt 2016, S. 17, 146.

9 Vgl. Bafin, Jahresbericht der Bundesanstalt für Finanzdienstleistungsaufsicht, Bonn und Frankfurt 2016, S. 16, 136, 141 ff.

10 Vgl. *Draghi*, Introductory remarks at Deutscher Bundestag, Berlin 18.09.2016; *Mersch*, Rede vor dem Bayerischen Sparkassenverband, München 27.01.2016 und viele Presseberichte z. B. Siedenbiedel, Banken und EZB geben sich gegenseitig Schuld, FAZ vom 05.10.2016.

zugreifen kann. Braucht seine Familie aber Geld über das Ersparte hinaus, so wählt er einen Kredit mit langer Zinsbindung. Beim Autokauf sind 3 bis 5 Jahre Standard, beim Hausbau werden 10 Jahre oder mehr Laufzeit mit festen Zinsen nachgefragt. Da der langfristige Zins in der Regel 1 bis 2 Prozent über dem kurzen Zins liegt, macht die Bank aus kurzem Sparergeld langes Kreditgeld und verdient hierbei im Schnitt 1 Prozent Zinsmarge („Fristentransformationsmarge"). Normalerweise gibt es in 70 bis 80 Prozent der Fälle eine steile Zinsstruktur. Das Zinsprinzip „mache aus kurzem Sparergeld langes Kreditgeld" geht in den allermeisten Fällen gut auf.

Kritisch wird es aber für die Banken dann, wenn die Zinsstruktur flach ist, zumal dann die Bank für die Fristentransformation nicht belohnt wird. Besonders kritisch ist der Fall dann, wenn das Zinsniveau „flach" und bei „Null" ist. Wenn es für einen Sparbetrag keinen Zins mehr gibt, ist der Preiswettbewerb gewöhnlich hart, der Sparer kämpft um das letzte Zehntel Zins. Die Zinsspanne lässt sich in diesem Fall für die Bank oder Sparkasse dauerhaft nicht halten, das Kreditinstitut gerät in eine Zinsfalle. Kurzfristig hält sie das aus. Wenn diese Zinssituation aber lang anhält, muss die Bank einen Strategiewechsel mit weitreichenden Konsequenzen einläuten. Sie wird Filialen schließen, Mitarbeiter entlassen, an der Gebührenschraube drehen oder eine Fusion anstreben.[11] Das alles ist schmerzhaft und ungewiss.

Steigen die Zinsen, was alle hoffen, kommt die Bank mittelfristig aus der Falle wieder heraus. Steigen die Zinsen aber schnell, fallen die Kurse von Anleihen, eine Kapitalmarktkrise droht. In diesem Szenario muss die Bank Abschreibungen auf ihre Finanzanlagen verbuchen, was direkt ihr Eigenkapital belastet. Noch kritischer: Steigen die Zinsen zu schnell, verlangen die Sparer von ihrer Bank oder Sparkasse für ihre Einlagen schnell höhere Zinsen. Auf der anderen Seite werden die Kreditnehmer der Bank gemäß der langfristigen Zinsbindung noch lange auf niedrige Zinsen pochen. Das Zinsprinzip „mache aus kurzem Sparergeld langes Kreditgeld" belastet in diesem Szenario die Ertragslage der Bank sehr, die Bank sitzt für die nächsten Jahre erst recht in der Zinsfalle.

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[11] Vgl. *Bacher*, Die Zinsfalle – worunter dezentrale Kreditinstitute seit 1995 leiden, in: Kreditwesen 7/1999, S. 342- 345.

4. DAS REZEPT „NIEDRIGE ZINSEN = MEHR INVESTITIONEN“ IST ZU EINFACH

Die Idee, durch niedrige Zinsen Kredite und damit Investitionen anzukurbeln, ist grundsätzlich lobenswert, dennoch zu einfach. Im internationalen Kreditmarkt sind die deutschen Kreditzinsen schon seit langem sehr niedrig.[12] Richtig ist, dass durch niedrige Zinsen Kredite sich verbilligen und der jährliche Zinsdienst damit erschwinglicher wird. Entscheidend sind die Zinskosten für ein Unternehmen nicht. Unter allen Aufwandsposten schlägt der Zinsaufwand im Gegensatz zu den Material- und Personalkosten sowie sonstigen Aufwendungen praktisch nicht durch.[13] Gemessen am Umsatz machen die Zinsen durchschnittlich 1 bis 2 Prozent aus. Sie sind damit für die Ertragslage eines Unternehmens nicht entscheidungserheblich.

Gerade in der Bankenkrise 2008 grassierte die Angst vor einer Kreditklemme.[14] Unter den Banken war man sich aber schnell klar: Es gibt keine Kreditklemme, sondern einen Mangel an guten Kreditengagements. Ein gutes Firmenkreditgeschäft lebt viel mehr von der Kreditwürdigkeit als von einer billigen Kondition. Die personelle Kreditwürdigkeit ergibt sich über die Zuverlässigkeit, die Erfahrung, Managementfähigkeiten und Charaktereigenschaften des Unternehmers. Materiell erschließt sich die Kreditwürdigkeit über nachhaltig solide wirtschaftliche Verhältnisse. In erster Linie zählt hierzu eine realistische Zielvorstellung über das Investitionsobjekt, gutes und aktuelles Daten- und Zahlenmaterial,[15] eine gute Planung und solide finanzielle Verhältnisse. Aus den Zahlen der letzten drei Jahresabschlüsse und der Erfahrung der Hausbankverbindung heraus prüft die Bank, ob der Cashflow zu jeder Zeit den Zins- und Tilgungsdienst decken kann und ob das Unternehmen genügend Eigenkapital für etwaige Durststrecken hat. Entscheidend für die Kreditierung ist also die nachhaltige Kapitaldienstfähigkeit. Die Bank prüft dabei, ob der Kreditnehmer zu jeder Zeit den vereinbarten Zins leisten und die Kreditsumme

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[12] Vgl. *Bacher*, Bankmanagement, 2015, S. 20 ff. und 339 ff.

[13] *Bundesbank*, Ertragslage und Finanzverhältnisse deutscher Unternehmen, in: Monatsbericht der Bundesbank 12/2016, S. 57-77.

[14] *Bundesbank*, Die Entwicklung der Kredite während der globalen Finanzkrise, in: Monatsbericht der Bundesbank 9/2009, S. 17-36; *Bundesbank*, Die Entwicklung der Buchkredite, in: Monatsbericht der Bundesbank 9/2011, S. 61-82.

[15] Die letzte Bilanz darf nicht älter als 12 Monate alt sein. Bei Privatleuten und Freiberuflern ist die Vorlage einer Vermögensübersicht mit laufender Einnahmen-und-Ausgabenrechnung vorteilhaft („Status“); vgl. hierzu: *Bacher*, Bankmanagement, 2015, S. 373 ff.

tilgen kann. Sicherheiten spielen dabei auch eine Rolle, sie werden aber wie die Kondition für die Entscheidungsfindung eines Kredits überschätzt.

5. FAZIT

Seit über zwanzig Jahren sinken die Zinsen auf ein unvorstellbar niedriges Niveau. Seit 2014 gibt es das Phänomen der Negativzinsen. Die Nullzinspolitik der Zentralbanken und das Anleiheankaufprogramm der EZB beschreiben eine Extremsituation, die es so bisher nicht gegeben hat. Kurzfristig hat diese Politik die Finanz- und Schuldenkrise beruhigt. Langfristig bringt diese Strategie mehr Probleme als sie lösen kann. Die Entscheidung der EZB, „Geld für Null" in den Markt zu pumpen und Anleihen ad infinitum anzukaufen, setzt falsche Anreize und zerstört auf lange Sicht bewährte Spar- und Vorsorgesysteme. Zusammenfassend ist folgendes erkennbar:

1. Mit den niedrigen Zinsen setzt die Zentralbank Fehlanreize. Die Ersparnisbildung wird gestört, die Nullzinspolitik verändert die Risikoallokation. Haushalte und Investoren werden in riskante Anlageformen gedrängt.
2. Immobilienpreise und Aktienkurse werden durch niedrige Zinsen getrieben. Während die Aktienmärkte derzeit noch durchschnittlich bewertet werden, sind Immobilien eher überteuert.
3. Traditionelle Spar- und Vorsorgesysteme geraten in eine Schieflage. Lebensversicherungen, Pensionskassen, die private Krankenversicherung und die Bausparkassen werden direkt von den Nullzinsen bedroht.
4. Banken und Sparkassen leben vom Zins und weil dieser nicht mehr existiert, geraten Einlagenkreditinstitute in eine Ertragsfalle.
5. Die gute Kreditwürdigkeit (nachhaltige Kapitaldienstfähigkeit) ist für das Kreditgeschäft wichtiger als sehr niedrige Konditionen.

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EXPERIMENTELLE FORSCHUNG ZU VERHANDELTEN BUDGETS

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Abstract

Budgeting can be defined as a process of setting up, approving and controlling budgets. It can be systemized in regards to participation in the process. Systematization should be made about whether and how to inform subordinate area managers into the budget creation process

Budgeting remains, despite the partial sharp criticism, too slow, time consuming and costly. Latest development in practice toward better and advanced budgeting and with abolition of the beyond budgeting movement keeps it as one of the most important control instruments in companies.

Keywords: *budgeting, top down, bottom up, information asymmetry, risk aversion*

JEL Classification: H6

1 EINLEITUNG

Trotz Kritik zählt die Budgetierung zu den zentralen Steuerungsinstrumenten in Unternehmen. Budgets werden von dezentralisierten Unternehmen hauptsächlich zur Planung, Kontrolle und Koordination verwendet, sie haben dabei aber auch große Auswirkungen auf die Motivation der Mitarbeiter im Unternehmen. Auch die Angestellten haben die Wirkung von Budgets verstanden und wissen, diese in ihrem Sinne auszunutzen. So sehen sie sich oftmals dazu verleitet, Ressourcen am Jahresende zu verschwenden und ihre Budgetvorschläge für die nächste Periode zu ihrem Vorteil zu beeinflussen. Dabei können sie Slack in ihr Budget einbauen, was für das Unternehmen nachteilig ist. (Schwering, 2016) [A]Vgl.[1]. Wie das Problem der Slackbildung verhindert werden kann und Mitarbeiter soweit angereizt werden können, im Sinne des Unternehmens zu agieren, ist zentraler Bestandteil der Forschung zur Budgetierung. Hierbei spielt die Ehrlichkeit des Managers eine wichtige Rolle, um zu verhindern, dass er seine Budgetmeldung zu seinen Gunsten verzerrt. Eine Lösung des Budgetierungsproblems kann in der Ehrlichkeit liegen. Mark Twain (1910: 342) [B]In der Rede 1901 im Eastman College New York, zitiert nach [32]. äußerte sich zur Ehrlichkeit in Verbindung mit Geld wie folgt: *Honesty is the best policy - when there is money in it.*

2 THEORETISCHE GRUNDLAGEN

Budgetierung kann als *Prozess der Aufstellung, Verabschiedung und Kontrolle von Budgets* definiert werden. Ein Budget wiederum ist das Ergebnis der Budgetierung und stellt einen formalzielorientierten, in wertmäßigen Größen formulierten Plan mit Verbindlichkeitscharakter dar. (Göpfert 1993: 590; Horváth 2011: 202) [C]Definitionen entnommen aus:[21]; [25].

Budgetierung kann u.a. hinsichtlich der Partizipation systematisiert werden, d.h. ob und wie Informationen der i.d.R. besser informierten nachgeordneten Bereichsmanager in die Budgeterstellung eingehen. Entlang des vertikalen Informationsflusses können drei Arten unterschieden werden. Bei der retrograden Budgetierung (Top down) wird das Budget von der Zentrale mittels Rahmendaten, die aus der strategischen Planung abgeleitet werden, festgelegt und von den nachgeordneten Ebenen weiter detailliert. Der Informationsfluss geht von oben nach unten, es werden keine Informationen von den Managern an die Zentrale weitergegeben. Problematisch dabei ist der hohe Informationsbedarf der Zentrale. Im Gegensatz dazu erfolgt die Budgeterstellung bei der progressiven Budgetierung (Bottom up) durch die Bereichsmanager, die Zentrale fasst die Budgets der einzelnen Bereiche lediglich zusammen. Diese Budgetierungsform sieht eine maximale Beteiligung der untergeordneten Manager vor, wodurch die besseren Informationen der untergeordneten Manager in den Prozess einfließen können. Die dritte Variante der Budgetierung ist das Gegenstromverfahren. Hierbei handelt es sich um ein iteratives Herantasten an das Budget mittels Interaktion zwischen Zentrale und Bereichsmanager. (Ewert & Wagenhofer 2014: 422; Horváth 2011: 206; Jung 2006: 180-181; Wöhe, Döring & Brösel 2016: 196-197) [D]Mehr zur Systematisierung in:[15]; [25]; [27]; [37]. Die Bottom up-Budgetierung und das Gegenstromverfahren werden als Methoden der partizipativen Budgetierung bezeichnet.(Arnold 2007: 70) [E]Vgl.[6]. Wegen des Trends zur Dezentralisation im Unternehmen ist die partizipative Budgetierung weit verbreitet. (Heinle, Ross & Saouma 2014:

1025; Ranking, Schwartz & Young, 2008: 1083) [F]Vgl.[24]; [29]. Das Modell der partizipativen Budgetierung erlaubt dem Manager, seine Informationen in den Budgetierungsprozess einfließen zu lassen. Dadurch steigt die Jobzufriedenheit und daraus resultierend eine bessere Jobperformance. Das Problem partizipativer Budgetierung ist die Informationsasymmetrie, die aufgrund privater Informationen seitens des Managers entsteht. Da die Zentrale die privaten Informationen des Managers nicht kennt, kann sie das Budget in der Top down-Budgetierung selbst nicht optimal aufstellen und ist somit auf die besseren Informationen der Bereichsmanager angewiesen. Der Manager hat aufgrund seines Informationsvorsprungs einen starken Anreiz, seine Informationen verzerrt darzustellen, wenn die Höhe seiner Entlohnung oder (zusätzlich) die Menge der zugewiesenen Ressourcen davon abhängen. Durch seine besseren, privaten Informationen kann der Manager mehr Ressourcen verlangen und somit den sog. Slack aufbauen. (Young 1985: 829-830; Waller 1988: 87; Chow Cooper & Waller, 1988: 111) [G]Siehe dazu[39]; [34]; [11]. Unter Slack wird ein Überschuss an Ressourcen über die für eine bestimmte Tätigkeit benötigte Menge hinaus verstanden. (Young 1985: 5; Waller 1988: 87; Stevens 2002: 154; Huang & Chen 2009: 663) [H]Vgl.[39]; [34];[31]; [26]. Um dem Problem zu entgehen, muss ein Anreizsystem geschaffen werden, damit der Manager im Sinne des Unternehmens handelt und wahrheitsgemäße Informationen an die Zentrale berichtet. (Chow, Hwang und liao 2000: 160; Groves & Loeb 1979: 221) [I]Vgl.[12]; [20]. Die bisherige Slackforschung setzt auf der Prinzipal-Agenten-Theorie (P-A-Theorie) auf, welche von ökonomisch rationalen Akteuren mit unterschiedlichen Zielsetzungen ausgeht. Zwischen Prinzipal und Agenten bestehen Informationsasymmetrien, die ein opportunistisches Verhalten des Managers begünstigen. (Gilabert-Carreras & Naranjo-Gil 2014: 55; Stevens 2002: 153.) [J]Vgl.[19]; [31]. Slack als Teil des opportunistischen Verhaltens senkt den Wert und die Effizienz der partizipativen Budgetierung. (Douthit & Stevens 2015: 468) [K]Vgl.[13]. Slack im Allgemeinen schadet dem Unternehmen, da die Kosten steigen oder das Ertragspotenzial sinkt. (Stevens 2002: 154; Arnold 2007: 71) [L]Vgl.[31]; [6].Weiter kann Slack zu geringerer Anstrengung des Managers führen, und dadurch kann die Leistung sinken. Durch die Messung der niedrigeren Leistung önnen Ressourcen falsch allokiert werden. (Webb 2002: 361) [M]Vgl.[35]. Der Manager allerdings hat starken Anreiz, Slack in sein Budget einzubauen, um die Wahrscheinlichkeit der Budgeterreichung zu steigern und sich mit einem Puffer vor Unsicherheit zu schützen. (Webb 2002: 361; Semrau, Graumann & Jost 2011: 241) [N] Vgl. [35]; [30].

Die P-A-Theorie baut auf verschiedenen Annahmen auf, die einerseits eindeutige Vorhersagen und Gestaltungsempfehlungen für die Budgetierungsprozesse ermöglichen. Andererseits sind diese eben nur im Rahmen der zuvor getroffenen Annahmen gültig, was oft als Angriffspunkt am Modell von der Praxis dargestellt wird. Die experimentelle Forschung als neuere Forschungsrichtung erweitert die P-A-Theorie um verhaltenswissenschaftliche Aspekte wie die Analyse der Präferenzen und Fähigkeiten der Akteure. Der Vorteil darin besteht in der Überprüfung und möglichen Falsifikation theoretischer Ergebnisse unter kontrollierten und replizierbaren Bedingungen. Dazu wird ein theoretisches Modell und dessen Annahmen im Labor exakt abgebildet, wodurch Unterschiede zur Praxis abgebaut werden können und die Analyse von abweichenden Faktoren vorgenommen werden kann. Hauptaugenmerk bei der experimentellen Forschung in der Budgetierung liegt sowohl in der Überprüfung der theoretischen Erkenntnisse als auch in der Analyse der von standardtheoretischen Annahmen abweichenden oder nicht abschließend erklärbaren Präferenzen. Somit können verschiedene Präferenzen der Zentrale und des Managers („gegebene" Zielkonflikte) sowie über die Gestaltung des Anreizschemas induzierte („gemachte") Zielkonflikte abgebildet und das Verhalten der Akteure besser nachvollzogen werden. Beispielsweise wird die Ehrlichkeit als eine Präferenz von vielen Autoren in ihre Modelle eingebaut und analysiert, weil sie in der P-A-Theorie nicht gänzlich über die Informationsasymmetrie oder Anreizsysteme erklärt werden kann. Gerade in den Studien der letzten Jahre spielt der verhaltenswissenschaftliche Ansatz eine immer größer werdende Rolle. (Arnold 2007: 71-72) [O] Vgl. zu den Ausführungen[6].

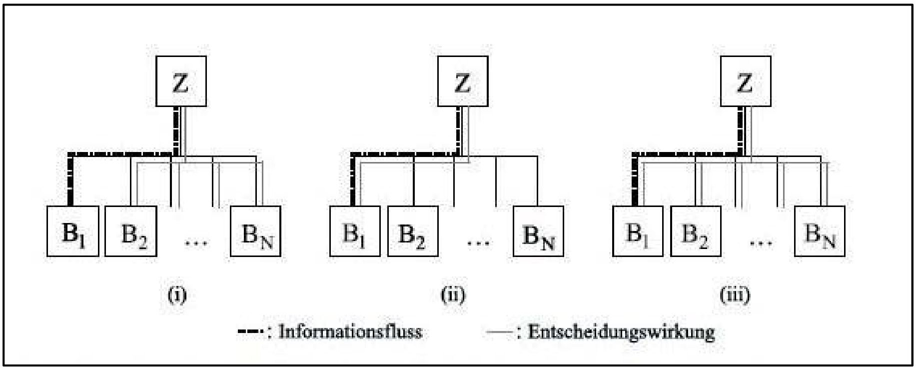
3 EXPERIMENTELLE FORSCHUNG IN DER BUDGETIERUNG

3.1 Abgrenzung dreier Budgetierungssituationen

Experimentelle Forschung in der Budgetierung wird im vorliegenden Beitrag wie bei Arnold anhand der Informationsverwendung der Zentrale kategorisiert. Zentral ist die Frage, ob und wie Informationen nachgeordneter Bereichsmanager in den Budgeterstellungsprozess eingehen. Die Antwort dieser Kernfrage ist davon abhängig, welche Rückwirkungen die Entscheidungen der

Zentrale für die Manager haben, und welche Anreize daraus für die Abgabe der Informationen resultieren. Wie die Zentrale die von den Bereichsmanagern bereitgestellten Informationen verwendet, kann in drei Situationen unterschieden werden. [P]Siehe zur Einteilung die Grafik im Anhang 1!

Abbildung 1: Informationsfluss und Entscheidungswirkung in der Budgetierung (Arnold, 2007: 74)



Es gibt eine Zentrale und n Bereiche, wobei der Fokus immer auf Bereich 1 im Moment der Informationsabgabe an die Zentrale liegt. Hierbei werden die Informationsflüsse der anderen Bereiche vernachlässigt. Im ersten Fall kommen die Informationen für den Budgetierungsprozess aus Bereich 1, wobei diese Informationen nur Einfluss auf die operativen Entscheidungen der anderen Bereiche, jedoch keine direkten Folgen auf den Bereich 1 selbst haben. Für Bereich 1 gibt es lediglich Rückwirkungen über die Entlohnung. Konkret bedeutet dies, dass das Budget zur Planung der anderen Bereiche und als Sollvorgabe für die Beurteilung der Manager aller Bereiche dient. Im zweiten Fall betreffen die operativen Entscheidungen der Zentrale lediglich den informationsabgebenden Bereich, also Bereich 1. Dieser erfährt Rückwirkungen sowohl über die Entlohnung als über die Ressourcenverteilung. Dieser Fall entspricht einer Ressourcenallokation ohne Ressourcenknappheit, weil die Entscheidung der Zentrale ohne Auswirkung für die anderen Bereiche ist. Im dritten Fall wird die Ressourcenknappheit berücksichtigt. Hier wirken sich die Informationen des Bereich 1 auf die operativen Entscheidungen für alle Bereiche aus. Daraus ergeben sich Rückwirkungen für alle Bereiche sowohl über die Ressourcenzuteilung als auch für die Entlohnung. Interessant für alle drei Fälle bleibt die Frage, ob und wie die Bereichsmanager ihren Informationsvorsprung ausnutzen und die

Meldungen abgeben, sodass eventuell Slack aufgebaut wird, was den Managern zugutekommen kann. (Arnold 2007: 73-76) [Q]Vgl. zu den Ausführungen[6].

3.2 Operative Budgetierung zur Planung und Kontrolle der Unternehmensaktivität

3.2.1 Basisexperiment Young (1985)

Gegenstand der Untersuchungen von Young, dessen Experiment später oft referenziert und von weiteren Autoren vertieft wurde, ist die Frage, wie sich das Ausmaß der Informationsasymmetrie zwischen dem Manager und der Zentrale und die Risikoeinstellung des Managers auf seine Produktivität, die damit verbundenen Budgetmeldungen und den Slack in der Bottom up-Budgetierung auswirken. Dazu werden fünf Hypothesen aufgestellt, auf die im späteren Verlauf eingegangen wird. Die Methodik des Experiments basiert auf Weitzmans Erkenntnissen, wonach der Manager einen möglichst geringen Standard setzen wird. Dieses relativ geringe Niveau kann er leicht überschreiten und somit eine Bonuszahlung erlangen. Somit besteht ein Anreiz des Managers zur Falschberichterstattung. (Young, 1985: 833; Weitzman, 1976: 252) [R]Vgl.[39]; [36]. Auf diese Weise kann Slack entstehen. Ähnlich Weitzman[S]Das Anreizschema nach Weitzman führt nur zu wahrheitsgemäßem Bericht, wenn der Manager sicher die Höhe des Bereichsergebnisses kennt. Bei Unsicherheit hat nur ein risikoneutraler Manager keinen Anreiz zur Bildung von Slack, ein risikoaverser jedoch schon! Mehr dazu in Weitzman 1976. wird hier über die Gesamtentlohnung[T]Die Gesamtentlohnung orientiert sich an der tatsächlichen Produktion (K1) minus der Differenz (K2) aus budgetierter Produktion und tatsächlicher Produktion. Sobald K1 und K2 übereinstimmen, gibt es keinen finanziellen Anreiz mehr als das Budget zu produzieren. Wird weniger als das Budget produziert, so wird ein Anreiz zu einer höheren Produktion gesetzt. ein Anreiz zur wahrheitsgemäßen Berichterstattung gesetzt. Die Risikopräferenz wird dabei über eine hypothetische Lotterie gemessen. Unsicherheit der Teilnehmer besteht darin, wie lange in jeder Periode gearbeitet werden kann.

Das Design des Experiments ist folgendermaßen aufgebaut: Die 40 Experimentteilnehmer haben ein Durchschnittsalter von 25 Jahren. Es gibt ein Treatment mit und ein Treatment ohne Informationsasymmetrie. (Young, 1985: 835)[U]Vgl.[39].

Die Studie kommt mittels statistischer Auswertung zu dem Ergebnis, dass die Hypothesen 1 bis 4 bestätigt werden und Hypothese 5 verneint wird. (Young, 1985: 838-839) [V]Vgl.[39]. In den Hypothesen wurden verschiedene Determinanten von Slack getestet. Demnach bilden Manager im partizipativen Budgetierungsprozess Slack (Hypothese 1). Slack korreliert mit der Risikoaversion, was als Slack in Folge von Unsicherheit gedeutet werden kann (Hypothese 2). Risikoaverse Teilnehmer bauen signifikant mehr Slack in ihre Budgets ein als risikoaffine. Der soziale Druck ist höher bei öffentlichen Informationen als bei privaten (Hypothese 3). Der soziale Druck steigt, wenn Slack sinkt (Hypothese 4). Ein möglicher Gegenspieler des Slacks ist der soziale Druck. Sozialer Druck wird vom Manager als entmutigendes Gefühl wahrgenommen, dass dieser als falsch dargestellt wird, weil die Zentrale Informationen über dessen Leistungen hat. (Young, 1985: 830) [W]Vgl.[39]. Partizipative Budgetierung mit privaten Informationen führt nicht zu signifikant mehr Slack als bei öffentlichen Informationen (Verneinung der Hypothese 5). (Young, 1985: 840) [X]Vgl. [39]. Zusammenfassend wurde aufgezeigt, wie sich das Ausmaß der Informationsasymmetrie zwischen Manager und Zentrale und die Risikoeinstellung des Managers auf seine Budgetmeldung und den Slack auswirken.

3.2.2 Erweiterungen zum Basisexperiment

In ersten Experimenten (Waller, 1988; Chow, Cooper & Waller, 1988) [Y]Siehe dazu[34]; [11] im Anhang 2. wurden die Effekte der Risikoaversion, der Informationsasymmetrie und das Entlohnungsschema als traditionelle Agency-Variablen untersucht, nachfolgend wird das opportunistische Verhalten als weitere Voraussetzung der P-A-Theorie genauer analysiert. Stevens (2002: 154-156) untersucht den Einfluss von Reputation[A]Reputation wird als Wunsch, als ehrlich und fair wahrgenommen zu werden, interpretiert (S. 156). und Ethik als mögliche Kontrolle opportunistischen Selbstinteresses und deren Auswirkungen auf Slack. Demnach sinkt Slack, sobald Reputation und ethische Bedenken eine Rolle spielen und dienen somit als effektive Kontrolle für opportunistisches Verhalten.(Stevens, 2002: 169) Eine wichtige Neuerung kommt von Chow, Cooper & Haddad (1991: 48) [C]Vgl.[10]., die das wahrheitsinduzierende Anreizschema um die Mehrperiodigkeit erweitern und somit die Theorie an die Praxis annähern, da Arbeitsverhältnisse i.d.R. langfristig ausgelegt sind und somit andere Verhaltensweisen auftreten als bei einmaligen Ereignissen. Außerdem wird der Effekt von Ratchets auf Slack untersucht. Ein Ratchet ist ein minimaler Standard für das Budget, der auf vergangener Leistung basiert. Durch die Einführung von Ratchets sinkt der Slack. (Chow, Cooper & Haddad, 1991: 57) Somit entspricht der Effekt von Ratchets einem wahrheitsinduzierenden Schema und steht diesem als effektives Mittel zur Slacksenkung in Nichts nach. Allerdings sinkt die Überperformance der eigenen Leistung mit der Einführung von Ratchets, da die aktuelle Leistung zu einem höheren Standard in der Zukunft führen würde. (Chow, Cooper und Haddad, 1991: 50)

Die Erweiterungen zu Youngs Experiment haben bis hierher lediglich die Bottom up-Budgetierung betrachtet, wohingegen in den nachfolgenden Experimenten auch Budgetverhandlungen herangezogen werden. Fisher, Frederickson & Peffer (2000: 94) gehen der Frage nach, welchen Einfluss eine Verhandlung und die finale Entscheidungsmacht auf die Slackbildung hat. Eine Verhandlung mit Einigung führt zu mehr Slack als ohne Einigung bei finaler Entscheidungsmacht bei der Zentrale. Bei einer Verhandlung ohne Einigung aber mit finaler Entscheidungsmacht bei der Zentrale wird der Manager das Budget nur akzeptieren, wenn es für ihn machbar erscheint. (Fisher, Frederickson & Peffer 2000: 101) Daraus kann gefolgert werden, dass die Budgets bei Verhandlungen mit Einigung leichter erreicht werden können und somit Slack enthalten. Slack ist also bei Einigung größer als bei Top down-Budgetierung oder Verhandlung ohne Einigung mit finaler Entscheidungsmacht bei der Zentrale.[L]Vgl.[16]. Fisher et al. (2002: 848) [M]Vgl.[18]. untersuchen die Fragestellung, was passiert, wenn das Budget auch zur Ressourcenallokation verwendet wird und wie sich dabei ein Informationssystem auf die Höhe des Slacks auswirkt. Sollte das Budget zur Ressourcenallokation verwendet werden, besteht ein Anreiz für den Manager, seine Leistung zu übertreiben, um so mehr Ressourcen an seinen Bereich zu binden. Dieser Effekt gleicht den Effekt aus, dass ein Manager bei einer budgetbasierten Entlohnung seine Leistung unterschätzt. Die entgegengesetzten Effekte der Überschätzung der eigenen Leistung wegen der Ressourcenallokation und der Unterschätzung der Leistung wegen der Leistungsbewertung über eine budgetbasierte Entlohnung können über das gleiche Budget für die Ressourcenallokation und die Leistungsbewertung gelöst werden. Im Ergebnis lässt sich festhalten, dass die Leistung steigt und Slack fast auf Null sinkt, sobald das Budget zur Ressourcenallokation verwendet wird. (Fischer et. al, 2002: 862) Außerdem sinkt durch ein Informationssystem die Informationsasymmetrie, es wird ein Anreiz für wahre Berichte gesetzt und der Slack sinkt, auch aufgrund des sozialen Drucks. (Fischer et. al, 2002: 849) Genau diesem Ergebnis widmen sich Arnold & Gillenkirch (2015: 2), indem sie herausfinden wollen, ob es effektiver ist, zwei einzelne Budgets für die Ressourcenallokation und Entlohnung zu verwenden oder ein Budget für beide Zwecke. Die ökonomische Theorie würde zwei einzelne Budgets als Lösung vorschlagen, wenn beide Ziele im Konflikt zueinander stehen. Mittels experimenteller Forschung konnten die Autoren aber herausfinden, dass ein Budget für beide Zwecke die Kooperation und Leistung des Managers steigern können. (Arnold & Gillenkirch, 2015: 13)

Als Zwischenfazit kann gezogen werden, dass die standardtheoretischen Vorhersagen zwar in der Tendenz mit den Ergebnissen der Experimente übereinstimmen, nicht jedoch in der Höhe. Ein Grund dafür ist, dass die Budgetmeldungen auch von anderen Motiven abhängen, die in der Standardtheorie nicht abgebildet werden (ethische Bedenken wegen sozialer Präferenzen oder Präferenz für Ehrlichkeit, soziale Interaktion und daraus resultierend die Präferenz, als ehrlich/fair wahrgenommen zu werden). (Arnold, 2007: 83)

3.3 Budgetierung zur Ressourcenallokation bei ausreichend Ressourcen

3.3.1 Antle & Eppen (1985) als Basisexperiment

Antle & Eppen dienen als Ausgangsexperiment zur Investitionsbudgetierung. Die Ausgangslage gestaltet sich so, dass der Bereichsmanager den Kapitaleinsatz und die Rendite eines Investitionsprojekts kennt, wohingegen der Zentrale nur die Wahrscheinlichkeitsverteilung der Rendite bekannt ist. Die Kapitalkosten liegen beiden vor. Aufgabe der Zentrale ist es, die finanziellen Mittel zur Projektrealisierung bereitzustellen. Aufgrund seines Informationsvorsprungs hat der Manager einen Anreiz, eine niedrigere Rendite als tatsächlich zu melden, um mehr Kapital als notwendig von der Zentrale für das Projekt zu erhalten. Ziel des Managers ist es, den Slack zu maximieren, wohingegen die Zentrale den erwarteten Present Value des Investments maximieren möchte. Die optimale Lösung für die Zentrale für dieses Problem wäre, dass die Zentrale dem Manager eine kritische Rendite (Hurdle Rate) vorgibt, die immer größer als die Kapitalkosten ist. (Antle & Eppen, 1985: 163-164) [S]Vgl. dazu[2]. Bis zur Meldung dieser Hurdle Rate erhält der Manager nur eine Minimalentlohnung und keine weiteren Ressourcen und muss somit auch keine weiteren Erträge realisieren. Ab dieser von der Zentrale festgelegten Hurdle Rate erhält der Manager einen festen Betrag an Ressourcen und muss das Projekt umsetzen. Im Optimum gilt, dass diese Hurdle Rate größer als der Kapitalkostensatz ist, und dass der Manager bei Projektrealisierung stets mehr Ressourcen als notwendig erhält. Dieser Vertrag führt zu wahrheitsgemäßem Bericht über anfallende Kosten und Renditen. (Arnold, 2007: 75)

3.3.2 Evans et al. als neues Grundmodell und andere Erweiterungen

Die Studien und vor allem das experimentelle Design von Antle & Eppen und Evans et al. stellen eine wichtige Grundlage für die weiteren experimentellen Forschungen dar. Die wichtigste Erweiterung und neue Grundlage für viele weitere Autoren ist die Studie von Evans et al. [U] Aufgrund der Relevanz wird das Experiment in Anhang 3 ausführlicher erläutert. Untersuchungsgegenstand im Experiment ist, ob die Präferenz des Managers neben der Entlohnung auch die Ehrlichkeit beinhaltet und falls ja, ob die Ehrlichkeitspräferenz den Wert der Kommunikation steigert. (Evans et al., 2001: 538) Sie kommen zu dem Ergebnis, dass eine Präferenz für Ehrlichkeit gegeben ist, obwohl es dafür keine finanzielle Entlohnung, sogar einen finanziellen Anreiz zum Lügen gibt und dies obwohl es an Kontrollen und Reputationseffekten fehlt. (Evans et al., 2001: 552-553)

Hannan, Rankin & Towry (2006: 889) führen ein Informationssystem ein und testen den Einfluss generell und dessen Präzision auf die Ehrlichkeit und den Abbau der Informationsasymmetrie. Sie kommen zu dem Ergebnis, dass die Existenz eines Informationssystems die Ehrlichkeit steigern kann, weil die Informationsasymmetrie sinkt. Ein weiterer Grund dafür ist das sog. Impression Management [Y] Beim Impression Management legen Manager Wert darauf, welchen Eindruck sie auf andere hinterlassen, es ist ihm z.B. wichtig, als ehrlich oder fair wahrgenommen zu werden. Der Manager investiert in Impression Management ohne finanzielle Anreize, sondern lediglich aufgrund sozialer Anerkennung (Vgl.[23]). . Beim Impression Management legen Manager Wert darauf, welchen Eindruck sie auf andere hinterlassen, es ist ihm z.B. wichtig, als ehrlich oder fair wahrgenommen zu werden. Der Manager investiert in Impression Management ohne finanzielle Anreize, sondern lediglich aufgrund sozialer Anerkennung. (Hannan, Rankin & Towry, 2006: 891-892) Bezüglich der Präzision des Informationssystems müssen die Ergebnisse differenziert betrachtet werden: Im präzisen System sinkt die Ehrlichkeit verglichen mit einem unpräzisen System, da die Kosten des Managers für noch ehrlichere Berichte im Vergleich zu Falschen zu hoch werden. Die Ehrlichkeit und der Unternehmensgewinn steigen, wenn das Signal des Informationssystems nicht mit dem Vertrag gekoppelt ist. (Hannan, Rankin & Towry, 2006: 910-911) Die gleichen Autoren testen in einer späteren Studie, wie die Anzahl der Manager die Budgetmeldungen beeinflusst. Sie stellen fest, dass mit einer steigenden Anzahl an Manager die Wahrscheinlichkeit der Projektablehnung durch die Zentrale steigt. Grund dafür sind soziale Normen, dass die Zentrale von zu hohem Slack im Budget ausgeht. Weil der Manager von der höheren Wahrscheinlichkeit der Projektablehnung weiß, baut er weniger Slack in die Budgetmeldung ein, um den sozialen Normen zu genügen. Somit steigt letztendlich die Effektivität des Budgetierungsprozesses mit einer steigenden Anzahl an Managern. (Hannan, Rankin & Towry, 2010: 505) [A]Vgl.[22]. Brown et al. (2014: 237) [F]Vgl. [8]. analysieren den Effekt von Rankings auf die Ehrlichkeit des Managers. Sie kommen zu dem Schluss, dass die Ehrlichkeit steigt, wenn das Ranking auf den Unternehmensgewinn basiert und sinkt, wenn es auf der eigenen Entlohnung aufsetzt. Somit kann die Zentrale unternehmensbezogene Rankings als effektives Mittel zum Kampf gegen opportunistisches Verhalten einsetzen. (Brown et al., 2014: 245) Die aktuellste Studie von Cardinaels (2016: 50) behandelt die Frage, wie die Unternehmenserfolgssituation die Ehrlichkeit beeinflusst. Die Studie kommt zu dem Ergebnis, dass die Ehrlichkeit im Bericht steigt, sobald der Kostenbericht des Managers Einfluss auf den Erfolg des Unternehmens hat. In dieser Situation fühlt sich der Manager verpflichtet, ehrlich zu berichten, um dem Unternehmen zu helfen, profitabel zu bleiben. (Cardinaels, 2016: 60)

Im zweiten Fall haben die Entscheidungen der Zentrale direkte Konsequenzen für den informationsabgebenden Bereich über die Ressourcenallokation. Auch hier spielen Präferenzen, die nicht in der Standardtheorie verankert sind, eine Rolle. Hier wurde gezeigt, wie solche Präferenzen auch in Relation zum finanziellen Nutzen gestaltet sind. (Arnold 2007: 91)

3.4 Budgetierung zur Ressourcenallokation bei knappen Ressourcen

3.4.1 Groves & Loeb (1979) als Basisexperiment

Groves erste allgemeine Erkenntnisse zur Teamtheorie wurden von Groves & Loeb zum sog. Groves-Mechanismus weiterentwickelt. Der Groves-Mechanismus ist für die Budgetierungsproblematik erweitert worden und stellt ein Anreizsystem zur wahrheitsgemäßen Berichterstattung dar. Hierbei wird jeder Manager auf Basis des tatsächlichen Bereichsgewinns und der gemeldeten Bereichsgewinne der anderen Manager entlohnt. (Groves & Loeb, 1979: 226) [K] Vgl.[20]. Die wahrheitsgemäße Berichterstattung entsteht als Gleichgewicht in dominanten Strategien. (Arnold 2007: 91) Dieser Mechanismus ist im Gegensatz zum Weitzman-Schema zur Ressourcenallokation geeignet, generell vielseitig einsetzbar. (Groves & Loeb, 1979: 230) Spannend bleibt die Frage, warum der Groves-Mechanismus trotz des theoretischen Optimums an wahrheitsgemäßen Berichten kaum Anwendung in der Praxis findet.

3.4.2 Testen des Groves-Mechanismus

Waller & Bishop [N] Vgl.[33]. (1990: 815) analysieren die Situation zur Ressourcenallokation und vergleichen drei Vergütungssysteme: den Groves-Mechanismus (G), eine einfache Bereichsgewinnbeteiligung (B) und eine Bereichsgewinnbeteiligung-Plus-Strafe (BPS), wobei die Strafe für Unterfüllung des Budgets gezahlt werden muss. Im Resultat ist G besser als B. Grund dafür ist, dass weniger falsch dargestellt wird, weniger Ressourcen suboptimal allokiert werden und der Unternehmensverlust insgesamt geringer ausfällt. Allerdings ist BPS mindestens genauso gut wie G bzgl. der Falschdarstellung. Dieses Ergebnis kann damit erklärt werden, dass BPS leichter zu verstehen ist als G und unabhängig von der Zusammenarbeit der Manager funktioniert, was eine Bedingung für G ist. BPS ist sogar besser als G hinsichtlich der Kontrolle der Ressourcenkonsums, da BPS den Manager zur Investition zwingt, damit dieser sein Budget erreichen kann. (Waller & Bishop, 1990: 826) In einem anderen Experiment untersuchen Arnold & Ponick (2006: 89) s die Auswirkung anonymer Kommunikation auf die Bugdetmeldung in G. Sie kommen zu dem Fazit, dass signifikant unterschiedliche Meldestrategien im Treatment mit und ohne Kommunikation auftreten. Ohne Kommunikation kommt es in 44 % der Fälle zu wahrheitsgemäßer Berichterstattung, mit Kommunikation sogar nur in 22 %. Der Grund für den Fall ohne Kommunikation kann auf Verständnisprobleme der Teilnehmer bzgl. G zurückgeführt werden, koordinierte Manipulationsstrategien erklären den Fall mit Kommunikation. (Arnold & Ponick, 2006: 101-102) [Q] Vgl.[5].Somit lässt sich festhalten, dass Kommunikation erheblichen Einfluss auf das Verhalten der Experimentteilnehmer hat. Durch die Möglichkeit der Kommunikation verhalten sie sich kooperativer, entwickeln stabile Kooperations- und sogar Manipulationsstrategien. Durch Absprache können die Manager ihre Entlohnung in G steigern. (Arnold & Ponick, 2006: 111) [R] Vgl.[5].

Im Fall 3 herrscht die gleiche Ausgangslage wie in zweiten Fall bis auf die Ressourcenknappheit. Dadurch entstehen Interdependenzen zwischen den Bereichen, weil die Meldung des einen Bereichs Auswirkung auf die anderen Bereiche hat. Der Vergleich von G und Weitzman-Schema ist problematisch, da das Weitzman-Schema nicht zur Ressourcenallokation entwickelt wurde und somit schon aus standardtheoretischer Sicht nicht zum optimalen Ergebnis in diesem Fall führen kann. (Arnold 2007: 93) [U] Vgl.[6]. Als Fazit zu G gilt: In der Theorie führt G zwar zum optimalen Ergebnis aufgrund des wahrheitsgemäßen Berichts, in den Experimenten konnte jedoch gezeigt werden, dass die Manager durch Absprache ihre Entlohnung steigern können, sodass G nicht kollusionsresistent ist. G findet in der Praxis kaum Anwendung. Gründe dafür sind u.a. unrealistische Annahmen, Implementierungs- und erhebliche Ver Die Budgetierung bleibt trotz der teilweisen scharfen Kritik, dass sie z.B. zu langsam oder zeit- und kostenaufwendig sei, und der neueren Entwicklung in der Praxis hin zu Better-&- Advanced-Budgeting und sogar zur Abschaffung in der Beyond Budgeting-Bewegung eines der wichtigsten Steuerungsinstrumente in Unternehmen. Aufgrund dieser Tatsache ist und bleibt es für Unternehmen von großer Bedeutung, die Verhaltenswirkung von Budgetierung auf die Mitarbeiter zu verstehen. Auch deshalb ist es unerlässlich, dass die Forschung weiter im Bereich der Budgetierung und deren verhaltenswissenschaftichen Auswirkungen in die Tiefe geht. Gerade die weit verbreitete experimentelle Forschung kann mit deren Vorzügen einen großen Beitrag dazu leisten. Dagegen steht die Umfragemethode, die in neuester Zeit Einzug in die Forschung erhalten hat. Die experimentelle Forschung in der Budgetierung kommt zu dem Schluss, dass es notwendig ist, die traditionelle P-A-Theorie um verhaltenswissenschaftliche Aspekte zu erweitern, um Verhaltensmuster der Manager, gerade in Bezug auf dessen Ehrlichkeit und der damit verbundenen Slackbildung, verstehen zu können. Die Studien zeigen, dass das Weitzman-Schema grundsätzlich zu wahrheitsgemäßen Berichten führen und somit Slack senken kann, allerdings nur, wenn die Berichte der Manager nicht zur Ressourcenallokation verwendet werden. Für diesen Fall führt der Groves-Mechanismus zu wahrheitsgemäßen Berichten. Zu besseren Ergebnissen als das Weitzman- oder Groves-Schema führen Gesamtgewinnbeteiligung-Plus-

Strafe oder Gesamtgewinnbeteiligung mit weiteren Kontrollelementen wie u.a. Ratchets, der Möglichkeit der Aufdeckung durch Audits, Feedback, oder gleichgestellte Kollegen. Entscheidend dabei ist die Ehrlichkeit des Managers, die sich aus seiner Präferenz für Ehrlichkeit, seinen ethischen Bedenken oder seinem Wunsch, als ehrlich wahr genommen zu werden, zusammensetzen kann. Teilweise kann selbst ein starker finanzieller Anreiz zum Lügen die Ehrlichkeit des Managers nicht verringern.

Die meisten Experimente gehen mit der P-A-Theorie einher, doch teilweise kommt es in den Ergebnissen zu Abweichungen. Einen ersten Schritt zur Annäherung der P-A-Theorie an die Verhaltenswissenschaft macht Young, indem er sozialen Druck einführt und dadurch Slack senken kann. Weitere Untersuchungen (Waller, 1988; Cooper, Chow, Waller 1988; Frederickson et al. und Rankin et al., 2008) [W]Waller; Cooper, Chow, Waller; Frederickson et al. und Rankin et al. zeigen, dass die Manager ehrlicher berichten, als in der P-A-Theorie angenommen. Chow, Cooper, Waller & Waller stellen außerdem fest, dass Slack auch im wahrheitsinduzierenden Schema nicht auf Null sinkt, wie es laut Theorie sein müsste. Stevens erkennt einen Effekt von Reputation und ethischen Normen, die in der P-A-Theorie keine Rolle spielen. Brown, Evans & Moser führen noch weitere Beispiele auf, die Anomalien zwischen den Ergebnissen der experimentellen Forschung und der P-A-Theorie aufzeigen. Allerdings stellen sie auch fest, dass die P-A-Theorie eine anerkannte Theorie ist und einen geeigneten Startpunkt für die Analyse der partizipativen Budgetierung liefert. Die Abweichungen werden an den Vorhersagen der Theorie gemessen. Generell stehen die meisten Ergebnisse in Einklang mit der Theorie, es wurden allerdings acht größere Abweichungen festgestellt, derer es Wert ist, sie in neue Theorien münden zu lassen. Man muss in einem nächsten Schritt empirische Tests anstellen zur Klärung der Vorteilhaftigkeit der neuen, überarbeiteten Modelle im Vergleich zu den bereits bestehenden. (Brown, Evans & Moser 2009: 338-342) [X]Vgl. zu den Ausführungen[7].

Zu den offenen Forschungsfeldern ergibt sich folgendes Fazit: Gerade die Frage, wie sich gleichgestellte Manager und Vorgesetzte auf die Ehrlichkeit des Managers und somit auf die Slackbildung auswirken, birgt Potenzial für weitere Forschung. Weiterhin fehlt es an Forschung auf Seiten der Zentrale, also welche Präferenzen die Entscheidungen der Zentrale beeinflussen. Die Analyse der von standardtheoretischen abweichenden Präferenzen hat sich bis jetzt lediglich auf die Manager konzentriert, müsste doch genauso auf die Zentrale übertragen werden. Eine grundlegende Restriktion in den Experimenten ist der Aufbau des Experiments an sich. Hier müsste untersucht werden, ob sich die einfachen mechanischen Spielsituationen mit Studenten so auf reale Budgetierungsprozesse übertragen lassen, gerade in Hinblick auf die Macht der Zentrale.

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INTERNATIONAL INVESTMENT PROJECTS AS A COMPETITIVENESS FRAMEWORK OF COMPANIES

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Abstract

One-time processes that we call projects have a special role in the survival and development of a society. The basic characteristic of these processes is that, after their ultimate goal has been determined and their implementation leads to their achievement, they cease to exist. Objectives of one-time processes are especially important and they usually serve to achieve something entirely new that did not exist before. The greatest human achievements have been accomplished by using these one-time processes – projects, regardless of which human activity they are related to (flight to the moon - the Apollo project, the tunnel under the Mont Blanc, etc.). An investment project is a set of very complex activities and procedures in which, although all segments are taken into account, undesirable and unpredictable situations can always occur. In each project, no matter how similar or even identical to the previous one it may seem, attention should be devoted to the smallest of details to reduce the risks to the lowest possible level. Disregard could prove fatal for a company or organisation, and in case of a large project, it could lead to bankruptcy and liquidation of companies. A project is, in fact, a unique process, at least with the set object of the project, so the organisation must adapt to projects that are very different in terms of object, duration, ultimate goals, purpose, environment in which they appear, complexity in terms of costs, investments, etc. This is evident when projects related to new products are compared, projects of building an electric power plant, overhaul projects, and other.

Keywords: *international investment projects, company, competitiveness*

JEL Classification: G31, H43

INTRODUCTION

Work in an organisation is traditionally divided into projects and processes, i.e. operations. A project may be viewed as a final process of the execution of certain operations or activities that are logically related to the achievement of subgoals, and further connection of activities based on these goals results in the ultimate goal. Nowadays, in modern economic practice, they often overlap, because processes and projects share many characteristics: they have a goal and a purpose, they are carried out by people, they have limited resources, they are planned, executed and controlled. The main difference between a project and a process is uniqueness of the project. Likewise, a process does not have a defined completion nor clear ultimate goals; only defined tasks and work activities. The term programme implies planned and organised work undertaken to achieve long-term goals. It often consists of several related projects that share a common goal, strategies for its achievement, rules and values. The term project is used to describe activities that companies or organisations do not perform every day, but rather periodically and when necessary; they are thus unique and temporary. The term process implies a set of everyday activities in an organisation that continuously and routinely transforms certain organisational inputs into desired inputs. In its core, a process means a series of repetitive activities. A programme in practice often does not fully achieve its goals; instead, goals of individual projects that are complementary with programmes of the organisation in which it is implemented are usually achieved in the framework of the programme.1 Ten generally accepted characteristics of a project: a project is:2 a temporary venture that has a beginning and an end, results in a unique product or service, it is a one-time venture, each with its defined goal and purpose, it is directed to a specific, pre-defined goal, has its own budget, includes a schedule of activity performance, i.e. development phases that make the life cyle of the project, it presents the abilities of sponsors and project manager, sets quality standards, has its own structure, transforms the current state into future, desired state.

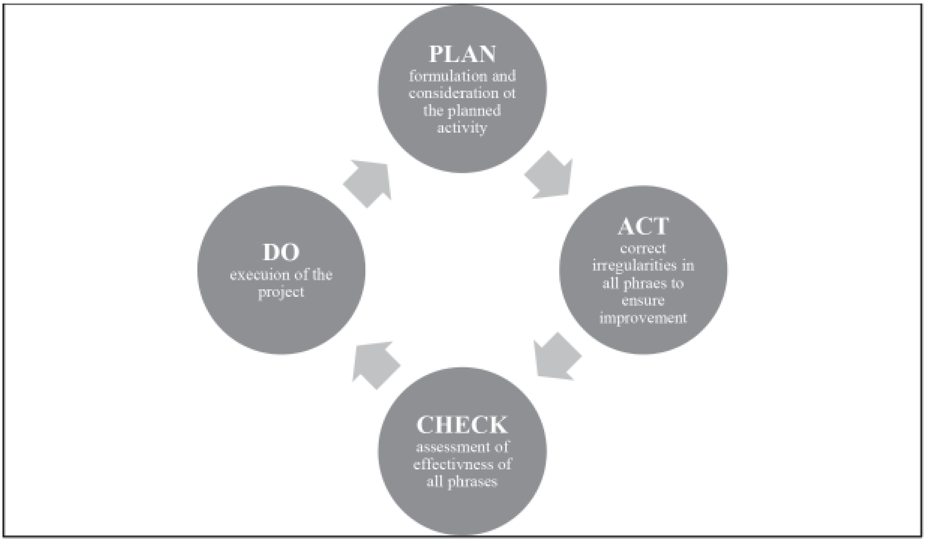
[1] Omazić, M. A., Baljkas S., Projektni Menadžment, Sinergija, Zagreb, 2005, p. 30-31

[2] Dujanić, M., Projektni menadžment, Polytechnic of Rijeka, 2010, p. 9-11

1. THE CONCEPT OF PROJECT MANAGEMENT

Project management is based on adequate planning and optimal design and dedication of the people working on the project, with the use of previous experiences that make organisational knowledge. The process of acquiring new knowledge is only possible through permanent search for problems and taking „ownership" of the problems by the project team. Identifying problems and solving them makes the key to success in the long run. Also, it is necessary to identify and solve problems as soon as possible to achieve a better end result.[3]

Image 1. Deming Project Management Cycle



Source: Authors according to Deming, W. E.: The New Economics, Massachusetts Institute of Technology Press, 1993, 35.

The first phase – **planning** – includes the formulation and consideration of the planned activity through the implementation of situation analyses, defining new models and developing an action plan for the transfer of the current state into the desired state.

The second phase – **implementation** – the phase of execution of the project that directly adds value to a product or service.

[3] Omazić, M. A., Baljkas, S., op. cit., p. 36-37

The third phase – **evaluation** – includes a critical assessment of project effectiveness, as well as the activities (were good results achieved?), and of the entire process (how effective was process management?).

The fourth phase involves changes in all phases and the application of acquired experiences, i.e. organisational knowledge in order to achieve improvement, i.e. gain a competitive advantage. All of the above is what we call in the field of quality the Deming cycle, i.e. PLAN-DO-CHECK-ACT, or the PDCA cycle. The process of acquiring new knowledge is only possible through permanent search for problems and taking „ownership" by the project team. Identifying problems and solving them makes the key to success in the long run. Also, it is necessary to identify and solve problems as soon as possible to achieve a better end result.

Project management is a management tool that connects hierarchical divisions and function-oriented organisational structures in the framework of project activities and during the execution of the project. This connection is achieved through organisational forms of management and project management according to the project team principle. Project management is both a problem and a skill – how to carry out a project in co-operation with the people in the organisation within the set deadline, with limited funds and the desired effect. It includes integrated coordination and leadership tasks, organisation and implementation of techniques. The key factor is synchronisation of time, costs and risk with other requirements, and the project should be organised accordingly. Namely, project management is responsible, depending on the type of project, for direct and indirect economic effects in the life cycle of the project. In project-oriented companies, project management operates in the entire process of the formation and completion of the project, from tender procedure, execution of the project, warranty period, to handover to the customer. In projects that provide revenue and profit to project-oriented companies and, at the same time, business and other effects for the clients/customers, project management is associated with responsibility for economic effects. The issue in these cases is also responsibility in the life cycle of the project.

1.2. THE FRAMEWORK OF 7-S PROJECT MANAGEMENT

Management needs planning to assist organisations in successful integration of various components and initiate constant changes in order to be more successful in achieving strategic objectives.

The 7-S model is used as a benchmarking tool and motivates organisations to continuous development; in the quality system, this is called continuous improvement. The model shows how success (or failure) follows the configuration of seven interrelated elements. If only two or three elements are in order, there are no benefits for the organisation or project.

Table 1. The 7-S Project Management

ELEMENT	DESCRIPTION
STRATEGY	The high-level requirements and the means to achieve them
STRUCTURE	The organisational arrangement that will be used to carry out the project
SYSTEMS	The methods for work to be designed, monitored and controlled
STAFF	The selection, recruitment, management and leadership of those working on the projects
SKILLS	Managerial and technical tools available to the project manager and members of the project team
STYLE-CULTURE	The underlying way of working and inter-relating within the project team and the respective organisation
STAKEHOLDERS	Individuals and groups who have an interest in the project process and its outcome

Source: http://www.kresimirbuntak.com/Utjecaj_suvremenog_projektnog_managementa.pdf (accessed on 03/03/2017)

The elements of the model can be divided into „hard" and „soft" considering the possibilities of their changing. The „hard" elements – strategy, structure and systems – are easier to define and identify, the management has a direct influence on them and they are easier to change. The „soft" elements – skills, staff, style, shared values – are more difficult to change directly and their change requires more time; they are influenced by organisational culture and are important for the success of the organisation just like hard elements.

2. THE COMPLEXITY OF PARTICIPATION IN INTERNATIONAL INVESTMENT PROJECTS

The implementation of complex investment projects in other countries, especially in geographically remote and „exotic" countries, brings to exporters and contractors a number of additional problems, challenges and obstacles which, in addition to the usual project activities, they need to overcome in order to successfully complete the projects. The International Chamber of Commerce in Paris (ICC) supplemented the rules several times (1953, 1967, 1980, 1990, 2000), and the last amendments were published on September 16, 2010. The amendments took into account important changes in international trade from 2000 to date, the use of electronic communication and changes in the shipping practice, possibilities of their use in domestic transport, security elements, etc. Incoterms 2000 prescribed 13 terms, of which each is defined by a three-letter acronym. Each parity belongs to a certain category (there are four categories – E, F, C, D), and each group indicates a different level of responsibility of the vendor as follows:[4]

- Category E – the vendor places the goods at the buyer's disposal in his own premises and has the lowest degree of responsibility for the goods.
- Category F – the vendor delivers the goods to the location determined by the buyer (FCA, FAS, FOB).
- Category C – the vendor agrees to transport the goods, but does not assume the risk of destruction or accidental damage after the goods had been delivered and sent (CFR, CIF, CPT; CIP).
- Category D – if the parity from category D has been agreed on, the vendor has the highest degree of responsibility and incurs all the costs and risks of delivery of the goods to the buyer at the final destination (DAF, DES, DEQ, DDU, DDP).

A particular problem that has arisen in the application of INCOTERMS was distribution of costs between the vendor and the buyer in relation with the manipulation of cargo at the destination terminal. The DAT term indicates that the vendor bears all risks in the movement of goods by the time of their delivery, i.e. unloading of goods from the vehicle (road, rail, sea or air transport) and placing these goods at the buyer's disposal at the agreed specific terminal in the destination country. The vendor is also responsible for the transit transport of goods through third countries. Accordingly, the biggest changes in Incoterms 2010 took place in group D; the above-mentioned parities DDU, DAF, DES and DEQ were erased, and new parities, DAT (Delivery at Terminal)

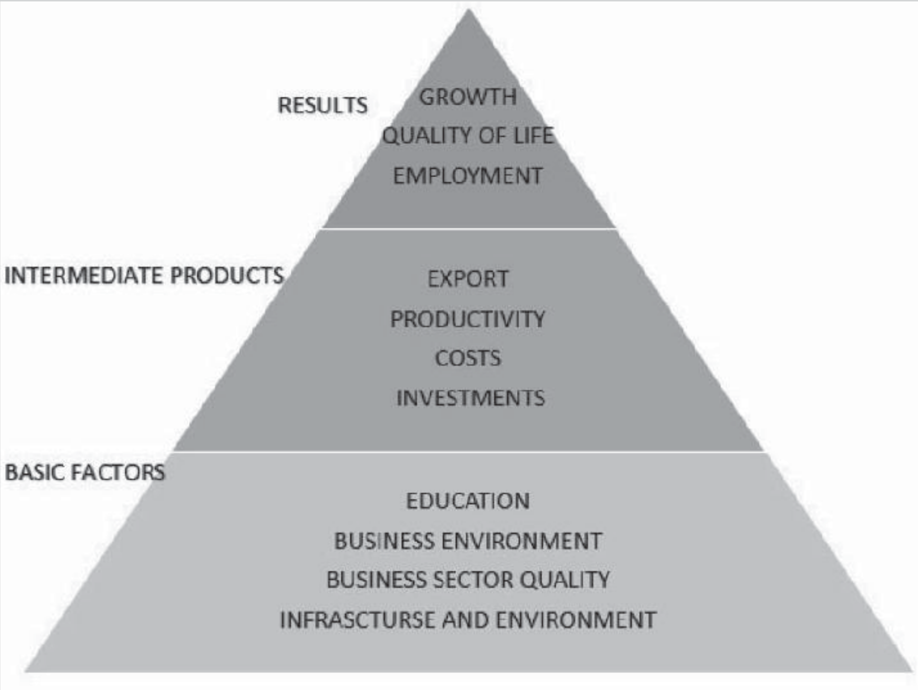
[4] D. Jurić, J. Mihić, „Prijelaz rizika s prodavatelja na kupca kod ugovora", Proceedings of the Faculty of Law of the University of Rijeka, (1991), v. 33, No. 1, 355-387 (2012)

and DAP (Delivery at Place), were included. A significant change also occurred with the FOB term applied in maritime transport and inland waterway transport, and consequently, the terms CFR and CIF. As a risk transfer point, the term„ship's rail" was abandoned, which has eliminated extensive and contradictory interpretations of this term. The risk of damage or destruction of items now tranfers from the vendor to the buyer at the time the goods arrive„on board of the vessel" when the entire shipment is loaded. Incoterms 2010 specifically indicates that the application of terms in maritime transport and inland waterway transport of goods (FAS, FOB, CFR, CIF) is not appropriate in case of container transport of goods. This has been prescribed because the technique of container transport and container handling does not correspond with the point of risk transfer determined by these terms. In the process of execution of an international investment project and use of Incoterms, correct parities need to be applied for the actual type of transport, i.e. if the goods are shipped by a boat, adequate parities should be used. It is also very important to indicate the exact place of destination and the version of the applied ordinance. Knowledge of Incoterms and parities is also important in the formation of prices in the offer, i.e. when calculations are made, because, for example, in certain parities (DDP-Delivered Duty Paid) the vendor delivers the imported and cleared goods to the buyer, and therefore, these costs (customs duties, taxes and other fees) must also be calculated in the offer.

2.1. QUALITY AS A COMPETITIVE PRIORITY OF COMPANIES

Quality management as a competitive advantage is the key success factor. Entrepreneurs in their business activities often think about how to increase their competitive position in the market. Except for the price of goods or services, a buyer also chooses a higher level of service and his needs keep growing, and meeting these needs has become more difficult. The most famous international business standard that a company can include in its business operations is ISO 9001:2008, which represents a quality management system for goods and services. In recent years, the role and importance of quality has increased all over the world, including Croatia. Nowadays, more and more companies turn to quality as a business priority.

Image 2. A Pyramid of Competitiveness (according to the National Competitiveness Council)



Source: https://bib.irb.hr/datoteka/578541.WHP-2007-07-1-01_Kvaliteta_i_konkurentnost.pdf (accessed on 03/03/2017)

The microeconomic dimension of competitiveness can be viewed from two perspectives – effectiveness and quality. The modern view of quality, however, does not make a distinction between these perspectives, and integrates effectiveness criteria as well as quality criteria into a unique quality management system. In the context of the pyramid of competitiveness, it is fair to say that the task of quality management is to provide the basic factors, manage products and achieve results. International success of a certain branch of industry or a company can be achieved only in terms of a positive simultaneous impact of four characteristics that affect the determination of the environment in the framework of which local businesses compete. These characteristics are the following:

- *Earning conditions*. The position of the country in terms of sufficiency and quality of production factors necessary for competition in a particular industry, such as, for example, skilled labour force or infrastructure.

- *The level and structure of demand*. The scope, structure and intensity of domestic demand for products and services in branches of industry.
- *Ancillary industries*. The presence or absence of international competition of suppliers and related branches of industry in the domestic market.
- *Strategy, structure and competition of companies*. The conditions under which a country determines the manner of establishing companies, how they are managed, as well as characteristics of domestic competition.

In order to achieve success on the market, a company needs to take into account two factors: attractiveness of the activity it is engaged in and in which it competes, and its relative position in the economic sector in which it operates. A successful company will be one that achieves a competitive position which in the best possible way aligns its activities with available resources – the company must choose the position in which it will best defend itself from the competition, which is why competitive advantage is linked to current activities and markets. In achieving competitiveness, a company must invest in its resource strength. It is an element of company's success or a feature that increases its competitiveness.[5] This resource strength is the result of learning and experience; it is not just a specific asset of the company. Therefore, this resource strength is also called company expertise that results from cumulative learning and development of skills of internal activity execution. The basic expertise makes competitive strength more valuable than expertise because it greatly contributes to success on the market. Specifically, strategic management deals with achieving competitive advantage in the company's business activities. Many theories and approaches study how competitive advantages can be achieved. They assume different sources of competitive advantage and, accordingly, different bases for competition and influence among organisations.[6]

CONCLUSION

It can be concluded that a complex investment project is expensive, has very complex activities where nothing should be left to chance, and that project management is therefore very important. Meticulous planning, organisation, man-

[5] Vrdoljak Raguž, I., Jelenc, L. and Podrug, N.: Izvori konkurentske prednosti u XXI. stoljeću, University of Dubrovnik, Dubrovnik, 2013, p.10

[6] Sikavica, P., Bahtijerević-Šiber, F., Pološki-Vokić, N.: Temelji menadžmenta, Školska knjiga, Zagreb, 2008, p. 199

agement and control of the execution of tasks are basic preconditions for the implementation of any project from beginning to end in the framework of costs and benefits that are defined and planned before the project starts. Project management includes planning, organisation, monitoring and control of all aspects of the project, along with management of everything involved in the project to ensure achievement of project goals within the agreed scope as well as temporal, financial and qualitative standards. The use of tools and techniques of project management allows project managers and members of project teams planning, execution and control of projects within a limited time, budget, and quality requirements. In today's world of great and rapid changes, it is necessary to adapt to market demands, keep pace with the competition and fight for every customer. Company competitiveness is achieved by complementarity of project management and implementation of quality. With the development of the world economy and market liberalisation, quality has become a dominant factor of competitiveness, and the goal of every company is to maintain a competitive advantage. This is why companies invest more effort in improving and enhancing the project management process, project management, as well as quality management.

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STRATEGIC MANAGEMENT, ORGANIZATIONAL CHANGE AND REPRESENTATION OF AN INDIVIDUAL IN THE LIGHT OF PHILOSOPHICAL ANTHROPOLOGY

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Abstract

In the quest of excellence and innovation, modern management faces the challenges of creating competitiveness of enterprise. More than ever before, the pressure on managers and leaders in organizations has been increased to create new products and a new value to the organization. The need for constant growth and development seeks entry into the personal and organizational change. Here, the key question is how managers and leaders will come to the inspiration and vision regarding what the organization and the people in it in the future should do. This is the key question of leadership and strategic management. Thereat the question what in the future we should do is far more important than how the organizational changes will be implemented. The manner on how to implement organizational change is more a technical issue, and the direction where the development of the enterprise is heading an issue which in itself includes a compass, i.e. in which direction the company is developing.

This paper deals with managers and leaders in the companies, with those that determine the direction the company is going to and implement the changes, and how to embed into the dynamic, development and strategic thinking. In the strategic management, the main challenge was and still is a person who has a vision of the future development of the company.

The aim of this paper was to explore the variety of intelligence that managers and leaders have at their disposal, while shaping the future of the company. Besides the types of intelligence, we have identified the four basic levels of the person. For that purpose, it has been studied the achievements of various scientific *disciplines that are directly related to an individual, especially philosophy, neuroscience, psychology, logo therapy, anthropological medicine, to meet through the various scientific fields and with the help of modern scientific knowledge could understand how to help persons, such as managers and leaders in achieving their specific tasks.*

The research results reveal that man has four levels of its individuality (biological, psychological, anthropological and theological levels), and that the anthropological level is precisely crucial for the development of freedom of thought, ideas, inspirations, visions, especially freedom from the shackles of limitations and static reasoning. From an anthropological level rise freedom, creativity, vision, intellect, character, interpersonal relations and other person's qualities. These are the very qualities of an individual that have their origin in the anthropological level of man and its affirmation in the strategic management. By exploring specific anthropological level we are able to correctly understand how to achieve inspiration, innovation, vision, intellect and to offer a versatile help to the managers and leaders in the exercising of their duties, particularly in the area of strategic development of the company. In conclusion, it is required to meet the various scientific disciplines to offer a versatile answer to the question of who the individual is and how he comes to vision, leadership and healthy, dynamic development.

Keywords: *organizational change, strategic management, leader, leadership, philosophical anthropology.*

JEL Classification: O150

1. INTRODUCTION

In a world that is constantly changing and it is changing more quickly, the key question is what managers and leaders should undertake in order to keep companies maintain in the market. So far, the emphasis was placed on flexibility, change management, sustainable development, and corporate social responsibility, the introduction of new products, the sustainability of supply chains, innovation, ethics in business and others.

This thesis is about the employees who create change and seek for the answer on the question: how managers and leaders can get into the dynamics, development and strategic deliberation. The main challenge in the strategic management was and it still is a person who possesses the strength of vision for the future development of enterprises. Thus, the person is the holder of the vision. In addition to vision, is required and the ratio (intellect) so the vision could structure and develop a strategic change plan in feasible stages. Thereby, it is more important where the company is going (how to choose the direction of a development) than where it is today in the stock market. Therefore, with this work, it is intended to explore the kind of intelligence that managers and leaders have available while they are creating the future of the company. Intelligence is an attribute of a man. Computers too have high IQ, yet they still cannot process information from the environment of enterprises and intuitively comprehend the environment. The subjects of study in this thesis are the types of intelligence, human resources and its structure. For this purpose were studied grasps of various scientific disciplines that touch the person, in particular philosophy (philosophical anthropology), neuroscience, psychology, logotherapy, anthropological medicine as a kind of novelties that would through the interaction of various scientific fields and with the help of modern scientific knowledge understand how to help managers and leaders in achieving their specific tasks.

Research methods used in this thesis: the inductive method, deductive method, comparison method, detection method, a method of analysis, a method of synthesis, method of abstraction, concretization method, generalization method), method of description, the method of compilation.

2. STRATEGIC MANAGEMENT AND HUMAN RESOURCES

Managers and leaders are trying to provide to the company a competitive advantage by using strategy. If profit was the only goal of the business things would seemingly look easy. But since the term competitiveness includes various business aims the term strategy becomes an extremely complex issue. Especially when there is strong competition, when the habits and tastes of consumers change, when the emphasis is on the strategic partnerships and the exchange of information in the supply chains and when the reputation of the company is its assets. Managers and leaders are responsible for the achievements of various strategic objectives. Thompson et al. considers designing and implementing strategy as a responsible, comprehensive management job and he cited the following five stages in the process (Thompson et al.; 2008, p. 17):

a) Development of a strategic vision of enterprise development, which includes a focus on products, customers, markets and technology,

b) The establishment of targets, which will appraise the success of the company in achieving its strategy

c) Development of strategies for achieving the goals and guiding enterprise to the destination specified by the management

d) Effective enforcement of the chosen strategy

e) Monitoring strategy development and implementing corrective actions due to the new circumstances in the enterprise's environment, changes within the enterprise,etc.

It is easy to see, each strategy is based on the development of a strategic vision of the company. It is important to note that it is extremely difficult to give an answer to the question in which direction the enterprise should develop. Although, the enterprise has a whole set of information on its competitors, customers, suppliers, the efficiency of internal processes is still difficult to answer the question about our next innovation. This often includes decisions on new markets, new products or services, new technologies, and possibility of new quality relation to customers, strategic alliance with suppliers. It is more of a question of superior intuition, intelligence, insight, especially in innovation.

Crucial question that it imposed is how workers can become innovative and what qualities must have managers and leaders in the process.

Savolainen and López-Fresno (2012, p. 134) concluded that the core of the leadership is confidence. Confidence in leadership depends on: expertise, integrity, benevolence and credibility. Precisely these qualities of the leadership make a good basis for a systematic innovation.

Podrug and Ajduk (2015) in their study empirically proved a link, the causal link between confidence and innovation used to achieve the company's competitive advantage. As the confidence in the ability grows, integrity and benevolence of the employees and innovation behavior, the development of innovative products, strategies and processes within the Croatian companies grow, and vice versa. The authors emphasize the importance of vertical trust -the employee's trust in managers and leaders and they affirm the relevance of trust in creating value for the sake of the innovation and achieving competitive advantages.

Regardless of the already existing information basis, it is not easy for managers and leaders to determine the direction of long-term development of the company. The reason for this is in the fact that the environment of the company is changing rapidly. Therefore decisions of managers and leaders make strategic vision for the development of enterprises, it is a glance into the future with a lower or higher dose of imagination and with reasonable and logical explanation why should we go exactly there. (Thompson, et al.; 2008, p. 18). Therefore, every vision should comprise all the key stakeholders: customers, markets, products or services, partners, technology, and the values that company intercede for in the future.

Strategic vision must be clear, oriented towards the future; motivating. It should be vivid, directing, focusing, flexible, feasible, desirable, and easy to impart (Thompson et al., 2008, 13). All the employees must accept the vision, only then it can be a guiding principle in business (Duspara, Knežević, 2017, p. 33). It is necessary to identify the values that enterprises cherish. Based on the relations of the company towards its employees, customers, suppliers and others are values that are leaders and managers creating and that represents their personal contribution to the company. In that context are often mentioned commitment to quality, courtesy, corporate social responsibility,

Honesty, confidence among employees, confidence between the company and its partners, building partnerships, nature conservation, etc. It can be concluded that the company should develope comprehensively, and that includes the value development system in the company and such a company becomes an entity that contributes to the common good of society and all stakeholders.

Here is important to mention that the managers and leaders are in the conflict of the objectives, considering the pressure for profit maximization and shareholder satisfaction (short-term horizon), the firm's survival, strengthening organizational capacity of the adjustment, human resource development, building a learning organization (long term horizon).

Possession of an ethical compass by leaders and managers is crucial for both operational and strategic decisions. Ethical priciples in operations are not so different from general ethical principles (Thompson, et al.; 2008, p. 283).

When speaking of managerial ethics there are three basic categories of managers considering the ethical and moral principles in business (Thompson et al, 2008, p. 284):

A. The moral managers : Hold high moral stands and expect the same from their employees

B. The corupted managers : Ignore ethical principles and consider them an obstical in business, care for their own interenst, are greedy, "will crush or get crushed", focus on own gain and organizational gain (short-term horizon)

C. The amoral managers: here are two subcategories of amoral managers:

Consciously amoral manager: believes that business and ethics do not mix and believes that in their job they do not need to abide to the moral-ethics rules. The perception of good and evil goes the way of "all that is not forbidden is allowed"

Inadvertently amoral manager: Negligent with regard to business ethics inconsistent, and can be blind to the moral-ethical dimension of business decisions.

Both types of amoral managers believe that it is important to operate accordingly with the law, but do not see why it is forbidden to do everything that the law allows.

In the background of unethical behaviour can be observed the existence of a series of deviant behaviour manager and the leader blind to moral and ethics, greed, "trampeling over others" for survival, short term horizon, creating his own "sense" of things and self-justification instead of accepting the generally accepted moral and ethical principles of society. Therefore the company should be ethical for two important reasons (Thompson, et al .; 2008, p. 298):

a) Indecent strategy adversely affect the character of employees

b) Ethical strategy is in the long-term interests of shareholders and company owners

Beside the two mentioned reasons, the decisive influence on the value of the company is its reputation in public: business and general public. Once a company loses its reputation in the business community, it is difficult to regain it. As already, mentioned innovation is associated with trust of the employees in the leaders, trusting their integrity, credibility and expertise. This raises a question, what intelligences must managers and leaders have at their disposal when leading their systems towards achieving competitiveness and sustainability, and to achieve multiple objectives. In that sense, it is necessary to learn an interdisciplinary contemporary scientific knowledge of different scientific fields.

3. TYPES OF THE INTELLIGENCE AND THE CONCEPT OF IQ, EQ AND SQ

Quotient analytical intelligence marked most of the 20th century. Formerly it was thought that people who have high IQ were destined for a successful career, and IQ was paid substantial attention. Thus, testing IQ found its place in most of the selection procedures in the process of search and selection of human resources for the company. This kind of intelligence is considered responsible for solving logical tasks. Psychologist Lewis Terman at Stanford University developed the IQ tests that two million Americans dealt with during the First World War. (Daniel Goleman, p. 46).

Howard Gardner believes that this concept of thinking based on the IQ until today permeates the entire society. Howard Gardner mentions seven types of intelligence (Goleman, p. 46).What experience has shown, and in the 90s Daniel Goleman had confirmed, is the fact that a high IQ does not necessarily lead to the success of the individual. Goleman wonders, "What are the factors at work when people with high IQ torture and perceived failures, while those with modest IQ progressing amazingly well?" (Goleman, p. 4). Thanks to modern scientific research, Goleman sees a new kind of intelligence that is called emotional intelligence and the professional public enters under the label EQ.

D. Zohar and I. Marshall reveal the "third Q", in addition to IQ and EQ, they give him a label SQ and call it spiritual intelligence, which we use to estimate our life processes, create a vision of the future, SQ provides us with a foothold for growth and transformation (Zohar and Marshall, p. 10).SQ allows us to: discover new values, take over responsibilities, create vision, creative development, innovation, inspiring. Exploring and discovering the SQ, the authors estimate that in every individual there is a deep self, a highly developed SQ consciously serves the self. Unlike H. Gardner, Zohar and Marshall think that there are fundamentally three types of intelligence related to three specific centers in the brain: IQ, EQ and SQ, and that all other intelligence that Gardner mentioned, are subcategories of these three intelligence (Zohar and Marshall, p. 232). Zohar and Marshall in their research refer to a neuropsychiatrist Michael Persinger, who in 1990 discovered the "divine point" in the brain - a group of nerves in the brain that become active when a man is talking about spiritual topics. To that research, they add discoveries of neurologist VS Ramachandran who proved that man is able to place the so-called „core issues „that holds and applies a feel for a broader meaning and value." (Zohar & Marshall, 2002, p. 14).

Spiritual intelligence are investigating the authors of different scientific research areas. For this research were studies the results of scientific researches in the fields of management and business.

Karimi & Karimi proved that there is a significant correlation of spiritual and emotional intelligence on the quality of working life (quality of work life) and engagement at work (work engagement). It was researched a model of the relationship between emotional intelligence and spiritual intelligence. Both types of intelligence (spiritual and emotional) impact directly on the quality of working life, and indirectly, through the quality of working life, positively on engagement at work (Karimi & Karimi, 2016).

Wang, Xu and Qian (2007) construct spiritual intelligence quotient dimensions and create Ph assessment system. They found a positive association between the dimensions that constitute the spiritual intelligence quotient with the research Ph students' performance (task performance and contextual performance).

Hacker and Washington (2017) in their study examined the performance of the curriculum for the leader education after that in the curriculum was included the study of spiritual intelligence, in addition to human and emotional intelligence. Self-assessment of participants (160), it was confirmed the value of this integrated approach to developing a new generation of persevering leaders with a strong sense of individual purpose, vision and values.

Ahmed, Arshad, Mahmood, Akhtar (2016) in their study emphasized the importance of a holistic approach to human resources. Logic (IQ) and emotions (EQ) cannot be the only source of development of human potential but in this development, it is important to include the spiritual dimension (SQ) so the mechanism of development of human potential would be holistic.

Gage and Smith (2016) pointed out that the post-modern world needs a new view of leadership and a holistic approach to understanding of the human intelligence. In a study of the management and effectiveness of school principals, they emphasized the importance of the so-called Leadership intelligence, whose real strength lies in the balance of rational (IQ), emotional (EQ) and spiritual intelligence (SQ).

Ekegren i Dåderman (2015) in a study that includes 125 participants measured three types of leadership intelligence (rational, emotional and spiritual) before leadership training course and after leadership training course. The results of their study concluded that participants significantly improved average scores in all three dimensions of leadership intelligence and that such programs of improving leadership intelligence lead to a higher quality of leadership.

Martins (2011) in his article is committed to the assessment of student achievement that are based on the theory of multiple intelligences of Howard Gardner from 1983.Assessment of student achievement of students includes diversity in the assessment according to the types of intelligence and knowledge exchange on relations teacher-student and student-student. Preliminary results indicate that various intellectual potentials of students can be successfully developed and assessed.

It is therefore necessary to understand the basic types of intelligence and how they contribute to the success of managers and leaders. As already known IQ is rational analytical intelligence. It helps managers and leaders, for example, in how to collect and structure information within the company and outside the company from competitors, customers, supply chain, how to develop a strategy and so on. EQ is emotional intelligence and helps managers and leaders in managing relationships with employees, customers, suppliers, etc. SQ is spiritual intelligence and helps managers and leaders in creating innovative vision and value system that contributes to the long-term survival of the company. SQ is the compass of the person, and the compass is extremely important in strategic management because the company is a part of an overall system of social systems with multiple impacts on the overall community.

4. THE ACHIEVEMENTS OF THE OF PHILOSOPHICAL ANTHROPOLOGY, LOGOTHERAPY, ANTHROPOLOGICAL MEDICINE AND NEUROPSYCHOLOGY

It is necessary to investigate the specificity of human resources in order to find an answer to the question who is a man, what is his structure making it one specific man, if man instinctively or conceived being, does a man have a need for reason, why some managers are ethical and other are not. For the answers to these questions, it is necessary to interdisciplinary research on the results of various scientific fields.

5. HUMAN FROM A MEDICAL STANDPOINT

A. Jores, internist, and former Rector of Hamburg University, compares the human diseases with animal diseases and concludes that it is conspicuously large number of human diseases are unknown to animals.

V. Frankl, the founder of logotherapy, advocates existential analyze and solving meaningful or frustrating of a humans life through human spiritual dimension. D. Amen, psychiatrist concludes that a positive decision, words and thoughts rehabilitate brain, and every immoral procedure and negative attitude destroys brain cells. (Ivančić, 2006, p. 8)

M. Scheler considers that for the individual and society it is important to live and cultivate human spiritual dimension. (Ivančić, 2006, p. 9).

6. THE MAN FROM THE ASPECT OF PHILOSOPHICAL ANTHROPOLOGY

T. Ivančić, a former rector of the University of Zagreb, priest, theologian and scientist in his many years of research concluded that man is the unity of matter and spirit, that "in a man there are spiritual wounds, diseases and traumas and that they need to be treated" (Ivančić, 2006, p. 4). In his study of the spiritual dimension, Ivančić includes findings of other scientists, as stated below. Both Rahner and von Balthasar believe that human disease is a sign of a deficit of the foundations of his being. Haering argues that the disease is a consequence of the rejection of values. B. Haering argues that the rejection of values, a man becomes ill and heals when he re-accepts values (Ivančić, 2006, p. 8).

M. Beck in his research concludes that every cell of the human body has a spiritual dimension and that it is necessary to comprehensively diagnose and treat diseases based on pneumatic and psychosomatic levels (Ibid, 2006, p. 8). Exploring the knowledge of scientists in different scientific areas, Ivančić in the light of philosophical anthropology analyzes the philosophical and organic aspect of the spiritual soul, the pathology of the spiritual soul and spiritual therapy method - hagiotherapy which makes a man a dignified, capable, creative.[1] First Ivančić theoretical research and application to hagiotherapy with people concluded that the spirit of"freedom of space and time, transparent, self-conscious, transcendent, self-reflexive, superior, able to transform all" (Ivančić, 2006, p. 5). Therefore, human anthropology Ivančić conculdes, makes the unity of matter and spirit, and manifest themselves through their own personality and moral decisions that man makes, in accordance with their own conscience. Conscience is the voice of the battle and its transcendental. The core is spiritual, and when a human's spiritual dimension heals, a man stays being at his core. It is possible for a man to learn about his core, thanks to its spiritual dimension and structure of the spiritual soul.

Ivančić, synthesizing research of other scientists and his work concludes that a man has four levels Biology (with the plants, animals and man), psychological (some animals, man), anthropological level (only man, and thats what makes him a person) and theological level (only human). Anthropological level Ivančić considered the key to all-round development of a person and society. Therefore, states that there is in a man: biological soul, psychic soul and spiritual soul. The destruction of a man's spiritual soul destroys the human existence and the man becomes sick at his core. Philosophical Anthropology gives answers to the legitimacy of the spiritual soul, proving Ivančić. (Ivančić, 2006, p. 10).

Philosophical anthropology deals with the issues of the first causes of the existence of all creation. Reveals that the core of life and that is the same as existence. (Ivančić, 2011, p. 72).

A man can experiance his core through his transcendental (different types of beings): goodness (lat. *bonum*), truth (*verum*), unity (*unum*), beauty (*pulchrum*) (Relja, 2015, p. 62). The core is one with the truth, goodness and beauty itself (Relja, 2013, p. 65. Goodness this is not seen as moral and ethical dimension but as a fundamental reality. (Ivančić, 2011, p. 72). Unity is understood in the sense that in its core a person undivided entity in itself, one. The truth is understood as knowledge of its own core. Beauty is also an aspect of being - the

[1] Author in his study of the spiritual soul is based on the synthesis of the research results of scientists Berdyaev, A. Jores, S. Kirkegaard, M. Heidegger, K. Rahner, Urs von Balthasar, B. Haering, CG Jung, M. Beck, V. Frankl D. Amen, Goleman D., M. Scheler, I. Marhsall & D. Zohar, D. Bonhoeffer, H. Kueng and many more (up to Ivančić, pp. 7-9). Additionally see Ivančić, T. (2011): Hagiotherapy in the encounter with the man, Teovizija, Zagreb

core knowledges itself as true and good and that cognition causes a feeling of comfort, beauty. (Relja, 2015, p. 63). Thus goodness, truth and beauty are tissue of a spirit, core. A person's psychophysical level is limited, but the man is a spiritual dimension free.

The spiritual dimension of a man gives him a vision of what can be achieved and the power to achieve the development. Therefore, the spirit and freedom are superior human reality (Ivančić, 2011, pp 73-77).

Human being exists on the core, but the core alone does not participate in anything because it is the reality of all realities (*actualitas omnium actuum*) and perfection of all other perfections (perfectio omnium perfectionum) "(Relja, 2015, p. 61).

Relying on the strength of a spirit, Ivančić claims that man has no limits in his development, he can achieve incredible results, he should continually develop their talents and vision, be brave, responsible, efficient and capable. Man is therefore a being of cognition, decisions, creativity, responsibility and freedom, and the irresponsible actions of the man creates a sense of frustration, meaninglessness, depression. The spiritual dimension of a man can stimulate the development of vision, purpose and creativity. Ignoring the development of his own talents, the man will hurt himself and others (Ivančić, 2011, pp. 77-78). Man's spirit possesses consciousness and self-awareness. Consciousness is an inner light that helps us adopt already discovered realities. Self-consciousness is knowing yourself and your own actions. Based on the results of scientific researches of neuroscientists, psychologists, theologians, doctors and other scientific fields Ivančić forms the structure of the spiritual soul through the powers or functions of the soul in which there is a certain activity and here will be given some, chosen by the authors, who are the key to a man's work in the company and the development of his talents (Ivančić, 2011, pp. 95-118): Only a man is a person, the person is the totality of man, the person is a place where man's decisions are made. Only a man can say: I, has its own self.

Life is the first spiritual organ as a source of the existence (the man exists while he lives). The other spiritual organ is the conscience - the central organ of a spiritual life, the place of the cognition of good and evil. V. Frankl a conscience calls "organ of the intellect" (Ivančić, 2011 ,p 99)

Intellect is the power of cognition, man's ability of a spiritual cognition. The intellect is wisdom, without the intellects effort there is no wisdom.

Free will is the spiritual organ that controls our free decisions, our character and it treasures our virtues and chastity.

The heart of the spiritual soul is the center of human being, a place of faith, loyalty, belief, trust, the foundation of the interpersonal relationships, longings.

Free will as the place of man's decision. If the person is spirit free (not deviant), he is reasonable, wise and a superior being. Man's spirit is guided by the laws of "morality and ethics, and the body by the laws of the physical world ... if we do not obey the orders of our conscience, we despise moral principles and then we are destroying our human existence and we fall to the level of an animal that is guided by the instincts" (Ivančić, 2011, p. 101). *The spiritual character* represents man's moral dignity, virtue and chastity. The man is guided by the freedom, not by instincts. Therefore, freedom must obey conscience because conscience unmistakably tells the man what to do and what to avoid. According to Jores about 70% of diseases are specific human diseases, Ivančić concludes that these diseases have their cause in the spiritual level. (Ivančić, 2011, p. 103). *Interpersonality* is specific organ of the spiritual soul in charge of human interpersonal relationships. *Memory and remembrance* is the organ for storing knowledge and creating new forms. Memory is the archive of the knowledge and remembrance is the ability to remember the knowledge that was stored in the archive of the knowledge. Here the key role has the human consciousness, to be here and to be now, to be focused. *The intellect* is another organ of the spiritual soul whose task is rational cognition, control of all cognitions (emotional, mental, moral, biological, etc.). The intellect can structure the intuitive cognition, make something meaningful, find arguments that can be measured and experimentally proved. The intellect a perceived reality translates into concrete activities, structure and processes.

The wisdom is the spiritual organ that helps man wonder about the causes and consequences, development, excellent achievements. Therefore, the wisdom is a superior knowledge and superior creativity, "it is a requirement for becoming an intellectual" (Ivančić, 2011, p. 107). V. Frankl, professor of neurology and psychiatry, inventor of logotherapy, also explores the concept of freedom and he describes liberty as "feature of human existence oriented towards responsibility, towards giving yourself to another person, according to the specific task" (Frankl, 2001, p. 12). Frankl believes that psychoanalysists have too atomistic perspective on the human soul and that way the human soul is depersonalized. Instead atomistic view of human soul, he involves existential analysis and he sees the autonomy of spiritual existence in the person, where the responsibility is the essential feature of a human existence. (Frankl, 2001, p. 21). According to Frankl life is given to a man as a duty and man is being questioned about the meaning of the life, not other way. Therefore, man must give an answer to this question by living his life, by action, by taking responsibility for his own existence. For Frankl, existential responsibility is always personal (ad personam) and related to the given circumstances (ad situationem). Therefore, it is important to lead the man who is in the neurosis, to lead him towards the awareness that existence is actually a liability. In this interpretation, Frankl makes difference between the psychoanalysis that awares instinctive and the existential analysis that awares what is spiritual and that is the notion of liability that is at the basis of a human being. (Frankl, 2001, p. 22). Frankl says that man cannot make up a meaning of his life, he must discover it. If a man is not able to find a meaning of life, he runs from the meaninglessness that keeps on following him. In man's seek for the meaning of life he is lead by his conscience, which is the organ of sense, and Franklin has defined it as: "the ability to feel the unique and the single meaning that is hidden in every situation." (Frankl, 2001, p. 88).Conscience leads the man towards the responsible choice. One can listen to the conscience, but one can also ignore the conscience, go into conformity and totalitarianism. Frankl claims that education for responsibility is needed now more than ever. The man as a being with a spiritual dimension is able to transcend himself (overcome), in search for the meaning of life, which cannot be himself. The hardest part is living with the feeling of "the meaninglessness of his own life, that existential frustration, not even physical suffering is comparable with that" (Lukas, 2016, p. 13).

7. CONCLUSION

The role of strategic management is crucial for the competitiveness and sustainability of the company. Every vision must be clear, oriented towards the future and motivating. The need for constant growth and development requires managers and leaders to enter the personal, and later in organizational change. In this aspect it is key to get to the inspiring is to get to the inspiring vision, innovation and ideas, especially the value the employees can accept. Research shows that it is extremely important vertical trust - the trust of employees in their leaders and managers. Trust in their competence, integrity, benevolence and credibility resulting in systematic innovation. With the growth of that trust, grows innovative behaviour. Managers and leaders realize often mutually conflicting goals. On the one hand, the increasing pressure to maximize profits and benefits for shareholders, on the other hand, the increasing pressure for development of organizational adaptability, human resource development, building a learning organization. Thus, the possession of ethical compass by managers and leaders is crucial for both operational and strategic decisions. When speaking of managerial ethics there are moral managers, immoral and amoral managers. The conclusion is that immoral and amoral managers forms of deviant behaviour of managers (greed, "trampling other" for survival, self-justification of their own actions where the goals measure behaviour with denial of generally accepted rules of ethics, a short-term horizon and pursue their own interests). Therefore, company strategy needs to be ethical because immoral strategy adversely affect the character of the employees, and ethical strategy in the long-term interest of the shareholders and owners. Arguments in favour of the ethical conduct of managers and leaders give the concept of leadership intelligence, which is made up of rational and analytical intelligence (IQ), emotional intelligence (EQ) and spiritual intelligence (SQ). The spiritual intelligence gives humans potentials the need to create a vision of the future, a foothold for growth and transformation, assessment of their vital processes, discovering new values, talent development, accountability, innovation, inspiring. In this sense, we can conclude that spiritual intelligence is essential intelligence of every human being, but especially managers and leaders in companies. Therefore entering the change of organization begins from personal changes, changes in the value of each person and the development of leadership intelligence. Spiritual and emotional intelligence affects the quality of life at work and engagement at work. The curriculum for education of leaders and managers will be required to include the study of all three types of intelligence, especially spiritual intelligence because previous studies have confirmed the value of this integrated approach to developing a new generation of sustainable leaders with a strong sense of individual purpose, vision and values. The post-modern world needs a new view of leadership and a holistic approach to understanding the overall human intelligence. The achievements of philosophical anthropology, logotherapy, anthropological medicine and neuropsychology are going the way of confirming holistic approaches to understanding the overall human intelligence. The research results indicate that a human has four levels of its personality (biological, psychological, anthropological and theological), and that is precisely anthropological level key to the freedom of development of thought, idea, inspiration, vision, particularly the freedom of a sort of limited and static. From an anthropological level rises freedom, creativity, vision, intellect, character, Interpersonal and other qualities of a person. These are precisely the qualities that people have their origin in, the anthropological level of man, and its affirmation in strategic management. Exploring specific anthropological level may be the right way to understand how to get inspiration, innovation, vision, healthy intellect and versatile help managers and leaders in the fulfilment of their duties, particularly in the area of strategic development of the company. Therefore, rational intelligence (IQ) and emotional intelligence (EQ) is not sufficient to make people managers and leaders to a complete and wise vision of the development of enterprises. Only recognition and inclusion of the third kind of intelligence, managers and leaders allows the creation of a new vision of development and they are able to get into the personal and organizational change. Unethical manager is a sick and deviant person, as such, required a change of thinking and behaviour, harmful to employees, shareholders, customers, suppliers, society ultimately. Scientific management tends humanization of work and overall social progress, which is shown through the history of the development of thinking about management, organizational development, development of human resources and others. Therefore, scientific management is a human, sustainable and consistent with the general good and, as such, gives an immeasurable contribution to the wider human community, the interests of shareholders, customers, suppliers and the like. Therefore, in order to truly remains such, socially beneficial, must necessarily recognize the pathological manifestations of the behaviour leading people in companies that shape company strategy, values. As a recommendation for further research, it is necessary to discover further opportunities for development of leadership intelligence and its contribution to the development of enterprises.

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BOOSTING COMPETITIVENESS OF CROATIAN COMPANIES THROUGH BUSINESS MODEL INNOVATION

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Abstract

In order to improve competitiveness, companies often benchmark themselves against competitors. To get the big picture, it is useful to benchmark countries in order to get insight into the comparative advantages of each. The Global Competitiveness Index (GCI), published by the World Economic Forum (WEF), is the accepted tool for evaluating a country's potential for growth. It evaluates the productivity and efficiency of countries and can be very important for attracting foreign investors.

According to "The Global Competitiveness Report 2016-2017", Croatia's rank is 74th among 138 countries in the world. Local entrepreneurs and macroeconomists agree that the rank is not sufficient and that, as a member of EU, Croatia should reach a similar position as other developed western countries. This article aims to present a current state of the Croatian global competitiveness, to find the weakest part of it, and to give recommendations on how it can be improved.

Every company has a business model, although many of them are not really aware of it. Business model represents a way that companies do business, a way they create and capture value. The goal is to introduce business model innovation as a powerful source of competitive advantage.

Keywords: *global competitiveness, innovation, business model*

JEL Classification: O3,O32

1. INTRODUCTION

Market globalization, international competition and financial liberalization has gained the importance of the global competitiveness concept. Although some authors called it a dangerous obsession and argued that the concept is wrong (Krugman, 1994), competitiveness is recognized as a key driver of growth. Michael Porter of Harvard Business School argues that national prosperity is created, not inherited. He has highlighted competitive advantage as the key to superior performance not only by firms but also by industries and economies as a whole (Porter, 1990).

For Croatia, global competitiveness became especially important after joining European Union in July 2013. Economic borders were opened and transitions of goods, services, capital and workforce have become much easier. Competitiveness imbalances between member states have been one of the drivers of the crisis in the EU (Altomonte & Bekes, 2016). Therefore, improving competitiveness in order to close these gaps is at the heart of the current policy agenda.

This paper will present a current state of global competitiveness of Croatia, analyze its sub constructs and give recommendations on how to improve it.

2. MEASURING GLOBAL COMPETITIVENESS

Measuring global competitiveness allows benchmarking among countries and identifying strengths and weaknesses of the national economies. It helps foreign investors to decide where to invest, but it also helps local policymakers in making decisions and discussing strategies for removing obstacles, thus improving national competitiveness.

Although there is no clear consensus on how to measure competitiveness, three well known indices are substantially prominent:

- The Global Competitiveness Report[1], prepared by World Economic Forum (WEF),

[1] The Global Competitiveness Report measure the competitiveness of 138 countries in different phases of economic development, providing insight into the drivers of their productivity and prosperity. The WEF has been studying the competitiveness of nations since 1979. For more details visit: www.weforum.org

- The World Competitiveness Yearbook[2], prepared by Institute for Management Development (IMD),
- Doing Business[3] report, prepared by International Finance Corporation (IFC) and the World Bank Group.

For the purpose of this paper and measuring competitiveness, The Global Competitiveness Report as the most comprehensive assessment of national competitiveness worldwide since 1979 will be used. They define competitiveness as the set of institutions, policies and factors that determine the level of productivity of an economy, which in turn sets the level of prosperity that the country can achieve (WEF, GCR, 2016).

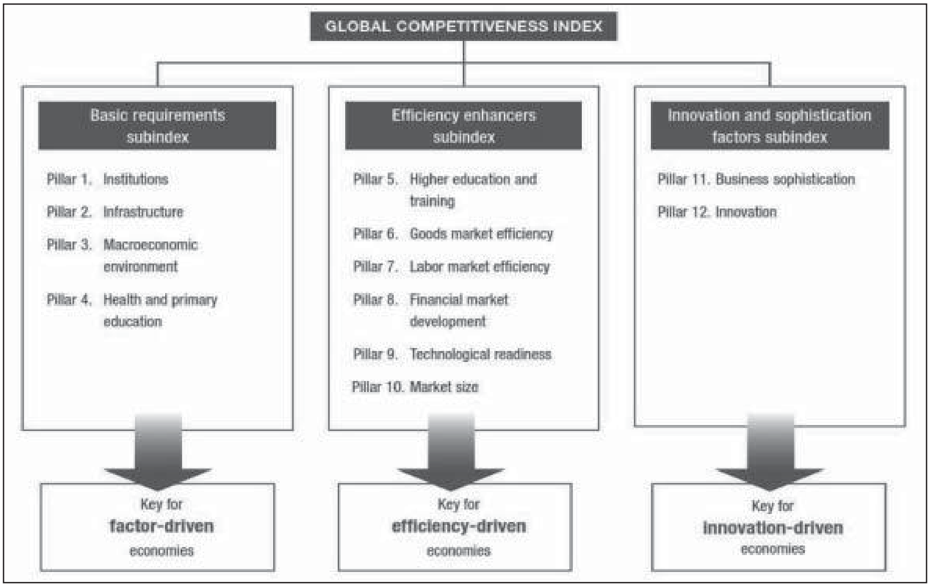
Building on Klaus Schwab's original idea of 1979, Professor Xavier Sala-i-Martin in 2004 created a Global Competitiveness Index (GCI) which included both macroeconomic and microeconomic factors of competitiveness. In 2008 Professor Michael E. Porter assembles a team of scholars to develop the New GCI in order to improve both the Index methodology and the quality of the Executive Opinion Survey. The New GCI was published in the 2009 Global Competitiveness Report.

The GCI combines 114 indicators grouped into 12 pillars: institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation. These pillars are in turn organized into three subindexes: basic requirements, efficiency enhancers, and innovation and sophistication factors (Figure 1).

[2] The World Competitiveness Yearbook has been published by IMD since 1989. It benchmarks the performance of 62 countries based on more than 340 criteria measuring different facets of competitiveness. For more details visit: www.imd.org

[3] The *Doing Business* report covers 11 areas of business regulation and provides objective measures of business regulations and their enforcement across 190 economies and selected cities at the subnational and regional level. It was launched in 2003. For more details visit: www.doingbusiness.org

Figure 1: The Global Competitiveness Index Framework



Source: WEF, Global Competitiveness Report 2016-2017

The pillars affect different economies in different ways depending on their stages of development. Therefore, they are organized into three sub-indexes, each critical to a particular stage of development. The GCI assumes that, in the first stage, the economy is factor-driven and countries compete based on their factor endowments-primarily unskilled labor and natural resources. Companies sell basic products or commodities, with low productivity and low prices, which reflects in low wages. With increasing productivity and wages, countries move into the efficiency-driven stage. They must develop more efficient production processes and increase product quality because wages have risen and they cannot increase prices. In the third stage, the economy is innovation-driven because wages have risen so much that companies are able to sustain that wage levels and the associated standard of living only if their businesses are able to compete using the most sophisticated production processes and by innovating new ones. The GCI takes the stages of development into account by attributing higher relative weights to those pillars that are more relevant for an economy given its particular stage of development (WEF, GCR, 2016).

3. (GLOBAL) COMPETITIVENESS OF CROATIA

According to GCI, Croatia's rank for 2016 is 74th out of 138 countries. Croatia did make progress for three places, but still it's not enough to reach selected EU countries. Among all EU countries, only Greece and Cyprus have worse positions. Table 1 also shows that Switzerland, Singapore and United States are three best ranked countries, same as previous year. The Netherlands and Germany have changed positions. Sweden and United Kingdom have improved their positions for three places while Japan, Hong Kong SAR and Finland declined for two places.

Table 1: Global Competitiveness Index 2016-2017 Rankings

Out of TOP10 countries, TOP 3 hold the same places, other 7 have only changed positions. Croatia is below selected EU countries, despite the progress for 3 places.

TOP10 countries, Croatia vs selected EU countries
Global Competitiveness Index 2016 Rankings
2015, 2016, ΔPY

TOP 10 COUNTRIES	2015	2016	ΔPY
Switzerland	1	1	0
Singapore	2	2	0
United States	3	3	0
Netherlands	5	4	+1
Germany	4	5	-1
Sweden	9	6	+3
United Kingdom	10	7	+3
Japan	6	8	-2
Hong Kong SAR	7	9	-2
Finland	8	10	-2

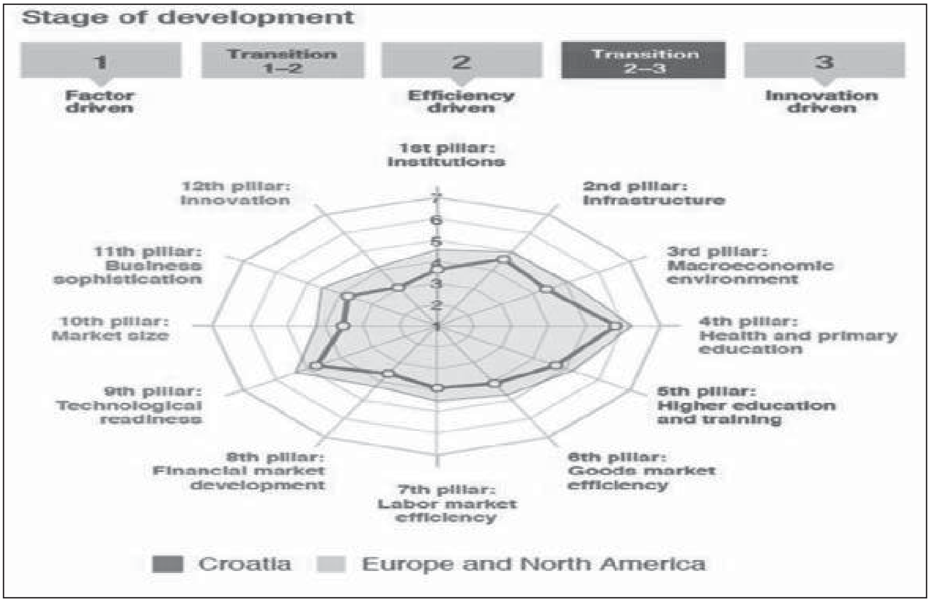
CROATIA VS SELECTED EU COUNTRIES	2015	2016	ΔPY
Czech Republic	31	31	0
Poland	36	41	+5
Bulgaria	54	50	0
Slovenia	59	56	+3
Romania	53	62	-9
Slovak Republic	67	65	+2
Hungary	63	69	-6
Croatia	**77**	**74**	**+3**
Greece	81	86	-5
Cyprus	65	83	-18

Source: Author's calculations, using data from WEF, Global Competitiveness Report 2016-2017

In order to evaluate the global competitiveness of Croatia, it is necessary to look at the 12 pillars that construct a weighted Global Competitiveness Index, according to the stage of economic development. With GDP per capita 11573 US$ (WEF, GCR, 2016) Croatia is in the transition stage from efficiency driven economy to innovation driven economy. Efficiency driven economies sell capital-intensive products and compete internationally on the basis of both price and quality. Their drivers of competitiveness are: higher education and training, efficient goods markets, efficient labor markets, developed financial markets, advance technology and expanding market size. On the other hand, innovation driven economies are paying high wages to improve the standard of living, competing with new and unique products using sophisticated production processes and investing heavily to invent and innovate new products.

Figure 2 shows that Croatia is below Europe and North America's average on all 12 pillars. Pillar 2: Infrastructure and Pillar 4: Health and primary education are closest to the average, while Pillar 12: Innovation is farthest to the average. Croatia is best ranked on Infrastructure (46/138) and Technological readiness (47/138), and worst ranked on Innovation (103/138) and Labor market efficiency (100/138).

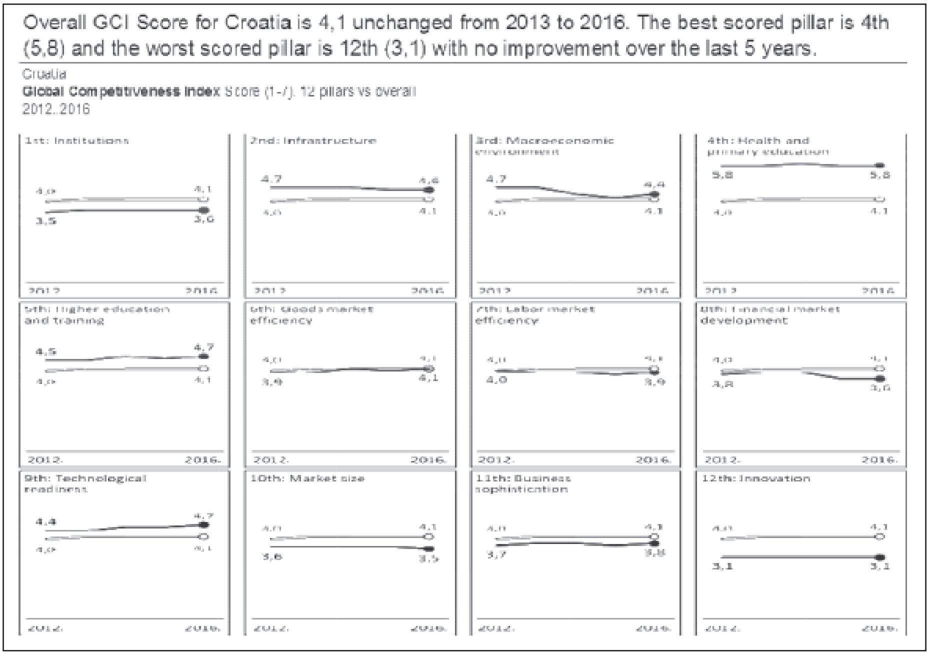
Figure 2: Global Competitiveness Index 2016-2017 performance overview of Croatia



Source: WEF, Global Competitiveness Report 2016-2017

Since Figure 2 only shows current position, it is useful to see each pillar's score development over past five years, which is presented in Figure 3.

Figure 3: The Global Competitiveness Index Score development from 2012 to 2016



Source: Author's calculations, using data from WEF, Global Competitiveness Report

It is important to differentiate rank and score. Rank shows the position of the country in relation to other countries. The score is more like a grade in school, only in this case 1 is the worst grade and 7 is the best grade. The score is independent for each country while rank is dependent on the other countries' scores.

Figure 3 shows that current overall GCI score for Croatia is 4,1 and that it hasn't been changed in the last four years. Score for the most pillars is unchanged or has been very little changed over the last five years. Major improvements have been made in Technological readiness and Higher education and training while major declines have been made in Macroeconomic environment and Financial market development.

Best scored pillar is Health and primary education with a score of 5,8 but in 2012 it was enough to rank 60, while in 2016 it is enough to rank 66. Worse scored pillar is Innovation with a score of 3,1 which was sufficient to rank 74 in 2012, but the same score in 2016 is sufficient only for rank 103. Croatia's competitiveness is declining whether we look at the best scored or the worse scored pillar.

By looking at the results of The Global Competitiveness Report 2016-2017 it is clear that Innovation is Croatia's worst scored and worst ranked pillar. The score of 3,1 for Innovation hasn't been changed in the last five years, but rank dropped from 74 to 103. Other countries are being more innovative than Croatia.

The government seems to be aware of the importance of innovations for boosting global competitiveness and export. Therefore, it published a document called "Strategija poticanja inovacija Republike Hrvatske 2014. – 2020." (Narodne novine 153/2014). According to the Strategy, the main reason for low position in innovation is a lack of so-called systematic innovation policy. Another reason is relatively low investments in R&D, most of which comes from the public sector. They conclude that the overall innovation performance of Croatia is not sufficient because of the low innovation capability of business sector, a small number of applicable (industrial) researches, ineffective incentive system and weak connections between different innovation subjects within the innovation value chain.

According to the Strategy, the main strategic goal for 2020 is increasing the competitiveness of Croatian economy and increasing national prosperity as a result of the investment in knowledge, creativity and innovations. The main strategic goal consists of four strategic goals:

- Improving innovation performance of Croatia.
- Increasing the level of business sector investments in total R&D investments.
- Increasing the number of fundamental and applicable researches aimed to boost national competitiveness.
- Increasing human capacity for research, technological development and innovations.

We have the situation where the problem is defined and the goals are set, framework is given but the results are missing. Actual innovation performance of Croatia can also be seen in the European Innovation Scoreboard[4] 2016 (Eu-

[4] European Innovation Scoreboard is introduced in 2001 and it measures innovation performance of EU countries, as well as the key international competitors, using a composite indicator – the

ropean Union, 2016), according to which Croatia is a moderate innovator, far away from strong innovators and innovation leaders. It takes the 26th place out of 28 countries. Only Bulgaria and Romania as modest innovators are worse than Croatia. When looking at the performance changes over the last 8 years, Croatia has an average annual growth of -0,9%, which puts her in 27th position with only Romania being worse (-4,4%). Current position of is very low and the trend is negative.

4. BUSINESS MODEL INNOVATION

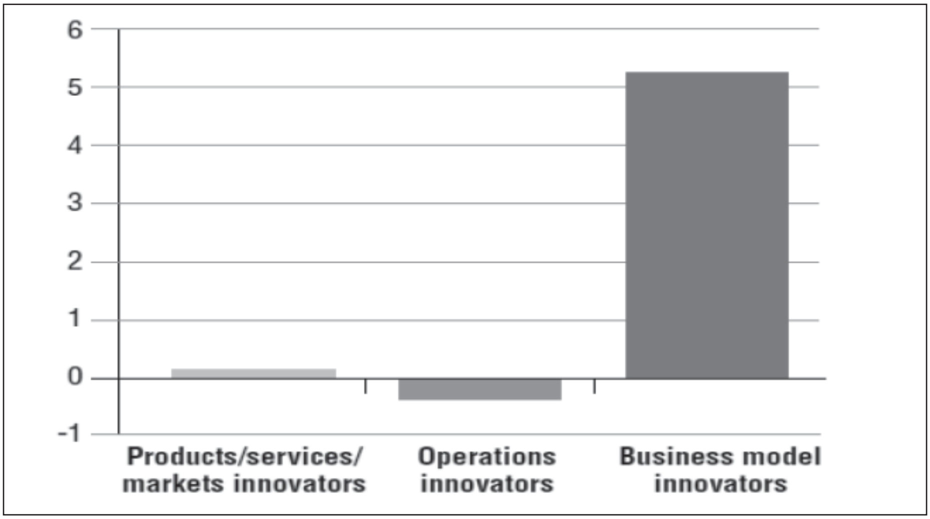
Companies achieve competitive advantage through acts of innovation, especially when competitors are slow to respond (Porter, 1990). When speaking about innovations, first association is product or service innovation than process innovation. Rarely do we think about business model innovation. Business model innovation is a framework or recipe for creating and capturing value by doing things differently (Afuah, 2014).

Any business has its own business model, although many managers are not really aware of it. Companies that understand their business model and its impact on performance are rare. Understanding and creating a business model should be an important part of any business strategy. There is no universal definition of a business model, only an universal approach (Golob, 2009) because it should be applicable to any kind of business. One of the universal tools for generating, describing and innovating business model is The Business Model Canvas (Osterwalder & Pigneur, 2010).

Business model innovations have grown rapidly in significance in the last fifteen years. Business models have high relevance in management practice, and a steadily increasing focus on the scientific subject area in recent years (Wirtz et al., 2016). The importance of business model innovations was confirmed by IBM Global CEO Study conducted on a 765 managing directors worldwide (IBM, 2006). Results have shown that CEOs are focusing almost 30 percent of their innovation efforts on their business models, and companies that have grown their operating margins faster than their competitors were putting twice

Summary Innovation Index. It distinguishes between three main types of Indicators - Enablers, Firm activities and Outputs – and eight innovation dimensions, capturing in total 25 indicators. For more details visit: http://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards/index_en.htm as much emphasis on business model innovation as underperformers. Figure 4 shows that business model innovation had a much stronger correlation with operating margin growth than product/service innovation or operations innovation. Although the data are more than ten years old, it should be a strong motivator for local managers.

Figure 4: Operating margin growth in excess of competitive peers (percent compound annual growth rate over 5 years)



Source: IBM Global Business Services. (2006). *Expanding the innovation horizon: The global CEO study*; available at: http://www-935.ibm.com/services/us/gbs/bus/pdf/ceostudy.pdf (accessed: 08-09-2016)

A more recent study, from Pricewaterhouse Coopers (PwC, 2013) conducted on 246 CEOs from around the world, explored the changing role and nature of innovation in businesses. Unlike a similar study conducted in 2009 when operational effectiveness was top priority, now three-quarters of CEOs regard innovation as at least equally important to operational effectiveness. Furthermore, when investigating the innovation area, products are a top priority for 26% managers, but the business model is close behind being the first choice for 17% managers. The changing business landscape is reflected in the evolving nature of innovation and focus is shifting from products to solutions.

According to the latest thinking, innovation occurs in an ecosystem where businesses, regulations, and social norms promote connectivity, creativity, entrepreneurship, collaboration, and the adoption of the latest technologies to generate new ideas and bring new products and business models to market (WEF, GCR, 2016). The field of business models seems to have emerged into its own discipline, building on the established areas of strategic management on the one side, and technology and innovation management on the other side (Gassmann et al. 2016).

There is an increasing consensus that business model innovation is key to firm performance (Zott et al., 2011). Business model innovators manage to revolutionize their industries by overcoming the dominant industry logic. For example, Ryanair is typical business model innovator that revolutionized airline business; Uber is doing taxy business without owning single taxi car; Alibaba is making money on selling goods without any stocks; Skype is the world's largest telecommunications provider without having any network infrastructure; HTC is focused on the product while Apple is focused on business model innovation and therefore is far more successful company.

5. CONCLUSION

Higher education and training, infrastructure and technological readiness are among the highest scored and highest ranked pillars of Croatia's global competitiveness index, but to improve competitiveness they should be supported by innovations. However, innovation is worse scored and worse ranked pillar with no improvement in score over the last five years and negative trend in ranking. The Croatian government is aware of this problem. In 2014 they defined strategic goals for 2020 which are to be reached through four thematic pillars, they even defined KPI-s to be reached and gave the framework (Narodne novine, 153/2014). But they still didn't find a way to improve innovativeness. Other countries are better in improving innovativeness and therefore are overtaking Croatia which is now ranked 103rd out of 138 countries in terms of innovation. The problem might be that, in general, innovations require high investments in R&D with unsecure outcome and the business sector is not ready to take that risk.

The meaning of innovation is being updated. To be truly innovative, a country should not only file patents and support research and development in science and technology, but should also provide a networked, connected environment that promotes creativity and entrepreneurship, fosters collaboration, and rewards individuals who are open-minded and embrace new ways to perform tasks (WEF, GCR, 2016).

As a part of a globalized world, Croatian companies are confronted with an increasingly fast change of technical and technological possibilities, available knowledge and differentiated markets. Opposed to new products and/or new technology, new business models can be equally created by big and small organizations in developed or undeveloped countries. Therefore, business model innovation might be a chance for Croatian companies to improve their competitiveness without big investments, but through benefits created with knowledge, networking and new ways of linking resources and activities with global environment.

To the author's best knowledge, Croatia still doesn't have any scientific researches that link business model innovation with performance. Confirming positive links would for sure encourage entrepreneurs to consider business model innovation as a way to create competitive advantage. Government, scientists and entrepreneurs should communicate better and work closely together in order to encourage, accelerate and remove barriers to finding new solutions, new ways of creating, capturing and delivering value to customers. The Croatian market is too small, therefore boosting global competitiveness is essential for long term development and national prosperity. Innovations, investments and export are key drivers for the Croatian economy.

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SPECIAL CITY PROGRAMS IN THE FUNCTION OF GROWTH AND DEVELOPMENT OF TOURISM AND HOSPITALITY OFFER

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Abstract

Special city programs that city of Split is offering represent a unique experience on the existing tourist market. Two main goals of executing special city programs are to increase the economic effects as well as increasing the level of satisfaction of tourists. Modern tourists have a high level of expectations, which is a major challenge in creating a 'tourism of experience'. Management of special programs, in this case, represents a relevant segment of global destination management, which deals with planning, organizing, leadership and controlling these special programs. In addition to contributing to the volume of a content offer, special city programs also affect the extension of the tourist season, reduction in seasonality of business in tourism and hospitality, increasing revenue and attracting new guests as well as retaining existing tourists. Programming and execution of special city program has a multiplying effect. It has a direct and indirect impact on revenue growth, it encourages additional employment of professional staff, it creates a virtual platform of a large number of manufacturers and suppliers of products and services and affects the development of the entire destination. Therefore, there is a need for strategic planning *of special programs, monitoring the performance of the same and securing all necessary resources for the rollback. Tourist Board of Split plays a major role in accomplishing this as the holder of a destination management. With this approach Split becomes a unique tourist destination, offering a wide range of special events and programs. The purpose of this paper is to show the real impact of programming and executing special city programs put in place specifically focusing on the standpoint by Split Tourist Board. The aim of this paper is to determine to what extent and in what way the special municipal programs are affecting the increase in revenue and the effect on the level of expectations and satisfaction of tourists, by analysing key tourism indicators.*

Keywords: *management of special programs, special city programs, experience, satisfaction of tourists, tourist offer, Split Tourist Board.*

JEL Classification: Z3, Z32

1. INTRODUCTION

Special programs represent a unique segment of the tourist and hospitality offer. They are the bearers of the modern trends on tourism market, as they are based on tourism of experiences. They exist primarily to fulfill the purpose, which is an increase in tourist consumption. The secondary objective is based on fulfillment of motives, needs, and demands of tourists who are consumers of these programs. It covers the success of quantitative and qualitative demands of efficient special programs. On one side, special programs offered to a tourist must satisfy management's requirements and also achieve maximum profit, while on the other side it must meet all expectations of tourists who consume them. It's a series of interconnected services and products, which is placed in a unique way as part of an exclusive tourism and hospitality offer on the market. Special programs exist since mankind if we take into account that people are in a constant state of planning and creating their personal free time to satisfy their needs. In the tourism terms, they are referred to as a relatively new term. First researchers which were devoted to special programs in tourism, or better to say deliberations, begin to implement them in the mid 20th century as part of the tourist animation, they were classified as French creation. Special program management includes planning, organizing, staffing and performing a program, repeating program cycle, as well as control of performance, evaluation, and success of the program, so by its content to meet all targets and goals of enterprise and tourists. Tourism of today is one of the most dynamic and socio-economic phenomena, which is based on permanent changes, and it reflects on the tourist offer and tourist demand. The whole system of supply and demand changes in the essence of a generalized approach, that the tourism market in older conditions is determined by an offer (Cerović;2008,26). Today, as a result of the globalizing processes and transformations of the tourism market, it can be certainly stated that all desires, motives, and needs of a modern tourist are an imperative and offer is subordinated to guests. Therefore, a special program management creates and sells events and programs that will satisfy all motives and desires, which makes tourists visit a destination. In the last couple of years, The Tourist Board of a city of Split payed special attention to the design of events and special programs, which will be carriers of an additional tourist offer. The key part is related to control and monitor success in those programs, in order to enhance and maintain the quality of the offer, and also to ensure competitive advantage in the promotion of the overall image of a city of Split.

2. THEORETICAL BACKGROUND OF SPECIAL PROGRAMS

As a contemporary concept of planning, tourism and hospitality offer, special programs stand out as a synonym for tourism of experiences. Special programs can be defined as a set of protocols, procedures, and elements of content. They are placed as a result of planning in a materialized form whilst respecting influential factors, basic principles and primary targets of special programs, as a part of the tourist and hospitality offer of a tourist destination. While designing the content of a program it is important to think about the interdependence of supply and demand. A modern tourist will choose a traveling destination based on how much that destination is fulfilling his expectations, as well as deliver an unforgettable traveling experience. From the standpoint of special programs management in the tourism and hospitality industries, the decisions are based on the same principles, but from another perspective. The organizer doesn't make programs and content because he finds that tourists like it, but because it triggers an increase in tourist consumption (Jadrešić;2001,49). Emphasis on synergy is common to all special programs and events in the tourism industry along with all involved in creating and realization of the content program. Through common activities, they fulfill their own separate goals, which is the reason they interconnect on the tourist market. These are all strategies to meet certain demands made by tourists, which are eventually ensuring their return, but also attracting new guests to secure a further increase in tourist spending. If we take into consideration that tourists' experience at the destination is made up of a huge number of service and product providers from different areas who are placing their services and products independently from one another, it is necessary to take a serious approach in planning stage, as well as in control phases and in analysis of the performance. Main goals of special programs are interconnected with the principles of managing the program to each other, with the principles of the performance of a program, which makes every factor crucial for the realization of the programming. Since every activity is managed on a certain principle, which then achieve a specific state, it is obvious that managers have to respect those principles, as well as the principles of freedom, activity, equality and appropriateness, while planning and performing special programs and events in tourism and hospitality. Tourists decide themselves whether to participate in a given program or not. A tourist can decide in advance whether to visit a tourist destination for some specific program and upon arrival decide to encounter with the program included in the package that tourist pays. If the decision on visiting a certain destination is based on the main motive, to participate in an event or program, then they will base their satisfaction with destination primarily on the basis of expectations for a special program. If a tourist is already visiting a tourist destination and then he finds out about a certain event, his satisfaction with the program will not be the main motivation for reentry, although there is more leverage to get back in the same period next time. Also, there are package arrangements which tourists buy whose price includes various services. Depending on organizer's choice that could include transportation, hotel, event or a program visit, travel insurance, etc. In any case, tourist will have the freedom of choices and it should be treated with the outmost respect. Furthermore, during the special program performance, tourists can be active or passive. This is referred to as a principle of activity. Tourist can participate in a particular program as a part of an interest group which is consuming offered program or participate as individual. This is also related to the principle of equality, meaning that every tourist in the interest group has equal rights as the other participants and that all the guests are equal to an organizer of a program. The principle of appropriateness relies on a system of value for money. That ensures that every program is based on the need and a demand of a guest and it is entirely appropriate for a particular interest group. Besides principles, there are certain factors that affect the performance of special programs and events in the tourism and hospitality industry. Relation and connectivity of conditionality and influence on tourist and on the formation of a tourist's demand, are visible in a program, location, and human resources (Cerović;2008,78). For that purpose this paper will have outlined main characteristics and effects of the quality of a particular element, to get a clearer image of their mutual dependence and conditionality. Creating special program begins with identifying programming approach. Areas or access types of animation programs are the following; general access, time access, proprietary access and a repertoire access (Cerović;2008,67). It is very important to know the structure of tourists these programs are intended for. Such as which program is intended to satisfy a specific type of tourists' motives, will the program tourist is interested be offered, when will the program be held and is it possible that one is free. From the view of ownership, will be it owned, financially supported or completely bought by the third part. Also, location affects the planning and realization of programs and that can be an interior or exterior environment. That's important phase since there is the relevant difference between the program that is running in the exterior or interior. When defining the space, it is taken as a starting point for further elaboration of the plan. The third important factor is human resources. There are not many economic activities that depend entirely on a human component as it is the case with tourism (Pirjevec and Kesar;2002,133). The quality of special programs and events in the tourism and hospitality industry is based on expertise and professionalism of human potential. A person, the main key to success, is a carrier of tourist offer and an executor of a special program at the same time. The issues of the staff, for example in the Republic of Croatia, are summarized into four main characteristics, or facts. These are the following facts (Pirjevec and Kesar;2002,139):

- a high percent of women employees,
- a high percent of unprofessional staff,
- a high percent of senior employees,
- a need for numerous seasonal labor force.

To be sure that the realization of special programs will be successful, it is important to have highly motivated professional staff, with extensive knowledge and experience in a certain field, also to continue with an education of staff, make new experts and make the effort to create a quality human resources. To reach that successful realization of programs and events, it's important to systematically educate all involved in the management of special programs and strengthen the connection between educational institutions with the real sector.

All of these characteristics are affecting tourist spending. This is a process that starts before the consumption of special programs. To influence tourists' attitude and a decision to participate in a particular program takes a lot of effort. This is where marketing activities play a really big role and they need to be conducted in the right place at the right time. Another big part is the psychology of consumption in marketing, primarily because tourists obtain their attitude on the basis of perceiving the environment. Attitude is a relevant segment when profiling our tourists since it plays a part in marketing researches and practices. Correlation between what tourist thinks about the program and the one he ultimately participates in is very close. Attitudes, previous behavior and subjective societal norms of tourists largely affect whether to have the expectation and to what extent, but it also reflects on a total satisfaction with an offer in a tourist destination. These attitudes are of a crucial importance for destination management since they reflect the expected impact on behavior. Marketing mix starts with the product, which is in this case, a special program. This is a representative of the tourism and hospitality offer of every destination. The price, as an element in the marketing mix, marks the product of the special program, expressed as a value in money. In order for the price to reflect a real value of the product, special program management must take a special care when selecting the ideal price calculation methods, which will cover all expenses and ensure the planned profit. This is the most sensitive component of all. It determines the success of the program through indicators of success such as profitability, cost-effectiveness, and productivity. The last element is the promotion of a special program, which is realized through activities on the market. This includes propaganda, a personal selling, publicity and promotion of sale, public relations and direct marketing. By analysing the importance of special programs, as well as other different services and products, which are forming a unified offer on the market and affects the expansion of tourism market, the important thing is to cover each established level, i.e. the levels, which are the same for all.

Table 1. Stages in the process of programming events

	Stage in the process of programming events
1. STEP	Event description
2. STEP	Event organization
3. STEP	Permits and agreements
4. STEP	Marketing
5. STEP	Financial control
6. STEP	Risk management
7. STEP	Event staging
8. STEP	Staff
9. STEP	Safety and insurance
10. STEP	Operational plans
11. STEP	Evaluation

Source: Milohnić, I. Specificities of cultural events management in tourism (Case study: Istrian region), Management in the Function of Increasing the Tourism Consumption, May 17, 2010, p. 165.

All special programs are programmed for a certain reason, and each of them is specific. That depends on the segment to which it is intended to attract, as well as to location and staff included in the performance. Nevertheless, all events and programs have common characteristics, contained through all levels, which are mentioned previously. Every program, or an event, has a precise description of the organization and realization of the same way. Besides that, every program executor is obliged to secure certain licenses and to make contracts with their business partners. In order to make a successful event, a high-quality marketing is required to achieve that. That, of course, affects the entire financial structure, and as it stands, the main goal is the financial gain. Throughout the programming of the program, it is important to make a good quality plan of staffing and follow standard operating procedures to safely perform the program in its entirety. Every program ends with an evaluation, which provides feedback that can be used to enable progress and a more successful program next time.

3. RESEARCH RESULTS AND ANALYSIS

Split Tourist Board has largely invested in the promotion of special programs, events and manifestations within the last couple of years and all of those components are of interest for the entire destination. This part of the paper shows the results of a special program research and it is based on the tourist and hospitality offer of Split. The focus of the research is the level of expectation and satisfaction of tourists and local inhabitants and the results of the success of last year by the Tourist Board of the city of Split. The results of research of 2016. have been compared with research results of 2012., to demonstrate the influence special programs have on enhancing the city offer. Comparative analysis outlines relevant results and gives relevant projections of further development of additional tourist offer in Split. Situation analysis is based on qualitative and quantitative indicators. These research results are bound primarily for the destination of Split, but they could serve as a model for future research of other tourist destinations. The next table represents a comparative review of the main quantitative indicators of tourist season for 2011 and 2016. It shows an increase in the number of arrivals and overnight stays by tourists in the city of Split.

Table 2. The indicators of the development of tourism in Split in 2011. and 2016.

Years	COMINGS			OVERNIGHT STAYS		
	Domestic	Foreign	Total	Domestic	Foreign	Total
2011	47.927	204.360	252.287	100.461	539.428	639.889
2016	58.557	516.458	575.015	131.652	1.631.457	1.763.109
Index	122	253	228	131	302	276

Source: Split Tourist Board (www.visitsplit.com, access on 30.1.2017.)

According to results given in table 2, there is a visible 22% visit increase in the numbers of domestic tourists, an increase in the number of foreign tourists by 153% since 2011., and the total of 128% increase off all touristic visits. In addition to marked increase in arrivals, there is a positive increase in recorded number of overnight stays. The number of overnight stays of domestic tourists is higher by 31%. The number of overnight stays by foreign tourists increased by 202%, and the total number of overnight stays in the year 2016 is higher by 176%. These main quantitative indicators clearly show an increase in tourist traffic through the researched period. According to the results of the research in 2012., most numerous tourists were from Germany, France, Italy, United Kingdom, Spain and United States of America. In the year 2016., however, the order of origin has changed so most numerous tourists came from the United Kingdom, the United States of America, Germany, France, Australia, Republic of South Korea and Spain. Another relevant fact shows that Split, in 2016., counts 24.544 beds, unlike in 2011., when the total number of beds amounted to 4.088, i.e. 624 beds in the hotels and 3464 beds in private accommodation. An increase is directly related to special programs, due to the event *Ultra* in 2016., there were total 17.731 beds in private accommodations.

Table 3. The number of beds in Split in 2011. and 2016.

Accommodation facility	2011.	2016.
Hotels	624	6.813
Private accommodation	3464	17.731
Total	4098	24.544

Source: www.hr.croatiasailing.hr (access on 30.1.2017.)

Except for the main indicators, there are also researched and recorded numbers in terms of infrastructure equipment of Split. Further is stated the total number of hotels, hostels, restaurants, clubs, sports centers, museums and private accommodations. In 2011. city of Split had 22 hotels, two of which were five-star hotels, nine were four-star hotels, eight were three-star hotels, while the other three hotels had two-stars. Apart from hotels, Split had 10 hostels. The total number of beds that year was 7490, which shows how poorly developed accommodation offer of the city has been. As for travel agencies, there were 34 agencies available. By analysing gastronomic infrastructure, then there were 34 restaurants in Split, 8 pizzerias, and 4 wine bars. Most of them had typical Dalmatian specialties to offer, part of them were specialized for international and macrobiotic gastronomic offer. In regard to special programs in the segment of entertainment, it was 15 nightclubs were registered, 8 sports centres and clubs, and only 1 spa centre. A segment of special programs in the culture was developed in the offer of 6 museums in total, 8 galleries, 1 multimedia cultural centre, 3 photo clubs, 3 theatres and 7 movie centres. According to the new situation analysis there has been a certain change of infrastructure equipment in Split in 2016. City of Split now counts 33 hotels in total, two of which are five-star hotels, 19 of them are four-star hotels, 11 three-star hotels, and one hotel with two stars. An increase in the number of hotels is apparent, but high-quality accommodation offers had a small change on improvement scale. Also, there is a major increase in registered numbers of hostels. There were 35 hostels open in 2016., one was 3-star hostel and the rest of them were two stars' hostels. The greatest progress in accommodation offer expansion is indicated in private accommodation, luxurious rooms, and suites. However, since they were represented in a very small percentage half a decade ago, they were excluded from this research. In terms of development and offer of special programs, there are 90 registered travel agencies in the city of Split, which is an increase of 165%, in relation to 2011. when there were significantly fewer agencies. With an increase in the number of agencies, the offer of specialized programs for tourists has been expanded. Also, gastronomic and hospitality offer had made a substantial progress in both, quantity and quality sense. In 2016 city of Split counts 24 taverns, 9 wine bars, 10 pizzerias and 60 restaurants with various gastronomic offer. The offer of cultural programs and entertainment is based on 10 museums, 13 galleries, 1 multimedia cultural centre, 3 theatres, 3 photo clubs, 9 sports centres, 9 spa centres, 3 shopping centres and 5 movie theatre centres, but also 23 nightclubs. Also, unlike in 2011., tourist offer in Split has now added new special programs and specific program attractions, such as the aquarium, Tea House, Room Escape, Live Museum, Froggyland and Semi submarine. The enlargement is evident in the quantitative point of view. Apart from the infrastructure equipment there is also a significant widening of special programs offer with 13 special events and manifestations throughout 2016.

Table 4. Tourism and hospitality infrastructure in Split, 2011. and 2016.

Object	2011.	2016.	Index
Hotels	22	33	165
Hostels	10	35	350
Tourist agencies	34	90	265
Restaurants, wine bar, tavern	46	103	224
Museums	6	10	167
Galleries	8	13	163
Theaters	3	3	100
Sport centers	8	9	113
Shopping centers	2	5	250
Movie centers	7	5	71
Nightclubs	15	23	153
Spa centers	1	9	900

Source: Authors' analysis according to research

By investing in infrastructure, primarily in accommodation, transport and catering, the city of Split has seen a big improvement in extending the tourist season. For instance, in 2011., Split had started a tourist season in the fourth month of the year, starting with the Croatia Boat Show, and finished it on the World Day of Tourism, on 27th of September 2011., with the final event at Riva, entitled *Cili svit in Split*. In 2016. there is a visible change in reduction of seasonality and that was achieved by city's involvement in the project *Cro-*

atia 365. This project allowed for main events to be distributed throughout the whole year. In 2011. special programs in Split have been branded through the main slogan *Cili svit u Split*, whereas during 2016., the slogan used was: *Split, living monument*. The tourist Board of Split has in that regard invested substantial effort in developing marketing strategy of promotion the city as a destination of experiences and events. After all, one of the main problems identified during the research were problems with the level of infrastructure and the expertise of employees. Tourists evaluated the kindness and hospitality as one of the main elements of satisfaction. It could be concluded that the lack of education and training has been compensated with sincerity and courtesy of all employees in the tourism and hospitality industry. Also, in terms of tourists' expectation from a specific tourist offer it was concluded that tourists have become more demanding. Tourists are no longer in transit, they stay in Split on average 3,5 nights, with the tendency of an increase. Duration of vacation in Split is raising up to 3 to 5 days. Tourists are motivated to meet with cultural and historical heritage, and they want to have a contact with the local people and really get to know the destination. During the day there are specified programs available that are associated with the history, culture, gastronomy and nature, while during the night there are still not enough offers for the visitors who are mostly young tourists. The reason for that is in the fact that 50% of tourists who have visited Split are between the ages of 18 and 35. These profile of tourists wants to have a lot more in a lot less time and they're expecting the adrenaline and entertainment included in the programs. During 2016., a major role in promoting those, as well as expanding tourist offer of Split, had programs nowadays known as *city break* programs. For that purpose, Split Tourist Board has prepared special city-cards in the preseason and after season. A city card enables a guest to accomplish a lot more activities, i.e. free entrance to the city museums, but also a free spectacle at the Croatian National Theater on weekends, discounts on certain products and services that are offered outside of the high season and a number of others. That is one of the actions to entice tourists to come to Split during the whole year, staying at least three days in a city, and consuming more tourist products, programs, and services, which are unique for each part of the year. The same organization made a guide for guests who are staying in Split for 1 day, 3 days, or 7 days and they are available on the web pages of the Tourist Board throughout the year. It is important to underline that city of Split had 13 special events and programs realized in the year of 2016 . Special Programs mentioned were: *Advent in Split, Museum Night,* *Spli'ski Carnival, Days of Christian culture, a Party of St. Cross, Sudamja, Spli'ski koluri, World championship in picigin, Radunica Days, Diocletian Days, Mrduja regatta, Celebration holiday of St. Vincent, and a pilgrimage for the feast of Our Lady of the Prizidnice.* Also, next table shows an overview of the most prominent fairs, festivals, and events, which are of interest for the city of Split, due to the effect on the increase in tourist spending.

Table 5. Special programs in tourist offer of Split in 2016.

The festivals	The fairs	The event
The Mediterranean Film Festival	Gast (tourism fair)	Diocletian days
Ultra Europe festival	Croatia Boat Show	Split'ski Carnival
Split Cultural Summer	Saso (economic fair)	Sudamja
The Chamber Music Festival	Wedding day - Wedding Fair	Mrduja regatta
Split film festival	The Adriatic Gastro show	Koluri split'ski
Cro Patria	Fair HoreCa Adria	Advent in Split

Source: Authors' analysis according to research

Of course, it is impossible to directly measure an income of each and every event, program and festival. Especially when it comes to those special programs that take place in open air places which are free for all guests and where there is no direct record based on the number of sold tickets. The important indicators then are the number of arrivals and overnight stays, which can be compared with the past years and that was mentioned in previous part of research results. However, there are certain special programs where a direct income can be measured. One of them is *Ultra Europe festival*. In only three days of festival's duration, there were about 150,000 visitors from 143 different countries and more than 90,000 of tickets sold, which is a 15% increase in comparison to the previous year. Except for three central days in Split, festival was also held on the islands of Brač, Hvar, and Vis, so duration was extended for a week. This event had a direct influence on the rise of arrivals and overnight stays, both by 21% more compared to the same period in the previous year. Guests who participated in this event stayed five and a half days on average in the city of Split. Income from this particular event was around 500 million kuna's, and organizers have invested around 8 million euros. When it comes to tourist consumption, it is important to spot the specificities of the catering and tourist activity mediation, located in the sector in the sphere of reproductive exclusively as a recipient ("consumer") of products and services sector, or other economic activities (Blazevic;2007:335). Tourist consumption and consumer spending are in the proportional relationship. For that reason, it is not possible to isolate the specific tourist consumption, it has to be perceived through the cross-sectoral analysis of economic impact. The indicators of the business success of business efficiency can be divided into three groups: the indicators of condition, operating indicators and strategic indicators (Avelini Holjevac;2002:241). During the analysis of the success of special programs, there are two indicators of success which are monitored, the real success and a potential success. Negative discovery of this research is a reduced amount of support in the public call of the Tourist Board of Split. Two years ago, in co-operation with the Council of Split, one million kuna's were secured for special programs and events, while in 2016. that amount was reduced by 50%. Management of special programs has an important role in expanding tourism and hospitality offer. The main goal is to reach positive results for an entire destination, and in that sense, it is necessary to have a good cooperation with the local Tourist Board. Split Tourist Board has diversified special programs and events, according to certain categories. Special programs and events are sorted into next categories (www.visitsplit.com; access 30.1.2017.):

- The sights
- Tours and excursions
- A city of culture, gastronomy, natural beauty, sport, and entertainment
- Wellness and Spa
- Casino
- Shopping
- A child's content
- Unique experiences.

On the basis of the presented statistics, there is an overview of situational SWOT analysis, throughout the matrix, depicted in continuation. It gives the frame of the strengths and weaknesses that are stated in this paper, as well as certain opportunities and threats that can affect the growth rate and diversification of those special programs.

Table 6. Swot analysis of special programs in tourist offer of Split

Strengths	Weaknesses
• The geographical position • Historical heritage and cultural heritage • Rapid adaptation and allocation of resources • Friendly atmosphere • Courtesy and friendliness of the staff • The innovation of employees • Security	• An insufficient number of built accommodation infrastructure, with an appropriate quality • Not enough traffic infrastructure adapted • Frequent change of destination brand • Not enough qualified staff • Small support amounts from local administration
Opportunities	**Threats**
• Release and promotion of new contents and offer • The performance of programs throughout the year • Attracting new guests from all over the EU • Segmentation of new markets outside Europe • Rapid adaptation of offer to modern trends	• A change of tourist perception of destination • Strengthening competition of cities in the EU • Changes in the legislation and regulations • Change of fiscal policy and tax growth • Change of monetary policy • Instability in this part of Europe

Source: Authors' analysis according to research

As for the second part of research which was based on the surveys taken, results are including a profile of respondents and their expectation and satisfaction of the programs offered. A total of 50 participants has fully filled all requested questions. 52% of the total number were males and 48% were female. 24% of the respondents are within the 26-35 age category, and at least, 6% of them, is in the category of 46 to 55 years. 8% of them are in the category of the incomes higher than 3,000 euros, while most of them, 34% of respondents, are in the category of the incomes of 2,000 euros. As for the number of overnight stays, 42% of respondents stayed up to 3 nights, 28% of them stayed more than three nights, and 30% of them were without overnight stays, i.e. they came for one day just to attend the special program or event. During planned consumption questioning, 40% of them said that they would spend mostly less than 100 euros. As a motive for arrival to Split, 59% of respondents have said that they came because of a particular event or program, so 50% of them attended an event *Advent in Split*, 40% of them came to participate in a *New Year program*, and 10% of them came for other events. Comparative analysis of a level of expectation and satisfaction used the following elements:

Table 7 Rating elements of expectations and satisfaction with special programs

Element number	City's special program elements
1	Availability of information on specific city program
2	Promotion of special programs
3	Value for money
4	Traffic availability
5	Expertise and courtesy of employees in organization and performance of special programs
6	Offer of other services

Source: Authors' analysis according to research

Respondents assessed availability of information as the most powerful element on their expectations about the particular program (17,1%), ratio of value for money and traffic availability were in the same proportion and placed on a second place (17%). In terms of satisfaction, the largest percentage is given to the expertise and courtesy of staff (17,9%) and the second highest evaluated element was an availability of information (17.5%). We analyzed the elements of the quality of special programs and events in Split, and the elements of quality score on a scale from 1 to 5 are listed in Table 8.

Table 8. Rating elements of special programs quality

Element number	Perception elements of quality of the city's special programs
1	Reputation of special programs
2	Characteristics of special programs
3	Service of special programs
4	Price of special programs
5	Safety of participants in special programs
6	Results of the special programs

Source: Authors' analysis according to research

By analysing the respondents' perception of the quality of special programs, the most important element was the result of special programs (22,9%). This is applicable in the case of *Ultra Europe festival* which records a higher success every year and it is proportional relation to an increase in the number of participants. The smallest influence on the perception was the element of a price of the special program (12%). Last part of a survey was to give a general assessment of satisfaction by scoring it from 1 to 5. Based on all collected and processed data, the largest percentage was for grade 4, i.e. very good (36%) and the average score of all respondents was 3,94. The conclusion is that respondents were very satisfied with kindness and expertise of employees and with the availability of information. However, when it comes to the availability of transport and transport infrastructure it has been established that degree of satisfaction was below expectations.

A synthesis of the surveyed data provides a basis for further research on the role and importance of special programs in Split, but it also provides information about which part needs to be modified, and which part needs to be pointed out, during the promotion of city of Split, as a destination of experiences, events, and special programs.

4. CONCLUSION

Special programs in Split contribute to the positive indicators of the development of tourism and influence on a Split image as a tourism capital of Dalmatia. Mastering all challenges on the tourism market, it is important to permanently monitor all requests, needs, and motives, which make tourists travel to a certain tourist destination. Special programs, unlike other elements of tourism and hospitality offer in the tourist destination, can relatively fast track trends. They are subject to the adjustments and changes, resource allocation is to some extent feasible and their influence on the environment is multiplicative. Realization of special programs affects the extension of the tourist season, it creates new jobs and gives a better platform of networking of various clusters and indirectly affects the improvement of the overall image of the tourist destination. Research of influence and importance of special programs for this purpose shows that the tourist season in Split is significantly extended, i.e., programs are one of the reasons of reduction of seasonality influence, since they are performed throughout the year. Also, promotion of programs contributed to the increase of total arrivals and overnight stays, which indirectly led to the investment in new accommodation facilities over the past period and in the same time stimulated employment. Split can be a destination of experiences, where tourists stay longer than before, also attract new potential guests and through various channels, such as social networks and applications, directly and indirectly, promote special events and programs offered in Split. Half of the tourists are between 18 and 35 years old, with an average of 3,5 days of stay, with intention of sustainable growth. They have higher purchasing power and they are more demanding in having high value for money, which is an excellent base for special city programs. The largest percentage of guests who choose the city of Split as their destination have a monthly income of 2,000 euros and they use mostly cars and planes as a transportation solution. They spend a 55 euros' as a daily average and with city special programs they might be encouraged to additional consumption. By mastering changes and challenges on the market, with further research of quality, excellence and influence of special programs on the development of destination, and with a joint approach of Split Tourist Board and performers of programs, Split could become the main destinations of experience in this part of Europe in the near future.

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POSSIBILITIES OF SPECIALIZED ICT TOOLS APLICATION IN PREPARATION AND IMPLEMENTATION OF PROJECTS FINANCED FROM EUROPEAN UNION FUNDS

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Abstract

In today's world where the flow of information in business is considerable, development accelerated and ICT tools used every day, the application of computers and programme solutions play a key role in the process of managing activities in real time. Since economic activities and economic development are based and rely on the available EU funds, it is well-founded to think about how efficiently the existing system is managed and what are the possibilities of its upgradal. For this purpose we shall look at a systematic approach to planning

[1] Andreja Hašček is an employee of the Croatian Financial Services Supervisory Agency. The views expressed in this paper are those of the author and do not necessarily reflect the views of the Croatian Financial Services Supervisory Agency.

and monitoring projects. It can provide a basis for a more efficient prediction of potential problems and risks in the projects and allow for timely reactions that should result in success in project goals achievement. This paper shall elaborate on a number of published calls for financing from the EU funds in the Republic of Croatia and according to publically available information identify some elements of risk in preparation and implementation of such projects. Accordingly, the paper shall elaborate on the possibilities of reduction, mitigation or avoidance of the mentioned risks by means of detailed planning using specialized tools for planning and monitoring of projects.

Keywords: *EU projects, project planning and control, specialized ICT project management tools, integrated project plan*

JEL Classification: H4, O22

1. INTRODUCTION

Financing projects from the European Union funds is currently a very topical issue in the Republic of Croatia, both from the position of state institutions that invite tenders for the use of these funds, and from the position of beneficiaries using such funds. In view of the fact that, in the programmes of all active political options, economic activities and economic development are highly based and depending on available funding from EU funds, the efficiency of managing the existing system for planning and monitoring projects is deliberated upon with good reason, thus also the usage of the European Union funds, and the possibilities for its improvement.

In today's world of extremely high throughput of business information, accelerated development and, much more importantly, application of information and communication technologies in everyday work, it can be said that the application of computers and software solutions plays a key role in the management process in real time, and in accordance with that, in taking timely corrective actions in order for the started activity not to enter the zone of exceeding the set deadline or approved budget. In that sense, when managing projects financed by the European Union funds, where rules for the preparation and implementation of projects are rather rigid and clearly and unambiguously define the mentioned terms, the question is raised regarding improvement of the efficiency of the system for managing projects financed by the European Union funds at all levels of management, from users that work on the operational level, through to the national portfolio, where operational programmes are managed at the strategic level.

This paper will explore the theoretical basis of requirements that are set when planning and monitoring projects financed by the European Union funds in the Republic of Croatia, by analysing published calls for submission of project proposals[2]. A correlation to other publicly available information about the existing way of managing these projects will be made, some elements of risk in preparation and implementation of projects will be identified, possibilities for reducing risk by using specialised tools for planning and monitoring projects will be explored, and through application of authors' existing experience from practice and constant contact with users and their concrete problems, an overview of systematic approach to planning, that is, managing projects, as a possibility for more efficient prediction of potential problems or risks on the project, as well as timely reaction in order to be successful in achieving all project objectives will be given.

The paper starts from the set hypothesis that the use of specialised ICT tools for planning and monitoring can reduce the risks of unforeseen deadlines, unforeseen losses of working hours, as well as reduce costs. In order to test the proposed hypothesis, secondary sources of data collected through conducted desk research were used. These secondary data consist of domestic and foreign literature in the field of project management, books, specialised business magazines, databases, and the Internet. The following scientific methods were used: method of induction and deduction, method of analysis and synthesis, method of compilation, method of description, and method of modelling.

2. THE ROLE OF INFORMATION TECHNOLOGIES IN PLANNING AND MONITORING PROJECTS

Even in the 90s of the 20th century, it was considered irrefutable that modern enterprises operate in specific conditions, that is, "conditions of ambient complexity and dynamics" (Dulčić in: Buble, 1997, 77). These conditions are characterised by rapid, turbulent and unexpected changes, and along with them, the main features or characteristics of the external environment of enterprises of the time were being confirmed in practice (ibid.): *a) complexity* – determined

[2] For more details, visit http://www.strukturnifondovi.hr; accessed on November 11, 2016

by the number of actors in enterprise environment and the intensity of their interconnectedness; *b) dynamism* – determined by the number, type, character and predictability of changes; *c) heterogeneity* – expressed by the degree of diversity of relevant components of the environment, which requires constant monitoring of the environment, as well as its individual parts; and *d) uncertainty* – associated with the availability and quality of information about future or potential changes in the environment.

Government or state organisations, civil society organisations or communities, as well as various professional organisations, prevalent among which are trade associations, stand out as special parts of external, that is, business environment of enterprises. With their appropriate policies and legal regulations, all of them can significantly influence enterprises and their strategic forecasts and achievements (Buble, 1997, 77).

Consequently, it is logical to conclude that there is a significant interaction between all organisations in the business environment, whereby it is further stated that in these conditions the amount of information that these organisations exchange with each other significantly increases. Information technologies generally improve and enhance the information capabilities of organisations. They enable processing of large quantities of information and speed up their transfer. They also enable the use of complex analytical methods and systematisation of knowledge and experiences for the purpose of improving processes. Among other things, they also allow simultaneous monitoring of different tasks in real time (Davenport et al., 1990, 17).

In this regard, the role of computer in the planning process corresponds to its original intention of a tool for aiding human labour. The computer itself cannot plan, but through implementation of a series of programmed actions, it executes the routine part of the work, doing it faster, more accurately and cheaper than a human does. This means that all creative actions in the planning process are still carried out by a human, who is responsible for the quality and accuracy of the results (Radujković et al., 2012, 344).

The application of computers in planning is based on the known advantages of using this tool, which also exist in other areas: (ibid.)

1. fast and accurate data processing
2. storage of data – plans of past projects and the possibility of creating a database

3. possibility of fast development and testing of a large number of alternative solutions
4. possibility of connecting several plans into a system and creating reports with system-level data
5. possibility of implementation of various plan optimisation procedures
6. fast creation of various graphical and numerical reports.

Bearing in mind all of the above, a specialised tool for planning and monitoring projects should establish a system with a central database of project data in which all the plans are integrated by projects in the organisation, and which at the same time should allow (Rastovski, 2011, 53):

1. multi-project and multi-user simultaneous access
2. immediate insight into the state of the portfolio and projects, execution of the agreed tasks, and utilisation of the budget
3. insight into future, i.e. projection of current trends in the form of quality, time and costs (money and resources), assessment of project completion and total costs until the end of the project
4. creation of a history database of events for future audits and analyses
5. identification of problems in project implementation
6. knowledge of risks and impacts of risks on projects
7. security in the form of access to information (parts of projects can be isolated, which is very important on large projects)
8. increased resource efficiency through better planning and forecasting
9. greater satisfaction of employees and external contractors through clearly defined tasks
10. lower exposure to „emergencies“ on the project
11. better communication and exchange of information.

3. FUNDAMENTAL DETERMINANTS OF PREPARATION AND IMPLEMENTATION OF PROJECTS FINANCED BY EUROPEAN UNION WITH AN OVERVIEW FROM THE POSITION OF PLANNING AND MONITORING PROJECTS – ELEMENTS OF RISK

According to the instructions of the bodies[3] that invite tenders for projects financed by the European Union funds, in project application forms, in addition to the description of the enterprise or organisation, their expertise and capacity to implement the project, project relevance, considering the objectives of operational programmes and sustainability, applicants are obliged to describe the project and specify the elements or groups of activities to be implemented in order to achieve the results that they want to accomplish with the project. Project budget is defined as a list of expenses that are listed by elements.

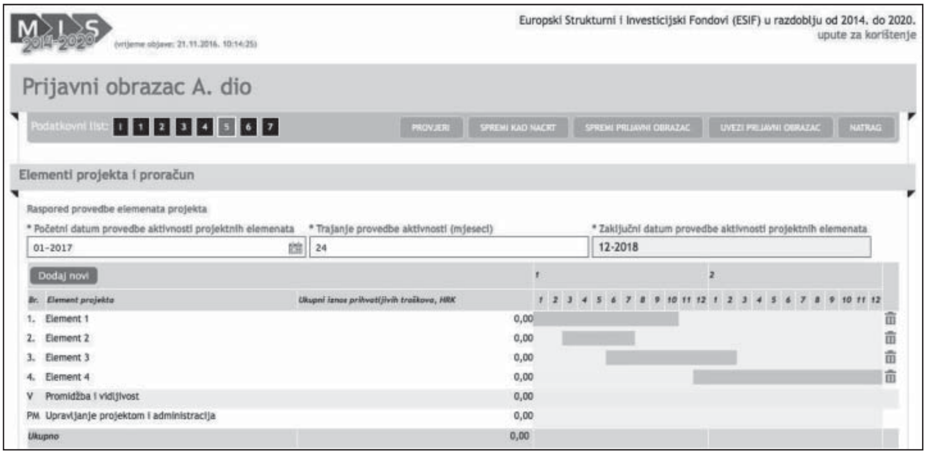
3.1. Defining project activities and time frame

As shown in Figure 1, in the Application Form A, that is, in the integrated information system for managing the Cohesion Fund and Structural Funds (SF MIS)[4], a project plan is defined using the so-called elements. A project element represents a larger logical grouping of activities, i.e., work on the project. Project elements describe which goods and services will be delivered and summarize the activities that will be undertaken within the project (ESIF MIS 2014-2020, User Manual, 25). Elements are actually names for groups of activities that need to be implemented in order to achieve the goals foreseen for that element. Figure 1 shows the time frame of the project where each element is separately defined by the starting and the ending month. However, neither the activities that are an integral part of each of those elements, nor the relationships between them are visible.

[3] More details about open calls and bodies that invite tenders for financing with the European Union funds are available at: http://www.strukturnifondovi.hr/natjecaji; accessed on November 30, 2016

[4] Web system for the entry of project proposals. For more details, visit: https://esif-wf.mrrfeu.hr/Form/Index/2032302; accessed on November 30, 2016

Figure 1: Application Form A – definition of elements


Europski Strukturni i Investicijski Fondovi (ESIF) u razdoblju od 2014. do 2020.
upute za korištenje

Prijavni obrazac A. dio

Podatkovni list: 1 2 3 4 5 6 7

PROVJERI | SPREMI KAO NACRT | SPREMI PRIJAVNI OBRAZAC | UVEZI PRIJAVNI OBRAZAC | NATRAG

Elementi projekta i proračun

Raspored provedbe elemenata projekta

* Početni datum provedbe aktivnosti projektnih elemenata: 01-2017
* Trajanje provedbe aktivnosti (mjeseci): 24
* Zaključni datum provedbe aktivnosti projektnih elemenata: 12-2018

Dodaj novi

Br.	Element projekta	Ukupni iznos prihvatljivih troškova, HRK
1.	Element 1	0,00
2.	Element 2	0,00
3.	Element 3	0,00
4.	Element 4	0,00
V	Promidžba i vidljivost	0,00
PM	Upravljanje projektom i administracija	0,00
Ukupno		0,00

Source: Integrated information system for managing the Cohesion Fund and Structural Funds (SF MIS), for more details, visit https://esif-wf.mrrfeu.hr/Form/Index/2032302

In case of more complex projects, another form (Form B) is foreseen, in which a more detailed overview of data about the project and the project plan itself is expected. In the Application Form B[5] of one of the tenders that was ongoing at the time of writing of this paper, in addition to project elements, all the activities that need to be implemented within an individual element have to be defined. Unlike in Form A, project elements are elaborated in much greater detail, with all the attributes that are important for individual activities. Namely, for each activity it is necessary to describe the objective and result, the steps required for implementation, the qualitative and quantitative output indicators, and the team members who are responsible for delivering results. The schedule of activities, as foreseen by Form B, is shown in Table 1.

Table 1: Application Form B – indicative schedule of activities

Aktivnost	Godina n												Godina n+1												Godina n+2
	Mjesec												Mjesec												Mjesec
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
Aktivnost 1.1.	x	x	x																						
Aktivnost 1.2.			x	x	x	x																			
Aktivnost 2.1.																									
Aktivnost 2.2.																									

Source: Tender documentation downloaded from http://strukturnifondovi.hr/natjecaji/1179; accessed on December 08, 2016

[5] Tender documentation downloaded from http://strukturnifondovi.hr/natjecaji/1179; accessed on December 08, 2016

The instructions that explain how to fill out the forms, dictate that, when defining activities, it is necessary to determine their order and interdependence, but also to limit oneself to stating of project activities (e.g. purchase of equipment) that will be carried out during project implementation, and not to list administrative procedures (such as collection of bids, requests for tenders, etc.).

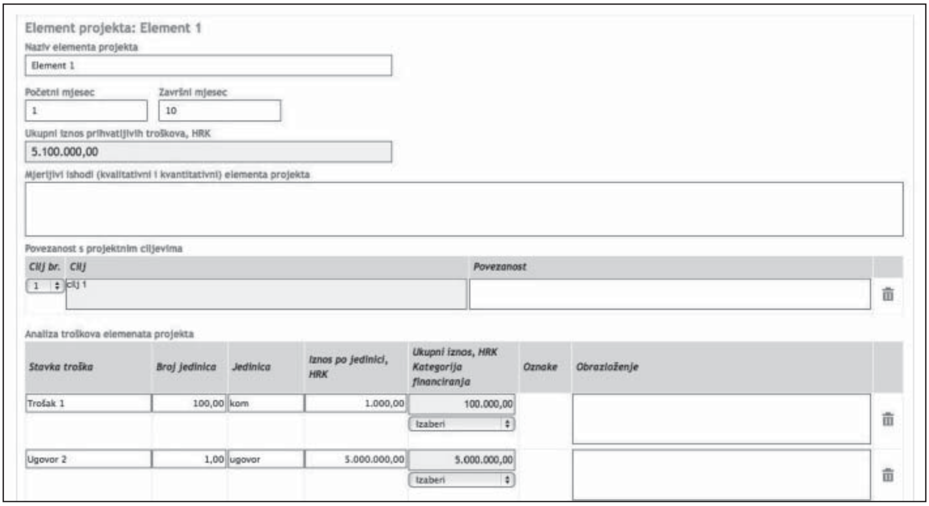
From the position of project management, the mentioned activities related to administrative procedures require involvement of almost the entire project team in the implementation phase and they are the most common risk associated with project deadlines. When stating the expected time schedule of activities, it is only required to indicate in which month of implementation is the realisation of the respective activity expected (e.g. purchase of equipment is expected in the 3rd and 4th month of the project). Considering the above instruction not to list the administrative procedures in the application, it can be concluded that these key activities and their interconnectedness, on which the realisation of both the respective activity and the entire project depend, are, in fact, not described in a transparent matter at all. In the context of the observed problem, this is a very significant insight from the position of the user who must timely predict these activities and carry them out in the implementation phase, but also from the position of the intermediate bodies that announced the competition, which will fully control the implementation of those activities and projects.

3.2. Defining project budget

According to the Application Form A[6], i.e., the integrated information system for managing the Cohesion Fund and Structural Funds (SF MIS), applicants are required to define only the elements when filling out the form, and the project budget is formed by simply adding up the individual costs of the elements, as shown in Figure 2.

[6] Downloaded from https://esif-wf.mrrfeu.hr/Form/Index/1032104#; accessed on December 08, 2016

Figure 2: Application Form A – input of project elements and associated costs


Element projekta: Element 1

Naziv elementa projekta

Element 1

Početni mjesec: 1

Završni mjesec: 10

Ukupni iznos prihvatljivih troškova, HRK

5.100.000,00

Mjerljivi ishodi (kvalitativni i kvantitativni) elementa projekta

Povezanost s projektnim ciljevima

Cilj br.	Cilj	Povezanost
1	cilj 1	

Analiza troškova elemenata projekta

Stavka troška	Broj jedinica	Jedinica	Iznos po jedinici, HRK	Ukupni iznos, HRK Kategorija financiranja	Oznake	Obrazloženje
Trošak 1	100,00	kom	1.000,00	100.000,00 Izaberi		
Ugovor 2	1,00	ugovor	5.000.000,00	5.000.000,00 Izaberi		

Source: Integrated information system for managing the Cohesion Fund and Structural Funds (SF MIS, downloaded from https://esif-wf.mrrfeu.hr/Form/Index/1032104#; accessed on December 08, 2016

Figure 2 shows that every element, except the cost of goods, works and services that are unique to that element, will include the cost of human resources, e.g., project manager, administrator or procurement specialist, but in percentage ratios of working hours for engagement on individual elements, if they are planned in such a way. In this case, there is no comprehensive overview of engagement of individual human resources on the entire project. If we take into account the fact that in a large majority of cases involvement of individual project team members in the project takes place in addition to their everyday business obligations, the issue is raised of the actual availability of those resources, if there is no adequate plan of needs for human resources on the project. In another case, if team members are involved in several projects financed by the European Union, the actual engagement of each employee, i.e. potential over-allocation, is not visible, since overtime work is not an acceptable cost.

From the foregoing, it can be assumed that there is risk of inadequate planning of necessary activities in the preparation phase. Consequently, quality monitoring of all the indicators later in the implementation phase has also not been enabled. At the same time, neither a proper method of forecasting the necessary human resources and their engagement has been established, and ultimately nor the responsibly planned costs. In the absence of a comprehensive plan that includes a schedule of activities and distribution of costs over time, there is no proper cash flow of the project, nor there are preconditions for monitoring project performance in real time.

Experience shows that more meaningful and detailed planning starts in the phase when the project has been approved and its implementation begins. In that moment, all the relevant features that define the project as such have already been set (participants, objectives, activities to be implemented and resources required to achieve the objectives). But, in order to successfully manage the project, among other numerous and equally important components, it is necessary to focus attention on the definition and control of the project. The definition is taken as a broad concept, which essentially includes the objectives of the project, the work that needs to be done, the time schedule of activities and the budget. All four mentioned segments have to be controlled during the implementation phase (Barković, 2011, 152). It can be concluded that the meaning of planning lies in a good definition with all the key indicators, which are known before the start of implementation, that is, in the preparatory phase.

Assuming a time plan in which there is a dynamic interdependence of all the necessary activities, and its connection with the financial plan in which costs and all other data are distributed in time, a dynamic environment is created in which, depending on the progress of the project, fluidity of the plan in time is enabled, creating real data in real time, necessary for quality decision-making (Butković, 2015, 1157). By regular updating of real events and continuous planning of the remaining part of work, all the aspects of the project during its life cycle are reflected upon in an iterative process, continuously asking oneself questions what more needs to be done, what is the additional cost, what are the possible disadvantages and how they can be avoided. It is a creative process in which the computer can help by creating a virtual image and simulation of implementation through trends of key indicators.

In that sense, specialised tools for planning and monitoring projects with built-in project management methodologies are available today.

4. POSSIBILITIES PROVIDED BY THE USE OF ICT TOOLS IN THE PREPARATION AND IMPLEMENTATION OF PROJECTS FINANCED BY EUROPEAN UNION FUNDS ON EXAMPLES FROM PRACTICE

Practical experience has shown that the applicants, team members or project leaders and their consultants when applying for tenders for projects financed from the European Union funds most commonly use the descriptive method when planning their project, using, in addition to the predefined web forms, mainly MS Word and MS Excel to calculate the project budget (Butković, 2015, 1157). Application of these tools makes planning, as described previously, static and it does not provide the ability to track changes in the project in real time at any stage of preparation or implementation.

Therefore, presented below are several selected situations in the preparation and implementation of projects financed by the European Union funds through all life stages of the project, in which the use of ICT tools decreases the aforementioned elements of risk.

4.1. Integrated project plan – basic document for project management

Integrated approach to planning implies a time plan in which all activities are logically connected. Each activity is associated with its corresponding costs, and since they are connected with a time plan, a distribution of project costs in time is obtained (Butković, 2015, 1153). In the later stages of the project, by continuous refreshing with new information about the circumstances surrounding the project, the likelihood of not predicting some activities, costs and other data critical to the success of the project is reduced. A plan that is connected in such a way is the prerequisite for all advanced techniques of planning, monitoring and reporting on projects.

Using these conceptual assumptions, a project plan consists of a sequence of logically related activities that are grouped by project phases. Each activity carries a financial component in terms of working hours of people who work on the project, that is, their gross salaries or funds that are planned for the implementation of those activities through external suppliers of goods and services or contractors. Since the time component and the financial component are connected, a distribution of costs in time is automatically obtained[7]. If the planned values for some reason move in time, the same shift will be automatically reflected in the financial plan. For example, if there is a cancellation in the public procurement procedure, as one of the steps in the project, a new procedure must be planned, which causes a time delay in implementation of the activity for which the respective procurement is carried out. This also causes the „delay of money", since the financial component also moves in time together with the corresponding activity. Such timely information is of crucial importance for the intermediate bodies that announced the competition because of, among other things, the planning and reservation of total funds. However, it is equally important for the project team and the project user because of payments on the project and planning the compensation of funds.

It is evident from the prescribed forms that intermediate bodies monitor individual projects purely in administrative sense, which does not provide dynamic information about the impact of the respective project on the overall portfolio of projects under their authority.

4.2. Baseline plan – basic document for project control in the implementation phase

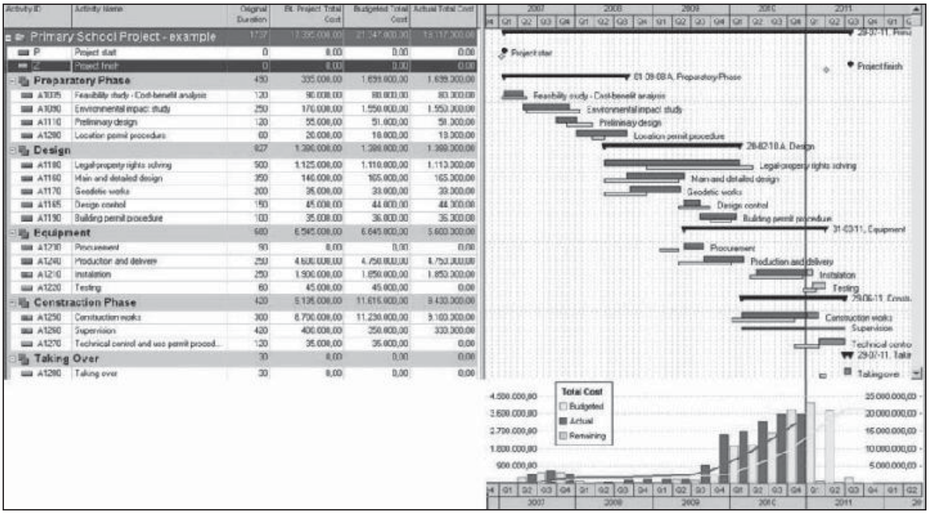
The more complex a project is, it becomes less and less possible to have a good-quality management of the trend of time and financial indicators, if the current situation cannot be compared with the planned situation. That is what copies of the baseline plan, which contain all the planned time and financial data in the observed moment, are for. It is the initial (starting) project plan proposed by the user and approved by the project sponsor, in this case the implementing body that announced the competition, when signing the contract on financing by the European Union funds. The meaning of control of the project through a copy of the baseline plan lies in regular and periodic updating of project parameters in the implementation phase. In this way, the actual dates of the beginnings and endings of individual activities, actual costs and actual hours worked on the project by the project team are registered. Through continuous updating of this information, it is possible to determine deviations from the initial plan,

[7] For more details, see: Butković, D. (2015). Integrated Project Plan as Basis for Multi-Project Systems Management

which consequently enables early insight into the status of project performance and undertaking of timely corrective actions to maintain the project within the planned values.

In this regard, the essential meaning of good project management lies in regular re-planning of the remaining activities, based on indicators derived from the planned-implemented ratio by comparing the current and the initial plan. During project implementation, depending on the changes that are taking place in the project, it is possible to have several copies of the plan, which can be used by the project team for management purposes. However, the initial plan is the most important, which contains the contracted values, in relation to which the final report is submitted, as prescribed by the implementing body that announced the competition.

Figure 3: Copy of the baseline plan – relationship between the current and the initial plan



Source: Authors' own work created in Oracle's Primavera P6 project management tool

Figure 3 shows the relationship between the current and the baseline plan. Baseline plan is marked with yellow colour, blue colour represents the realised values, and green represents the remaining values. The column „BL Project Total Cost" represents the planned amounts at the start of the project (planned initially), „Budgeted Total Cost" represents the contracted amount until the moment of reporting, that is, new planned values from the moment of reporting until the end of the project (planned currently) and „Actual Total Cost" represents the budget that is spent. According to the presented situation, the project is 4 months late, so far it is almost HRK 2 million above the budget, and it is estimated that it will end with a budget higher by almost HRK 4 million than initially planned, which is also evident from the S-curves showing the cumulative planned and realised budget.

4.3. Planning public procurement procedures

In order to finance their projects by the European Union funds, users sign a contract with the relevant institution (intermediate bodies that announced the competition), which strictly defines the conditions related to the deadline and budget for implementation. As already mentioned, it is particularly important to carefully plan all the activities that achieve the project objectives in order for the project to be completed within the set deadline and budget. Since the financial resources from the European Union Funds are public money, all users are required to purchase all the equipment, services and works through public procurement procedures. This equally applies to the public and the private sector. In order for the mentioned realisation of key project activities to be completed as planned, careful and quality planning of all public procurement procedures within the project is of utmost importance for the success of the project.

According to the guidelines issued by the European Commission (2015, 15), a realistic time schedule for the entire procurement process should be developed in the planning phase, including possible procedures for seeking legal remedy, all through to the award phase and the implementation of the contract. Overly optimistic schedules are common and lead to mistakes in the later stages of implementation. For example, unrealistic deadlines for the preparation of bids, which limits the number of bids and affects their quality, can result in an unsuccessful procurement procedure or major problems in implementation. The first phase, which includes preparation and planning of the procedure is critical and will affect all future activities with regard to the contract. If this part of the tender procedure is properly implemented, then the remainder of the procedure should be carried out without difficulty; the same is true in the opposite case. It often happens that the contracting authority underestimates the planning phase of the process or that it does not implement it at all. Furthermore, the same guidelines state that, depending on the size and complexity of the contract, this phase of preparation of the procedure can take months even before an invitation for tender needs to be published. Good planning should reduce the risk of the need for modifications or versions of the contract. The biggest (and potentially the most expensive) and the most common mistakes in terms of the contract are the consequence of inadequate planning[8].

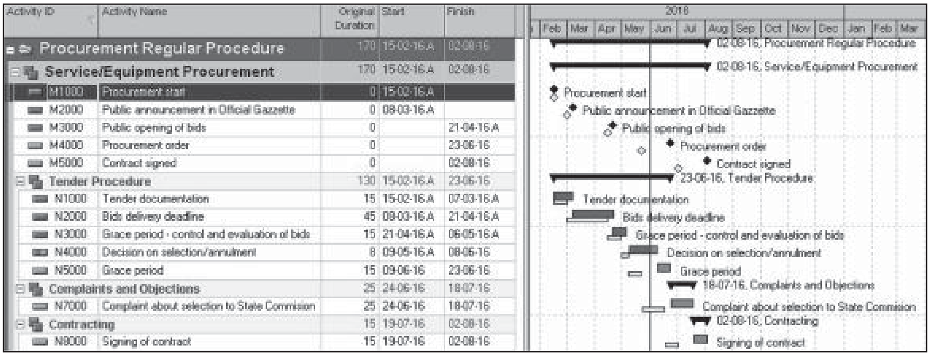
Wrongly estimated duration of certain procedures, which cannot be influenced by own engagement, may in implementation lead to endangering the completion of the project within the stipulated time. For example, all the relevant parameters of the procurement procedure in the implementation of public procurement are defined by the Public Procurement Act[9], and that segment cannot be influenced by anything but good planning and initiating the procurement procedure precisely at a certain time , so that the implementation of e.g. purchased equipment or service would be started or realised in the planned time, according to the project.

Each public procurement procedure may become the subject of increased public interest, and influence, criticism or complaints of virtually all interested parties in the project. In this case, this can become a disadvantage for the contracting authority in terms of predicting the outcome of the procedure. However, a responsible and well-prepared project team will predict such risk situations and calculate them into the project plan and thus, if not avoid them, at least reduce their impact.

[8] Public Procurement – Guidance for practitioners on the avoidance of the most common errors in projects funded by the European Structural and Investment Funds, available at: http://ec.europa.eu/regional_policy/sources/docgener/informat/2014/guidance_public_proc_hr.pdf; accessed on January 15, 2017

[9] Official Gazette No. 120/16

Figure 4: Display of public procurement procedure

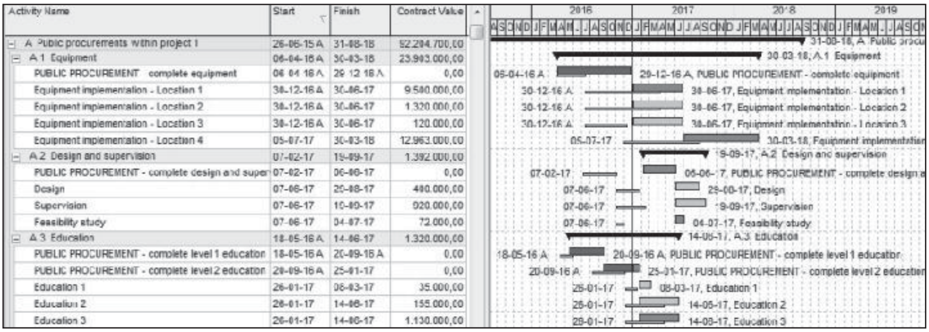


Source: Authors' own work created in Oracle's Primavera P6 project management tool

Figure 4 shows part of the project plan of one of the public procurement procedures. The plan shows the key activities in the public procurement procedure with key deliveries (milestones). From the displayed image it is possible to simply and quickly visually determine the status of the respective procurement by comparing the current plan with a copy of the baseline plan. Namely, the procedure has started according to plan. The activity of preparation of tender documents took longer than planned, which caused the first delay. The activity of selection takes longer than planned, and has not yet ended. According to the current assessment, the public procurement procedure will end a month later than planned.

Very often, on large and complex projects a contract is implemented in different places, that is, different activities in the project. Though an activity coding system, by using identical codes, that is, common attributes of procurement and contract, it is possible to connect each procurement with various activities at different places in the project, so as to ensure consistency of the contract with the corresponding procurement.

Figure 5: Status of procurement contracts



Activity Name	Start	Finish	Contract Value
A Public procurements within project 1	26-06-15 A	31-08-18	52.294.700,00
A.1 Equipment	06-04-16 A	30-03-18	23.903.000,00
PUBLIC PROCUREMENT - complete equipment	06-04-16 A	29-12-16 A	0,00
Equipment implementation - Location 1	30-12-16 A	30-06-17	9.540.000,00
Equipment implementation - Location 2	30-12-16 A	30-06-17	1.320.000,00
Equipment implementation - Location 3	30-12-16 A	30-06-17	120.000,00
Equipment implementation - Location 4	05-07-17	30-03-18	12.963.000,00
A.2 Design and supervision	07-02-17	19-09-17	1.392.000,00
PUBLIC PROCUREMENT - complete design and super	07-02-17	06-06-17	0,00
Design	07-06-17	29-08-17	400.000,00
Supervision	07-06-17	19-09-17	920.000,00
Feasibility study	07-06-17	04-07-17	72.000,00
A.3 Education	18-05-16 A	14-06-17	1.320.000,00
PUBLIC PROCUREMENT - complete level 1 education	18-05-16 A	20-09-16 A	0,00
PUBLIC PROCUREMENT - complete level 2 education	20-09-16 A	25-01-17	0,00
Education 1	26-01-17	08-03-17	35.000,00
Education 2	26-01-17	14-06-17	155.000,00
Education 3	26-01-17	14-06-17	1.130.000,00

Source: Authors' own work created in Oracle's Primavera P6 project management tool

Figure 5 shows the case when the contract for which public procurement procedure is being carried out implies realisation at various activities in the project, based on a logical sequence. In this case, the system clearly suggests any deviations in logic and, among other things, provides all relevant information about all procurements and contracts in one place. For instance, the figure shows 3 procurements and 3 corresponding contracts with individual activities that are carried out at different places in the project. In large and complex projects, such a quick display greatly facilitates planning deadlines and estimated procurement values for the project team, as well as the monitoring of the contract and all its parts in the implementation phase.

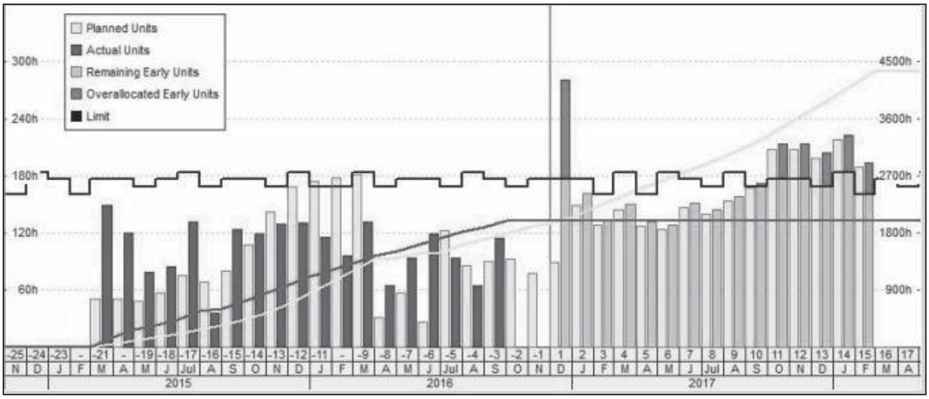
4.4. Planning human work

One of the components of costs that are eligible for financing are the salaries of people working on the project, whether they are treated as financing in full or co-financing by the applicant. In both cases, these funds are tracked through working hours spent on the project, which are proven through timesheets during the implementation phase. In the case of co-financing by the user or applicant, this component is shown in the project budget through working hours, that is, percentage of working time of the organisation's employees who will be engaged in project activities. Incorrect assessment, or rather erroneous distribution of this engagement in time can lead to a breach of contractual obligations, which inevitably leads to changes in percentages of co-financing by the European Union funds and, consequently, to an increase in costs for the project user.

Since the funds foreseen for salaries of participants in the project represent a significant amount compared to the total budget, it is important to take special care when planning working hours of employees on the project, for several reasons. Primarily, to determine the real commitment, that is, availability with regard to regular work. Furthermore, to determine the involvement on other projects and the extent of that involvement. Finally, to maintain the planned engagement in real terms with spending in the implementation phase. In order for each realised hour to be paid, it must be proven with the monthly timesheet. Since these hours are tracked on a monthly basis, and since their realised amount depends on activities that were carried out in the observed period, it is very important, by strict monitoring of realised hours and regular re-planning of remaining values, to control the relationship between the planned and realised values, so as to ensure good realisation and maximum utilisation of resources.

In the case of a unified system, this method of planning and monitoring of human work would also be of utmost importance for the intermediate bodies that announced the competition when performing control, because all the important information about all the projects would be available in one place, and thus, e.g. engagement of an individual employee would be visible on all the projects, and it would be possible to ascertain any irregularities very quickly.

Figure 6: Display of an employee's engagement on the project



Source: Authors' own work created in Oracle's Primavera P6 project management tool

Figure 6 shows a comprehensive overview of the workload of one employee during the entire project created in Oracle's Primavera P6 project management tool. Black line shows total hours per month. Yellow bars represent the planned, and blue the realised amount of hours per month. Given that updating of the actually realised and re-planning of the remaining values is conducted every month, green bars show the remaining amount of hours that need to be realised to satisfy the contracted amounts. It is important to note that the tool automatically suggests places where there is over-allocation, that is, places where intervention is needed to return the values within the allowable limits (e.g. red bar for December of 2016). Another advantage of this system is the representation of cumulative amounts through S-curves, which, in a simple graphical way, enable quick insight into the relation between the planned and realised values. Yellow curve represents the planned, and blue the realised hours for the employee in question. According to this situation, more hours than planned have been realised, continuously since the beginning of the project until September of 2016, until when entries of realised hours exist.

From the foregoing, it can be concluded that with detailed planning in the application phase of the project it is possible to predict and manage potential risks in the implementation, regardless of the fact that such plans are not required by the implementing bodies that invite public tenders and evaluate project applications.

5. INSTEAD OF A CONCLUSION – OVERVIEW OF THE CURRENT SITUATION IN THE REPUBLIC OF CROATIA

Authors' experiences from practice show a relatively low level of formal knowledge and use of available technologies in the field of project management. Namely, although today there are many information technology tools that can provide connectivity and storage of all project information in one place, which are operationally available to all project participants simultaneously, and which allow monitoring of the project through all the phases, experience shows that organisations either do not use these ICT tools at all, or that very often they are not used properly in terms of features they provide, so that obtained data are usually not used for operational management of the project. There are even open source versions of such programmes intended for small users, but experience shows that they are also used very rarely. Authors see the reason for this primarily in the systematic lack of information, followed by the lack of education in the field of project management, that is, in ignorance of basic techniques of planning and monitoring projects, and in the lack of knowledge and skills when it comes to project management.

Since the applicants very often do not have the technical capacity to manage the project, and there are not enough available people of that profile in the labour market, experts in project management are very often hired only in the implementation phase; for example in cases when work must be carried out under the circumstances from the contract, for which there are no detailed plans. This usually leads to problems in activities that are not foreseen, but are necessary to achieve the objectives, and thus also to unforeseen costs, discrepancies in the implementations of contracts and corresponding procurements, imprecisely planned human resources engaged on the project because of co-financing, etc. All of these are risks that can and should be foreseen in the initialisation phase, that is, creation of the project idea, and mitigated or, if possible, avoided through quality detailed planning during the preparatory stage.

Since a good part of the activities and work that are financed from the state budget is classified as projects, we are living in times in when these features are not characteristic only for the area of financing of projects by the European Union funds, but also for all the participants in the public and private sectors, which has become especially evident after the accession of the Republic of Croatia to the European Union. Therefore, from the perspective of experts, it is not possible to talk about the use of ICT tools in project management, without a critical reflection on the current situation, that is, without thinking how things could and should function if there was a unified system that would include all the parties involved in financing from the European Union funds, from users and implementing bodies, to all the interested parties – government, ministries and other state and public bodies.

Let us therefore assume a unified system for project management, which is elaborated according to a predefined structure whose individual levels represent a vertical of management structure (government, ministries, implementing bodies, etc.). Let us also assume that, when applying for a project and filling out the prescribed forms, users have the obligation to enter their project ideas into the system in the form of an integrated project plan. Let us further assume that all the project plans are made according to predefined standards that are universal for all institutions and mandatory for all users in all calls. Already in this, we can say initial stage, one can observe countless opportunities of a defined dynamic system with all the unique information. Primarily, at the project level, detailed planning significantly reduces the risks of exceeding the deadline and budget, from which users benefit directly. The intermediate bodies and managing authorities, on the other hand, is enabled to plan and monitor time and financial realisation on a large scale. This means that the intermediate bodies and managing authorities have in one place all the necessary information for managing time and financial indicators of the entire call. This enables more precise control of all the activities on a particular project. Finally, this also makes more room for analysis and decision-making at the top level of management of all means of financing from such sources.

The prescribed rules require fulfilment of a precisely defined form when preparation and implementation of such projects is in question. This leads to a very simple conclusion that project management has an administrative nature, since emphasis is placed on properly filled reports about e.g. records of working hours or acceptable part of an employee's salary, rather than on the actual allocation of that same employee and the question whether they can actually perform the foreseen work through their planned involvement. As a rule, today the system does not expect users to manage their projects according to conventional knowledge and techniques of project management. As most common mistakes, users of funds very often point out lack of preparation, additional costs due to failure to foresee activities necessary to achieve the objectives, uncertainty of public procurement procedures, adequate and timely manner of reaction, all because of insufficient preparedness and prediction of potential problems, that is, non-existence of a detailed plan in the project preparation phase.

However, a systematic approach through a programme of institutions' targeted investments in knowledge and technologies for project management systems and simultaneously through a programme of workshops and grants that would encourage users to become educated in the field of project management, and investment in ICT technologies, would certainly contribute to the overall efficiency at the national level, since vertical connecting establishes a system that manages information from the very beginnings at the level of desires and ideas of users (creating a kind of a catalogue of projects), which gives information to the system about the potentially planned values, all the way to the actually realised values in implementation, and forecasts that provide information about the trend of both individual and all projects in the programme or portfolio.

Bearing in mind that there are practice-proven methodologies, as well as available technologies in the field of project management on the one hand, and the pressing need for such knowledge and experience in the existing system for managing projects financed by the European Union funds on the other, in conclusion a motivation question for future calls for financing is asked – can such a potential mega-project be prepared and implemented as a strategic state project co-financed by the European Union funds?

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BRAND COMMUNITIES IN AN OPEN INNOVATION ENVIRONMENT

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Abstract

The present articles as an explorative study adds to the growing stream of brand community and innovation-focused literature in two ways. First, it attempts to summarize and structure academia's understanding of brand communities and link it to the topic of open innovation and customer co-creation.

Second, the qualitative research in the form of expert interviews adds to the body of knowledge by targeting issues and questions that might be relevant and interesting for further studies. Especially topics that have been neglected by brand community researchers so far are touched, identifying potential opportunities for marketing practitioners.

Keywords: *brand communities, innovation management, open innovation*

JEL Classification: O3, O31

1 INTRODUCTION

Postmodern societies are characterized by the highest forms of individualism, sought after by consumers and enabled by marketers and especially brand managers (Cova 1997, pp. 298). It is widely accepted that brands are an increasingly important factor in differentiating a company from its competitors, especially in industries where quality and other tangible attributes are less important or hard to compare (Di Maria and Finotto 2008, p. 186). New approaches towards marketing put more focus on intangible elements of firms' offerings and see goods as "distribution mechanisms for services, or the provision of satisfaction for higher-order needs" (Vargo and Lusch 2004, p. 9).

For consumers, brands and their consumption are more and more becoming determinants of social belongingness and identity. The question this raises is: If brands are the reflection of someone's personality, shouldn't people with a passion for the same brand be able to connect with one another based on their perceived values and self-identification? Research on brand communities tries to answer this question by explaining relationships and interactions that go beyond traditional branding approaches focused on one single customer. Groups of like-minded consumers can originate a counter-force to individualism by reviving the desire for social ties and shared belongingness. (Cova 1997, pp. 300; Hammedi et al. 2015, pp. 777)

Besides delivering important insights for marketing research, engaged customer groups are predestined to be involved in the process of brand development, management, and innovation (Casaló, Flavián, and Guinalíu 2008, p. 20). Brand communities enable some of the strongest experiences in a consumption and brand engagement context, (Muniz Jr. and Schau 2005, p. 738) and can therefore become crucial elements of the consumer journey. As such, they can be viewed as "a higher level of customer engagement with brands" (Hammedi et al. 2015, p. 784), leading to increased brand loyalty (Hur, Ahn, and Kim 2011, p. 1195). These discoveries have not gone unnoticed by brand managers who increasingly focus their efforts on engaging groups and communities instead of single customers (Hammedi et al. 2015, p. 777). That being said, it becomes obvious that there is a lot of potential in studying such brand communities to a further extend and explore new areas of interest which haven't been thoroughly examined by scholars so far.

A second shift in business conduct has been the topic of interest for researchers and practitioners in the realms of innovation management. In view of rapidly changing market conditions, firms are increasingly forced to redirect their agendas in terms of new product development and process transparency. The concept of open innovation came to the forefront of interest for organizations, suggesting practices which aim to open up the company borders in order to allow knowledge and information transfer with external entities (Chesbrough 2003). More than a decade of research on this topic has manifested it as a strategic orientation for innovation-seeking companies to strongly consider. One source of external knowledge that, when enabled to flow across company borders, bears large potential for competitive advantage is the innovative power of consumers (Arvanitis, Fuchs, and Woerter 2015, pp. 20; von Hippel, Ogawa, and De Jong 2011, p. 32). Both open innovation and user innovation produce large bodies of knowledge. However, the crossing-over between consumers' involvement in innovation and a more marketing-oriented view is rather a new stream of investigation (Parmentier 2015, p. 78).

It is evident that leveraging brand communities for innovation projects offers exciting possibilities for long-term consumer engagement strategies. Companies with a strong brand such as LEGO have started to use the creative potential of consumer communities, for example by selling customer-designed products to a mass market. Accordingly, the challenge of actually taking advantage of the additional value stemming from co-creation with a brand community is a vital element of effective management. (Cova and Paranque 2013, pp. 3; Schreier, Fuchs, and Dahl 2012, pp. 18)

The present articles as an explorative study adds to the growing stream of brand community and innovation-focused literature in two ways. First, it attempts to summarize and structure academia's understanding of brand communities and link it to the topic of open innovation and customer co-creation. Second, the qualitative research in the form of expert interviews adds to the body of knowledge by targeting issues and questions that might be relevant and interesting for further studies. Especially topics that have been neglected by brand community researchers so far are touched, identifying potential opportunities for marketing practitioners. The remainder of this research is outlined as follows. First a review of the relevant literature on brand communities and a short introduction to open innovation will be drafted. Afterwards, the implications of brand community involvement in the open innovation process are assessed, formulating the research questions which are investigated using expert interviews as a research method. Findings, implications, as well as recommendations for further managerial and scientific conduct are outlined.

2 BRAND COMMUNITIES

2.1 Definition

The concept of brand communities as a field of research is comparatively new with the term "brand community" formally introduced in 2001 by Muniz and O'Guinn (2001), who defined such as a specialized, non-geographically bound community, based on a structured set of social relationships among admirers of a brand. Much of the work on the topic is building on this paper and therefore this definition.[1] Several other definitions have emerged within literature on the topic, often extending or narrowing down the scope to fit specific communities. Cova and Pace (2006, p. 1089) take into account the related concept of brand tribes and propose a common treatment, as they "depict [..] as a brand community or brand tribe any group of people that possess a common interest in a specific brand and create a parallel social universe (subculture) rife with its own myths, values, rituals, vocabulary and hierarchy." Due to the inclusion of brand tribes, this definition seems broader and more differentiated than others. A more management oriented description is offered by Fournier and Lee (2009, p. 105) who in their Harvard Business Review article define a brand community as "a group of ardent consumers organized around the lifestyle, activities, and ethos of the brand." One of the latest and most comprehensive definitions is the following by Hammedi et al. (2015, p. 778): "A [brand] community is [..] defined as a group of consumers with a shared enthusiasm for the brand and a well-developed social identity, whose members engage jointly in group actions to accomplish collective goals and express their mutual sentiment, values, and commitment [...]."

Evidently, there is not one specific definition, as the nature of a brand community and its inherent mechanisms differ across industries and depend on the topic of research in question. Especially two elements seem to be dependent on

[1] See for example Algesheimer, Dholakia, and Herrmann 2005; Bagozzi and Dholakia 2006a; Dahlander, Frederiksen, and Rullani 2008; Füller, Matzler, and Hoppe 2008; Woisetschläger, Hartleb, and Blut 2008; Sung et al. 2010; Matzler et al. 2011; Zhou et al. 2012; Lee and Kang 2013; Habibi, Laroche, and Richard 2014.

the circumstances: 1) The locus or basis of the community, which can either evolve from the community and its members or be based on the brand, and 2) the relationship that links the brand to the community, which can either be rationally-based or emotionally-based. In neither of these issues, there seem to be a clearly predominant opinion identifiable.

Building on the previous analysis of literature, the following will be given as a more generally applicable definition of a brand community:

A brand community is any group of people who, through a shared set of rational or emotional relationships towards others and a certain brand, engage in online or offline activities that are likely to be impactful for the community as well as for the organization.

2.2 Characteristics of brand communities

2.2.1 Markers of community

On the basis of sociological literature, Muniz and O'Guinn (2001, p. 413) describe three markers of community that can be applied to brand communities, namely consciousness of kind, rituals and traditions, and moral responsibility. These three markers of a brand community have been largely referred to and validated in further brand community literature[2] and can therefore be considered part of academia's basic understanding of the subject. They are not exclusive to brand communities, as studies show that they can also be found for instance within open source communities, (Bagozzi and Dholakia 2006b) emphasizing the importance also with regards to innovation management.

[2] See for example McAlexander, Schouten, and Koenig 2002; Hammedi et al. 2015; Füller, Matzler, and Hoppe 2008; Habibi, Laroche, and Richard 2014; Woisetschläger, Hartleb, and Blut 2008; Zaglia 2013; Kotler and Keller 2016; Schögel, Tomczak, and Wentzel 2007.Mass.",""number-of-pages":"714"","edition":"15. ed., Global ed"","source":"Gemeinsamer Bibliotheksverbund ISBN"","event-place":"Boston, Mass."","ISBN":"978-1-292-09262-1"","language":"eng"","author":[{"family":"Kotler"","given":"Philip"},{"family":"Keller"","given":"Kevin Lane"}],"issued":{"date-parts":[["2016"]]}},"locator":"165"},{"id":200,"uris":["http://zotero.org/users/2961672/items/M5I26QUP"],"uri":["http://zotero.org/users/2961672/items/M5I26QUP"],"itemData":{"id":200,"type":"chapter"","title":"Chancen und Gefahren des Community Marketing"","container-title":"Innovation Driven Marketing: vom Trend zur innovativen Marketinglösung"","collection-title":"Thexis"","publisher":"Gabler"","publisher-place":"Wiesbaden"","page":"207-213"","event-place":"Wiesbaden"","language":"ger"","author":[{"family":"Schögel"","given":"Marcus"},{"family":"Tomczak"","given":"Torsten"},{"family":"Wentzel"","given":"Daniel"}],"editor":[{"family":"Belz"","given":"Christian"},{"family":"Schögel"","given":"Marcus"},{"family":"Tomczak"","given":"Torsten"}],"issued":{"date-parts":[["2007"]]}},"locator":"207ff."}],"schema":"https://github.com/citation-style-language/schema/raw/master/csl-citation.json"}

Consciousness of kind

Considered as the most important aspect of a brand community, consciousness of kind expresses the deep connection community members feel and display amongst each other, or in other words: "a way of thinking about things that is more than shared attitudes or perceived similarity" (Muniz Jr. and O'Guinn 2001, p. 413). Bagozzi and Dholakia (2006a, p. 58) take the consciousness of kind concept in the case of a small brand community a step further by identifying three parts of it, viz. "cognitive identification" (group members are conscious about belonging to a community), "affective commitment" (group members feel attached to the community), and "collective or group-based self-esteem" (group members assign meaning to their involvement with the community). This shared perspective of members, fueled by the brand, serves as a demarcation line of the community (Hammedi et al. 2015, p. 784). Along with this, brand community members often gain consciousness of kind through their distinction from another brand and its community (Muniz Jr. and Schau 2005, p. 418; Woisetschläger, Hartleb, and Blut 2008, p. 243). Negative effects of this so-called "oppositional brand loyalty" (Muniz Jr. and O'Guinn 2001, p. 420) will be discussed in more detail in section 2.3.4..

Rituals and traditions

Rituals and traditions are seen as a vehicle of communication that brand community members use to express their belongingness within the group as well as with people on the outside. Typical areas where rituals and traditions evolve are for example brand history and consumption experiences. In some cases, members communicate among each other using "insider jargon" (Muniz Jr. and O'Guinn 2001, pp. 420). These shared experiences can serve as a tangible expression of the community's meaning to its members (Schögel, Tomczak, and Wentzel 2007, p. 208). Furthermore, they can be seen as a way to establish a stronger form of loyalty than traditional company-to-consumer approaches do (Cova and Cova 2002, p. 604). The role of the marketer is also evident here, as for instance advertising serves as a basis for a lot of rituals and self-identification of a brand community (Muniz Jr. and O'Guinn 2001, p. 424). The presence of marketers at offline events can add to the process of establishing rituals, as well (McAlexander, Schouten, and Koenig 2002, p. 42).

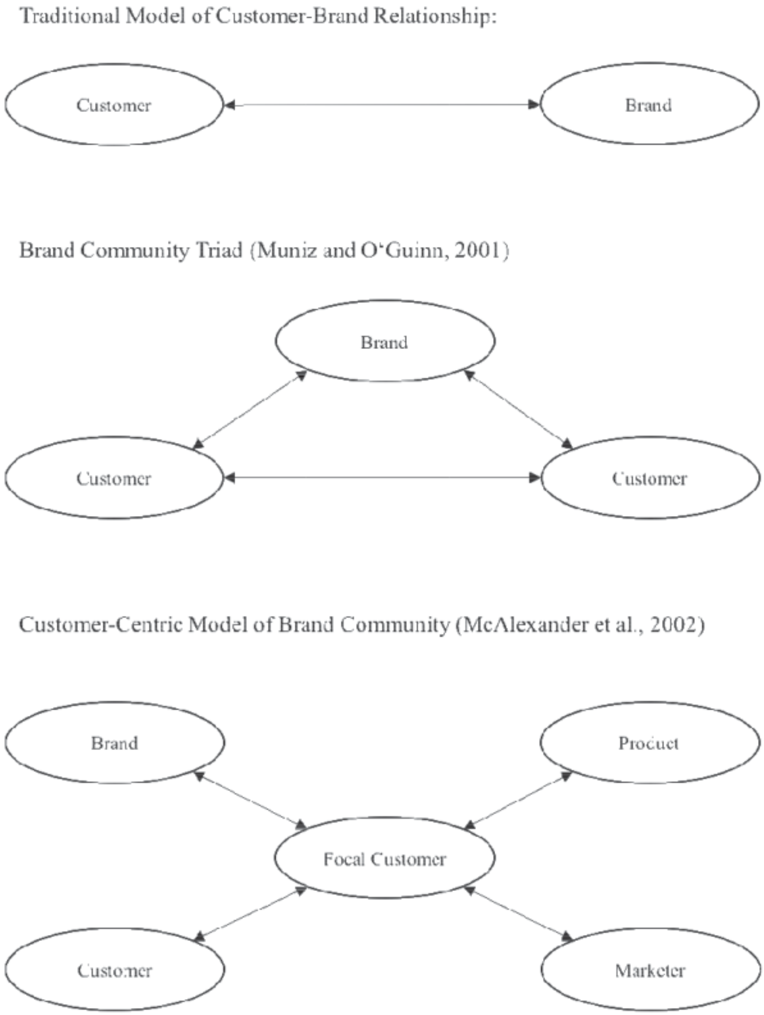
Moral responsibility

Moral responsibility intrinsically drives community members to contribute to the welfare of the community. Integration and retaining of members as well as assistance in brand use are mentioned as "two critical and traditional communal missions" by Muniz and O'Guinn (2001, p. 42). Besides this, helping other and especially new users, e.g. in online communities, is another expression of moral responsibility (Casaló, Flavián, and Guinalíu 2008). This form of service can stretch the entire process from pre-purchase decision making to after-sales support, all executed by consumers (Jang et al. 2008, p. 57).

2.2.2 Relationships and actors within a brand community

Muniz and O'Guinn (2001, p. 427) propose brand communities being embedded in a "consumer-brand-consumer triad" which implies two essential relationships a given member of the community is engaged in: 1) the relationship with the brand, and 2) the relationship with another community member. McAlexander et al. (2002) study the behavior of Jeep and Harley-Davidson enthusiasts at locally organized brandfests. They "suggest an extension of [Muniz and O'Guinn's] model as well as a shift of perspective" (McAlexander et al. 2002, p. 39): By extending the number of participating groups within the model and declaring the customer its pivotal element, they propose four relationships a community member faces: 1) the relationship with the brand, 2) the relationship with other customers, 3) the relationship with the product (i.e. the "branded possessions"), and 4) the relationship with the marketer (i.e. the employees of the company responsible for brand community enabling practices). The figure 1 illustrates this shift from a triangular model to a customer-centric four-way model:

Figure 1: Relationships within a brand community



Source: Page 39 in McAlexander et al. (2002)

It can be said that the relationship a user establishes towards a product can hold emotional and intangible value, that bonds him or her closer to the brand (Stokburger-Sauer 2010, p. 350). Considering this line of reasoning, the relationship consumer-brand, as presented by Muniz and O'Guinn, seems oversimplified for neglecting the different dimensions of product and brand. The introduction of marketers, i.e. the role of the company, as a fourth actor within a brand community needs to be taken into account, too. While direct interaction with employees during offline activities sponsored by the brand has proven to be an essential factor in nurturing relationships, (McAlexander, Schouten, and Koenig 2002, p. 49) the broader effects on brand communities in general are to be considered. Studies show that, also in an online setting, the interaction between working staff and brand aficionados is a crucial element that can make or break the bond between brand and follower and the role of the company in providing or denying access to the brand and the community is never to be neglected (Cova, Pace, and Skålén 2015, p. 696; West and O'mahony 2008, pp. 161). All in all, the extension to include product and marketers as elements within the set of brand community relationships makes sense, as in many cases their roles are highly distinctive and not fully acknowledged by the initial brand community triad.

2.2.3. Community-created brands and anti-brand communities

Community-created brands and anti-brand communities are two other distinctive phenomena. Both differ from traditional brand communities in the underlying motivations and the process leading to their establishment. Nevertheless, they are an interesting topic for scholars and practitioners alike.

Community-created brands

Studies examine communities that, instead of forming around an existing brand, constitute brands themselves. The key to success of these brands is often the above mentioned linking value of the product or service such user groups create. Cova and White (2005, p.265) use CouchSurfing as an example of what they call an "alter brand" in which the community cannot be divided into a producing and a consuming group, but one and the same group has fading borders with regards to their roles. Therefore every member can be seen as part of the brand building process.

In a study on Apache as a user generated brand, Füller et al. demonstrate how this open source community managed to create a strong branding and spread it beyond its boundaries. The members did this unintentionally and without financial investment through common practices within an open source environment (Füller, Schroll, and von Hippel 2013). This makes the results, as described by Füller et al., all the more impressive: "Our study shows that

Apache is able to attract large market shares, accrue a significant price premium, and being perceived as high quality, authentic brand that users' desire [...] and want to get connected with" (Füller, Schroll, and von Hippel 2013, p. 1202). Digital forms of development and diffusion of innovations by consumers are increasingly accessible, which lowers market entry barriers for such brands (von Hippel, Ogawa, and De Jong 2011, p. 31). In a way, this process of a community establishing internal relationships which later spread and constitute a brand can be seen as an alternative path to creating a brand community.

Anti-brand communities

An anti-brand community is an extreme result of what Muniz and O'Guinn (2001, p. 420) call "oppositional brand loyalty". In comparison to regular brand communities, these groups are not primarily supporters or admirers of a particular (competitor's) brand. They rather form around a brand they actively oppose in the first place. Despite the reason to join for many being a personal aversion towards this brand, the community itself can become very interactive and members do identify with others on a personal level (Hollenbeck and Zinkhan 2006, pp. 479).

Interestingly enough, the markers of a traditional brand community can be observed in the behavior of an anti-brand community. Consciousness of kind becomes observable in the members' shared objectives and "their fight for a common cause." Rituals and traditions are noticeable in forms of stories shared about the community and about bad experiences with the opposed brand. Moral responsibility is visible in members' motivation to join an anti-brand community in the first place, as they feel obliged to act in the face of perceived unfair treatment by a brand towards themselves, other community members or outside groups. Therefore, the definition of a brand community given in section 2.1.3 can indeed be applied to an anti-brand community as well, with the notion that the shared set of rational or emotional relationships towards the brand are solely negative in this case. Despite the danger to a brand and its reputation stemming from these communities' practices, it is often claimed that taking their concerns serious and actively approaching them leads to possible benefits and advancements for companies. (Hollenbeck and Zinkhan 2006)

2.2.4 Impact of technology on brand communities

This section sheds light on the fundamental impacts on modern communication and consumer behavior coming from technological developments and how they relate to brand communities. Even more than the emergence of mass media in the twentieth century, the internet is a driving force behind the decentralization of communities, helping to unite people beyond geographical proximity. Consequently, there are evolving forms of brand communities facilitated and enabled by this environment with their importance steadily increasing (Muniz Jr. and O'Guinn 2001, p. 413; McAlexander, Schouten, and Koenig 2002, p. 40). As has been discussed in section 2.2.1.2, there are psychological brand communities with no social ties at all. Technological advancements could drive the contrary type, i.e. social brand communities, through the lower efforts necessary to set up or to join such a community. For example, the "trend of internet usage in which people use their real identities online as opposed to using the pseudonyms that were common in previous online platforms" (Habibi, Laroche, and Richard 2014, p. 155) could lead to a greater level of personal linking. Sung et al. show that this is the case mostly for brand communities initiated by users themselves in contrast to those created by the company (Sung et al. 2010, p. 438).

Social media embedded brand communities

With regards to online communities, social media networks are one of the most relevant tools and "a natural place for brand communities" (Habibi, Laroche, and Richard 2014, p. 152). They allow for people with shared interests who possibly would have never met offline to connect and interact (Sung et al. 2010, p. 433; Zaglia 2013, p. 217). In this regard. online community engagement offers more flexibility and is perceived as a faster and more convenient method (Hollenbeck and Zinkhan 2006, p. 483). Users can exchange knowledge and thus create a network of different skills (Mount and Martinez 2014, p. 126). Furthermore, the ease of access of these platforms is a motive for consumers to join brand communities embedded in social media (Sung et al. 2010, p. 443). From a company's point-of-view the ease of use of social media platforms as a tool for communication helps to create brand communities quickly and without the need of large investments, while bearing great possibilities due to large data and consumer insights available. This can be useful when narrowing communication down to small segments or even single customers (Zaglia 2013, p. 222; Sung et al. 2010, pp. 431; Mount and Martinez 2014, pp. 124).

Technology as an alternative approach to communication

One important issue with regards to technology's influence on brand community development is the question, to which degree new forms of communication are taking over traditional ways of interaction. Most authors argue that they serve as supplementary tools without fully replacing offline interactions (Andersen 2005, p. 40; Blazevic and Lievens 2008, p. 139; Stokburger-Sauer 2010, p. 351; Fournier and Lee 2009, pp. 109). One reason is seen in the human longing for personal, unmediated interaction (Stokburger-Sauer 2010, p. 351). The biggest problem with non-personal communication is the lack of immediacy and non-verbal elements such as gestures or mimic expressions (Mahr, Lievens, and Blazevic 2014, pp. 605). It is therefore argued that, especially as interactivity within a group increases over time, face-to-face contact needs to come into play to support the development of a community (Bagozzi and Dholakia 2006b, p. 1112.).

On the other hand, some communities are exclusive to digital interaction and don't establish any ties offline (Hollenbeck and Zinkhan 2006, p. 480; Wang, Ma, and Li 2015, p. 580). Some brand communities, due to geographical boundaries, don't manage to pull a group of people large enough to engage with, which can be overcome due to the internet (Andersen 2005, p. 39).Thus, for some communities it is not only an additional tool for interaction but a mere prerequisite for the founding of the group. Under this light, an online community in comparison to a traditional offline community sees the process of building relationships among members taking place before the participants meet in person, if they do so at all (Jang et al. 2008, p. 59).

In addition, these changes in consumer behavior have disrupted established rituals in the context of consumption, for example online shopping makes it possible to obtain products without personal interaction (Cova and Cova 2002, p. 596). This in turn has potential influence on the quantity and quality of touch points with other members of a brand community, e.g. other customers or representatives of a company.

All in all, the rise of the internet dictates a direction for companies who seek to engage with brand communities, whether they use technological capabilities as a mere extension to offline activities or as a primary touch point in their communications repertoire.

2.3. Brand community practices and competitive advantages

Influential insights on the question how brand communities create additional value are offered in an article by Schau et al. (2009, pp. 34) in which they describe their observations of twelve practices exerted by brand community members, grouped into four categories:

- *Social networking* refers to practices that serve as the community-internal mechanisms bonding members together. Consciousness of kind, as discussed earlier on, comes into play in these practices and can imply relationships that go even beyond the brand.
- *Impression management* practices serve as the touch point between brand community and the outside world, with members seeing themselves as the voice of the brand towards others.
- *Community engagement* practices depict the activation of members to participate in community oriented activities. Engagement within a brand community is considered a crucial variable for its well-being. Algesheimer et al. (2005, p. 21) offer the following definition: "[...] 'community engagement' refers to the positive influences of identifying with the brand community, which are defined as the consumer's intrinsic motivation to interact and cooperate with community members." Schau et al. (2009) demonstrate how the practices identified in their study can positively influence engagement. Nevertheless, the personality of a community member is an important variable to consider, as for example rewards within a community can be seen as a constraint rather than a motivation, if the individual feels restricted in his action and forced to comply with rules and regulations (Wang, Ma, and Li 2015, p. 579).
- *Brand use* refers to practices that revolve around the brand, the product, or the company and are often wielded by individual users rather than by groups. Interactions aimed at assisting other users are also an important part of brand use practices and are increasingly facilitated by technological means (Muniz Jr. and O'Guinn 2001, p. 425; Schau, Muniz Jr., and Arnould 2009, pp. 38).

All of these practice are not settled within their own cosmos, but rather interrelated and built upon one another, a phenomenon which Schau et al. (2009, p. 35) call "intrathematic" (i.e. including several practices from the same category) or "interthematic interactions" (i.e. including practices from more than one category). It is important to note that the difference between experienced and less experienced customers also influences the way an individual acts within a certain community (McAlexander, Kim, and Roberts 2003, p. 7). As an example, it is shown that more experienced members of a Linux user group, i.e. an open source community, are attached to their peers in a stronger way than new participants (Bagozzi and Dholakia 2006b, p. 1111).

The model of collective value creation through brand community practices is picked up in standard literature on consumer behavior, as well, emphasizing its importance for understanding the true worth of engaged customers (Solomon 2013, p. 434).

3 OPEN INNOVATION

3.1 The concept of open innovation

The face of innovation with regards to new product and technology development has changed drastically throughout the last century and one important reason for this is the role of companies. In earlier days, due to firms being the dominant institutions engaged in technological research and innovation seeking, one could witness "the knowledge landscape [...] as a series of fortified castles located in an otherwise impoverished landscape" (Chesbrough 2003, p. 24). In other words, companies with an expertise in a certain area had no option other than to innovate themselves for the simple lack of external sources of adequate research. Despite there being new actors in this field nowadays and new approaches to innovation, many organizations still hold on to a more traditional concept of internal innovation processes. Often, extensive research and development (R&D) is used by these companies to prevent other players with less financial resources to enter the market and work on innovative projects. Long-term planning and investment thus act as decisive tools for gaining competitive advantages. (Chesbrough 2003)

In 2003, Chesbrough (2003, p. xxiv) introduced open innovation as an alternative approach towards organizational innovation, proposing the following definition: "Open Innovation is a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology. Open Innovation combines internal and external ideas into architectures and systems whose requirements are defined by a business model".

3.2 Different types of open innovation processes

There are three types of knowledge flows to be classified in an open innovation environment that are explained in the following (Gassmann and Enkel 2004, pp. 6; Piller and West 2014, pp. 36; Chesbrough and Bogers 2014, pp. 18). In an "outside-in process", the company leverages knowledge and capabilities provided by external innovation partners. An "inside-out process" depicts a knowledge flow in the opposite way, i.e. outside of a company, in the form of intellectual property or technologies that are used in another firm. The third type is labelled a "coupled process", in which outside-in and inside-out are combined, meaning that the innovation is co-produced by two or more partners which exchange of knowledge on a rather regular basis. The purpose of this idea is "to collaboratively develop and/or commercialize an innovation" (Chesbrough and Bogers 2014, p. 19). In this case, "give and take is crucial for success" (Gassmann and Enkel 2004, p. 6).

A step from internal towards open innovation implies for a company to "interact with external entities in terms of their innovation process's efficiency and effectiveness" (Gassmann and Enkel 2004, p. 5). Collaborating with external partners such as customers serves a company by creating competitive advantages in a market. Besides the increased level of the specialization achieved through channeling relevant input from the outside, it also helps to break up rigid patterns that prevent a company from adapting to current needs and conditions (Arvanitis, Fuchs, and Woerter 2015, p. 4).

3.3 Extending open innovation by the concept of user innovation

With the concept of open innovation giving way to more transparent company borders, another stream of research, namely that of user innovation, becomes relevant and builds the bridge towards communities. Investigations have shown that many consumers innovate independently with regards to the products they use (von Hippel 2005, pp. 19) and it has been shown "that firms involving users for the purpose of innovation perform better in terms of innovative sales than do other firms" (Arvanitis, Fuchs, and Woerter 2015, p. 20).

It is arguable that open innovation is an approach which some industries are able to implement more effectively while others might continue to rely mostly on internal mechanisms (Reichwald and Piller 2009, pp. 117). The fashion industry can be seen as an example that increasingly relies on customer knowledge instead of technological innovativeness, with companies differentiating themselves more by designs and strong brands (Di Maria and Finotto 2008, p. 186). High-tech firms on the other hand are confronted with problems such as high R&D costs despite short product life cycles, or the incentive to gain a substantial competitive advantage by setting a new industry standard (Gnyawali and Park 2011, p. 650). In this case, it is questionable if consumers can deliver the necessary amount of knowledge fast enough. However, additional value from interaction with customers during the early steps of the process is identified, e.g. through more reliable concept testing, without implying that internal tasks are not necessary anymore (Reichwald and Piller 2009, p. 124).

4 LEVERAGING BRAND COMMUNITIES AS THE EXTERNAL LINK WITHIN THE OPEN INNOVATION PROCESS

4.1 Innovative potential of brand communities

It has been shown that user innovators often don't act on their own but gather in groups along with others, e.g. communities of athletes practicing sports that require special equipment. From research on innovative consumer groups it can be inferred that in a brand community not all members are likely to be interested in innovative tasks. Besides lead user characteristics, Franke and Shah (2003) found other factors that influence the likeliness of a user becoming an innovator, viz. the time he or she has been part of the community for, the time he or she spends with other members, how actively he or she engages with the community, and the perceived role within it.

It is therefore argued that various different people within a community are potentially interesting for co-creating knowledge with an organization (Mahr, Lievens, and Blazevic 2014, p. 613). Together, users discover and collaborate within what Baldwin et al. call a "design space", a number of possibilities for remodeling an existing product (Baldwin, Hienerth, and von Hippel 2006, p. 1291). Such a heterogeneous combination of brand aficionados is likely to be found within an active brand community.

When these innovative groups get together, even without the involvement of a company, they often co-create knowledge by sharing their creative achievements with each other free of charge. Crucial for a successful community innovation effort however seems to be a low level of rivalry among the users, in order to maintain the free sharing of information. (Franke and Shah 2003, pp. 159; Baldwin, Hienerth, and von Hippel 2006, pp. 1297)

Schreier et al. (2012, pp. 20) identify four factors, why users may perceive a community-designed product to be more innovative. First, "the numbers argument" points to the fact that there are simply way more users than company employees, so the amount of good ideas will be larger. Second, "the diversity argument" nods to the pool of variety in the community in comparison to the rather narrow scope of a company which should drive more dissimilar ideas, i.e. a sort of outside-the-box thinking. Third, "the user argument" points out that needs and concerns of consumers are not always clear to company designers, which is why they fail to come up with better solutions than users themselves. Fourth, "the constraints argument" mentions the perceived freedom of users to come up with innovative solutions that are not bound by company management or conventions, thus preventing organizational blindness. Especially the first two elements are acknowledged as great opportunities in broader work on community innovation. (Hienerth and Lettl 2011, p. 177)

4.2 Research framework and research questions

In order to analyze how brand communities influence the innovation process of a company, a simplified model of an innovation funnel will be borrowed from an article by Mount and Martinez (2014) focusing on how firms leverage social media for open innovation. With research showing that brand communities are comparable to and embeddable in social media, (Zaglia 2013, p. 216; Habibi, Laroche, and Richard 2014, p. 152) the use of this model can be justified. The three-steps innovation funnel consists of 1) ideation, 2) R&D, and 3) commercialization, with all of these stages being a possible point of interaction between brand and consumer groups (Mount and Martinez 2014, pp. 138).

Additional to this rather company-based point-of-view, the research framework addresses two consumer-oriented assessments, specifically 1) how brand communities are initiated and users' join them on the one hand and 2) how brand community failure occurs and users' exit from the community on the other hand. These two parts will be the frame in which the three-step innovation funnel is embedded (see Figure 2).

Figure 2: Research framework

I	Brand community and user entry (Q1; Q2)		
II	Brand communities' influence on the innovation funnel		
	Ideation (Q3)	R&D (Q4)	Commercialization (Q5)
III	Brand community failure user exit (Q 6)		

Brand community initiation and user entry

Communities established by both company and users are possible. Jang et al. (2008, p. 60) call these "consumer-initiated" and "company-initiated" communities. Furthermore, both types of communities can be imagined in an offline or online environment. The motivation behind these communities is distinct, with user-initiated ones being rather intrinsically motivated due to brand love and enthusiasm, and company-initiated ones being founded in order to gain a competitive advantage (Jang et al. 2008; Woisetschläger, Hartleb, and Blut 2008; Ouwersloot and Odekerken-Schröder 2008; Di Maria and Finotto 2008; Parmentier 2015; Sung et al. 2010).

It is being argued that investing in online communities is often dangerous for companies due to the lack of real control over it and its members (Dahlander, Frederiksen, and Rullani 2008, p. 116; Mount and Martinez 2014, p. 134). Also the quality of marketing research insights are considered more valuable on user-initiated websites due to the larger appearance and honest handling of negative comments on brand and products, as well as comparatively more openness and participation. Finally, higher level of trust and perceived authenticity of the information exchanged can be assumed. One can therefore infer that successful brand communities in an online setting are rather user-driven. (Jang et al. 2008, pp. 61; West and O'mahony 2008, pp. 163)

On the other hand, offline brand events are seen as a way to engage consumers in a shielded and very close form of interaction leading to a stronger experience (McAlexander, Schouten, and Koenig 2002, pp. 43; Schouten, McAlexander, and Koenig 2007, p. 359). In a comparison between company-initiated community marketing activities, Stokburger-Sauer (2010, p. 363) finds that offline activations have a stronger influence on the community relationships than those situated online. In addition, the need for effective organization and financial investment being mounted by a brand community without support of the company is questionable. The following is therefore hypothesized:

Q1) Is brand community engagement initiated differently for online and offline channels? Are a) online communities rather autonomously user-driven, and are b) offline communities rather organized and led by the company?

The concept of co-operation between firms is an important basis for open innovation, as has been discussed earlier on. However, little seems to be known about the effects of a jointly developed innovation on the participating firms' brand communities. A common and very obvious issue related to these forms of open innovation projects is the predicament of trying to deliver the best possible outcome while handling "the temptation to be opportunistic in order to appropriate a greater share of the created value" (Gnyawali and Park 2011, p. 651) than the partner involved.

This triggers the question whether joint innovation between companies, at least those from different industries, is a way of approaching each other's consumer groups. Research shows that consumers find themselves in a construct of identification and community engagement influenced by several brands at the same time (Hammedi et al. 2015, p. 798). Moreover, their choice of brands is influenced by various psychological factors and associated values (Di Maria and Finotto 2008, p. 186), which often implies an overlap of brands a community identifies with and thus uses regularly. The following is therefore hypothesized:

Q2) Co-operative (open) innovation of two brands with similar groups can help to engage each other's consumers.

Brand communities' influence on the innovation funnel

Innovation management literature proposes the value of brand community engagement throughout the innovation process (Füller, Matzler, and Hoppe

2008, p. 609; Schreier, Fuchs, and Dahl 2012, pp. 23). As initially stated, a three-step innovation funnel will be examined with regards to brand community involvement, consisting of ideation, R&D, and commercialization.

Ideation: The quality of ideation processes can be enhanced by including users, for instance on social media platforms (Mount and Martinez 2014, p. 130). A common approach is an ideation contest, in which the best proposal is chosen, produced and marketed to a large audience. From a user point-of-view, an important reason for participating in such activities is seen in the acknowledgement they receive for good contributions (Schreier, Fuchs, and Dahl 2012, p. 20; Mount and Martinez 2014, pp. 126). In the context of lead user innovations, the significance of input and approval by other community members has been studied and validated (Hienerth and Lettl 2011, pp. 189). The role of the company in this first step is seen as a more passive one, due to high levels of user interaction (Mount and Martinez 2014, p. 134). It would be a valuable insight for companies, whether the acknowledgement sought by consumers in the first step can and should be handled by other community members or if the company needs to play an active role in it. The following is therefore hypothesized:

Q3) During the ideation stage, is the acknowledgement by fellow brand community members more important to the users than acknowledgment by the company?

R&D: The role of a community in marketing research is crucial, as they provide consumer insights necessary for improving a value proposition (Mount and Martinez 2014, p. 132). Parmentier (2015, p. 80) talks about a space of co-creation: "In this case, a brand community is not only a space for social activities to support a community and a brand, it can also become an innovative brand community to support firm innovation."

In order to engage users and turn the brand community into an innovative one, the company's role is to set up the right environment for such practices. Another study indicates "that consumer creativity components – task motivation, skills, innovativeness, and task involvement – determine their willingness to engage in open innovation projects" (Füller, Matzler, and Hoppe 2008, p. 615), thus linking personality of the members to the likeliness of their participation. This is backed up by an investigation finding that "individuals who are creative and innovative, possess skills complementary to [those of the person seeking assistance], and often have expertise that was useful in developing the innovation"

(Franke and Shah 2003, p. 165) to be more likely to join in co-innovation. The following is therefore hypothesized:

Q4) Should a brand community be in itself actively innovative before it makes sense for the company to open up the innovation process towards its users?

Commercialization: Cova and White (2010, p.264) argue that "the value provided by co-created offers is said to be higher than that which can be achieved through company creation". There are findings of customer acceptance and willingness to pay being positively affected by user co-creation (Mahr, Lievens, and Blazevic 2014, pp. 610; Schreier, Fuchs, and Dahl 2012, p. 27). Especially remarkable are the findings of Franke and Piller which include an increased willingness to pay of almost 100% for customers purchasing a watch they previously customized using an online tool kit (Franke and Piller 2004, p. 412). Beyond the technical element of user innovation and the influence on tangible specifications of a product, customers can also enhance "the symbolic and communicative elements which are responsible for product value" (Di Maria and Finotto 2008, p. 185). It would be interesting to know, whether this additional value is appreciated by the consumers in a way that makes them raise their willingness to pay.

It has been shown that assistance among end users in a community can positively influence diffusion of an innovation (Franke and Shah 2003, pp. 166). One can assume that such a co-creation effort leads to an enhanced appeal to outer groups and thus leads to a higher propensity to try out the brand (Mount and Martinez 2014, p. 133). The following is therefore hypothesized:

Q5) Does an increasing degree of community-created value (compared to company-created value) increase a) established customers' willingness to pay for a product or service and b) new/potential customers' propensity to try out the brand?

Brand community failure and user exit

It has been argued that a brand community's focus on traditions might possibly put breaks on innovative projects (Parmentier 2015, p. 79). On the other hand, a brand's history and longevity are often the roots of identification, established rituals, and thus vital drivers of brand community appeal and engagement (Muniz Jr. and O'Guinn 2001, pp. 422).

This dilemma leads to the assumption that such brands might have a harder time introducing innovations with regards to their brand community. On the other hand, if the dominant part of the brand community approves of or even drives the evolution of a brand, the backlash of innovations might be compensated more easily. The following is therefore hypothesized:

Q6) a) Can innovations lead to the failure of a brand community, in which the members are highly attached to the brand's tradition and history? b) Can an involvement of the brand community in these innovations reduce the risk?

5 EMPIRICAL STUDY

5.1 Methodology

In order to find out more about the interplay between brand communities and open innovation, semi-structured expert interviews were chosen as an appropriate research technique. The reason why this qualitative method was picked over a quantitative approach is rooted in the explorative nature of this research. Instead of finding statistical proof for a suspected relationship between two elements in the brand community - open innovation setup, the goal was to identify new areas of interest which in turn should be validated by surveys and other quantitative methods in the future. Compared to other qualitative research methods such as a case study that focuses on the specific example of a brand, a community, or an innovation project, it was anticipated that the involvement of opinions shaped by distinctive backgrounds and experiences would produce more generally applicable insights. Using the research framework illustrated above as a guideline, the experts were asked about their opinion on the related issues. The interviews were conducted over the course of three months. A total of nine experts agreed to the interview consisting of five professors and four practitioners who will be referred to as *Expert 1*, *Expert 2*, and so on. Due to confidentiality reasons, the names of the experts are not revealed. General appropriateness of the results was ensured by including both researchers and practitioners of brand community management from various countries.

5.2 Results

Brand community initiation and user entry

As a starting point of brand communities, the difference between online and offline community initiation was examined. Overall, the experts did not follow the assumed distinction between user-led communities being rather online and company-led communities being rather offline. The general opinion suggested that both users and company can initiate successful communities on all channels, as long as they handle the process well. While some experts considered online and offline to not be very distinct from one another, most agreed that both ways should be employed to complement each other. *Expert 4* sums this thought up by saying, *"the best practice is hybrid engagement, where you have a community that blurs online and offline."* The need for both types of engagement was traced back to the different advantages, with digital being considered faster to set up and more dynamic, and offline being able to establish stronger ties due to personal interaction.

A main argument regarding online community engagement was that the internet with all its complexity also offers company-managed communities the possibility to become highly successful. As the most important factor it was mentioned that the company should avoid disclosing an obvious *"commercial purpose"* (*Expert 5*) when initiating a community. Accordingly, *Expert 8* notes, *"If something looks too much like advertising, [...] it will quickly be rejected."*

An advantage of company-led communities over user-led ones was seen in the quality of organization. *Expert 8* states that larger offline *"events [...] need to be coordinated by the company, because [...] no community mounts that on its own"* and *Expert 3* confirms the benefit of having *"more resources for good management"* also for maintaining an online community.

Q2) deals with the potential of co-operative innovation of two firms in terms of brand community engagement and consumer targeting. While studies on this topic are rather hard to find, the expert interviews emphasized the opportunities inherent in such activities. There were remarks on the question with whom to co-operate. The general perception was that the partnership should involve *"a logical conjunction"* (*Expert 1*) or *"compatibility of brands"* (*Expert 2*). This was stated not only with regards to the products, the technology, or the tangible output of the collaboration, but also, and sometimes considered even more importantly, with regards to the communication aspect. *Expert 6* notes that *"the story [a] partnership tells has to be real"* and that sometimes the result is rather a *"lifestyle innovation"*.

The necessity of an actual innovation stemming from this co-operation was sometimes questioned by experts, claiming that *"classical ways to engage people"* (*Expert 1*) such as co-sponsoring might be effective enough in some cases. This has again influence on the way the partnering organizations communicate to their fans. Consider this remark by *Expert 4*: *"Unless the partnership is so powerful and so enduring that it has a whole product or brand of its own, I would see it more as a conversation that occurs on both [separate] brand communities."*

Brand communities' influence on the innovation funnel

Ideation: As expressed in Q3), the acknowledgement users receive from other community members was believed to be more important than that coming from the company in the first step of the innovation process, i.e. ideation. This research question produced very unclear results, as in the general opinion on how to handle the evaluation of user ideas is that a combination of both user and company feedback should be employed in this first step. Various experts mention ideation communities and contests in which ranking mechanisms lead to acknowledgement as an effective way of combining the two. The example of McDonald's allowing consumers to create their own burger was given by *Expert 3*, where *"the community picks a shortlist of their favorites, out of which a jury picks the final winners."* Advantages for both ways of evaluation were given. Community feedback is perceived as more honest and authentic than that of the company. *Expert 8* states, *"If from a company perspective there is too much moderation or steering and praising towards a certain direction, that is again close to not being authentic."*

On the other hand, the company needs to have a say in the process, because finally it is their responsibility to bring the idea to life. Therefore, the operational capabilities are necessary to be considered, which is why some experts suggested the differentiation between general brand communities based around innovation and specific time-limited projects initiated by the company to generate ideas. Finally, the incentive for users to participate in such narrow projects of co-innovation is often extrinsic, i.e. monetary. For example, *"if a contest winner is picked by the company and awarded with money, the acknowledgement gained from other participants is less important"* (*Expert 3*).

R&D: Q4) suggested that a brand community should in itself be actively innovative before it makes sense for the company to open up the innovation process towards its users. This was mainly contradicted by the experts. The crucial point that made most participants doubt the statement was the value of community feedback in the research phase that is not limited to innovative communities. On the contrary, many experts emphasized the generality of input coming from non-innovative and thus rather normal consumers as a first step. A recommendation is to confront the community with innovation projects in order to unlock previously unknown potential. All in all, the experts nonetheless agreed that an already innovative community bears a larger potential for value creation. *Expert 3* expressed that these communities not only tell a company what problems need to be solved but also give hints on how to solve them. In the same context the contestants stressed the possibility to *"invite a set of people who I [as a company] respect into a curated or closed community"* (*Expert 4*). This can be helpful when working on particular projects where high technical or operational knowledge is demanded of the participating users.

Commercialization: In a last step of the innovation funnel, the commercial opportunities of brand community involvement were analyzed. Q5a) predicted a higher willingness to pay for current customers of a brand and members of the community that helped to co-innovate. An important reason why a premium price could be charged for a co-innovated product is identified by the enhanced fit-to-market people expect of such a novelty. On the one hand, co-creation with a community *"serves as market validation"* (*Expert 4*). The assumption consumers will have according to *Expert 3* is that, *"because you have worked closer with your stakeholders [..] you'll get a better product in the end."* On the other hand, the company has a great responsibility to conform with the expectations of the brand community and the broader market. As stated by *Expert 4*, *"at the end of the day you have to deliver a value proposition that's compelling."* This implies a certain threat that appears during the commercialization step when engaging customers in the innovation process.

Focusing on a second group of consumers, i.e. those not using the brand presently, Q5b) proposed a positive effect on the acquisition of such by launching innovations that were co-produced by the brand community. As a major influence on customer acquisition, the experts saw WOM coming from customers or community members that have been involved in the process. Similar to *"product reviews or testimonials"* (*Expert 9*), communication coming from these groups is perceived as more authentic as *"consumers value other consumer opinions on product experiences much higher than they do the company's"* (*Expert 7*), which in turn leads to higher propensity to try out the brand.

One danger identified was that outer communities might depict the user involvement as *"fake or a marketing scheme"* (*Expert 1*) or judge it as *"the company stealing ideas from their audience"* (*Expert 9*). In that case, the role of actively communicating users is again emphasized. Another point to consider is the fact that, as is the case in R&D, the members of a co-creating community might not reflect the overall tendencies in the current market, for example with regards to their willingness to pay. Therefore, companies are advised to double check, as expressed for example by *Expert 3*: *"Just because you co-produced it with the community doesn't mean that you shouldn't engage in concept testing with a more representative sample of customers."*

Brand community failure and user exit

The last part of the interviews focused on brands that managed to build their brand community around users with strong attachment to the brand's tradition and history. The goal was to find out how innovations that imply a change in current branding and product policies affect such communities. Q6a) implied that such a move could potentially be dangerous for companies with regards to their brand communities. Out of all research questions, this one saw the most positive results. Despite this threat, the need for companies to innovate nonetheless is a recurring theme within the interviews, as a standstill will cause the brand to collapse in the long-run. Consider this statement by *Expert 5*:*"If a traditional brand is going down – it's losing market, losing profitability, losing preference - then innovation is going to be disruptive [...] And they will have a very, very hard time, but they will be better off in the long-run, because that brand will be rising again in the future. If they do nothing, they will end up with no brand, no money, no business."* As an advice, some experts mentioned to avoid radical and abrupt innovation, but instead move *"in evolutionary rather than revolutionary steps"* (*Expert 8*).[3] Ultimately, the brand community will have to follow the company's direction in some cases to avoid obsolescence, or as expressed by *Expert*

[3] „[...] vielleicht eher in evolutionären als revolutionären Schritten [...]"

4: *"Your community needs to evolve with the brand. If you don't do that, you have the wrong people enthusiastic about the wrong thing."*

Q6b) proposed the opportunity to involve the brand community in creating and thus approving of the innovation, in order to lower the risk of users turning their back on the brand. This research question was answered positively by most of the experts. *Expert 2* refers to a brand's *"DNA"* or *"soul"* that has to be kept alive and visible in order to retain the brand community while making a step towards innovation and it becomes obvious that the brand community can help to identify these elements of a brand's legacy they value the most. Considering the community's role in breaking up rigid brand traditions, it is once again important to make sure *"the people involved have a certain authority"* (*Expert 5*) and thus act as opinion leaders. All in all, with regards to pushing innovation beyond a gridlocked brand community, consider the following two statements. *Expert 2* asserts: *"It's a balancing between moving forward and providing due diligence to the soul of what the brand is." Expert 1* adds to this by saying, *"innovation is embracing your past and changing for the future."*

6 SUMMARY

6.1 Discussion

Studying brand communities and their influence on an organization's innovation efforts from various angles shows mainly two things. First, there is an undeniable opportunity in engaging such groups on a deeper level by inviting them in. And second, there is still a lot of room for improvement when it comes to understanding internal mechanisms of brand communities and how companies can systematically take advantage of them. The work present taps into both of these aspects. How the findings add to the body of literature will be discussed in the following.

Online and offline worlds are more and more merging and blending into one another. This has important implications for brand communities. First, the rise of the digital world shows that consumers will connect with others in a consumption context, if they experience similar attitudes towards brands and products, regardless of geographical closeness. Second, the ordinariness and regularity with which online platforms are approached by consumers indicates the need for brands to make them their home and demonstrate presence, raising the awareness of hybrid strategies to engage with brand communities. Case studies with such a background are overshadowed by literature focusing exclusively on either online (Cova and Pace 2006; Sung et al. 2010) or offline (McAlexander, Schouten, and Koenig 2002; Algesheimer, Dholakia, and Herrmann 2005) forms of participation.

Similarly, the differences and analogies between company-initiated and user-initiated brand communities are worth discussing in more detail. While the study present acknowledges successful example of both, the general direction accentuates the desire for autonomy and real participation. As literature proposes, user-led communities develop more open and transparent mechanisms within the platform (West and O'mahony 2008, pp. 163). However, this study adds the consideration of providing a functional and stable framework, which can often be seen as a point where the company has an advantage over a group of consumers, either due to superior managerial skills or financial and technical resources. It can be inferred that even a strong brand that triggers engagement among users often relies on a good community management, if the consumers are not able to organize something on their own.

Probably one of the most interesting findings of this study implies that there is indeed large potential for firms to co-operate with one another to engage each other's brand community. While this sort of cross-engagement is often seen in areas like sponsoring of cultural events or co-branding of related products and services, the opportunities of co-created innovation between two rather unrelated organizations are largely neglected in literature. This might be due to the fact that the prevailing perception implies the need for a company-sided connection between the partners, for instance common markets, technological procedures, or resources required for their business (Gnyawali and Park 2011, pp. 650). The study present extends such a list by the notion of taking a more consumer-sided point-of-view, i.e. a user's belongingness to more than one brand community (Hammedi et al. 2015, p. 798), and thus broadens the scope for firms looking to co-operate and co-innovate with other organizations. Putting this in context means that open innovation processes do not necessarily have to start within the R&D department, but can also be initiated based on marketing research or brand management objectives.

The main discovery regarding the ideation process is that a hybrid approach of community and company evaluation is the most successful and recommend-able way to do it. The degree to which the two forms should be employed highly depends on the nature of the project or the community in question. For example, engaging with lead users in a small group requires more involvement by the company, whereas this cannot be expected for large ideation platforms that generate a number of contributions too big for a company to thoroughly evaluate on their own.

Instead of asking which consumer groups possess the right characteristics necessary for a project (von Hippel, Ogawa, and De Jong 2011; Füller, Matzler, and Hoppe 2008), it could be asked which projects and activities are possible when involving the existing community as it is. Such an approach will likely lead to faster engagement.

In terms of promoting the additional value of user co-creation towards the outside, i.e. the broader market environment, two lines of reasoning emerge: First, the appeal of seeing an innovation that was co-produced by 'people like me' can psychologically resonate with some groups of consumers. Second, the notion of a better product, more tightly aligned with consumer needs and preferences, can be a convincing statement for more rational users. In a way, these two approaches resemble the traditional central vs. peripheral routes of marketing persuasion (See Petty, Cacioppo, and Schumann 1983, p. 138). Both are believed to increase the willingness to pay and the propensity to try out the brand for certain consumer segments, a finding that underlines the considerable effect of involving the brand community in such processes...

Last but not least, the study present demonstrated the threat of brands losing their appeal to the brand community when innovating too radically. This offers another very important consideration and opens a discussion which has so far been largely neglected in brand community literature. It is largely understood that brands with a large history and emotional value to their fans are more likely to spark the enthusiasm leading to strong brand communities (Muniz Jr. and O'Guinn 2001, p. 415; Hammedi et al. 2015, pp. 779). As shown in this study, radical innovation might clearly be a risky and perhaps dangerous move, which is an important contribution to existing literature. While the need for innovation was emphasized throughout the interviews, the necessity to involve users and especially brand communities in the process became clear.

All in all, brand communities can be seen as a logical consequence of today's society exerting its role in a consumption context. While branded products and services offer an additional value by reflecting consumers' personalities, making them more individual, the most successful ones have established ties that go beyond a single customer by offering a basis for true interaction. From a marketing perspective, this implies the need to take an even clearer consumer-based approach and put the brand on a more equal level with its empowered users. Similarly, the emergence of new concepts describing how to innovate the way we innovate in the first place bears testimony to the fact that there are still means left to discover towards gaining an edge in the marketplace. Brand communities can help organizations identify those means and lead the direction towards reaching the objective of being able to deliver the most compelling value proposition possible. Companies are more and more obliged to permit customers and other stakeholders a view beyond the surface of its products and brands. If managed correctly, the benefits of such an involvement strategy outweigh the drawbacks and threats, bearing witness to a truly innovative mindset.

The biggest problem with brand community management is that there is no such thing as the one best solution. Brand communities differ heavily from one another in their shape, size, motivation, the platform they use, and so on. Research has focused on carving out the similarities and characteristics they have in common in order to make the phenomenon more tangible. Examples in the business world praxis have showcased successful and less successful attempts of brand communities, but again, they provide a narrow view. At this point, academia should turn towards providing a clearer picture in terms of differences, best practice criteria and perhaps a classification of various types of brand communities.

6.2 Managerial implications and recommendations

The findings of this study have implications for practitioners in both innovation and marketing-related fields of management, out of which the most important ones are outlined below.

As a first shortcoming, companies need to be careful when trying to initiate a brand community or tap into an existing one led by customers. A first investigation should aim at answering the question whether the users are interested in joining such a community and if so, what expectations they have. Under no circumstances should the organization follow the purpose of creating a commercial platform without offering something of true value for the members. For example, if a company maintains an online brand community, it should investigate whether an offline extension is desired by the consumers and how this sort of engagement should look like. For brands trying to build up a community parallel to an existing one, the main consideration should be what the additional value proposition is in order to avoid the appearance of rivalry or competition between these communities.

An implication for companies looking to co-operate with other firms is to extend their scope of possible partners by looking at their brand's proposition from a consumer point-of-view. A partnership that seems to make sense internally is not necessarily well-received by a brand community, whereas others that haven't even crossed the mind of the company could bring large opportunities in terms of customer acquisition, brand building, or capturing new revenue streams.

When it comes to the evaluation of user ideas, two things are important to keep in mind from the organization's standpoint. First, the motives and criteria behind the evaluation need to be transparent to the community, which in turns allows an honest dialogue and reasoning of why an idea is evaluated in a good or bad way. Second, the company has to give the community the chance to have their say and exert some autonomy in the earlier stages of evaluation.

Marketers who want to take advantage of the co-creation in their communications should consider differences and similarities between the community that helped during the innovation process and the receiving audience of consumers. The story they tell should be clear with regards to how the users were able to enhance the product or service. As mentioned earlier, some consumers have doubts when highly complex products are launched and labeled a co-creation. One option here is what Schreier et al. mention, i.e. emphasizing that the users involved are in fact experts on the topic and therefore legitimate sources of knowledge (Schreier, Fuchs, and Dahl 2012, p. 30). Another option would be to be more transparent and show that the steps in which the brand community was involved are not the most sophisticated ones, but rather those which heavily rely on the input of the average consumer, i.e. extended concept testing or design tasks. In all cases, the message spread out needs to be real and reflect the involved users' activities correctly.

With regards to the risk involved when pursuing innovation in a company that built a brand around traditions and history, marketers need to be careful and have a thorough understanding of their brand community in the first place. Such a back-and-forth between brand community managers and R&D is helpful to provide more comprehensive insights about consumer preferences.

As do all studies, the present one has various limitations that need to be considered. First, an obvious limitation is the lack of quantitative appropriateness and generalizability of the findings. While some of the areas are largely covered by quantitative studies, others remain rather unexplored, for example the effect of collaborations on the involved companies' brand communities or the effect of brand community co-creation on other consumers' willingness to pay.

This study and its findings mainly focus on innovation as the development of new products and services. However, there are other aspects that can be approached innovatively within a company. (See e.g. the "innovation radar" proposed by Sawhney et al. (2006, pp. 77).

Nevertheless, as mentioned above, the most significant leap for brand community research would be a proper classification of different types, based on criteria to be determined during the process. Perhaps, conducting a vast amount of case studies would be the best, albeit difficult and time-consuming, way of doing it.

As a final statement it shall be said consumers have very specific needs and hand over the responsibility to fulfil them to organizations, along with the trust they put in their chosen brand. This responsibility should never be taken lightly by companies, and active involvement of the right people might just be the key to communicate and demonstrate that they have understood the challenge, that they accepted it, and that are willing to solve it for the consumer, now and in the future.

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THE IMPORTANCE OF ONLINE PROMOTION OF THE CITY OF ZAGREB'S TOURISM PRODUCT

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Abstract

The fast growth of digital technologies, primarily Internet and mobile phone use, has been dramatically transforming all sectors of the economy, and especially tourism as an information-dependent sector of the economy. In this paper, the authors analyse the status of the online promotion of Zagreb's tourism on the tourism market and channels used by the Zagreb Tourist Board for online promotion, and examine the correlation between online activity and the number of tourist arrivals and overnight stays. The authors also explore the impact of the Internet and social media on the promotion of the City of Zagreb's tourist product, examining the correlation between the growing investment in online promotion and the growing number of tourist arrivals in Zagreb. The authors anticipate a further growth in the scope and impact of digital marketing in general and mobile promotion in particular on the tourist business in the City of Zagreb and Croatia.

Keywords: *online promotion, city of Zagreb, tourism, digital marketing, mobile*

JEL Classification: L83, Z3

1. RESEARCH METHODOLOGY AND DATA SOURCE

The research methodology is based on methods of compilation, analysis, synthesis and quantitative method in a descriptive approach to describe trends in online promotion of Zagreb's and Croatia's tourist products. This research is of explorative nature and it attempts to provide an insight into the present scope of online promotion and to anticipate future trends in this matter. The research is based on secondary data obtained from the official websites of the Croatian National Tourist Board and the Zagreb Tourist Board. The authors consulted secondary research and scientific papers, as well as other publications that helped to define and present conclusions pertinent to the future tourist online promotion of the city of Zagreb and Croatia. In terms of scope, this paper focuses on the city of Zagreb in the period between 2014 and 2016 after the introduction of the Croatian Strategic Tourist Master Plan 2014-2020 in 2014.

2. THEORETICAL BACKGROUND AND REFERENCES

Tourism is an extremely important sector of the Croatian economy, with the foreign income, despite the recession, representing about 18% of GDP, the largest respective share in the EU (Croatian Chambers of Economy, 2016). Embracing and adapting to economic, social and communication trends is extremely important for a continued growth and stability of the tourist industry.

Tourism has become ingrained in the life and lifestyle of a growing part of the population of advanced economies and increasingly also for emerging economies. During the past six decades, tourism has gone through a large expansion and has become one of the biggest and fastest growing sectors in the world economy (UNWTO, 2016). International tourist arrivals to destinations of the EU-28 are expected to grow by 2.1% a year on average until 2025, and worldwide international arrivals will grow by 3.5% a year on average through 2025. (UNWTO, 2014)

With the expansion of Internet use in all segments of the tourist industry, from promotional websites and platforms, search engines, internet discussion groups, blogs and social media, new virtual markets have been created that have transformed the established communication and business strategies. In this respect, e-marketing has become an increasingly important and versatile answer to the challenges of modern-day business management.

E-marketing may be defined as a "process of product building, pricing, distribution and promotion with a view of catering to customer needs and desires in a profitable way by extensively using the potential of digital technologies" (Ružić et al., 2014, 63) Eley and Tilley define e-marketing as promotional activities on the Internet, including e-mail, that may include forms of advertising in search engines, e-mail marketing, online advertising, advertising in social media, etc. (Eley and Tilley, 2009, 1) Through digital promotion and user management, the communication with users, providers and the general public has become faster, better, more efficient and mutual in the true sense of the word.

The most recent report on Internet penetration all over the world published in "We are Social - Digital in 2017: Global Overview Report" shows how digital connectivity is changing the lives of people. The digital world experienced spectacular growth in 2016, with the pace of change accelerating across almost all key indicators versus 2015. (We are Social, 2017)

The report reveals that:

- Half of the world's population now uses the Internet (3.77 billion - 50% penetration);
- Two-thirds of the world's population now has a mobile phone (4.92 billion - 66% penetration);
- Half of the world now uses a smartphone;
- There are 2.80 billion global social media users in 2017, equalling 37% penetration;
- There are 2.56 billion global mobile social media users in 2017, equalling 34% penetration;
- There are 1.61 billion global e-commerce users in 2017, equalling 22% penetration;
- More than half of the world's web traffic now comes from mobile phones;
- More than half of all mobile connections around the world are now 'broadband';
- More than one in five of the world's population shopped online in the past 30 days.

Tourism is undergoing a dramatic change in which technology empowers consumers to engage in information, booking, and reviewing processes previously performed by intermediaries. Thus, changes in ICT pose significant risks to tourism companies using traditional business models, but create opportunities for new ones. Consumers add to the content on websites and platforms and use peer information more and more. Tourism companies therefore must engage customers by using social media in striking, proactive and emotionally intelligent ways. Location Based Services are also an important tool for Destination Management Organizations (DMOs) to distribute their information.

The key elements of ICT impact on tourism (Mitas et al., 2015: 21) include:

- Predominance of a small number of large travel agencies and Google;
- Low-cost information and low stakes for new participants in the market,
- Limited resources of traditional-style tourism businesses inhibit innovative models;
- Success stories show a combination of innovative technology use, perceptivity to consumer activity and creativity.

The gap between digital and traditional media consumption is widening. Users are spending more time with digital devices and less time with traditional media sources. In 2016, the average marketing budget allocation to online was 33 % in the US, and this rate is expected to grow to 37% by 2018; search engine marketing captures the largest share - 50% of online spend (online display banner ads, online video, etc.), mobile represents 19% of the total online spend, which will grow to 27% of online budgets in 2018, and social media 15% of the total online spend (Webstrategies, 2016).

Tourism is an information-intense industry, and Internet the most effective tool in information communication. The consumer's lifestyle and perception have changed. Consumers are better informed and find the traditional advertising styles less attractive. Consumers increasingly tend to use Internet search engines to seek and receive information. The traditional models of word-of-mouth marketing and advertising have lost their share in marketing strategies, but the word-of-mouth marketing has become increasingly important in social media, exerting a strong influence on travel shopping choices, and therefore needs to be incorporated in any marketing effort.

Digital marketing is steadily growing and is increasingly used by DMOs as the key element of marketing strategies. Tourists are thus provided with an interactive platform used by both consumers and providers. The advantages of digital marketing for the consumer would include an opportunity to shop 24/7 regardless of the location, direct interaction between the consumer and the provider, and easy access to information, product and services. The advantages of running a tourist company would include an opportunity to build customer relations and cooperate with consumers in their interactions, and to create their own databases; smaller costs of communicating information and introducing the product; flexibility or an ability to create custom-made service and promptly correct prices and promotions in response to daily developments in the fluid market; access to global markets, branding and product promotion. (UNWTO, 2008)

In comparison to the traditional marketing strategies, digital marketing is cheaper, more effective, universally available and unlimited in terms of time and space, with a potential to expand globally. Social networking online communities and chat groups are based on interaction and user-generated content. Marketing specialists should therefore be able to use the content in attractive, proactive and emotionally intelligent ways to direct the consumer and reach the potential customer.

With the development of interactive platform, everyone can post information by creating blogs, wikis or other online services, and every visitor can search and evaluate the information and recommendations available from online chat groups, travel blogs and social media. User-generated content such as peer reviews and comments is increasingly combined with author content in the decision-making process associated with travel planning. DMOs should be able to use the advantage of social media and online platform availability to generate their own authentic, attractive and helpful content. They should establish the priorities of the public and identify the best ways to make their destinations interesting to the public by promoting their content, inviting comments and communicating with the user with a view of presenting their information and making the potential user aware of their product. Social media are a huge demographic source of information on age, sex, race, position and special user interests that can help social media advertising to better target user groups, adjust and present accurate information to the individual user, as well as to devise flexible online campaigns in order to reach more customers.

The inherent problem of using social media, on the other hand, is that the Internet, a gigantic source of information of unreliable quality or credibility, may adversely affect the interest or antagonize the user with its sheer volume of information. It is therefore important to carefully design user-oriented web pages that are attractive and agreeable to the customer. Difficulties in managing content and supervising the growing activity in social media platforms may include incorrect or malicious customer reports. Destinations may be reviewed or depicted in an adverse fashion in online chat groups to a degree that gives rise to the creation of hate groups in some of the forums.

According to the UNWTO Handbook on E-marketing for Tourist Destinations from 2008, Web 2.0 dramatically transformed and introduced a new approach to digital marketing. The impact of social media on DMOs and tourist companies includes the inclusion of hard information in motivational content; dissemination of information through channels such as Expedia, Travelocity, Rough Guide, etc.; inclusion and engagement of visitors into one-on-one and one-to-many communication; a smooth mutual interaction between a DMO, a provider and a visitor, and among social media users; the identification of potential visitors through information content; better branding of destination or service through the expansion of broadband internet that enables posting of appealing visual material, animation and video; better travel planning for visitors with the application of helpful tools such as ideas, itineraries and route planning; associating promotional activities with online shopping; cost-effective and time-effective information sharing and direct tourist product sales and the adjustment of offline marketing activities to the effect of supporting the two-way visitor migration, from online to offline and vice versa. (UNWTO, 2008)

In 2011, Google's researchers developed a five-step online travel model that described consumer activity before, during and after travel, and suggested different online marketing tools applicable to each of the segments. (Joshi, 2013., 3)

- DAYDREAMING: seeking inspiration, with the Internet as the main source;
- RESEARCHING: web search engines;
- BOOKING: online and mobile booking;
- EXPERIENCING: continued researching and booking during travel;
- SHARING: the importance of social networking.

According to the UNWTO, the modern technology tools to create and communicate a clear message and identity include websites (user friendly and interactive), web domains (visible and distinctive), SEO (search engine optimization), e-mail marketing (highly efficient and cheap), mobile e-marketing (highly interactive through applications for tourists), the management of social networks, etc. (UNWTO, 2016)

World tourism market is increasingly intertwined with various promotional activities of the tourism product placement. This struggle involves the national tourism boards that have the role of communicator and strive to create the desired perception and associative image in the mind of the consumer. (Parlov et al., 2017., 145)

3. ANALYSIS OF ONLINE PROMOTIONAL ACTIVITIES IN ZAGREB TOURIST BOARD

Online promotion of Zagreb's tourism has proved to be the most efficient marketing tool employed by the Zagreb Tourist Board. Over the years, the Zagreb Tourist Board has modified the image of Zagreb as a primarily business travel destination and posited it as a desirable destination for art, city break, lifestyle and event tourism. In addition to highly informative web pages catering to tourists, www.zagreb-touristinfo.hr and B2B for congressional travel and tourism, the Zagreb Tourist Board has run online tourist campaigns on Google and YouTube, managed Facebook, Twitter and Instagram profiles, maintained a YouTube channel, and blogged on Blogspot between 2011-2016. Smartphone applications and a B2B newsletter have also been developed.

According to the TOMAS Zagreb 2012 research, the Internet has been the main source of information for 66% of all Zagreb's visitors. The Internet has been the chief source of information for 66% tourists in Zagreb's hotels, compared to 22% tourists relying on printed tourist guides and 16% on brochures, ads or posters, or 14% relying on previous tourist experience and 11% on recommendations from family or friends. Internet users and users of associated source of information prevail among the visitors from distant countries, with a large share of first-time visitors. It is interesting to note that 77% of hostel guests and 45% of one-day visitors to Zagreb rely on the Internet for information. Independent travel to destination prevails among the hotel tourists in Zagreb (70%), among the hostel tourists (77%) and among the one-day visitors

(88%); they have all indicated the Internet and social media as an important source of information for travel planning. (Institute for Tourism, 2012)

3.1. Online marketing, Google search and display networks

The Zagreb Tourist Board has been using Google AdWords for advertising since 2008. Biannual campaigns cover the spring/summer season and autumn/winter season in leading markets, including Germany, Italy, Austria, Spain, France, Hungary and Great Britain. The Zagreb Tourist Board has accordingly created campaign landing pages for users from search and display networks.

Table 1. – Google search and display advertising

	2014	2015	Index	2016	Index
Online advertising cost HRK	1,903,000.84	1,802,569.46	-5%	1,982,110.95	10%
Impressions	113,810,389	118,381,730	4%	136,729,716	15%
Clicks	690,556	541,460	-22%	671,754	24%
CTR	0.58%	0.46%	-21%	0.34%	-26%
Avg. CPC HRK	2.76	3.33	21%	2.95	-11%

Source: Zagreb Tourist Board

3.2. Social media and mobile application

The Zagreb Tourist Board maintains Facebook, Twitter, Instagram, Flickr, Google+, LinkedIn and Pinterest profiles, as well as its own YouTube channel.

Facebook. In early 2014, the number of fans was 27,900; in 2015 there were 34,365 fans, in early 2016 there were 38,593 fans, and in early 2017 47,040 fans, with a growing trend. Most of the fans come from Croatia, Bosnia and Herzegovina, Germany, Italy, USA, Serbia, Macedonia, Austria, Slovenia, and Hungary. 57% of fans are female, 42% male. The page reviews range from 4.4 to 5 (over 5 thousand Facebook users voting).

Twitter. In early 2015, the number of followers was 4,273; in 2016, the number was 6,245, and in early 2017 the number of followers was 8,200. A daily average of 15 posts are retweeted an average of 20 times, and the average monthly tweet impressions are at 110,000. Twitter has seen a growth in fan numbers (especially from users abroad), as well as communication and perception by users after Zagreb was selected as the best Advent destination in 2015.

Instagram profile of the Zagreb Tourist Board has been maintained since early November 2014; during the initial month, the number of users grew to 625 and reached 2,397 in 2016; in early 2017 the profile had about 7,300 fans and the number is growing. The average posting frequency is one or two posts per day; in 2016, there were 31,191 likes and 603 comments. The followers include 61% women and 39% men, mostly from Croatia, the US, Germany, Italy, and Bosnia and Herzegovina.

The Zagreb Tourist Board's **YouTube channel** has 869 subscribers and includes 72 videos that have been viewed a total of 5,380,697 times. In 2016, there were 2,616,482 views, 230 likes and 21 comments.

In 2014, the Zagreb Tourist Board launched its **mobile application** Zagreb Be There, which offers smartphone users different theme routes to choose from when in Zagreb. Each of the six routes presents a different view of the city, and the application has been downloaded to Android smartphones a total of 10.000 times.

3.2.1. *Zagreb Tourist Board marketing in social media*

The Zagreb Tourist Board started advertising on Facebook in 2015. The Facebook posts referred to the summer tour and the winter tour (Advent in Zagreb) campaigns, Zagreb Be There application, and major happenings in the city (boost). The number of advertising posts reached 1,189,964. in 2014 and the reach doubled to 3,061,073 in 2015.

As of 2016, the Zagreb Tourist Board has also advertised on Instagram, reaching 227,718.

Table 2 – Zagreb Tourist Board social networking and social media marketing

	2014	2015	Index	2016	Index
Facebook fans	34,365	38,593	12.30%	47,040	21.89%
Cost in HRK	n/a	4,839.00	n/a	23,481.00	385.24%
Reach	n/a	1,189,964	n/a	3,061,073	157.24%
Youtube Subscribers	199	346	73.87%	869	151.16%
Cost in HRK	254,291.95	391,850.09	54.09%	366,270.83	-6.53%
Impressions	3,464.99	5,295.36	52.82%	8,008.36	51.23%
Views	548,342	1,521.58	177.49%	3,019.67	98.46%
Clicks	49,726	23,423	-52.90%	11,496	-99.95%
Twitter followers	4273	6245	46.15%	8200	31.31%

Cost in HRK	0	0	0.00%	0	0.00%
Impressions monthly	100,000	100,000	0.00%	110,000	10,00%
Actual interactions	17,783	18,099	1.78%	18,386	1.59%
Instagram followers	625	2397	283.52%	7300	204.55%
Cost in HRK	0	0	0.00%	500	500.00%
Impressions	0	0	0.00%	227,718	228%

Source: Zagreb Tourist Board (TZGZ)

Click-through rate on YouTube increased by 1.44% in 2014, when cost per click was 5.11 HRK; by 0.44% in 2015, when cost per click was 6.73 HRK and from 0.14% to 31.86 HRK per click.

3.3. Zagreb Tourist Board web pages www.infozagreb.hr

The statistics of the Zagreb Tourist Board's website visits indicates intense growth in 2015 and 2016 compared to 2014.

Table 3 Visits to Zagreb Tourist Board websites - www.infozagreb.hr

www.infozagreb.hr	2014	2015	Index	2016	Index
Visits	1,019,928	1,859,790	82%	2,344,058	26%
Visitors	641,387	1,163,971	81%	1,362,149	17%

Source: Zagreb Tourist Board (TZGZ)

The number of visits typically grows until the early summer, stagnates because of summer vacations and begins to grow again from late August to early December. Most visitors are Croatians, followed by visitors from Italy, USA, Germany and France. Most visitors are in the age group of 25-34 (30.71%), followed by the 35-44 and 18-24 groups (about 20% each). Most have been directed to the website through Google search engine, or 24.89% of the total number of visitors, followed by Google campaigns which have proven to be a very effective teaser tool directing the visitor to the Zagreb Tourist Board websites. In 2016, most visitors viewed the website content using mobile phones (71.50%), computers (23.34%) and tablets (5.17%). Interestingly, the dominance of 59.2 male visitors in 2015 shifted to a 60.39% dominance of female visitors in 2016.

Table 4 Visitors to Zagreb investment return

	2013	2014	Index	2015	Index	2016	Index
Arrivals	782.000	881.000	12.66%	1.077.778	22.34%	1.152.598	6.94%
Overnight stays	1.324.000	1.488.000	12.39%	1.804.290	21.26%	2.016.107	11.74%
Total TZGZ budget in HRK per arrival	63.864.139	62.484.901	-2.16%	70.322.192	12.54%	70.658.461	0.48%
HRK per arrival	8.67	70.92	-13.15%	65.25	-8.01%	61.3	-6.04%
HRK per overnight stay	48.24	41.99	-12.94%	38.97	-7.19%	35.05	-10.08%
Offline advertising	8.805.283	9.307.691	5.71%	8.956.826	-3.77%	10.407.000	16.19%
Online advertising	3.670.000	4.154.993	13.22%	4.378.822	5.39%	4.660.000	6.42%
Index online /offline	-0.58	-0.55		-0.51		-0.55	
Online budget per arrival	4.69	4.72	0.49%	4.06	-1.85%	4.04	-0.49%
Offline budget per arrival	11.26	10.56	-6.17%	8.31	-21.34%	9.03	8.65%
Online budget per overnight stay	2.77	2.79	0.74%	2.43	-13.09%	2.31	-4.76%
Offline budget per overnight stay	6.65	6.26	-5.94%	4.96	-20.64%	5.16	3.98%

Source: Croatian Bureau of Statistics and Zagreb Tourist Board (TZGZ) performance reports

If we compare the online and offline advertising budgets, it is clear that the share of online advertising in TZGZ budget makes for about 50% of offline budget, and indicates an annual growth of 5.4% in 2015 and 6.4% in 2016. If we are to compare the online and offline marketing budget per arrival, the aspect has retained similar levels from 4.72 HRK per arrival for online and 10.56 HRK per arrival for offline in 2014, to the online budget of 4.04 HRK per arrival in 2016, while offline advertising slightly dropped to 9.03 HRK per arrival budget. If one compares the budget returns on the basis of overnight stays, the 4.72 HRK per overnight stay budget in 2014 dropped to 4.04 HRK per overnight stay in 2016, with the offline advertising retaining about 50% larger budget from 6.26 HRK per overnight stay in 2014 to 5.16 HRK per overnight stay in 2016.

4. CONCLUSION

Through its various activities, the Zagreb Tourist Board has significantly contributed to the good results of the tourist business in Croatia. Croatia had a total of 16.4 million tourist arrivals in 2016, with a 9.9% growth compared to the previous year. In 2016, domestic arrivals included 1.9 million tourists, with a 9.2% growth from the previous year, and 14.5 million tourists were foreign arrivals, with a growth of 10% compared to the previous year. The total number of overnight stays was 91.5 million (14.3% growth), with 10.7 million overnight stays (38.1% growth) for domestic tourists, and 80.8 million overnight stays (11.7% growth) for international tourists. (Croatian Bureau of Statistics, 2017)

The Croatian tourism industry have been using social media for a long while, indicating an almost natural response to its growth by adjusting the reputation of its destinations, consumer views, dissemination of information and positive effects of word-of-mouth advertising to online communication. The growing number of visits to TZGZ websites, indicating a growth of over 25% in 2016 compared to the previous year, has been the result of introducing newly designed attractive and functional websites and a growing popularity of Zagreb as a tourist destination. Other reasons for a growing number of visitors to websites have been the efforts focused on tourist promotion and the larger budgets allocated to online promotion. All the other indicators of growth, as well as the increasing activity in social media and investments in online promotion, indicate that the growth trend will continue.

When analysing the online presence of the Zagreb Tourist Board, it is difficult to assess the additional marketing effect of online promotion in the joint advertising with partners sponsored by the Zagreb Tourist Board or foreign bloggers visits.

When analysing the Zagreb Tourist Board's online presence and communication, one can conclude that TZGZ has successfully used online promotion to achieve good results in reaching a large number of internet users, which is the objective of online communication. In the structure of marketing budgets in the tourist industry, online marketing would continue a strong growth compared to the classic offline communication. Due to the impact of online communication, social media activity and mobile phone activity would continue to grow, with online and mobile marketing becoming increasingly important as marketing tools for the Zagreb Tourist Board.

This may be supported by the findings of recent Google research that has shown that 60% of destination searches are launched from mobile phones; in the US, 40% of travel websites visits are launched from mobile devices, indicating a growth of 115% increase in engaging the visitor in research of destination and travel planning suggestions. (Google, 2016)

The Zagreb Tourist Board's as well as other DMO's biggest challenge with regard to the management of social media is return on investment and measuring its success. Besides the financial input allocated to promotion, skilled manpower and metrics focusing mainly on quantity (e.g. mere number of fans or likes), an important non-financial indicator for measuring the success in social media has become engagement. Therefore, future research might take this topic into consideration.

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MARKETING IN THE FUNCTION OF THE NEW INTELLIGENT CONSUMER ELECTRONICS

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Abstract

Computers have seriously entered the business sphere back in the seventies of the last century. First of all, they were used to eliminate manual administrative work associated with accounting and finance. The eighties were marked by the personal computer which massively entered the business sphere and because of the friendly price and multimedia features, it decentralized and reorganized data processing. The usage of computers in the eighties has spread from accounting and finance sphere to every part of the business. Computers also became a common part of the production preparation and production realization through numerically controlled machines. Capabilities as much as the possibilities of computer usage in business have significantly grown in the moment of democratization of the global computer network Internet, which has allowed direct interaction between the market and business. The result of these processes is the emergence and evolution of concepts such as electronic commerce, elec-

tronic business, electronic marketing, customer relationship management and the like. But as the computer power increased, along with price decreases and computer size reduction, the more machines started to use computers for their specialized and general purposes. Today computers are used to control and manage almost all devices, from complex intelligent systems used for transport, to home appliances such as TV sets, oven and refrigerators. Since computers are so omnipresent in all spheres of life, there is a possibility to use them for improvement of customer relationship management as well as business process automation associated with satisfying the needs of customers. Generally speaking, the evolutive processes in information-communication technology enable evolutive processes in marketing, customer relationship management, electronic business, computer aided manufacturing, and other areas. Most significantly, the development of information-communication technology enables the evolution of customer relationship management concept into automatisation of management of all relationships i.e. business processes of manufacturing businesses. It is necessary to prepare for these changes and build models to ensure management of the business of the future which will automatize processes with the help of intelligent consumer touchpoints that are created with the intelligent consumer electronics.

Keywords: *Consumer Electronics, Internet of Things, information-communication technology, relationship marketing, Customer Relationship management*

JEL Classification: M3, M31

1. INTRODUCTION

Marketing is today seen as a business philosophy created in the middle of last century as a response to market changes between supply and demand. As a result of intensive technology evolution in the Second World War, the technological jump which occurred afterwards paved the way for production capacity that was higher than real needs of the population of that time. In the superior conditions of product demand over product supply, the product concept was powerless. The product concept dominated in the period where it was a problem to produce and not a problem to sell products. It is the period of the shortage of goods on the market with the producer dominating the market. As supply and demand equated i.e. as the competitiveness among manufacturers rose, trying to sell the products became a problem. Producers tried to solve this by engaging in price wars i.e. by achieving economy of scale, but when it was no longer possible to solve market problems with changes in production, the next solution was to improve selling. Focusing on selling efforts led to the selling concept. From the best manufacturing options the focus was then moved to the best methods of persuading customers to buy products. The customers were not accustomed to having a superior position on the market so they reacted positively on the persuasive selling efforts from the sales specialists. As the customers' awareness evolved and with recognition of their superior market position, things changed and product sale became a more complicated, demanding and cost ineffective process. An alternative to pushing the products to customers was searched in the middle of last century. Starting from the real assumption that people are using products they need, the economics offered an alternative to product concept and selling concept. The alternative was called marketing. The main idea in marketing is to change producers' focus from buyer to consumer, i.e. to change from "pushing" products to "pulling" products. Although buyer and consumer are the same person, the buyer is the person involved in the sales relationship, and the person actually consuming the product is consumer. By the principles of the selling concept, the buyer is persuaded to buy the product without knowing his real needs. The buyer who buys the product he finds unnecessary will fast become aware and act carefully in buying regardless of his need for the product. The negative attitude towards sale in such conditions becomes general within the buyer, so with time it becomes almost impossible to convince him to purchase a product. On the other side, if the offered product is something the buyer actually needs, it is significantly easier to sell. That is why marketing if focused on the consumer and his needs. Marketing process includes market selection and market segmentation, customer needs research, and on the basis of the gathered information through marketing plan and programme, the definition of product features, price, product distribution and promotion according to consumer needs. In addition to this, marketing process also implies control of the implemented marketing plans and programmes. At the time when marketing was created, general knowledge and information awareness were at a relatively low level. As the amount of information and knowledge level increased, people's awareness evolved. Generally speaking, standard of living has been continuously growing from that time and people are increasingly striving for individualization and self-affirmation. Marketing continuously follows society trends and from the middle of last century until today it has evolved from mass marketing, over segmentation marketing and niche marketing, to the current relationship marketing. The last mentioned, relationship marketing, has not only atomized marketing because it includes establishing a personal relationship with every individual customer, but it also means continuous and not discontinuous relationship with the customer through permanent communication process. In such conditions the customer is a known individual with whom the communication is held on the personal level. Market research and marketing control in the form of customer satisfaction examination i.e. helping customer in presale, sale and post-sale activities, are turning into a continuous process. Marketing theory assumes that manufacturer, i.e. supplier, and customer are in an immediate constant contact in the touch point, enabled by classic communication systems and also with information-communication technology.

It is clear that thanks to information-communication technology the way of life has significantly changed. The influence of using smart devices in recent years has been especially meaningful for everyday lifestyle. By adding computer as a control unit to a variety of devices people use, smart devices are created which are useful to people in ways different than before. As an example, smartphone allows not only communication, but also data interchange, photography, video recording, taking location (space positioning) etc. Important changes in people's lifestyle will be caused by adding artificial intelligence to devices that are used daily like consumer electronics devices. If the possibility to connect the devices on the global information network Internet is added, then the consumer electronics devices are becoming a part of the Internet of Things. Not only that the devices are becoming almost independent of direct and permanent human control intervention, they are also becoming capable for self-coordination and self-control of their own work through their interaction. The interaction of different devices aimed to make people's lives easier and to continue to increase life standard will consequently cause evolution of control interaction H2M (human to machine) into control interaction M2M (machine to machine). On the side of relationship marketing this kind of concept will demand new transformations and adjustments, and it will also enable consistent implementation of relationship marketing. To be specific, relationship marketing today with the applicative form of customer relationship marketing (CRM), often doesn't track costumer behaviour, but it tracks buyers, assuming that buyers' behaviour is the same as customers'. An example of this is the use of loyalty systems to track people in shopping and equating their shopping habits with their consumption habits. With immediate tracking of customer behaviour, from their usage of digital products to their habits in using single physical products, and with sales process automation, there will be better insight into consumer behaviour. For example, television which can track what viewers watch, or tracking which content a person is interested on the Internet, or information from customers' refrigerators about food products consumption, could enable a higher quality in meeting the needs of consumers and along with that, better implementation of marketing philosophy. In accordance with the above, it is necessary to examine how producers could use the potential of new intelligent consumer electronics in the function of meeting the needs of customers, i.e. how to transform marketing in the function of exploring the potential of new intelligent consumer electronics. Moreover, it is important to reply to the question whether customer relationship marketing in terms of intelligent consumer electronics will enable complete business process automation, that is, automatic management of all value chain elements through XRM concept.

2. RESEARCH METHODOLOGY

Evolutive processes in technology and society are so intensive that science needs to immediately find the right answers and describe phenomena in the sphere of business, as well as in the sphere of everyday life of people. Information-communication technology has entered in almost every sphere of human society. It is difficult to find a device which is not using information-communication technology today. Thanks to artificial intelligence and possibilities of digital connecting, information-communication technology has made smart machines from everyday objects, such as consumer electronics devices, which are intelligent and very much autonomous in their work. With the help of global connectivity provided by the Internet, smart consumer electronics has become a part of the Internet of Things concept. Lifestyle changes that come with the application of smart machines concept, where machines are communicating and working interactively (M2M concept), cause changes in the system of meeting peoples' needs. In this regard, relationship marketing must find appropriate solutions in terms of monitoring the needs of customers on one side, and in terms of business process automation through XRM concept on the other side. Based on the above arguments, the following hypothesis can be proposed:

Contemporary smart consumer electronics will enable marketing to overview individual customers' needs with more quality and to achieve business process automation.

The research goals are the following:

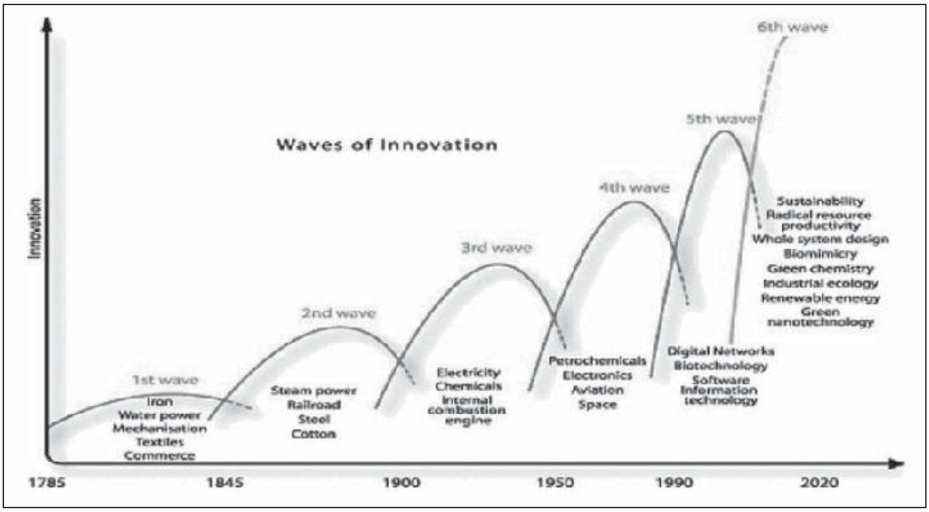
1. Explore and outline what is consumer electronics and how it transforms in smart consumer electronics i. e. Internet of Things concept.
2. Outline the possibilities of using the potentials of smart consumer electronics for relationship marketing needs i.e. tracking consumer behaviour.
3. Outline how relationship marketing in terms of automated processes on the side of customer behaviour can influence business process automation, i.e. XRM concept application.

Overall, the following scientific methods have been used in this research: deductive method, historical method, analytical method, generalization method, specialization method, combination method, causal forecasting method, analogy method, descriptive modelling method, along with some other methods. Written and digital secondary data sources are used for research purposes.

3. RESEARCH RESULTS

Modern society is changing very intensively thanks to evolving technology processes which have been happening in the last sixty years. That is the time when electronics is becoming one of the key factors of social development. Electronics is the foundation of information-communication technology which in the 1990s created a new era, colloquially called information era or knowledge era. Concerning the technology influence on social development the following arguments could be outlined: "Business success in a time of technological transformation demands innovation. Since the Industrial Revolution, there have been at least six waves of innovation, which shifted the technologies that underpinned economic prosperity. In the late 1700s textiles, iron mongering, waterpower and mechanization enabled modern commerce to develop. The second wave saw the introduction of steam power, trains and steel. In the 1900s, electricity, chemicals and cars began to dominate. By the middle of the century it was petrochemicals, and the space race, along with electronics. The most recent wave of innovation has been the introduction of computers, also known as the digital or information age.

Figure 1. Six technology waves of industrial and post-industrial era



Source: http://www.climatemanual.org/Cities/Chapter2/BusinessCase/index.htm#_ftn; The Natural Edge Project, Australia, http://www.naturaledgeproject.net/, 30 October 2006 (20.11.2016)

As the industrial revolution plays out and economies move beyond iPods, older industries will suffer dislocations, unless they join the increasing number of companies implementing the array of sustainable technologies that will make up the next wave of innovation" (Climate Protection Manual, 2006). The above argument is illustrated in Figure 1. The term electronic could be explained as follows: „Device or technology associated with or employing low voltage current and solid state integrated circuits or components, usually for transmission and/ or processing of analog or digital data" (Business Dictionary, n.d.). In addition to industrial applications, electronic devices have an extremely important role in everyday life of people. It is almost unimaginable today to see a residential building in modern Western world without a variety of electronic devices which help people in everyday life, but also enrich human life with culture and entertainment. These kinds of devices are jointly called customer electronics. According to one definition, consumer electronics are "a wide-ranging field of electronics for the general user that includes devices such as TVs, VCRs, radios, walkie-talkies, hi-fi stereo, home theater, handheld and software-based games, smartphones, tablets, smartwatches and Internet-connected appliances. The implication was that people purchase consumer electronics for casual use and entertainment rather than professional use. However, each year, consumer devices become as sophisticated as yesteryear's professional gear. In addition, smartphones, tablets and smartwatches fit into both consumer and business categories" (PC Encyclopedia - consumer-electronics, n.d.). Very similar, almost identical definitions of consumer electronics could be found in other sources. As an example, one of the definitions outlines the following: "Consumer electronics (CE) refers to any electronic devices designed to be purchased and used by end users or consumers for daily and non-commercial/professional purposes. Consumer electronics are among the most commonly used form of electronic, computing and communication device" (Technopedia - ce, n.d.). In some definitions the electronic dimension in consumer electronics is emphasized: "Consumer electronics refers to any device containing an electronic circuit board that is intended for everyday use by individuals. This encompasses a massive category of electronics that includes televisions, cameras, digital cameras, PDAs, calculators, VCRs, DVDs, clocks, audio devices, headphones, tablets, smartphones and many other home products" (Webopedia, n.d.). A common denominator could be noticed from the previous definitions for customer electronics which refers to electronic devices for personal and/or home usage.

If a more detailed idea about customer electronics is observed, then the following could be stated: "Consumer electronics includes a broad set of electronic devices that provide one or more functionalities in a home or for a particular individual. The term initially referred to electronic devices that were installed or used specifically inside a home/house. However, they also now incorporate mobile and computing devices, which can easily be carried by an individual outside the home, such as a cell phone or a tablet PC" (Technopedia - ce, n.d.). The devices outlined below are usually considered to be consumer electronics devices: (Technopedia - ce, n.d.)

- TVs
- DVD players
- Refrigerators
- Washing machines
- Computers
- Laptops
- Tablets.

The use of semiconductor elements in products used in everyday life, as well as strong evolutionary processes in electronics and other technologies used by consumer electronics, have influenced the lifestyle changes of modern man. Special impact in this regard is information-communication technology evolution, which redefines consumer electronics possibilities, and along with that, the functioning of modern society. The fundamental trends in consumer electronics development are the following: (Encyclopedia, n.d.)

- Miniaturization

The modern consumer takes for granted the portability of electronics devices such as Walk-mans, cellular telephones, pagers, and portable DVD players. Such portability of electronic devices has not always been the case. Early models of the radio, television, and computer were not considered portable. The processor of ENIAC, the first computer that was ever produced, included eighteen thousand vacuum tubes. As a result, ENIAC filled an entire room and generated a great amount of heat. Contemporary computers use semiconductor chips that are microscopic when compared to ENIAC's "brain." The widespread use of chips and transistors has allowed designers to create personal communication devices that are highly portable.

Cellular telephones, Palm Pilots, and laptop computers are among the items that have decreased in size while providing more options than ever before. This trend will continue as designers have unveiled prototype MP3 players that can be placed in a device the size of a wristwatch and in other wearable computer devices. Consumer electronics firms will continue to make "smarter" portable devices by packing miniature chips into devices that may include smart pagers and language translation devices.

- Digitization

The gravitation of communications-related software and hardware away from analog and toward digital will continue to drive the consumer electronics industry. The recordable DVD and hard drive-based personal recorders such as TiVo and Replay are poised to replace the analog VCR, just as the CD basically replaced the vinyl record album. The broadcast industry is also undergoing a major transition from an analog-transmitted medium to a more dynamic digital medium. The conversion to high-definition television (HDTV) and digital audio broadcasting will hasten the demise of analog television sets and traditional AM/FM radios.

The conversion of entertainment and communications to digital ones and zeroes has made software more portable and easily transmitted. The MP3 has allowed music fans to download music with ease and to send music as e-mail attachments. Video-streaming concepts will be the next stage of development as people will be able to exchange home videos and video clips in the same manner as MP3s are exchanged. Digitization and the widespread sharing of digital files over cellular, satellite, and telephone lines does raise significant concerns about piracy of copyrighted material and issues that are related to the privacy of the individual who is receiving and sending digitized communication. However, the great advances that are offered by digital communication will continue without interruption as new generations of improved digital camcorders, personal computing devices, and still-frame cameras are introduced to the marketplace.

- Convergence

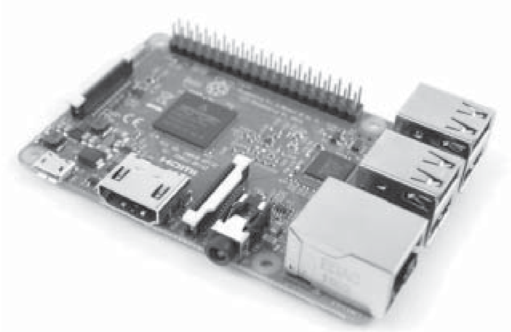
Probably the most important trend for consumer electronics is that of convergence. The computer, the telephone, and broadcasting were always considered distinct from each other. The consumer electronics industry has long realized that devices that are useful to consumers could be created by combining the power of telecommunications with the power of computing. The rise of modems to provide Internet service on personal computers, cell telephones that provide e-mail and online services, and televisions that allow for Internet connectivity demonstrate the notion of convergence. The merger announced by AOL and Time Warner in 2000 lends further support to the fact that the boundaries within the various communication-related industries have been obliterated.

All technologies that were once considered "wired" are converging toward wireless delivery modes. Both telecommunication and Internet devices have become less dependent on traditional telephone lines. Cellular telephone systems use a series of radio transmitters to provide interconnectivity. The next wave of convergent devices may use the same type of system to provide increased interconnection. The most promising of the wireless standards is known as the "Bluetooth" standard. Bluetooth would allow for the wireless networking of television, home theater, and Internet equipment. Furthermore, Bluetooth could provide a wireless interconnection between MP3 players, Palm Pilots, pagers, and cell telephones. This would allow for the wireless transfer of entertainment and information between devices, thereby eliminating the wire connection. The ease of interoperability between electronic devices suggests a dynamic and convergent future for a new breed of consumer products.

Initially it was digitization, and today it is convergence that has an increasing impact on the functioning of modern man. Connecting consumer electronics to global information-communication technology infrastructure called the Internet is especially important in terms of evolutive processes. This kind of connection resulted in the term the Internet of Things. With regard to this term the following can be said: "The Internet of Things (IoT) is generally thought of as connecting things to the Internet and using that connection to provide some kind of useful remote monitoring or control of those things. This definition of IoT is limited, and references only part of the IoT evolution. It is basically a rebranding of the existing Machine to Machine (M2M) market of today. IoT in its culmination – where we live in the data is defined as: The IoT creates an intelligent, invisible network fabric that can be sensed, controlled and programmed. IoT-enabled products employ embedded technology that allows them to communicate, directly or indirectly, with each other or the Internet. In the 1990s, Internet connectivity began to proliferate in enterprise and consumer markets, but was still limited in its use because of the low performance of the network interconnect. In the 2000s Internet connectivity became the norm for many applications and today is expected as part of many enterprise, industrial and consumer products to provide access to information. However, these devices are still primarily things on the Internet that require more human interaction and monitoring through apps and interfaces. The true promise of the IoT is just starting to be realized – when invisible technology operates behind the scenes dynamically responding to how we want "things" to act. To date, the world has deployed about 5 billion "smart" connected things. Predictions say there will be 50 billion connected devices by 2020 and in our lifetime we will experience life with a trillion-node network. Those are really big numbers. How things are fundamentally deployed today is a barrier to realizing those numbers. The industry will only achieve the reality of 50 billion connected devices by simplifying how things connect and communicate today" (Chase, 2013).

For the modern consumer electronics connectivity on the Internet, and their new functionalities for users, it is necessary to equip these devices with appropriate computer equipment. It is the minimization of computer hardware that enabled the development of the Internet of Things concept. Figure 2 shows a micro-computer which is today used in consumer electronics.

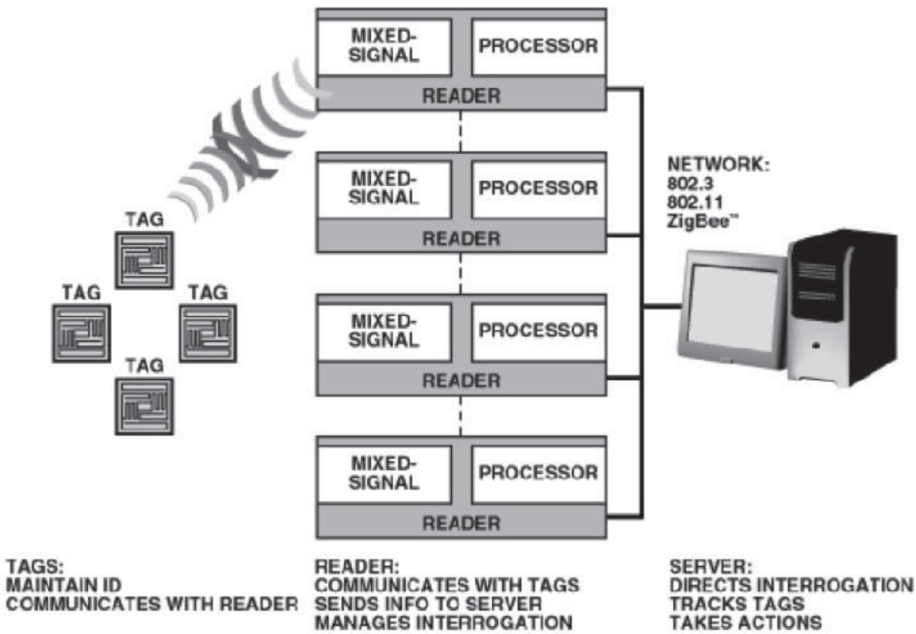
Figure 2 Micro-computer



Source: http://www.robotshop.com/eu/en/raspberry-pi-3-computer-board.html (19-3-2017)

Apart from micro-computers, and in the future nano-computers, Radio-Frequency Identification will have a significant role for the realization of the Internet of Things concept. "Radio-Frequency Identification (RFID) is the use of radio waves to read and capture information stored on a tag attached to an object. A tag can be read from up to several feet away and does not need to be within direct line-of-sight of the reader to be tracked" (EPC RFID Info, n.d.). RFID has a key role in physical products tagging. Figure 3 shows a conceptual model of an RFID system. Concerning the Internet of Things and RFID systems evolution Lynch argues: "We all know our world is more connected than ever, as is evidenced by the millions of smart phones cradled in the hands of people all over the word. But beyond this, there is a vast world of connected devices that is projected to far exceed smart phones. From toll booths and parking spots to refrigerators and thermostats, many places and common place 'things' can and will be connected. This is what the Internet of Things is all about. The Internet of Things has stealthily crept its way into our everyday lives, promising to create ease and efficiency in everything we do. In the years since the term "Internet of Things" was coined at the Auto-ID Center at MIT, its definition has evolved in some interesting ways. For example, Intel's tagline The Internet of Things Starts with Intelligence Inside indicates their heavy focus on embedded technology. Cisco's newly formed Internet of Things business unit has a vision to turn what were once physical products into services by enabling those products to deliver data. Their vision is broad, taking the Internet of Things a step further to The Internet of Everything. Just recently, SalesForce.com has begun defining its vision of IoT as The Internet of Customers. Whatever the Internet of Things is or will eventually become, research firm Gartner predicts it is growing rapidly. By the year 2020, the Internet of Things market as defined by Gartner will grow to 26 billion units, representing an almost 30 fold increase from 2009. While the Internet of Things may have expanded to include technologies and applications well beyond its roots in RFID, we believe RFID still plays a defining role, particularly as an embedded solution. We're seeing this manifested in the growth of the RFID industry, with new applications of embedded RFID increasing at a rapid pace across a variety of industries and product categories. To help drive this growth, ThingMagic recently announced the Mercury xPRESS Platform. The Mercury xPRESS Platform is the first of its kind development platform that will make new application-specific RFID product development faster, easier and less expensive. Leveraging over 10 years of RFID technology advancements and development expertise from ThingMagic, we expect the Mercury xPRESS platform will revolutionize the way that RFID readers and embedded solutions are brought to market, inevitably strengthening RFID's role in the Internet of Things" (Lynch, n.d.).

Figure 3 Simplified representation of an RFID system



Source: Katz, D., Ouellette, G., Gentile, R., Olivadoti, G.: Fast, Versatile Blackfin® Processors Handle Advanced RFID Reader Applications, AnalogDialogue, No.9/2006, Vol. 40, http://www.analog.com/en/analog-dialogue/articles/blackfin-processors-handle-rfid-applications.html (19-3-2017)

Due to the evolutionary processes of how consumer electronics is used, i.e. the changes involved by the Internet of Things modern concept, it is important to overview the changes that new concepts are bringing, and what is their impact on modern business. It is very important to observe the interaction of relationship marketing as a business philosophy which is focused on individual customers' needs, and new smart consumer electronics which enables direct tracking of individual consumer needs. Relationship marketing can be seen in the following way: "Relationship marketing is a facet of customer relationship management (CRM) that focuses on customer loyalty and long-term customer engagement rather than shorter-term goals like customer acquisition and individual sales. The goal of relationship marketing (or customer relationship marketing) is to create strong, even emotional, customer connections to a brand that can lead to ongoing business, free word-of-mouth promotion and information from customers that can generate leads. Relationship marketing stands in contrast to the more traditional transactional marketing approach, which focuses on increasing the number of individual sales. In the transactional model, the return on customer acquisition cost may be insufficient. A customer may be convinced to select that brand one time, but without a strong relationship marketing strategy, the customer may not come back to that brand in the future. While organizations combine elements of both relationship and transactional marketing, customer relationship marketing is starting to play a more important role for many companies" (TechTarget – relationship marketing, n.d.).

In today's era, products can be categorized in two main groups:

- Physical products and
- Virtual (electronic/digital) products.

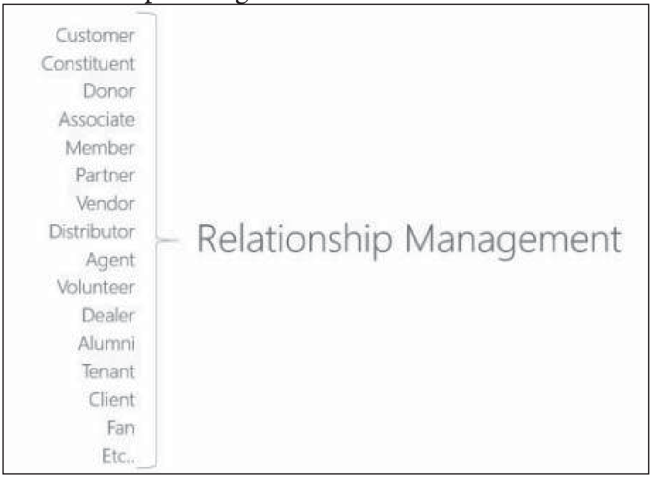
When it comes to virtual products, customer satisfaction tracking is understood, since most of the time customer must identify himself if he wants to buy in the virtual environment[1].The consumption of the virtual product can be tracked thanks to the systems that track customers' behaviour. For example, a user of some Internet content needs to identify himself, and the consumption of certain content can be detected in different ways, from detecting the time when the interaction occurred, to tracking the customer's focus by following the mouse pointer on the screen. In contrast to virtual products that appear as data

[1] While there are systems of payment that guarantee anonymity to the consumer, i.e. buyer, they are quite rare in comparison to omnipresent payment by electronic forms of money.

resources and have information by themselves, physical products are not recognizable from the data-information standpoint. Radiofrequency identification could have a big role in their identification. As explained earlier, thanks to RFID, every product becomes unique and recognizable, and detectors could recognize them as such. Accordingly, consumer electronics devices, with a computer system and a product identification system, could detect products and track consumer behaviour regarding product consumption. For instance, a refrigerator could detect products that are inside it, it could track product consumption, and in the most automated system with machines interacted communication (M2M) in the function of sales processes, it is possible to algorithmically refill the product stock in the refrigerator based on parameters that show the consumption of each product. Mental models show that relationship marketing, i.e. customer relationship management, has enormous opportunities in terms of getting to know the habits of consumers. However, in should be remembered that the implementation of relationship marketing in research of consumer needs system through smart consumer electronics produces a different process of cognition in comparison with classic methods of permanent research of consumer needs in touchpoint. H2H communication (human to human) in this case is transformed into M2M (machine to machine) communication.

Accordingly, if there is a machine on one side which tracks consumer behaviour, it is extremely inefficient to have a human on the other side (communication model H2M – human to machine), who is unable to consistently track all the information generated by the machines due to limited processing options. That is why it makes sense to develop models for automation of control elements of the production process, based on the customers' behaviour information which are automatically detected by automated customer relationship management system i.e. relationship marketing. Automation of business process management based on the information from the environment in the domain is called Anything relationship management (XRM). XRM could be perceived in the following way: "The term XRM stands for "X Relationship Management". The X in this case is a variable. This is because an XRM system does not just look after one type of relationship, for example customers, like in a CRM system, or suppliers, like in an SRM system. Different types of relationships are managed, such as employees, customers, prospective clients, suppliers and press contacts. This means that all the relationships that a company enters into can be managed from a central point" (TechTarget – xrm, n.d.). As for the origin of the term, the following can be said: "(X=Anything Relationship Management) A Microsoft brand for its Dynamics CRM system, which is used for applications other than customers. A CRM system keeps track of people and their relationships with other people and events. Therefore, CRM systems can also be used for employees in human resources and other disciplines that manage people" (PC Encyclopedia-xrm n.d.). Figure 4 shows some elements that could be included in relationship management.

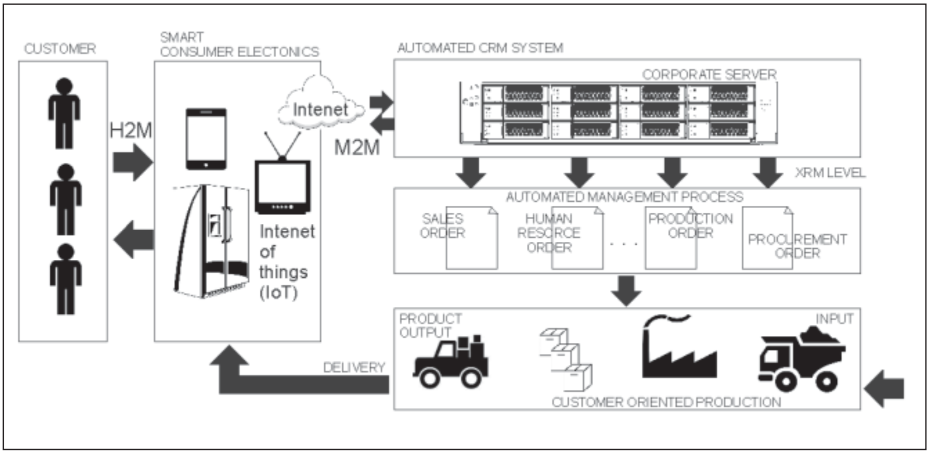
Figure 4 X Relationship Management



Source: https://community.dynamics.com/enterprise/b/dynamicscrmenthusiast/archive/2017/01/21/dynamics-xrm-a-whole-other-world-of-opportunity (20-3-2017)

The scheme of the model of automatic operation of the entire M2M communication process based on relationship marketing, i.e. customer relationship management between a business entity and advanced consumer electronics devices is displayed in Figure 5.

Figure 5 The principal model of automated functioning of M2M communication process for the purposes of relationship marketing on business entity level



4. CONCLUSION

There are certain changes in the way society will work due to further evolutive processes in information-communication technology, and also in smart consumer electronics sphere, which is a constituent part of the Internet of Things concept. In its essence, marketing is a business philosophy which is focused on customer needs and uses market research to find out what the needs of customers are. Based on the collected information about customers' needs marketing takes management efforts in terms of defining an acceptable product for the customer, with proper features, price and distribution options, it promotes the product and checks customers' satisfaction. Relationship marketing is the last current development version of marketing which aims to retain customers by applying the individualized approach. The main issue are the terms of business that are created by the new era with smart consumer electronics, bound in the Internet of Things concept where M2M system of information and knowledge interchange is dominant. It is suitable for application of marketing, especially relationship marketing. The research that was conducted leads to a valid conclusion that not only the new era is suitable for the application of marketing, but the terms which are formed by the new era are ideal for applying the relationship marketing through the relationship marketing concept. Therefore, based on the shown model of automated functioning of the entire M2M communication process based on relationship marketing, i.e. customer relationship management between business entity and smart consumer electronics devices, it can be concluded that modern smart consumer electronics could enable marketing to overview individual needs of customers with more quality and to automate business processes.

The displayed model is a principled one and requires many answers. Among other things, there are questions of access rights, system security problems, system scalability problems, system integrability problems, information exchange protocols, dealing with conflict situations, and the like. Thus, the problem of using marketing in terms of a wide existence of new consumer electronics opens a series of questions and polygons for research where modern science will in a very short time have to provide relevant answers.

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BRAND ARCHITECTURE IN ACHIEVING THE OPTIMAL BRAND PORTFOLIO

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Abstract

Optimal brand portfolio and optimal brand architecture are related concepts. Brand architecture is a key component of the firm's overall marketing strategy as it provides a structure to leverage strong brands in domestic and other markets, easily assimilate acquired brands, and rationalize the firm's branding strategy. Brand architecture is the way a company organizes, manages, and markets their brands and achieves optimal brand portfolio. It must be aligned with and support business goals and strategies. Different business strategies require different brand architectures. The two most common types are: "Branded house" architecture – employs a single (master) brand to span a series of offerings that may operate with descriptive sub-brand names and "House of brands" architecture – each brand is stand-alone; the sum of performance of the independent brands is greater than it would be under a master brand. Neither type is better than the other and some companies use a mix of both. Brand *architecture furthermore is an organizing structure of the brand portfolio that specifies brand roles and the nature of relationships between brands. This article introduces a powerful commercial market research brand architecture tool used in FMCG industry, with intent to help brand architecture strategists employ insight and subtlety to sub brands, endorsed brands, and their alternatives in a way they can "measure to manage" optimal brand portfolio by optimising target audiences through optimal brand architecture.*

Keywords: *Brand awareness, Brand measurement, Brand names, Brand loyalty, Target groups*

JEL classification: M31, Z33

1. BRAND ARCHITECTURE AS CONCEPT

Branding has changed and developed considerably in the last century. One of the most important aspects of branding is building the customer-brand relationship. The more precise the consumers' perception of that brand relationship is, the more it will lead to brand acceptance (Hankinson, Cowking, 1993., 3). In order to be able to manage brands and their market potential, it is important to understand concepts of brand architecture as a basis of brand portfolio optimisation. Basically, brand architecture could be seen as a defined way for creating and keeping a strong brand. Since brand is about perception and experience, brand architecture can be also seen as structural plan that ensures that everything fits together seamlessly. In business, brand architecture is usually used a strategic roadmap for present and future success. Brand architecture may be also defined as an integrated process of brand building through establishing brand relationships among branding options in the competitive environment (Sancez, 2004., 234). The brand architecture helps in the revival, retention or merger of brands that have low market impact and tend to cause organisational conflicts with the strong brands of the company. This process of brand building categorically determines the performance of the brand and allows the brand manager to choose the specific strategy position for the brand in the market (Aaker, Keller, 1990., 28). Furthermore, According to Aaker and Joachimsthaler there are four strategies and nine sub-strategies which can be described as follows (Aaker, Joachimsthaler, 2000.,10):

- A house of brands : A house of brands strategy involves an independent set of standalone brands, each maximising the impact on the market

- Endorsed brands: Endorsed brands are independent but are endorsed by another brand. The endorsement provides credibility and usually plays a minor driver role (Aaker, Joachimsthaler, 2000.,12).
- Sub-brands: Sub-brands are brands connected to a master or parent brand and augment or modify the associations of that master brand" (Aaker, Joachimsthaler, 2000.,14)
- A branded house: In this strategy the master brand moves from primary to dominant driver, and the sub-brand moves from modest driver to being a descriptor with little or no driver role (Aaker, Joachimsthaler, 2000., 15).

Literature provides some more interesting definitions and views about brand architecture. Brand architecture represents a structural link between the organisation and the consumer (Strebinger, Treiblmaier, 2006., 84). In order to understand brand architecture strategy, it is important for the categories of brand architecture to be highlighted. At the top of the brand architecture of an organisation usually lies the corporate brand (Aaker, 1996., 242; Hart et al., 1998., 65). The corporate brand is defined as the corporation behind the product or service offering (Aaker, 1996., 242). Following the corporate brand usually lies the product-line brands (Aaker, 1996., 242). Product-line brands are usually associated with the organisation's specific products (Aaker, 1996.,243; Hart et al., 1998., 164). Under the product-line brands, sub-brands are usually found. These brands refine and distinguish between different product offerings (Aaker, 1996.,243). Understanding of that relations and relations toward target customers a crucial for creating optimal brand portfolio since, in the brand architecture can be also seen as a way how company organizes, manages, and markets their brands and achieves optimal target audiences. Different business strategies require different brand architectures. It is important to understand which concept in FMCG industry and what kind of relations relationships between brands drives the best result from customer perspective. This article introduces a powerful commercial market research brand architecture tool used in FMCG industry, with intent to help brand architecture strategists employ insight and subtlety to sub brands, endorsed brands, and their alternatives in a way they can "measure to manage" optimal brand portfolio by optimising target audiences through optimal brand architecture.

2. BRAND PYRAMID AS A BRAND MEASUREMENT AND MANAGEMENT TOOL

This paper investigates understanding and perception of brand architecture observed through brand portfolios in FMCG industry, as an example of industry with high brand equity potential and strong focus on brand portfolio optimisation. The aim of this paper is to help in using scientific research and measurement methods in business strategic decision making. Several commercial versions for measuring brand portfolio optimisation are available and commonly used on market for brand management (e.g., Young and Rubicam's BrandAsset Valuator (BAV), WPP's Brand Z, and Research International's Equity Engine). This paper will be focused on Ipsos's Brandpuls tool for brand measurement.

2.1. Brand Pyramid Methodology

For the purpose of this paper, backdate of 4 research waves through 2 years (2 waves per year 2015 and 2016) were used. All of those conducted on a representative, random sample of Croatian citizens older than 15 years, (n=2.000 per wave, in total 8.033 respondents), examining (as a part of a wider study) FMCG brands in Croatia, as a part of a bigger syndicated commercial research and management tool called Brandpuls, owned by IPSOS market research agency.

Basic analysis will be done through brand pyramid, based on relationship with customer, including conversion model from one level to another. Brandpuls tool includes brand loyalty measurement as an important part of measurement of the majority of commercial brand equity models. Analysis also includes brand affinity and brand image as crucial criteria for brand strength.

2.1.1. Sample description

In Table1 detail socio-demography description for used sample is given.

Table 1: Socio demography sample description

Croatia			
		Column %	N
TOTAL		100,0	8033
Gender		100,0	8033
	Male	49,8	4002
	Female	50,2	4031
Age categories		100,0	8031
	15-19	10,3	826
	20-29	17,0	1368
	30-39	20,6	1654
	40-49	20,7	1663
	50-59	21,9	1763
	60-64	9,4	757
Education		100,0	8033
	DK/NA	1,6	129
	Primary school	22,9	1838
	Secondary school	57,7	4636
	College, university	17,8	1430
Employment		100,0	8033
	Yes	50,9	4090
	No	48,6	3907
	No answer	0,5	37
	DK/NA	0,0	0
Region		100,0	8033
	Zagreb and surroundings	25,5	2046
	North Croatia	18,1	1457
	Eastern Croatia	16,8	1345
	Lika and Banovina	8,4	672
	Croatian Littoral and Istria	11,6	932
	Dalmatia	19,7	1581
Marital status		100,0	8033
	Married	51,4	4132
	Single	30,4	2438
	Divorced	5,7	457
	Widower	3,5	281
	Common law marriage	6,0	484
	No answer	3,0	242
	DK/NA	0,0	0
Settlement		100,0	8033

	Village	38,8	3113
	Town	61,3	4920
Personal income		100,0	8033
	DK/NA	5,9	473
	Without personal income last month	19,6	1571
	Up to 2000 HRK	13,2	1061
	2001 - 4000 HRK	27,1	2174
	4001 - 6000 HRK	20,7	1660
	6001 and more	13,6	1093
Household income		100,0	8033
	DK/NA	9,2	740
	Without income last month	1,4	112
	Up to 3000 HRK	11,3	903
	3001 - 5000 HRK	15,7	1257
	5001 - 7000 HRK	18,0	1449
	7001 - 9000 HRK	16,6	1332
	9001 - 11000 HRK	11,6	931
	11001 and more	16,3	1309

Source: Brandpuls data, prepared by authors

2.1.2. Brand Pyramid explanation

Brandpuls tool allows brand analysis per different FMCG categories, primarily food and beverages, washing and cleaning products and cosmetics. For every category first step is to detect non category users, although, they can be also observed in relation to brand perception. For every category, set of chosen brands are measured through, as earlier mentioned hierarchical model, starting with recognition of the brand (in questionnaire asked as prompted awareness), second step measuring experience with brand, followed by brand usage. Consideration of brand while conducting category purchase leads to primary brand usage, where top of the model is defined with loyal users. Conversion model per every pyramid step can be analysed as well. Furthermore, that combination of variables allows brand loyalty segmentation. Important variable that can be combined with brand pyramid is average satisfaction.

3. BRAND PORTFOLIO OPTIMISATION MEASUREMENT

For the purpose of this analysis, FMCG producer from Croatia was chosen, who is nationally available in retail, doing business in several different categories with different brands, which makes this producer good example. Not all categories and all brand from Producers portfolio was being analysed. Chosen categories for the purpose of this analysis were non-food categories: first one is ***laundry detergents*** and the second one is ***household cleaning products*** where producer has different brand architecture strategies.

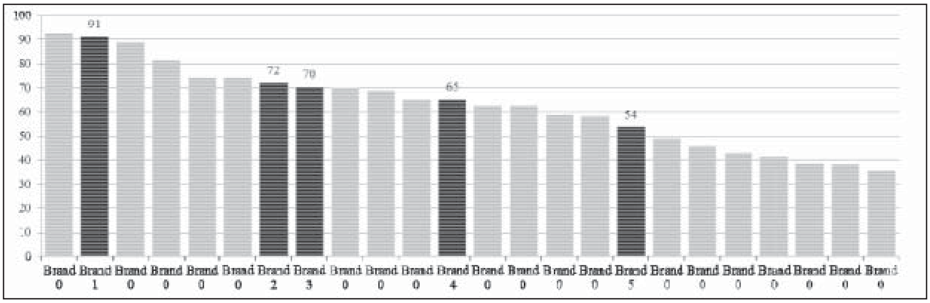
3.1. Brand Architecture Type in Laundry Detergents Category

Chosen producer can be observed as primarily using "House of brands" architecture model within Laundry Detergents Category, where each brand stands alone with the idea that the sum of performance of the independent brands is greater than it would be under a master brand. Every brand within brand portfolio has specific brand role, but the nature of relationships between brands was never examined and opens a new potential within future long term strategy brand portfolio optimisation. For the purpose of this study, strength, position and target groups description for 5 brands with different names out of the same producer within the same category are chosen for the analysis.

3.1.1. Laundry Detergents Category Brands Analysis

Brandpuls tool for the given category tracks and measures 24 brands where 5 of them are brands from chosen producer. Since having different names, there is no possibility for awareness transfer from one brand to another. When observing awareness based on brand name, observed producer is ranked on positions 2, 7, 8, 12 and 17 (graph 1).

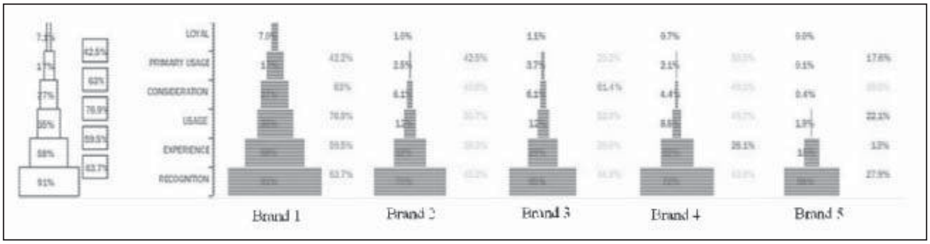
Graph 1: Brand Recognition/Awareness based on name



Source: Brandpuls data, prepared by authors

It can be seen that potential of the strongest brand within the family (Brand 1 with 91% of awareness) when observed only through brand name could deliver some value for 20% (Brand 2 or 3 with 70-72% of awareness) to 40% (Brand 5 with 54% of brand awareness) of market who are aware of one but not all brands. But this should be put in contexts of brand pyramid where interrelation between brand levels can be observed (graph 2).

Graph 2: Brand pyramids of the same producer within the same category

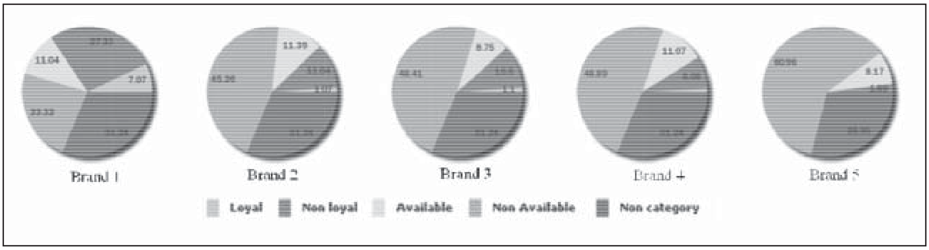


Source: Brandpuls data, prepared by authors

It can be concluded that there is a really strong brand within this family (Brand 1), with good conversion rates through pyramid, being one of the two leaders within the category. Four other brands are showing potential to grow on several levels: firstly conversion rate from recognition to experience can be improved, which argues that the same brand name (as a strongest brand within the family) would not need to create the push on that first level, but question for further research arises: could it help in transferring "confidence" and make customers "try" the brand.

Brand 2 and Brand 3within the family should be focused not only on making customers to experience the brand, but to think why those who tried are not using it more regularly. This is primarily the problem within the pyramid of Brand 4, which could indicate some issue related to distribution or even quality/price ratio. If so, it can be concluded that when observing interrelations within brand portfolio through brand architecture, strong brands should be kept safe from negative impact of lower quality products. Strategy of observed producer showed that House of brands strategy helped in optimising targets primary toward criteria of price sensitivity, where Brand 4 and Brand % are targeting particular price sensitive customers. Since one of the main tasks of brand is to help building loyalty it is interesting to see that only strongest brand managed to create loyalty with around 7% of customers (graph 3.) Those non available customers are loyal to some other brand. Here it is very important to emphasise that share of loyal users can be observed within category users only (there is 31% of respondents who are not personally involved or using Laundry Detergents category).

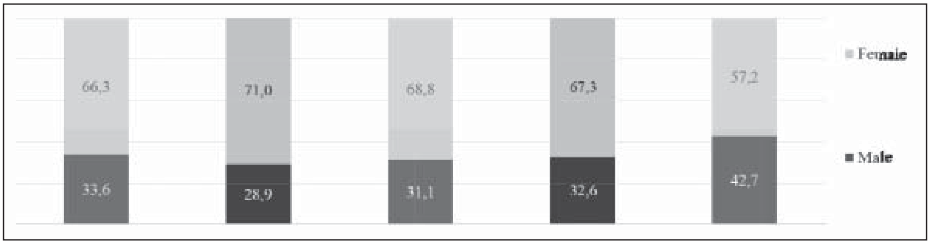
Graph 3: Brand <u>**loyalty**</u> of the same producer within the same category



Source: Brandpuls data, prepared by authors

Brand analysis per loyalty segmentation furthermore shows that every brand within the family have users who are here, but non loyal, and those who are available which means that there is potential to grow in loyalty for every of them from 22% for Brand 2 to 10% for Brand 5. Since it is argued that optimisation of brands is based on optimisation relationship with customers, it is important to analyse target groups of every brand within the family. This paper is focused on basic demographic variables (graph 4., graph 5.) as a first stage of target group's detection.

Graph 4: <u>Demographic target groups</u> – gender per brand

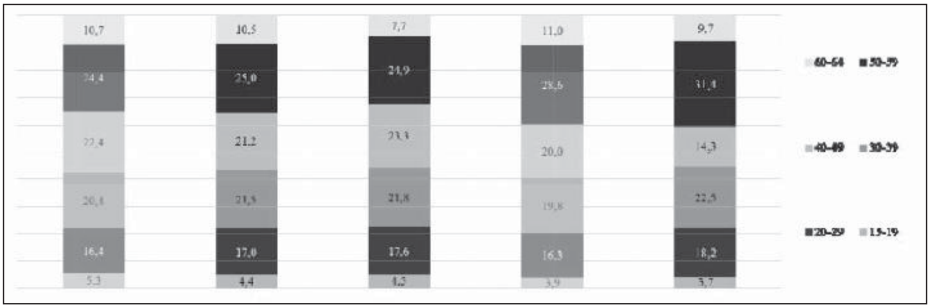


Source: Brandpuls data, prepared by authors

Although females are main shoppers and users within Laundry Detergents category, significant difference in gender structure can be seen within brand family. The "weakest" brand when observed through brand pyramid is actually the most functional one with lowest price within category. And it is significantly more perceived and used by men when compared with other brand in category.

When observed how brand perception and usage is distributed over ages groups, differences are not that visible, although stronger brands are more perceived and used by customers under 50 years, and Brand 5, the most functional price sensitive brand is more perceived and used by customers over 50 years.

Graph 5: <u>Demographic target groups</u> – age per brand



Source: Brandpuls data, prepared by authors

Several more demographic criteria have been checked such as settlement type and education level, but those did not show any statistical differences.

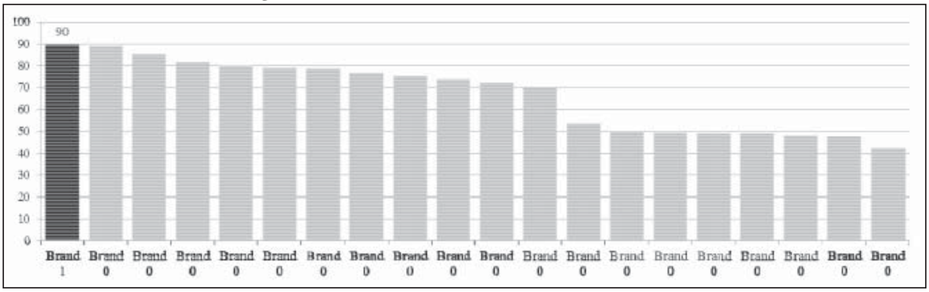
3.2. Brand Architecture Type in Household Cleaning Products

Second category which was used as "control" category of the same producer is *Household cleaning products* category. Chosen producer can be observed as one using mixed models within this category (on contrary to first example), having different brands, where some of them stand alone, but there is a sub-group of "Branded House" example, where one brand is mastering several product categories within category. Out of that branded house family which is used as an example, Brandpuls as a tool is only tracking the master brand, without awareness about concrete product brand within the category. That is why analyses will be focused on positioning the chosen brand within other brands in category.

3.2.1. Household cleaning products Category Brands Analysis

Brandpuls tool for the given category tracks and measures 20 brands where one brand of observed producer is stretched within 6 sub categories (meaning different products) under one brand, and one name. When observing awareness based on brand name, observed producer is ranked on first positions (graph 6.) where 90% of market heard about the brand, followed by producer with the same brand strategy.

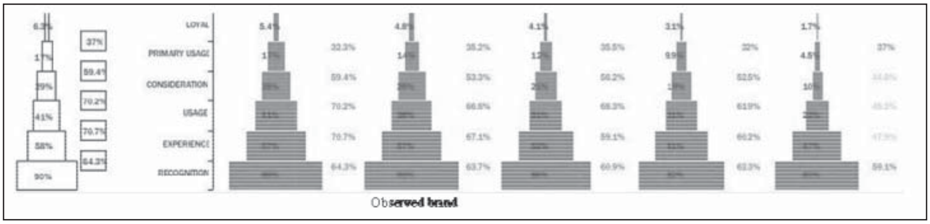
Graph 6: Brand Recognition/Awareness based on name



Source: Brandpuls data, prepared by authors

When analysing brand pyramids, it can be concluded that our observed brand although first in awareness is second in total brand strength, although very close to category leader, although all top 4 brands are solid. Only 5th brand in top5 show s weakness on almost all conversion rates.

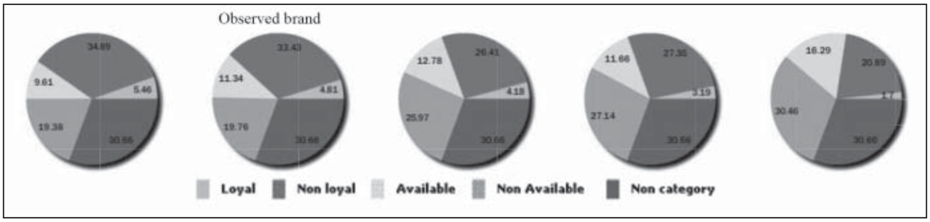
Graph 7: Brand <u>**pyramids**</u> of the same producer within the same category



Source: Brandpuls data, prepared by authors

Loyalty segmentation analysis shows that this master brand strategy was chosen good for this category of products, since the loyalty segmentation structure is mirroring leader within category (graph 8.) with potential to grow of 44% .

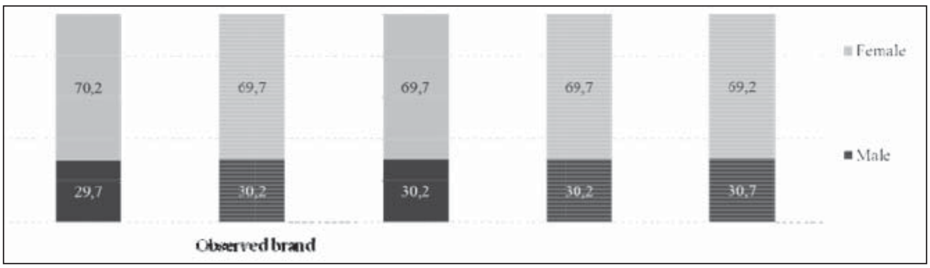
Graph 8: Brand <u>**loyalty**</u> of the same producer within the same category



Source: Brandpuls data, prepared by authors

Target groups analysis based on demographic variables (graph 9., graph 10.) as a first stage of target group's detection. Shows that gender distribution is almost similar through brands, no difference can be detected. And it correlates with structure of total category.

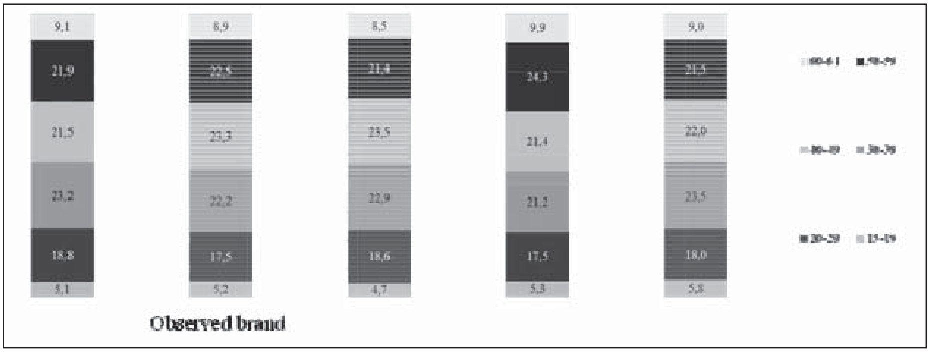
Graph 9: <u>**Demographic target groups**</u> – gender per brand



Source: Brandpuls data, prepared by authors

There is no significant difference when observing age structure as well, meaning that brand preference is not driven by demographic criteria but some other.

Graph 10: <u>Demographic target groups</u> – age per brand



Source: Brandpuls data, prepared by authors

Since Brandpuls tool collects data on psychographic variables and attitudes as well, future analysis should focus on deeper brand target group's description, as a basis of further discussion on optimising brand architecture through brand portfolio reaching maximum target audience.

4. ACHIEVING THE OPTIMAL BRAND PORTFOLIO

This article introduces a powerful commercial market research brand architecture tool used in FMCG industry, with intent to help brand architecture strategists in possibility to "measure in order to manage" optimal brand portfolio, by understanding and optimising target audiences through optimal brand architecture. Analysis of one producer in FMCG industry confirmed that different business strategies, even within one company (but different categories), requires different brand architectures. The two most common types House of Brands, and internal group of Branded house architecture showed that brand can be successful on both ways and that even when one seems to be unsuccessful (Brand 5 in Laundry Detergents Category), if has specific role and task to deliver value to specific target, without harming strongest brand of the same producer with completely different brand positioning, it should be valued differently. It confirms that organizing structure of the brand portfolio is successful if specifies brand has specific roles within the brand portfolio. For furthure discussion detailed analysis or reached target audience is recommended.

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CONTRIBUTION TO THE DEVELOPMENT OF THE BUSINESS PRODUCTION DISTRIBUTION SYSTEM

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Abstract

System Dynamic Simulating Modeling is one of the most appropriate and successful scientific dynamics modeling methods of the complex, non - linear, natural, technical and organizational systems. The methodology of this method showed its efficiency in practice as very suitable means for solving the problems of management, of behavior, of sensibility, of flexibility of behavior dynamics of very complex systems.

System Dynamics simulation models of organizational business system of management of material and informational flows in productive company will be presented in this paper. Organizational business-production system is simulated and realized by PowerSim simulation program.

Due to complexity and extensiveness of business management of organizational business process, or production-distribution system global simulation models of companies are presented on the modular way which are common structural characteristic in every productive business organization. These sub system are modeled according to its specific quality.

Keywords: *System Dynamics, Modeling, Heuristics optimization, Simulation, Business System*

JEL Classification: L1, L11

1. INTRODUCTION

For one productive organization which is made up of series of cause-consequence dependent sub systems, i.e. modules, which represents division based on functionality, can be told that this is complex process with large numbers of feedback loops, which are necessary to take into consideration. This interdependence sometimes effects very strongly on the final result of behavior dynamics of organizational business system. The result of dynamics behavior of business-production process can be manifested with fluctuation of relevant business variables, such as speed of supplying raw materials, speed of arriving the raw materials, speed of finishing the final products, state of unfinished production, state of finished goods - inventory, speed of shipment, state of productive capacities), state of: credits, debt, cash-flow, gross income, net income, speed of investment new capacities police, etc.

Previously it was mentioned that business production process, i.e. production organization business production system, is made up of seven sub system (sub-models), which have direct or indirect flows influence on some or even all listed indicators i.e. production relevant variables. Meaning, it is necessary to have a priori knowledge of this business-production process in order to define relationship between these indicator-variables and between every single module. Furthermore, it is possible to detect ineffective parts of such business organization system by necessary knowledge of this business-production processes and continuous modeling with System Dynamics. Further, with simulation of dynamics processes of production organization different behavior of this organization can be predicted, as response to different stimulus, i.e. test functions. For stimulus (known test functions), i.e. inputs in such processes in consequence consideration can be taken: changes in the markets, such as increase or decrease in credits for sale products or debit of this organization, introduction of new production equipment, change of supplier of components or materials, etc. Subjecting the production organization to different scenarios which are stipulated with changes in the market production organization can become more flexible, adaptive and robust. In this paper SD-continuous model of such production organization will be presented, and also a possibility of application System Dynamics methodology for simulation of this kind of business-production systems.

The business production traffic organization consists of seven following subsystems:

1. Production subsystem;
2. Demand subsystem;
3. Debits subsystem;
4. Subsystem of productive capacities;
5. Subsystem of money on transfer account;
6. Income subsystem;
7. Subsystem of demand for organization products.

2. PRODUCTION SUBSYSTEM

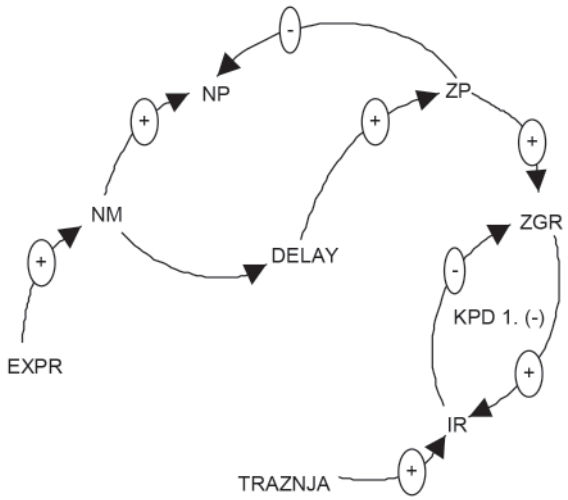
2.1. Mental-verbal model of the production subsystem

The *order speed* of material (**NM**) is influenced by demand for organization products (**EXPR**) which can be described as exponential average of the demand for products in last 36hrs (see graph *Demand for products* in subsystem of demand for organization products). With a larger exponential average (**EXPR**), the orders of the material (**NM**) are also larger (+), consequently with the increase of the order, the state of unfinished production will also increase (+). Increasing the quantity of finished production (**ZGR**), the quantity of unfinished production (**NP**) is decreasing (-). With a higher speed of product finishing, the supply of finished products will be higher (+) with the consequence of the increase of quantity of delivered products (+). When quantity of delivered products (**IR**) is higher, the quantity of finished products (**ZGR**) in supply is lower (-), which gives a negative (-) sign to the feedback link of FBL 1. The quantity of delivered products (**IR**) will, of course, depend on demand for products on the market (**TRAZNJA**). When the delay of the ordered material occurs, it could be described with macro function DELAY3, which as arguments takes a variable for which we describe the delay of the material flow of III order, and as a time delay parameter KP. The structural diagram and flow diagram are presented on Figures 1 and 2.

2.2. Structural model of the production subsystem

According to the described mental-verbal model it is possible to determine the system dynamic structural model of observed subsystem.

Figure 1. SD-structural flow diagram of the production subsystem



3. DEMAND SUBSYSTEM

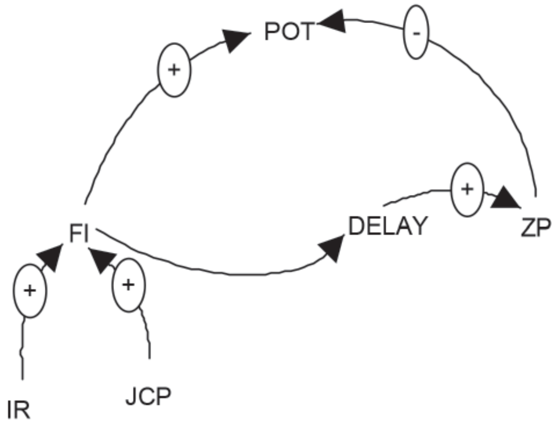
3.1. Mental-verbal model of the Demand subsystem

The demand depends on the quantity of the delivered invoices (**FI**) meaning the higher the quantity, the higher the state of the demand (**POT**) (+). The value of the delivered invoices (**FI**) is influenced by the price of the product (**JCP**) and the quantity of the delivered products (**IR**), and the larger are those sizes the bigger is the value of the delivered invoices (+). When delivering invoices, a material delay of the III order occurs, and can be described by macro function DELAY3. The bigger the delay is, the quicker is the speed of charging the demand (**SPOT**) on the behalf of production organizations (+). The quicker the speed of charging the demand (**SPOT**) means reduction of the state of demand (**POT**), i.e. the negative sign (-). Figures 3. and 4. present structural diagrams and flow diagram of demand subsystem.

3.2. Structural model of the Demand subsystem

According to the described mental-verbal model it is possible to determine the system dynamic structural model of observed subsystem.

Figure 2. Structural diagram of demand subsystem



4. DEBIT SUBSYSTEM

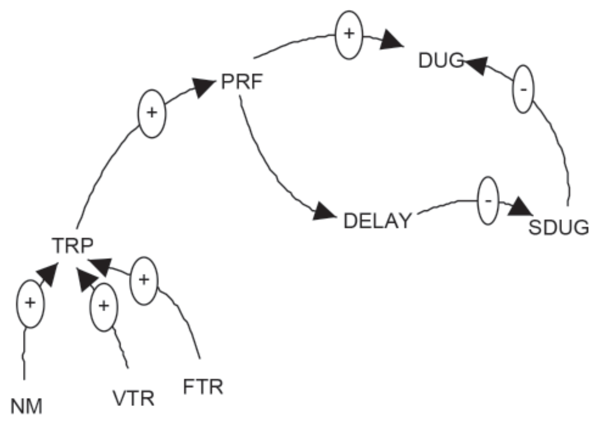
4.1. Mental-verbal model of the Debit subsystem

The debit of production organization (**DUG**) depends on the speed of invoice arrival (**PRF**) and also the speed of payment of the debits to the supplier (**SDUG**). The quicker the invoice arrival is, the state of debit is also higher (+). The quicker the payment of the debits to the supplier is, the state of debit is lower (-). There is a material delay between invoice arrival and payment of the debit to the suppliers and it can be described by macro function DELAY3. The higher the delay is, the speed of the payment of the debit to the supplier reduces (-). The speed of invoice arrival is directly influenced by production expenses (**TRP**) which are: acquisition of the material for the production (**NM**), variable production expenses (**VTR**) and fixed expenses (**FTR**). With the increase of all of these expenses, the production expenses, those that directly influence the invoice arrival (+), increase, as well. Based on such verbal model the structural diagram and flow diagram can be shown in Figures 5. and 6.

4.2. Structural model of the Debit subsystem

According to the described mental-verbal model it is possible to determine the system dynamic structural model of observed subsystem.

Figure 3. Structural diagram of debit subsystem



5. PRODUCTION CAPACITY SUBSYTEM

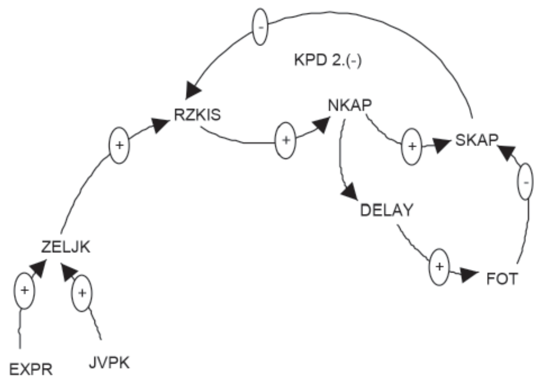
5.1. Mental-verbal model of the Production Capacity subsystem

Desired production capacity will depend on exponential average of demand (**EXPR**) and singular value of production capacities (**JVPK**), and that size can be mathematically determined by product of multiplication of last two. The higher exponential average of demand and singular capacity value means the increase of the states of desired capacities (+). Discrepancy (**RZKIS**, i.e. the difference between desired capacity state **ZELJK** and the real capacity state **SKAP**) will be higher when the desired capacity state is higher (+); increasing the real capacity state by investing in new capacities, the discrepancy reduces, i.e. by higher investment in new capacities, the real state of capacity increases (+) and the discrepancy reduces (-). The acquisition of new capacities (**NKAP**) will naturally depend on the state of existing, i.e. the writing off of the expired capacities (**FOT**). This link between acquisition of the new and the expiration of the existing can be modulated by macro function DELAY3.

5.2. Structural model of the Production Capacity subsystem

According to the described mental-verbal model it is possible to determine the system dynamic structural model of observed subsystem.

Figure 4. Structural diagram of the production capacity subsystems



6. MONEY ON TRANSFER ACCOUNT SUBSYSTEM

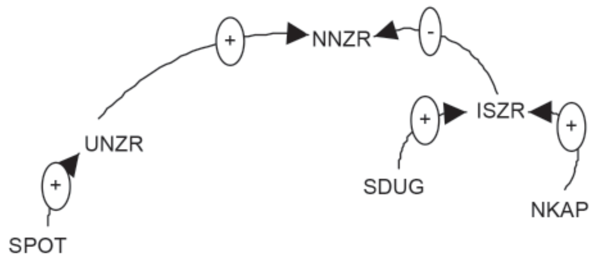
6.1. Mental-verbal model of the Money on transfer account subsystem

The amount of money on transfer account (**NNZR**) depends on deposits of money on transfer account (**UNZR**) and on payment from transfer account (**ISZR**). Payments from transfer account depend on debits state (**SDUG**) and the acquisition of new capacities (**NKAP**), i.e. the bigger the debit and the acquisition of the capacities are, the payment from transfer account is bigger (+), meaning the smaller amount of money on transfer account (-). Deposits on transfer account depend on demand state (**SPOT**), and the bigger the state is, the bigger are the deposits on transfer account (+), and consequently the amount of money on transfer account (+).

6.2. Structural model of the Money on transfer account subsystem

According to the described mental-verbal model it is possible to determine the system dynamic structural model of observed subsystem.

Figure 5. Structural diagram of money on transfer account subsystems



7. INCOME SUBSYSTEM

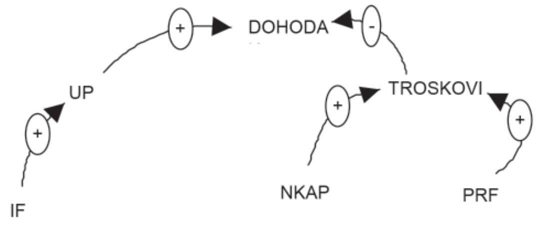
7.1. Mental-verbal model of the Income subsystem

Income (DOHODAK) depends on incomes (UP) and expenses of the production organizations (TROSK). The higher the total incomes are, the higher is the income (+), and these total incomes depend on delivered invoices (IF), i.e. more delivered invoices means higher total incomes (+). The expenses of the production organization can be reduced on expenses of the acquisition of new capacities (investment, NKAP) and the quantity of received invoices (PRF). The bigger the both of these sizes are, the expenses are bigger, too (+), and the increase of the expenses reduces the income (-).

7.2. Structural model of the Income subsystem

According to the described mental-verbal model it is possible to determine the system dynamic structural model of observed subsystem.

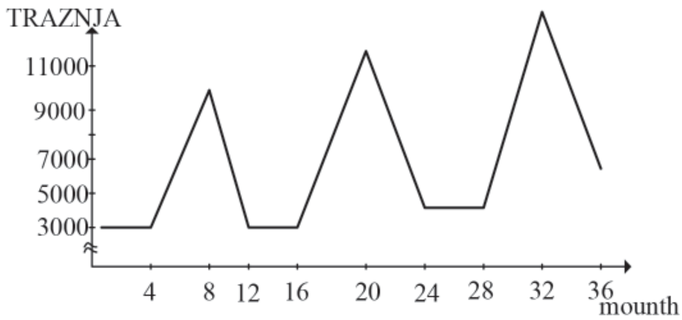
Figure 6. Structural diagram of the income subsystem



8. SUBSYSTEM OF DEMAND FOR ORGANIZATION PRODUCTS

The demand for organization product has a seasonal characteristic and can be shown by graphical preview below:

Figure 7. Demand for products

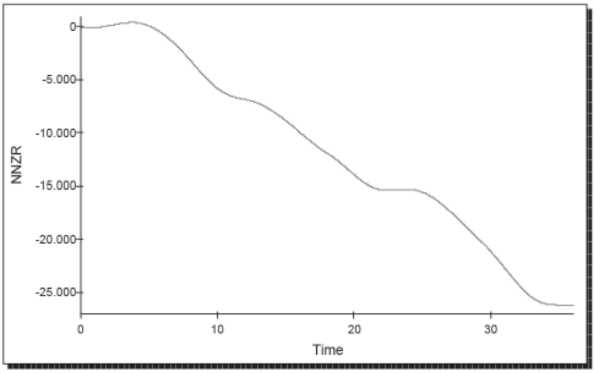


Based on such demand that can be shown by macro function TABLE, so called stimulated demand is modeled. The stimulated demand is a product of factors of delay (value 3) of the product from production department to the sales department with the demand described by upper graph.

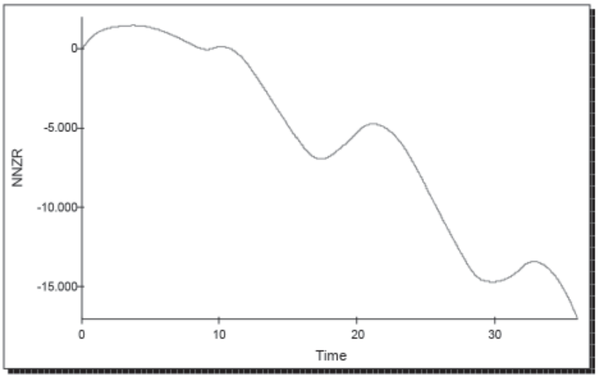
9. SIMULATION RESULTS

In this paper, due to the space limitation, we will show several interesting scenarios which applied to the money on transfer account, i.e. to the solvency of the business organization considering the changes of KP= production time delay parameter, VKD= debit time delay parameter and KPO=demand time delay parameter.

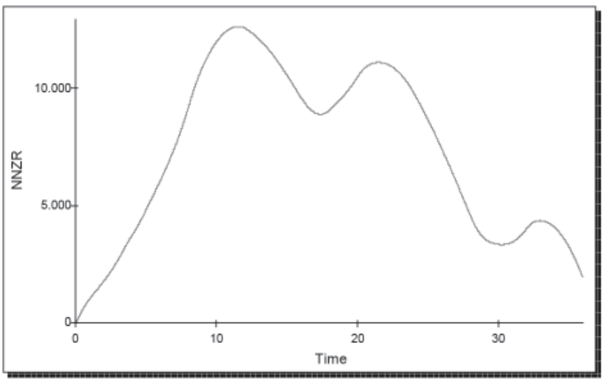
Scenario I: KP=3, VKD=3, KPO=3,



Scenario II: KP=3, VKD=3, KPO=0



Scenario III: KP=0, VKD=6, KPO=0



It is possible to conclude that the company model is behaving in concordance with economical regulative, and that for Scenario I (KP=VKD=KPO=3 months) dynamics of behavior of the amount of money on transfer account (**NNZR**) indicates relatively sudden fall in company solvency (after 36 months NNZR <-25.000 $). Scenario II (KP=VKD=3 I KPO=0) indicates somewhat slighter fall in company solvency (after 36 months NNZR>-15.000 $) and Scenario III (KP=0, VKD=6, KPO=0) indicates a constant trend of a significantly positive solvency which oscillates and which is after 36 months still positive.

The results are in complete concordance with the economic theory and practice which says that if KPO=0, which means if there is no delay in payment of demand, then the company solvency will be improved (reduced insolvency). Scenario III is a case where there is no delay neither in production KP=0 or in demand KPO=0, and if we increase the delay in debit payment VKD=6, then the company solvency would be constantly positive.

10. CONCLUSION

Based on ours long term experience in the application of the dynamical methodology of simulating and in this short presentation we provide every expert in need with the possibility to acquire additional knowledge about the same system in a quick scientifically based way of exploring the complex systems. It means:

Do not simulate behaviors dynamics of complex system using so called "black box" approach, because practice of education and designing of complex system confirmed that is better to simulate using so called "white box" approach, e.g. System dynamics Methodology Approach.

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THE ANTECENDENTS OF „FULL OF LIFE" CAMPAIGN AND THE CROATIAN COUNTRY IMAGE IN HUNGARY

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Abstract

Croatia is recently one of the most popular tourist destinations of the Mediterranean world, attracting millions of tourists each year with its crystal-clear sea. In the end of the last century, the country, by its secession from Yugoslavia, placed its tourism marketing activity on strategic basis, and the number of guest arrivals began to increase leaving the war-years behind – in 2013 the 28th member state of the European Union was visited by three times more tourists than the number of Croatian inhabitants' was that time. Attracting tourists is one of the main goals of country branding thus marketing activity related to tourism could play an important role in development of the country image as well. Present study focuses on tourism development and tourism-related image development of Croatia and investigates the role of this touristic feature in the country image at a date especially important for the country, in the year of its EU-accession.

Keywords: *Croatia, tourism, country image, country branding*

JEL Classification: M31, L83, P48

1. INTRODUCTION

Country image is one of the most significant marketing concepts of recent times. According to Kotler et al. (1993) country image is sum of views, beliefs and opinions about a country. Country image can be found in professional literature dating back to the 1960's, at that time primarily from the aspects of the so called country-of-origin effect. However, the latest papers investigate country image as a brand value, as a result of which the process of country branding shows up (Jenes, 2012).

Today's tourist has a hard job when deciding where to travel. Besides the fact that fast lifestyle and the increased wish for regeneration are simultaneously present in our lives, we meet excessive amount of information every day, furthermore, we can also get informed quickly in the continuously developing online world. Tourist destinations have to fight for the favour of the tourists in this highly complex environment in which a strong country brand and a positive country image can help a lot.

The country today known as Croatia appeared independently on the map in 1991 after long centuries of being part of different other states, after spending almost three-quarters of the 20th century as a member of the Serbian-dominated Yugoslavia. At the time of receiving the so desired independence, the Yugoslavian war broke out in its territory, causing serious damages in the life of the country in every aspect. However, one determinative treasure remained there – the Croatian coastline.

The aim of the present study is to investigate the development of the Croatian country brand by touching the listed fields of history and economy, and to reveal the peculiarities of Croatian country image by the time of a new turning point, the country's accession to the European Union. Thus, the study presents the specific case of Croatia from two aspects: it shows the development of its tourism and country brand during the decades of being part of Yugoslavia and the decades of independence until today, and the Croatian country image perceived in the neighbouring – and since 2004 already EU-member – Hungary by the country's accession to the European Union as the 28th member state in year 2013.

2. TOURISM AND THE CROATIAN COUNTRY IMAGE

Croatia traditionally sets tourism in the focus of its economic development, thus our picture about the country is in most of the cases connected to tourism. Due to its favourable geographic layout, it has always been a significant commerce centre during its history. In the early 6th century Illyrians living here did trading activities with ancient Greeks, the presence of Romans is proven by the numerous buildings and remains in the coastline area, and by the time of the arrival of Slavic people Dubrovnik played important cultural and commercial role. With the infrastructural development first commercial lodging facilities were built as well, first modern hotels arose at the end of the 19th century in Opatija, Crikvenica and Dubrovnik (Hitrec, 2002).

Country can be divided into two parts from geographical aspect related to the sea (continental and maritime), while regarding its relief three parts can be differentiated (maritime, highland and Pannonian territories). People live from other resources on the seaside, in the mountains and in Pannonian basin thus the picture of the settlements differs as well – the characteristic buildings, gastronomy, style of living and the economic activity. The population also alters, migration is concentrated primarily in the seaside territories and the capital city (Reményi, 2006) and so do the tourists (DZS, 2015) despite that the Pannonian parts of the counties are different but not possess less significant touristic values at all (Gerdesics, 2013, 2014). In the year Croatia joined the European Union, the number of tourists visiting the country was three times higher than the population, 6.5% of the residents worked in tourism and 16.7% of the GDP was produced by the touristic sector (DZS, 2015).

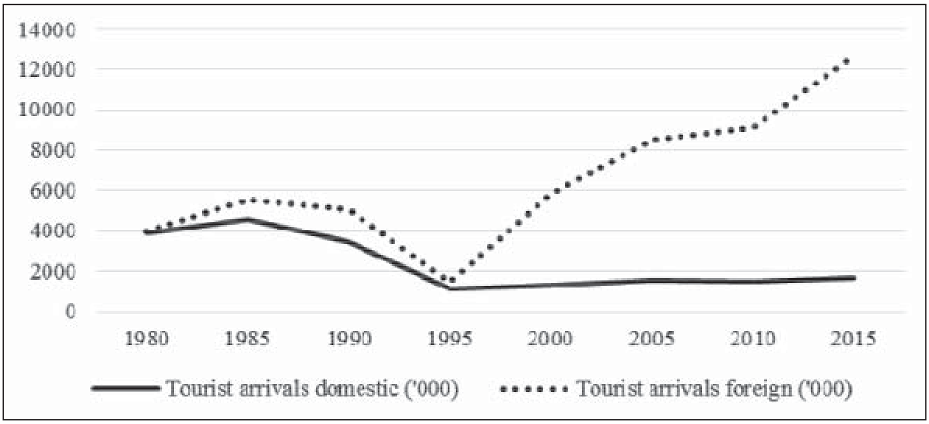
2.1. The peculiarities of the Croatian tourism

Meler and Ružić (1999) investigated the lifecycle of Croatian tourism between 1960 and 1990 in their work in which they came to the conclusion that it began to be more and more popular among the group of tourists since the 1960's, it showed continuous development until the 1980's in the middle of which it stagnated. The reasons for this type of cycle are manyfold, but probably the most significant one is the inequality of the demand requirements and the quality of the supply. That time the discovery of the Croatian coasts by the tourists was not a result of a conscious strategy, the increased number of lodging facilities did not go hand in hand with quality improvement and there was no planned positioning activity behind it either. They believe that Croatian tourism would have begun to decline even without the horrible war as well, it was rather the last warning and, at the same time, it forced the country to work out a conscious marketing activity plan.

Jordan (2000) gets similar conclusions in his paper about the relationship of the Croatian tourism and globalisation; he pronouncedly draws attention to the fact that the Yugoslavian tourism was "dead water", the majority of the accommodation facilities were in the proprietorship of the state, only few private accommodation providers could work in the sector. By the time of the war (1991-1995), the ordinary social and economic life of the country was broken and thus the touristic development as well, great part of the accommodation facilities became victims of the fights (Vukonić, 2005). The same is proven by Družić (2010) as well as he claims that Croatia was a developed touristic destination in the beginning of the 1970's, tourism continuously developed in the period between 1968 and 1988, and after the peak in the 1980's it began to decline, drastically dropped during the wartime in the beginning of the 1990's – and the indicators started an upward trend again after the war. Numbers in tourist arrivals of the middle of 1980's were reached again in year 2005 thus the consequences of the war were present in Croatian tourism for around 20 years (Dulčić, 2000; Šimičić, 2007). 10.6 million tourists chose Croatia as a holiday destination in 2010 and 14.3 million in 2015 (DZS, 2015).

As it can be seen in Figure 1, the number of foreign and domestic tourists decreased alike during the wartime period but trendlines of domestic and foreign guests show determinative differences after 1995; the number of domestic ones remains low while steep increase can be observed in the number of foreign arrivals. It is obvious that foreigners spend their time in Croatia more often than residents do, according to these data, but there is still another reason for the difference as before 1991 we are discussing tourism of the Croatian Socialist Republic being part of the Yugoslavian federation, and after that date the tourism indicators belong to the independent Republic of Croatia. This fact involves an essential methodological detail as until 1991 the category of domestic tourist arrivals includes every citizen of Yugoslavia, while after 1992 namely the year of the official international recognition of Croatia as an independent country, apart from Croatians, residents of the other Yugoslavian member countries, Slovenians, Serbians, Bosnians, Macedonians and Montenegrins were enrolled in the group of foreign guests.

Figure 1. The Yugoslavian and Croatian tourism between 1980 and 2015



Source: own edition based on DZS (2015)

2.2. The Croatian country branding and country image

As before 1991 we discussed Yugoslavian tourism and after 1991 Croatian one, the same is true for the country image – Croatia left the Yugoslavian federation and had to work out its independent country brand and image. There was a great and complex challenge for the new leaders of the country; while the Yugoslavian war was loudly raging on, they had to introduce their new Croatia to the world and hopefully create a positive country image.

Country image is recently one of the most significant marketing terms. According to the definition of Kotler et al. (1993, pp. 141) "country image is the set of views, beliefs and opinions about a country". The scientific literature has been intensively dealing with the research of this field since the 1960's, primarily focusing on the so-called country-of-origin effect, the effect of the country a given product is made in or coming from, however, recent papers write about the country image as brand equity as well, thus the country branding has appeared (Jenes, 2010).

Though brand literature began in the early 9th century, brands truly became important in the 19th century according to Papp-Váry (2007, 2009), on the one hand because of the appearance of the mass-production coming with the industrial revolution and, on the other hand, because that was the time by which the mankind became able to read thus the brand name received relevance. Cheverton (2005) highlights an outstanding speciality of brands namely that they expose majority of their functioning in the minds of the consumers thus a branded product cannot be identified only by a logotype, a name or a symbol but also by the feeling it awakes in people therefore brand image is created by the individuals. The conscious process of branding means differentiation of our product or service from others', which actually means that, behind branding, there is a strong aspiration for achieving a unique competitive advantage. The other side of this activity is the image namely the interpretation of our brand by the consumers. Every country has an image which is not static but continuously changing and changeable, it appears spontaneously or is developed under control (Papadopoulos & Heslop, 2002) and is a multidimensional concept as all other image types as well. We can differentiate previous, current and future, so-called wished images (Sándor, 2003).

There had been spectacular examples for appearance of country brands already before the concepts country brand and country branding were defined in the literature. Development of the French nation brand began its path in the 18th century as a result of a conscious strategy as well as England, Germany, Italy or Russia did it so in their histories. Great colonial empires unravelled after the Second World War and new nations appeared in their territories, and the same happened later in the 1990's with the collapse of the Soviet Union and Yugoslavia. By this phenomenon, the successor countries vigorously began to reveal their national consciousness, personality, cultural, linguistic, ethnical, religious and economic affiliation (Olins, 2004). There are nearly 200 countries competing in our globalized world, and the role of country image is highly prominent in this battle. According to Anholt (2005, 2007) – being the first one to define country branding in 1996 – a good country brand means "soft power" in this competition and he specifically calls it as competitive identity.

Country branding is the field of marketing where subject of branding is a country, while the aim is the development and shaping of a positive country image and reputation for it. Jenes (2012, 38.) says that "country branding is defining a geographical unit, a country in theory and all the approaches, together with the implication of relevant and targeted marketing implications in practice… country brand can be sum of all the symbols that serve for differentiating a country and that create value through associations, reputation, loyalty and image." According to Papp-Váry (2009) the primary goals of nation branding are lying in the economy; tempting tourists, investors and export opportunities but besides these the international opinion about the country has to be improved as well for successful processes in international relations and Europeanisation (Skoko, 2005). These motivations were interweaved in case of Croatia after it became independent in 1991 – it faced the challenges of creating a new country image after leaving Yugoslavia, reviving its economy impaired by the war and elimination of negative stereotypes sticking on its image thanks to the warfare. As a quick and good solution it received support from its tourism.

Tourism has been treated to be essential in the new country since the beginnings, the foundation, operation and financing of the Croatian National Tourist Board were ratified in the early 1991 amended later by further laws in favour of development of tourism and regaining its competitiveness (Vukonić, 2005). Although the role of foreign affairs, diaspora, sport and media in connection with communication done for shaping the country image is unquestionable, organized country image building activity appeared only through one field, tourism marketing. Goluža (2001) claims that tourism can be used for showing practically anything: history, culture, gastronomy or people, thus tourism seemed to be a highly suitable way of introducing the new Croatia, not to mention its significance as the almost only possible way of economic recovery that time.

In the case of Croatia, brand name can be treated as a new one as it had not been used solely for long time before 1991. Brand name received a slogan; however, it has been changed several times since 1993. In their modern meaning, we use country slogans since the 18th century, they are meant to mediate the textual message of the country, including the unique product promise. Otherwise, slogans were already used centuries ago but the aim at that time was not attracting the investors, tourists or supporting the sales of products but providing information about the country's actual political situation (Papp-Váry & Gyémánt, 2009). In 1993, in Croatia the already mentioned Goluža's touristic slogan won: "mala zemlja za veliki odmor" or "small country for a great holiday". The slogan "raj na zemlji" or "heaven on earth" originated from George Bernard Shaw was not successful as the term "heaven" seemed to be too commonly used to be effective in this sense. The third slogan was "Mediteran, kakav je nekad bio" or "Mediterranean as it once was" which was created in 2005 as part of a new marketing plan elaborated with a Spanish company (Skoko, 2005).

Apart from the brand name and the slogan, the third element of a country brand's identity is the visual part, the logotype. Nations use logotypes in several forms and for several reasons. In this overall country brand usage, the most commonly applied symbols are connected to landscapes, natural phenomena or abstract images, including the name of the county in the majority of cases and sometimes even the slogan as well. Croatian logotype was designed by Boris Ljubičić and has been used for more than 10 years in marketing materials including the red-white-blue colours of the Croatian flag and symbolic referencing on the blue sea, the golden wheat fields of Slavonia and the green forests of inner Croatia (Figure 2).

Figure 2. The Croatian logotype

Source: http://www.novacom.hr/korcula-velaluka/kako_do_nas.html

Based on the review above, Croatian tourism marketing and the tourism-related country image creation seems to be active. In the followings, results of a primary research done in Hungary will show what effects this touristic image creation had on the country image, at the specific time of Croatia's accession to the European Union, and how these results prove the necessity of the new campaign „Full of Life".

3. METHODOLOGY

Above was emphasised the significance of country branding and country image in case of a country that during its two and a half decade long independent history managed to raise its tourism on levels that had never been experienced before. In 2013 an own research was carried out in Hungary, gaining its topicality by the EU-accession, because of which the aim was to investigate the country image perceived by young intellectuals being the future EU-citizens. External country image, the so called mirror-image was studied by a survey in the neighbouring Hungary so as to see the country image the Croatians enter the EU with – as the author is involved in the Hungarian and in the Croatian society with being citizen of both, it was obvious to study this topic by this method, image perceived in countries other than Hungary is topic of further research.

Investigation shown in the study was carried out in late spring of 2013 in Hungary, few months before the EU-accession of Croatia, with the aim of providing a small slice of the welcoming of the country in the new environment. Purpose of the research was solely to study the nature of the country image and despite the fact that the research was not representative, it could nevertheless show findings worth for considering because of the big sample.

The primary research was done with the tool of a questionnaire survey, collecting the answers by snowball sampling - in nearly two weeks 681 valid questionnaires arrived. During the design the main aim was that the respondents in the beginning cannot recognize the focus of the investigation since principally their overall associations were expected. According to this, in the first few questions Croatia did not appear independently and guiding the respondents' thoughts, like by showing the word "tourism" in the beginning, was tried to be avoided. So the general aim of the research was revealing the image associations, it was not oriented towards the issue of tourism, it strived to investigate what image Hungarians associate Croatia with not long before the EU-accession.

The sample consists of Hungarian citizens, 59% of which are female and 41% men, with the average age of 29, 70% possessing BSc or MSc diploma, 56% working and 43% living in Baranya county, while 23.5% living in Budapest or the county of the capital of Hungary. They were also asked how many times they have visited Croatia so far (53.5% at least three times and 16.2% have never) that aimed to examine the rate of building their opinion on own experience. There was a filter question about their Croatian nationality where 12.6% of the respondents claimed having Croatian roots, thus answers of 86 Croatians in Hungary are included in the results.

4. APPEARANCE OF TOURISM IN THE CROATIAN COUNTRY IMAGE

Favourably a country brand is built up just like any other product brand. For reaching recognisability usage of different image elements can support (e.g. logotype, slogan) thus it is useful to study what colours, words, symbols people connect to a country and knowing whether male of female character is joined to it provides an effective basis for planning marketing tools. It is interesting to investigate what is the first association that comes into one's mind when hearing the name of a country. Several things can be connected to our Southern neighbour; the red-and-white chessboard, passionate people, Croatian gastronomy, sea with crystal-clear water, memory of a pleasant holiday or the rifle-shots of the war before hardly more than two decades. The same purpose has the investigation on the settlement first mentioned, in the followings we can see the findings of these researches – showing the significance of tourism in the perceived country image.

The answers of the open question (N=681) provided clear results; 89.9% of the respondents wrote a neutral word, there were few negative (1.6%) and more but not many positive associations (8.5%). For analysis own categories were defined as the associations could be grouped in separate collections. Category of sea and tourism (83.1%) is outstanding where such words appeared as sea, tourism, the Adriatic and other associations connected to tourism and seaside holiday – it has to be added that these words strengthen the neutral category. Besides these words like the Balkans or the war appeared only in 1.6%, and sport only in 1%. 4.8% of the answers can be mentioned as characteristics where patriotism was the most often one beside friendliness, ability for development, togetherness and peace (Figure 3).

Figure 3. Associations on Croatia

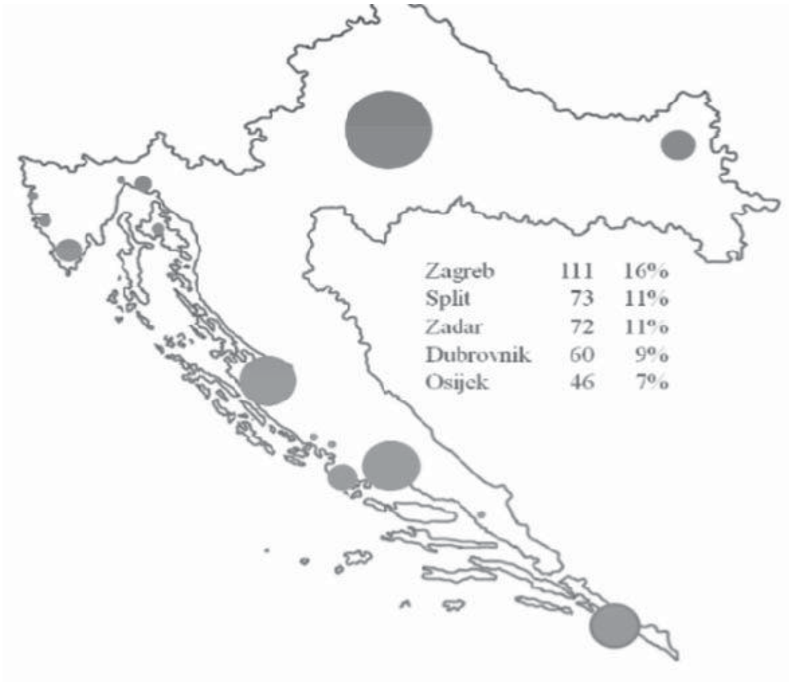
Source: own edition

According to Skoko's (2005) theory Hungarians should have been mentioned the red-white chessboard, the tie and the Dalmatian dog as Croatia's symbols. Nevertheless the respondents provided answers similar to the question of associations since 30% of the symbols was connected to the seaside and tourism. Beside this in significant proportion (18.5%) red-white chessboard was mentioned that can be familiar from the football dresses or souvenirs but obviously the flag (10%) and coat of arms (5%) were also present in the findings – all in all 37.4% of the answers were traditional symbols. It is interesting that out of 681 Hungarian respondents only two mentioned the tie, the meant to be original Croatian symbol, showing that story of the Croatian tie is not really well-known in Hungary as neither the Dalmatian dog's one is.

From the aspect of the image toolkit it could also be important to know what colour or personality is connected to a country. In 69.2% of the cases blue was marked as the joined colour and in 13.4% of the cases red. Besides the white these are the colours of the flag while blue can refer to the sea thus the previous conclusions could be drawn. Findings regarding the brand personality show that 60% of the Hungarian respondents if Croatia would be a person, it would be a man, while only 28% of the answers showed female.

In another question the respondents were asked to mention a Croatian settlement. It is obvious that beside the capital, Zagreb (16%), holiday destinations were mostly highlighted thus in high proportion seaside settlements, even those typically small ones. Split (11%) and Zadar (11%) also received quite good results, and Dubrovnik (9%) as well – these seaside resorts are followed by Osijek (7%, 46 respondents) (Figure 4).

Figure 4: Associations for a Croatian settlement



Source: own editing

5. CONCLUSION

Special characteristics of the Croatian image and the stones that have built it up could be listed and analysed without an end. However, there is one element that definitely seems to be crucial – tourism. Not just because the economy of Croatia largely depends on this basis of coastline tourism but also with the reason of its significance in creating the new, independent country image of the independent Croatia after 1991, the year of leaving the Yugoslav unity, being part of for more than seven decades. Choosing this orientation in developing the image of the country was probably a good decision as a favourable feature of tourism marketing is that it emphasises generally accepted values, not speaking about the fact that these pictures are in most of the cases connected to our summer holidays, enjoying our free time that recalls bad feelings in only a few people. This paper focuses on these positive values and investigated whether Croatia is primary really a touristic country and in what extent was the more than two-decade-long tourism based image creation successful.

The research findings from 2013 showed that country image of Croatia is, in the first place, a tourism-based one. It can be stated that the colours of the logotype and the flag, the red-and-white chessboard and the seaside tourism were expressed, all those used in the communication activity. It can be concluded from the answers that Hungarians interpret Croatia obviously from touristic aspect. Tourism and especially the seaside received high significance in the results, which proves the *raison d'etre* of the so-called sun and beach tourism, absolutely typical for the Croatian tourism industry.

As the time focus of the above detailed survey was the country's EU-accession, the marketing campaigns were also shown until the year 2013. However, just recently a new campaign was introduced in Croatian tourism marketing activity. The temporarily used "Croatia – the new star of the European Union" slogan is meant to prepare the entering of the country in the new environment and the so long applied one emphasising the treasures of the Mediterranean world were changed to "Croatia – Full of Life" in 2016 (Croatian National Tourist Board, 2016). Leaders of the Croatian tourism plan the long-term usage of this slogan which is not only a slogan but an overall communication strategy. Thus the campaign launching the season of 2016 in the sense of integrated marketing communication is concerned to all the platforms, focusing on Croatia as a tourist destination, aimed at arousing feelings and refers to originality as the term "life" is currently not used by other countries in their communication activities.

The main thought of the message is that Croatia is a colourful tourist destination full of feelings and experiences, abounded by natural beauties, traditions, historic memories and, at the same time, it is characterised by Mediterranean lifestyle loved by tourists. With the word "full", the variegation is meant to be highlighted and that this place lives 365 days a year while the term "life" refers to a young, vivid, dynamic country. The reason for the change in the communication concept is – according to the official news conference – that although the Mediterranean world used previously in the Croatian tourism communication is nevertheless significant in stabile positioning of the country in the foreign markets, the modern world requires applying new tools as well apart from lying on the past. The new slogan is dreamed by the consortium of Croatian BBDO, the British AMV BBDO and the Spanish DEC BBDO and won the announced tender with its simplicity, flexibility and originality, and mostly because it excellently synthesises everything that Croatia offers. The concept is based on a research showing that Croatia is primarily identified as a "sun and beach" destination – this is proven in the present study as well. Apart from the young and dynamic country position the current communication also says that Croatia is more than that, it reacts to new tourism trends and today it is far more than only "sun and beach".

This is also confirmed by launching the last year's spring campaign "say hello to someone, say hello to spring" as part of the strategy that was aimed to promote the preseason and gave outstanding role to online marketing tools and native advertisements, targeting the most important sending countries. The new communication concept includes an innovative (Facebook based) sales promotion activity as well that is started with the title "out of office". Within the framework of this campaign, foreign tourists are asked to write the most original out-of-office-reply that is automatically sent by our e-mail system to the senders when we are on holiday – obviously in Croatia (Croatian National Tourist Board, 2016).

Justification of starting the new "Full of life" marketing campaign was proven by the above detailed researches as well. By the time of the EU-accession, Croatia was recognizable primarily based on its coastline tourism and the new campaign reveals new research directions. While in the early years of independence this coastline tourism seemed to be an appropriate orientation for new image creation, now it is reasonable to change this image – "Full of life" concept lies on conscious strategic base with clear aims and relevant message, however, its success will be shown by the future.

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NUMERISCHE MAXIMIERUNG VON FUNKTIONEN MEHRERER VARIABLEN AM BEISPIEL EINER GEWINNMAXIMIERUNG

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JEL Classification: C3, C30

1. ZIELSETZUNG

Die Maximierung einer Funktion einer Variablen mittels Differentialkalkül wird bereits in der Schule behandelt. Dieselbe Zielsetzung für Funktionen mehrerer Variablen ist jedoch komplizierter und gehört nicht mehr zum Schulstoff. Dennoch treten solche Probleme häufig in der Praxis auf. In diesem Aufsatz wird als Beispiel die Maximierung einer Gewinnfunktion von zwei Variablen herangezogen. Grundsätzlich gibt es zahlreiche Verfahren zu diesem Zweck (siehe z.B. Dennis/Schnabel (1983) oder Lodders (1998)). In diesem Beitrag werden zwei relativ einfache, aber effiziente Verfahren vorgestellt, das Verfahren des steilsten Anstiegs und das Newton-Raphson-Verfahren. Als Teilaufgabe in beiden Verfahren ist eine sogenannte Schrittweitenoptimierung durchzuführen. Dazu stellen wir hier das Verfahren des Goldenen Schnitts vor. Alle Verfahren eignen sich natürlich auch zur Minimierung, da die Maximalstelle einer Funktion *f(x)* stets auch eine Minimalstelle der Funktion — *f(x)* ist.

2. MODELLANNAHMEN UND PROBLEMATIK

Eine Funktion *f(x)* von mehreren Variablen, d.h. x = (xi,... , x_n), sei zweimal stetig differenzierbar und ihr Gradient an einer bestimmten Stelle *x* sei gleich dem Nullvektor:

$$\nabla f(x) = (f_{x_1}(x), \dots, f_{x_n}(x)) = 0.$$

Ferner sei die Hesse-Matrix an der Stelle x negativ definit. Die Hesse-Matrix ist die Matrix der zweiten partiellen Ableitungen:

$$H\ f(x) = \begin{pmatrix} f_{x_1x_1}(x) & f_{x_1x_2}(x) & \dots & f_{x_1x_n}(x) \\ \vdots & \vdots & & \vdots \\ f_{x_nx_1}(x) & f_{x_nx_2}(x) & \dots & f_{x_nx_n}(x) \end{pmatrix}$$

Dann ist x eine lokale Maximalstelle von f.

Das direkte Auffinden solcher Maximalstellen kann bei komplizierten Funktionen jedoch recht schwierig sein. Daher werden häufig numerische Verfahren eingesetzt, die eine lokale Maximalstelle - bis auf eine selbst wählbare Abweichung genau - approximativ finden. Hier werden das Verfahren des steilsten Anstiegs und das Newton-Raphson-Verfahren vorgestellt.

3. VERFAHREN DES STEILSTEN ANSTIEGS

Man wahlt einen Startpunkt $x^{(1)}$ und berechnet dann iterativ weitere Stellen gemäß dieser Updategleichung:

$$x^{(i+1)} = x^{(i)} + \lambda^{(i)} \cdot \nabla f(x^{(i)}), \quad i = 1, 2, \dots$$

Dabei wird die Schrittweite $\lambda^{(l)}$ jeweils als Maximalstelle der Hilfsfunktion

$$g(\lambda) = f(x^{(i)} + \lambda \cdot \nabla f(x^{(i)}))$$

berechnet. Die Maximierung dieser Hilfsfunktion ist insofern einfach, weil sie nur eine Variable besitzt. Die Updategleichung verbessert eine Stelle, indem sie einen Schritt in die Richtung des steilsten Anstiegs, also in die Richtung des Gradienten, durchführt. Dabei wird die Schrittweite gerade so groß gewählt, dass der Funktionswert von f - in dieser Richtung - maximal wird; eine grüßere Schrittweite würde wieder zu sinkenden Werten von f führen.

Beispiel:

Ein Zwei-Produkt-Unternehmen stellt das erste Produkt im Umfang von x_i Mengeneinheiten (ME) und das zweite Produkt im Umfang von x_2 ME her. Eine ME betrage beispielsweise eine Tonne. Wir haben es hier also mit zwei Variablen zu tun. Wegen der besseren Lesbarkeit wollen wir hier die Indizes vermeiden und schreiben x für x_1 und y für x_2. Eine nichtlineare, zweidimensionale Regression hat in einer Vorstudie ergeben, dass sich die Gewinnfunktion in dem Intervall [0.2, 3.8] für x und [0.2,1.8] für y durch folgende Exponentialfunktion approximieren lasst:

$$0.8 \cdot \exp(-(x-1)^2 - (y-1)^2).$$

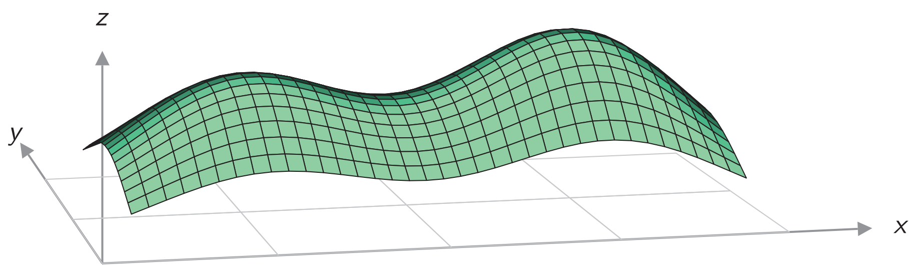
Diese Regression wird im letzten Abschnitt dargestellt.

An einem zweiten Standort ergibt sich diese Gewinnfunktion:

$$\exp(-(x-3)^2 - (y-1)^2).$$

Als Gesamtgewinn aus beiden Standorten erhalten wir also die folgende Funktion:

$$z := f(x, y) = 0.8 \cdot \exp(-(x-1)^2 - (y-1)^2) + \exp(-(x-3)^2 - (y-1)^2).$$



Die zu maximierende Zielfunktion ist bimodal, besitzt also zwei lokale Maximalstellen, wobei das eine Maximum einen grüßeren Wert aufweist als das andere. Sie erfüllt auch die Differenzierbarkeitsbedingungen, ist aber andererseits relativ kompliziert, so dass die Maximalstellen numerisch bestimmt werden sollen.

Der Gradient $\nabla f(x, y) = (f_x(x, y), f_y(x, y))$ egibt sich aus

$$f_x(x, y) = -(1.6 \cdot (x-1) \cdot \exp(-(x-1)^2) + 2 \cdot (x-3) \cdot \exp(-(x-3)^2)) \cdot \exp(-(y-1)^2)$$

$$f_y(x, y) = -(y-1) \cdot (1.6 \cdot \exp(-(x-1)^2) + 2 \cdot \exp(-(x-3)^2)) \cdot \exp(-(y-1)^2).$$

Wir führen das Verfahren des steilsten Anstiegs zunächst mit dem Startpunkt $(x, y) = (1.3, 0.7)$ durch. Wir iterieren die Updategleichung, bis das folgende Abbruchkriterium erfüllt ist:

$$|x^{(i+1)} - x^{(i)}| < 0.0001 \quad \underline{\text{und}} \quad |y^{(i+1)} - y^{(i)}| < 0.0001$$
$$\underline{\text{und}} \quad |f_x(x^{(i)}, y^{(i)})| < 0.0001 \quad \underline{\text{und}} \quad |f_y(x^{(i)}, y^{(i)})| < 0.0001.$$

Das Verfahren bricht also erst dann ab, wenn sowohl die Änderungen in beiden Variablenwerten als auch die Werte im Gradienten hinreichend klein sind. Die folgende Tabelle zeigt die Entwicklung dieser Werte sowie des zugehörigen Funktionswertes bis zum Abbruch:

i	$x^{(i)}$	$y^{(i)}$	$f_x(x^{(i)}, y^{(i)})$	$f_y(x^{(i)}, y^{(i)})$	$f(x^{(i)}, y^{(i)})$
1	1.3000	0.7000	−0.2282	0.4314	0.7190
2	1.1264	1.0282	−0.0870	−0.0460	0.8166
3	1.0602	0.9932	−0.0059	0.0112	0.8203
4	1.0564	1.0003	−0.0011	−0.0006	0.8203
5	1.0557	0.9999	−0.0001	0.0001	0.8203
6	1.0556	1.0000	−0.0000	−0.0000	0.8203

Man erkennt, dass sich der Funktionswert in der letzten Spalte bei vier Nachkommastellen schon nach vier Iterationen nicht mehr ändert. Außerdem erkennt man anhand der Abbildung, dass wir mit $x = 1.0556$ und $y = 1.000$ bei dem suboptimalen Nebenmaximum gelandet sind. Bei bimodalen oder multimodalen Funktionen kommt es also auf den Startpunkt an. Die folgende Tabelle gibt den Verlauf des Verfahrens f¨ur den Startpunkt $x = 2.7$ und $y = 0.7$ an:

i	$x^{(i)}$	$y^{(i)}$	$f_x(x^{(i)}, y^{(i)})$	$f_y(x^{(i)}, y^{(i)})$	$f(x^{(i)}, y^{(i)})$
1	2.7000	0.7000	0.3630	0.5255	0.8759
2	2.9246	1.0252	0.0740	−0.0511	1.0134
3	2.9650	0.9973	0.0037	0.0054	1.0156
4	2.9669	1.0001	0.0003	−0.0002	1.0156
5	2.9671	0.9999	0.0000	0.0000	1.0156
6	2.9671	1.0000	0.0000	−0.0000	1.0156

Jetzt findet das Verfahren auch das globale Gewinnmaximum. Es kann mit 2.9671 ME des ersten und 1.0000 ME des zweiten Produkts erzielt werden.

4. NEWTON-RAPHSON-VERFAHREN

Das Verfahren des steilsten Anstiegs orientiert sich bei der Wahl der Richtung zum nächsten Punkt nur an der lokalen Steigung, also am Gradienten.

Das Newton-Raphson-Verfahren orientiert sich zusätzlich an der lokalen Krämmung in Gestalt der Hesse-Matrix. Man wählt wieder einen Startpunkt $x^{(1)}$ und berechnet dann iterativ weitere Stellen gemäß dieser Updategleichung:

$$x^{(i+1)} = x^{(i)} - \lambda^{(i)} \cdot Hf(x^{(i)})^{-1} \cdot \nabla f(x^{(i)}), \quad i = 1, 2, \ldots$$

Die Schrittweite $\lambda^{(i)}$ wird jeweils als Maximalstelle der Hilfsfunktion

$$g(\lambda) = f(x^{(i)} - \lambda \cdot Hf(x^{(i)})^{-1} \cdot \nabla f(x^{(i)}))$$

berechnet.

Beispiel:

Im Beispiel des Zwei-Produkt-Unternehmens schreiben wir wegen der besseren Lesbarkeit wieder x für x_1 und y für x_2. Die Hesse-Matrix hat hier die folgende Gestalt:

$$Hf(x,y) = \begin{pmatrix} f_{xx}(x,y) & f_{xy}(x,y) \\ f_{xy}(x,y) & f_{yy}(x,y) \end{pmatrix} \qquad \text{mit}$$

$$\begin{aligned} f_{xx}(x,y) &= -(1.6 \cdot \exp(-(x-1)^2) - 3.2 \cdot (x-1)^2 \cdot \exp(-(x-1)^2) \\ &\quad +2 \cdot \exp(-(x-3)^2) - 4 \cdot (x-3) \cdot \exp(-(x-3)^2)) \cdot \exp(-(y-1)^2) \\ f_{yy}(x,y) &= -(1.6 \cdot \exp(-(x-1)^2) + 2 \cdot \exp(-(x-3)^2)) \cdot (1 - 2 \cdot (y-1)^2) \cdot \exp(-(y-1)^2) \\ f_{xy}(x,y) &= (1.6 \cdot (x-1) \cdot \exp(-(x-1)^2) + 2 \cdot (x-3) \cdot \exp(-(x-3)^2)) \cdot 2 \cdot (y-1) \cdot \exp(-(y-1)^2). \end{aligned}$$

Wir führen das Newton-Raphson-Verfahren zunächst mit dem Startpunkt $(x, y) = (1.3, 0.7)$ durch. Die folgende Tabelle zeigt die Entwicklung der relevanten Werte bis zum Abbruch:

i	$x^{(i)}$	$y^{(i)}$	$f_x(x^{(i)}, y^{(i)})$	$f_y(x^{(i)}, y^{(i)})$	$f(x^{(i)}, y^{(i)})$
1	1.3000	0.7000	−0.2282	0.4314	0.7190
2	1.0105	0.9598	0.0590	0.0658	0.8177
3	1.0551	1.0004	0.0006	−0.0007	0.8203
4	1.0556	1.0000	0.0000	0.0000	0.8203
5	1.0556	1.0000	0.0000	0.0000	0.8203

Das Newton-Raphson-Verfahren konvergiert hier etwas schneller als das Verfahren des steilsten Anstiegs; im Allgemeinen ist die Konvergenz jedoch deutlich schneller. Wegen des schlecht gewählten Startpunkts konvergiert das Verfahren allerdings wieder beim Nebenmaximum.

Daher wählen wir jetzt den Startpunkt $(x, y) = (2.7, 0.7)$. Die folgende Tabelle zeigt die Entwicklung der relevanten Werte bis zum Abbruch:

i	$x^{(i)}$	$y^{(i)}$	$f_x(x^{(i)}, y^{(i)})$	$f_y(x^{(i)}, y^{(i)})$	$f(x^{(i)}, y^{(i)})$
1	2.7000	0.7000	0.3630	0.5255	0.8759
2	2.9939	0.9749	−0.0476	0.0509	1.0143
3	2.9672	1.0001	−0.0002	−0.0002	1.0156
4	2.9671	1.0000	0.0000	0.0000	1.0156

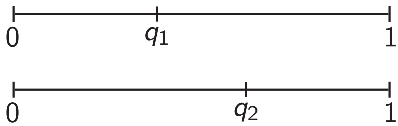
Das Newton-Raphson-Verfahren konvergiert wieder schneller als das Verfahren des steilsten Anstiegs. Wegen des günstigen Startpunkts findet das Verfahren nun das globale Maximum.

5. UNIVARIATE MAXIMIERUNG NACH DEM GOLDENEN SCHNITT

In den beiden vorgestellten Verfahren wird in jeder Iteration eine Optimierung der Schrittweite vorgenommen. Dazu wird das Maximum einer univariaten Funktion g(λ) gesucht. Zu diesem Zweck gibt es zahlreiche Verfahren. Hier soll ein zugleich robustes und effizientes Verfahren vorgestellt werden, das bei der Suche nach der Maximalstelle ein Intervall jeweils im Verhältnis des Goldenen Schnitts unterteilt. Betrachten wir - ohne Beschränkung der Allgemeingültigkeit - das Intervall [0,1]. Die Konstanten des Goldenen Schnitts sind:

$$q_1 := \frac{3-\sqrt{5}}{2} \approx 0.382 \qquad q_2 := \frac{\sqrt{5}-1}{2} \approx 0.618$$

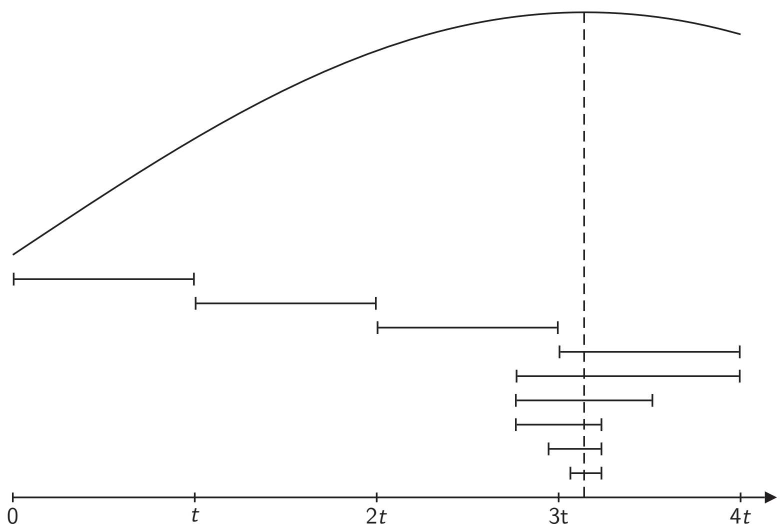
Das Intervall wird einmal bei q_1 geteilt und einmal bei q_2:



Man berechnet die Funktionswerte bei q_1 und q_2 und führt das Verfahren iterativ mit dem Intervall $[0, q_2]$ fort, falls $g(q_1)$ größer ist als $g(q_2)$, und sonst mit dem Intervall $[q_1,1]$. Wenn das verbliebene Intervall hinreichend klein geworden ist, bricht das Verfahren ab, und man betrachtet den Mittelpunkt als Approximation für die Maximalstelle. Die Aufteilung des Intervalls bei den Konstanten des Goldenen Schnitts ist optimal im Sinne der Konvergenzgeschwindigkeit (vgl. z.B. Luenberger (1984), S. 134ff.).

Die beschriebene Verkleinerung des Intervalls kann jedoch erst beginnen, wenn das Intervall auch die gesuchte Maximalstelle enthält. Daher stellt man eine Suchphase voran, in der man für eine nicht zu große Zahl t die Funktionswerte $g(0)$, $g(t)$, $g(2t)$, ... so lange berechnet, bis ein Funktionswert $g(nt)$ erstmals wieder kleiner wird als der vorherige. Das Intervall $[(n - 2)t, nt]$ enthält dann die gesuchte Maximalstelle und kann nach dem Verfahren des Goldenen Schnitts sukzessive verkleinert werden.

Die folgende Abbildung zeigt die Intervalle, die in den beiden Phasen sukzessive berechnet werden und schließlich die Maximalstelle immer enger einschließen.



6. REGRESSION

In fünf Jahren sind die folgenden Quartalswerte für die Menge des ersten Produkts (x_i) und des zweiten Produkts (y_i) sowie des Gewinns (z_i) beobachtet worden:

i	x_i	y_i	z_i
1	1.702	1.374	0.425
2	0.189	1.249	0.390
3	1.682	1.705	0.306
4	0.687	0.274	0.428
5	1.754	1.530	0.342
6	1.988	1.739	0.175
7	0.160	1.738	0.229
8	0.330	1.504	0.396
9	1.882	1.702	0.224
10	1.708	1.227	0.460
11	0.372	0.588	0.455
12	0.237	1.186	0.431
13	0.545	0.383	0.444
14	1.615	1.257	0.513
15	0.165	0.257	0.229
16	1.761	1.729	0.264
17	0.202	0.288	0.255
18	0.137	0.733	0.354
19	0.344	0.459	0.388
20	1.818	1.564	0.298

Die Betrachtung dieser Punkte im Raum zeigt, dass sie sich nicht durch eine Ebene approximieren lassen, sondern eher durch eine Exponentialfunktion vom Typ

$$z_i = a \cdot \exp(-b_x \cdot (x_i - 1)^2 - b_y \cdot (y_i - 1)^2).$$

Die Parameter a, b_x und b_y sollen durch eine Regression geschützt werden. Um eine lineare Regression anwenden zu können, wird der nichtlineare Zusammenhang zunächst linearisiert:

$$\underbrace{-\ln(z_i)}_{z_i^*} = \underbrace{-\ln(a)}_{a^*} + b_x \cdot \underbrace{(x_i - 1)^2}_{x_i^*} + b_y \cdot \underbrace{(y_i - 1)^2}_{y_i^*}.$$

Diese lineare Zweifachregression liefert die folgenden Schatzwerte:

$$a^* = 0.21, \qquad b_x = 1.01, \qquad b_y = 0.97$$

mit normalverteilten Residuen und sehr hohen t-Werten. Das korrigierte Bestimmtheitsmaß beträgt 0.9781, so dass die Regression als sehr zuverlässig gelten kann. Die Parameter b_x und b_y werden auf den Wert Eins gerundet. Für a ergibt sich:

$$a = exp(-a^*) = 0.809 \approx 0.8.$$

Damit ergibt sich die Gewinnfunktion

$$z = 0.8 \cdot \exp(-(x-1)^2 - (y-1)^2),$$

die oben als Gewinnfunktion für den ersten Standort verwendet worden war.

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INNOVATION MANAGEMENT IN SMART ENTERPRISES

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Abstract

Innovation of production and business processes, including the entire supply chain, while launching new and improved products and services is in the focus of managers' of smart enterprises interest. The said processes are realized through cooperation and strategic alliances, i.e. networking of creative capacities on a global scale with the aid of computer and telecommunications technology. The concentration of creative resources, clusters being one of the most important forms, is articulated as a fundamental process of smart enterprises which, in this way, seek to achieve sustainable competitiveness. The value system, i.e. organizational culture represents a platform for innovation and knowledge management in smart enterprises. The motivational mechanism is based on the intrinsic elements whereby personal satisfaction and continuous personal development are crucial for creative people's decisions to accept employment in particular smart enterprises. Thereby, we emphasize that the quality of life and working conditions in an organizational environment are of paramount importance, which results in the creation of intelligent regions. We believe that public policies must stimulate the formation of smart enterprises located within the innovative and smart regions. These processes should be *harmoniously complemented with innovation management at the company level. Our analysis is based on the results of the (available) empirical research, public policies and business practice, as well as creative people's psychological/ personal profiles. Based on these findings, we drew conclusions about the developmental tendencies of the world economy and society as a whole, using the method of induction.*

Keywords: *innovations, creativity, smart enterprise, networking, balanced scorecard*

JEL Classification: O3, O32

1. INTRODUCTION

We are in the process of establishing a new paradigm of economic activity that is based on creativity, innovation, and high technology. This mode of operation requires articulation of new structural forms and, in our opinion, the smart enterprise is one of them.

Innovations have always characterized human activity so, in this regard, the economy is no exception. Economic development was slow for centuries and started drastically accelerating in the 18th century with technical inventions that revolutionized production processes and production relations. This transformation of production directly influenced social relations as a whole and it can be argued that the significant rise in profits or capital enabled, among other things, better labour relations and better living conditions in general. We can conclude that the mass industrial production had a strong influence on the formation of a mass society. Certainly, new telecommunication technologies or, more specifically, radio and television, have also significantly contributed to the establishment of a mass society, as well as mass culture. A paradigm then appeared which imposed an abstract domination of quantity, rational specialisation, and mechanical organization. At the same time, individuals have integrated into large organizations which barely existed until the end of the 19th century.

Today, innovations have proved to be a key generator of value and an instrument of achieving sustainable competitiveness. In doing so, applied science has articulated itself as one of the important sources in the launching new ideas, i.e. products. The development of science is simultaneously stimulated by the public and private sectors with the help of public policies and management practices.

Innovation, or rather the launch of new products and services, has become an inevitable component of business strategies and operational policies. Innovative capacities of enterprises have drastically increased with contemporary information and telecommunication technologies. Communication technologies have enabled the exchange and transfer of knowledge and information, as well as virtual teamwork. In our opinion, information and telecommunication technologies are the nervous system of smart enterprises. The concept of smart enterprises is based on organic structure because they are open systems that evolutionarily develop. In smart enterprises all employees are communicationally networked and authorized to innovate processes and relations. It is mostly about small improvements that, in the end, result in respectable increases in productivity.

Clustering coefficient indicates the density of friendly relationships and the closer it gets to 1.0, the greater the density, i.e. greater is the number of friends/ employees who interact with each other (Barabasi; 2006; 55). A smart enterprise is characterized by an exceptional formal and informal union of groups, as well as their intensive internal social dynamics. A higher clustering coefficient, in our opinion, has a direct positive impact on the increase of innovative capacities of a smart enterprise.

Therefore, planned group linking with the help of a specific system of organizational values needs to be one of the priorities of the management activities in smart enterprises. Thereby, we are pointing out the importance of industrial and social psychology the findings of which can significantly facilitate the management involvement in these efforts.

One of the methods of innovation management, i.e. intangible resources is a balanced scorecard. With the help of this method, strategic goals, among other things, can be linked with the functioning of the innovative capacities of smart enterprises. In other words, a balanced scorecard enables the successful linking of strategies and overall intangible resources, which is a fundamental prerequisite for the effective management of this segment of a smart enterprise.

Around 75 percent of value created in an organization comes from intangible assets. A balanced scorecard provides a mechanism for monitoring, evaluation, and complete utilization of these crucial drivers of success (Neven; 48).

After analysing more than 300 companies, Robert S. Kaplan and David P. Norton determined the effectiveness of strategic mapping that describes the ways of creating organizational values and should be combined with a balanced scorecard (Kaplan and Norton; 2004; 9).

In this way, an effective framework of smart enterprise implementation strategy is articulated. Upon analysing 275 statements of portfolio managers, Robert S. Kaplan and David P. Norton determined that the elaborated feasibility of a business strategy is more important than its quality. In a smart enterprise, as well as in a strategically focused company, all employees must not only know, but also fully understand the strategy and systematically implement it on a daily basis. In the book Strategy Focused Organization, Robert S. Kaplan and David P. Norton extensively wrote about the importance of strategy feasibility and methods which enable it. In it, they ascertain that a strategic map describes the process of transforming intangible resources into tangible consumer and financial results (Kaplan and Norton; 2000; 69). Therefore, process mapping is a basic management method in a smart enterprise because it allows for the maximally effective evaluation of not only innovation capacities, but also of other intangible generators of value.

Strategic knowledge mapping is a process of visualization of creation, exchange, and use of ideas/knowledge between employees, i.e. group members within a smart enterprise. In this way, relations that are established during the realization of different projects are detected (Ed. Huff, Jenkins; 2002; 3). The established flow of knowledge and information enables, among other things, the identification of overlapping, lacking or excess fundamental employee competences, and is a platform for the planning and implementation of necessary communication improvements. This primarily relates to the strengthening of communications and structural support, as well as the improvement of innovation process competences needed for their successful implementation.

Ultimately, communication depends on the culture of the company. For example, Erin Meyer states that mystery is one of the main components of the organizational culture of the fashion company Louis Vuitton because fashion surprises are a very important segment of business operations (Meyer; 2015; 69). It is a creative company in which the creative people must adhere to certain specific rules when innovating. Thus, cooperation with creative people from other companies is not recommended, which is now a common practice in the majority of other industries.

Smart enterprises are primarily focused on launching radical new ideas/ products. Nathan Furr and Daniel Snow warn that sometimes radical innovations marginalize certain industrial sectors (Furr and Snow; 2015). For example, electrification radically altered certain industries, not only in industry, but also in everyday life in general. Today we witness innovation efforts aimed at launching affordable, high-quality electric cars which, among other things, requires the construction of appropriate infrastructure and, for example, the elimination of conventional gas stations.

Managing smart enterprises, aside from focusing on innovations, also requires the application of new business models. Value network is a model which requires the digitalization of the supply and distribution chain, as well as the integration of end users in the development of new products and services (Bovet; 2000; 2). In this way, the innovation capacity of a smart enterprise is significantly increased and the risk of launching new products is reduced because the communication network which provides an influx of new information, knowledge, and experience expands.

The dissemination of information in the process of innovation is obviously the key, where it is intensely implemented within innovative groups, which facilitates insight into the current status of certain (scientific-professional) areas (Christakis and Folwer; 2010; 148). The appropriate organizational, but also wider social contexts have a stimulative effect on innovation processes, not only within smart enterprises, but also within other entities.

In this sense, Velimir Srića raises an interesting and fun question: would Tesla, Newton or Edison become famous inventors and scientists on a desert island without books, information or the ability to socialize with colleagues? (Srića; 1997, 31). State interventionism can stimulate the development of scientific research and innovational-entrepreneurial undertaking in general. Alongside public policies aimed at strengthening the innovative capacities, investment engagement of the private sector in that area has been growing for decades and can be easily recognized through the practice of establishing corporate universities, development institutes, and organizational units for the design and development of new products.

In addition to innovative financing methods such as venture capital funds and angel investors, it is also necessary that managers of smart enterprises, in addition to building a system of values, mapping, and managing processes that are key to creating values, effectively manage all available resources. This primarily relates to a portfolio of intellectual property. Resources are primarily assets which can be overvalued or undervalued, bought or sold and it is, generally speaking, much easier to manage them than the processes or procedures of opening/adding value (Christensen; 1999; 326-328).

Regardless of the competence of managers, the innovative capacity of smart enterprises and other companies depends on macroeconomic conditions. Recession and depression do not support innovation activities in smart enterprises. It is interesting to mention that the workflow of innovation development phases was made based on the famous Kondratieff wave cycles in the period from 1782 to 2008 (Goffin and Mitchell; 2010; 52). Innovations in the 1990s belong to the age of information, i.e. the new economy in which a smart enterprise is one of the forms of structural business organization.

The smart enterprise model is formed in a networking society and this process can be significantly sped up or slowed down by state administration, the role of which has been explained by Manuel Castells (Castells; 2000; 43). Networking of smart enterprises is a desirable process which is achieved in different forms, such as clusters, alliances or different forms of partnership. The open sourcing of, until recently, heavily guarded data, information, and knowledge has become a common practice.

Smart enterprises in a networking society are often start-up companies located within the smart regions/cities, such as Silicon Valley and Boston in the USA. We are witnessing a kind of global start-up revolution characterized by entrepreneurship in creative industries and high technologies (Piscione; 2013; 19). In smart enterprises, effective stimulation of creativity is extremely important for innovation management. Creative people have a strong need for personal validation and further improvement, which is intrinsic motivation that should be strengthened with informal methods, along with hiring the workforce of diverse social backgrounds. Talented individuals, especially young people, prefer smart enterprises located in urban environments which are full of entertainment, cultural, and gastronomical offers, and are also tolerant of diversity.

2. CONCLUSION

We believe that Croatia must systematically and intensively strengthen its innovation capacities, primarily through articulation of smart regions and cities that will be attractive to creative individuals, entrepreneurs, and investors. The networking of smart enterprises should be carried out with the help of integration of research institutions, educational organizations, public institutions and policies, and financial institutions that would support and stimulate entrepreneurial engagement.

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GENERAL COMPETENCE ANALYSIS OF MANAGEMENT IN NAUTICAL TOURISM PORTS IN THE REPUBLIC OF CROATIA

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Abstract

Nautical tourism is of great importance for Croatia since it has many development potentials and much is expected from it in the future. Arrival and consumption of domestic and foreign tourists generate numerous direct and indirect effects on the Croatian economy; however, at the same time there are large unused capacities and potentials of nautical tourism. Developing and attracting new guests and encouraging the return of existing guests must be on the priority list of every port of nautical tourism. At the same time ports must strive to long term development, which largely depend on the quality and expertise of human resources, primarily management and its proper administration. The purpose of this scientific paper is analysis of management of nautical tourism and determining their general characteristics and competences. The research results point to the fact that most young managers are prone to more *frequent job changes; therefore, working in particular company, ie. port of nautical tourism see as temporary workplace for improvement and development of their own careers. On the other side, senior managers are more loyal to their company which is evident by the number of companies they changed during their career. Economic and technical education is most common form of education of the management of nautical tourism, and there is also noted the lack of qualifications of maritime interests. Results of this scientific paper aim to analyze the main characteristics of the management of nautical tourism in order to draw conclusions about the management's functioning and their competences.*

Keywords: *management, nautical tourism, ports, Republic of Croatia*

JEL Classification: Z3, Z32

1. INTRODUCTION

Tourism is one of the most important economic activities of the Republic of Croatia. According to development opportunities, nautical tourism which includes navigation and the stay of tourists on vessels and ports of nautical tourism for rest and recreation are particularly notable (Law on Offering Tourism Services, Official Gazette no. 68/2007, 88/2010, Article 44). The importance of nautical tourism for tourism in general, but also for the overall economy, is very large. The arrival and consumption by domestic sailors, and especially foreign sailors, encourages the realization of numerous direct and indirect impacts on economic operators, but also the country's economy as a whole. Even though nautical tourism in Croatia is becoming increasingly important, it is still not completely achieving the potential and conditions it is being offered.

In order to successfully economically evaluate the nautical potential of Croatia, the management of nautical tourism must invest effort in the best possible use of the comparative advantages of the Adriatic part of Croatia in order to stand out among the competition. The largest competitors to Croatia are Mediterranean countries: Italy, Greece, Spain, France and Turkey. Even though Croatia has a significant number of comparative advantages which are characterized in the seacoast, natural beauties, the purity of the Adriatic Sea and ecological preservation, there are relevant for the development and progress of nautical tourism, but they are definitely not sufficient. The above stated can be affirmed by a study in Croatian nautical tourism "TOMAS-Nautika 2012" where it was concluded that the quality of the offer of Croatian nautical tourism ports cannot be compared with the offer in other European countries (Institute for Tourism, 2012). According to the stated study, only a few elements of the offer are very acceptable and highly rated by uses of nautical tourism ports, while many elements received a poor rating, among which was also the total offer for sailors, the quality of catering services in marinas, the variety of cultural manifestations, services for on the road and many others. The management of nautical tourism ports is responsible for a good placement of the ports on the market and for using their potential. The basis of success of every company, and also certain nautical tourism ports, are various, and definitely one of the bases of success is the management of the port. Management is prone to various evolutions which are the consequence of sudden changes in the surroundings, and a successful manager is one who manages to conquer all of these obstacles.

The research of characteristics of management in 18 nautical tourism ports was performed for the needs of this scientific study. Questioned were manager characteristics such as sex, age, education, level of management they are performing work, employment and alike.

2. ANALYSIS AND EVALUATION OF THE CONDITIONS OF MARINAS IN CROATIA

In 2015, Croatia had 121 nautical tourism ports of which 70 were marinas. The largest number of nautical tourism ports is in the Zadar County, following by the Primorje – Gorski kotar County and the Split - Dalmatia County. The total surface of the waters of the nautical tourism ports is 3,614,784 m^2, and they have 17,351 berths (State Institute for Statistics, 2016, 1).

The total income of nautical ports in 2015 amounted to 753 million HRK, of which 519 million was realized through the renting of berths. Compared to the year 2014, when the total income of nautical ports amounted to 716,6 million HRK, the total income increased by 5%. Although the Šibenik - Knin County is the fourth in nautical tourism ports, it achieved the highest revenue of 194 million, while the lowest income of 33 million was achieved by the Dubrovnik - Neretva County. In the structure of total income in 2015, the largest part in the amount of 519 million or approximately 69% was achieved from renting berths (State Institute for Statistics, 2016, 1).

From a total of 70 marinas in 2015, Adriatic Club International (ACI) had 22 marinas (www.aci-marinas.com) which makes 31% of all Croatian marinas and this makes ACI the largest economic entity and the entity which manages the largest system of marinas in Croatia. Therefore, the research concerning the functioning of management of the ports in this scientific study was carried out at the nautical tourism ports in ACI d.d.

3. METHODOLOGY OF RESEARCH

For the purposes of this scientific study, a survey was conducted in 18 nautical tourism ports within ACI d.d. Examined were the characteristics of the management of nautical tourism ports with the desire to learn what characteristics of management are dominant and how management manages these nautical tourism ports. In researching and formulating the research results, a combination was used of the following scientific methods: inductive and deductive method, description method, surveying method, compilation method and statistical method.

Most of the quantitative data was gathered by the survey method, which included surveys and interviews with the management of nautical tourism ports where management was given the following:

- 16 general questions about the company and manager such as: number of employees, age, sex, years of employment, level of management, education, number of subordinates
- 16 self-evaluation questions which covered their inclination towards risk, conditions of brought decisions, the speed in noticing problems, factors which impact their decision-making, use of scientific methods and use of the technique of group deciding and alike.[1]

In researching the functioning of management in nautical tourism ports, directors of marinas, their assistants and leaders of individual sectors were surveyed.

For the purposes of this study, and because of the large extensiveness of the research and the questionnaire, presented will be the conclusions of the study related only with the general characteristics of companies and managers.

[1] For the creation of the survey questionnaire, the authors used form examples from: Sikavica, P. and Bahtijarević-Šiber, F.: MENADŽMENT - Teorija menadžmenta i veliko empirijsko istraživanje u Hrvatskoj, Masmedia, Zagreb, 2014.

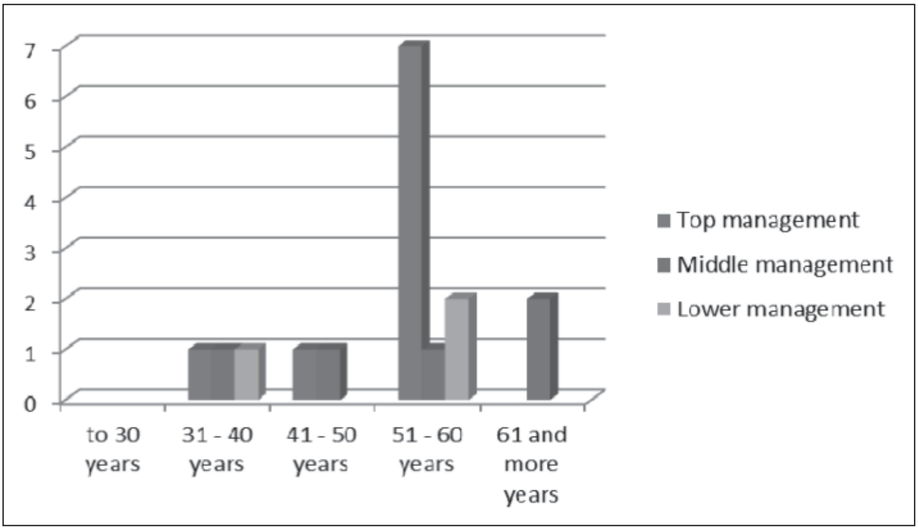
4. RESULTS OF THE RESEARCH

Below are analysed results of the study and its main conclusions. The connection between the level of management and age and education will be established. Moreover, the years of employment of management in the current company will be analysed and conclusions about the loyalty of management towards a company will be drawn.

4.1. Age and level of management

In the analysed sample, the largest group of managers was aged 51-60 years (61%), followed by managers from 31 to 40 years of age (17%), managers between 41 and 50 years of age 11%, while managers over 60 also had 11%. As noted previously, only 11% of respondents had an age structure from 41 to 50 years of age and precisely this 11% of respondents could be called mature managers, most capable of work and progress. They have enough experience and confidence in their skills and ability to work, as opposed to younger colleagues who still need to acquire experience, and as opposed to older colleagues where the motivation for new jobs and progress decreases. Figure 1 shows the relationship between age and level of management.

Figure 1. Connection between age and level of management



Source: Author's calculations

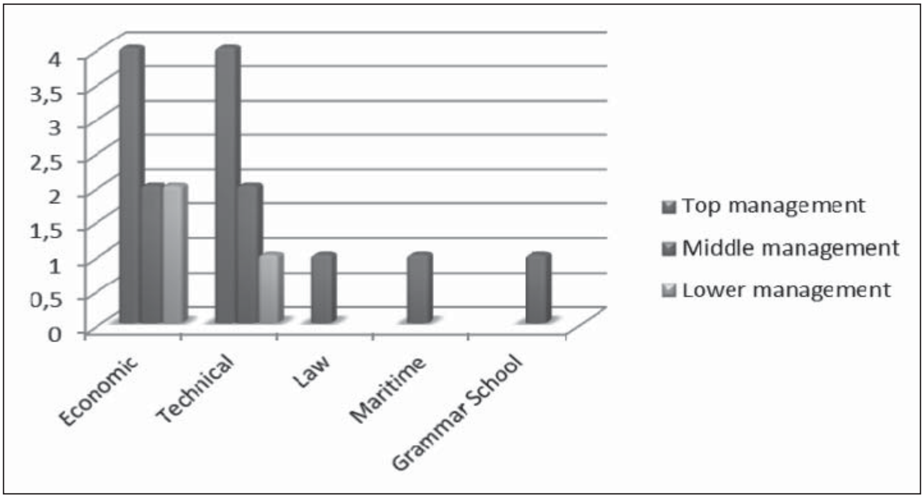
The highest level of management is most common in the age group of 51-60 years. The research conducted by Sikavica and Bahtijarević-Siber (2004, 105) showed that with the increase in the age of managers the importance of capabilities of associates decreases which means that managers are confident in their knowledge and do not need so much help and advice from associates. The managers between 41 and 50 years of age stood out as the most important in their own competence, experience and knowledge, and this age group is the most represented in the research conducted in the middle and upper level management. Managers older than 50 years have work which slowly enters into a routine and because of reduced motivation and added fatigue begin to seek the help of associates.

4.2. Education

Nautical tourism is an occupation of recent times and it usually deals with maritime and tourist-oriented studies. It has begun to be observed even from an economic aspect which confirms its multidisciplinary approach that leads to a certain chaos in understanding and interpreting nautical tourism itself (Luković, 2007, 23).

The research found that the management of the observed nautical tourism ports was educated and trained at various institutions. Only one respondent had a college qualification with maritime orientation, while eight of them had economic qualifications of which four high and four higher. Eight respondents had technical qualifications of which four had university degrees, three higher and one high school education. Only one respondent had a legal college degree. One respondent had secondary education and grammar school completed. Comparison of qualifications and levels of management can be seen in the chart in figure 2.

Figure 2. Connection between education and level of management



Source: Author's calculations

As can be seen in Figure 2, in the economic as well as in the technical field the most represented is the highest level of management. One lawyer and one graduate engineer of maritime profession also are in the top level of management. Middle management is equally divided between economic and technical professions, while two lower managers are of economic profession and one is of technical profession. It is difficult to determine which is the best education for the management of nautical tourism ports, but maritime and economic should certainly have an advantage over others as confirmed by the 7th Conference IASST (International Association for Safety and Survival Training) held in Šibenik in 2006. The Conference discussed the management of marinas and their sustainable development and the Conference recommended work on the standardization and certification of jobs in the marinas to two groups of jobs, economic and maritime (Luković, 2007, 30).

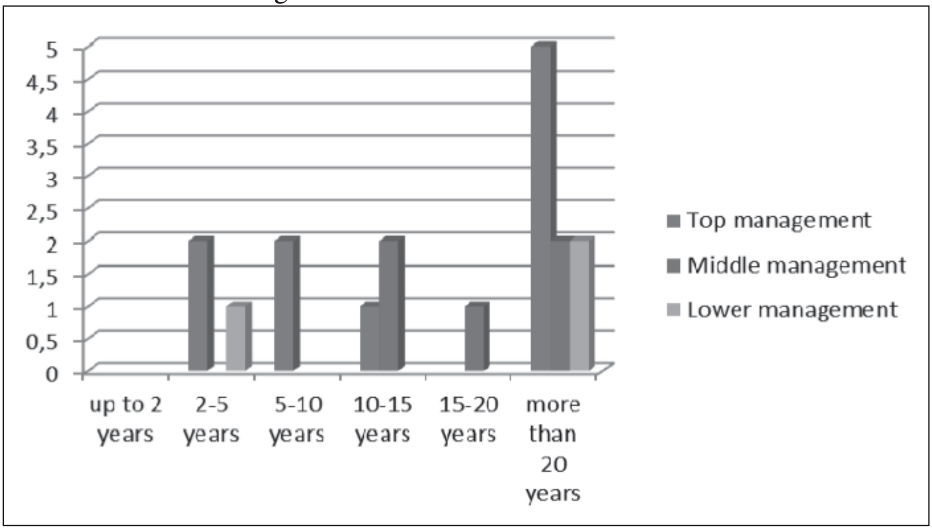
4.3. Years of employment in the current company

The years of employment in the company in which the management is currently working is connected with its loyalty to the company and the competence acquired by working in it, and is particularly connected with the development of a managerial career. The company generally needs to plan professional development and management education according to their own abilities, achievements, and connect it with its own goals and the purpose of the company itself. The professional development of managers should go through the following three phases (Sajfert et al., 2007, 163):

1. Basic professional education (continuous process of informing managers with work and work elements)
2. Introducing new managers (professional adaptation)
3. Professional training

The development of the managerial career is a long process of acquiring and expanding different skills and knowledge, confirming personal managerial potential and competencies and the acquisition of business experience and skills to individual parts or entire companies (Sikavica, Bahtijarević-Šiber, 2004, 49). Management which has longer years of employment in a company passes with more ease and detail through individual competence development and learning about the company itself. The following Figure connects years of employment in management to nautical tourism ports of the Republic of Croatia and the level of management in which they belong.

Figure 3. Connection of years of employment in the current company and the level of management



Source: Author's calculations

By analyzing data from Figure 3, it may be concluded that most managers in top positions have more than 20 years of service in current present company which in the analysis of the sustainability of employment is the main assumption that higher levels of management require more work experience in the existing company. Two senior managers of nautical tourism are employed in the current company from two to five years, along with two from five to ten years, and one from ten to fifteen years. Managers can connect work in nautical tourism ports to their own career development and the company can become one of the stations of their own expansion. In this regard, a survey was done for the connection of years of employment in the current company and the number of workplaces where the managers have worked. The research results indicate that the majority of managers of nautical tourism ports with more than 20 years of employment are at their third job while a few have it as their first employment. It is important to point out that the younger managers have frequent changes of jobs while senior managers were more loyal to the company and their employment in nautical tourism was the first, second or third in a row. The trend of the younger population is the frequent changing of workplaces, gathering knowledge and developing their own careers which is confirmed by a recent research of work values and preferences of employees which is a warning of a change in the system of values and moving emphasis from company loyalty, which is a characteristic of older managers (Sikavica, Bahtijarević-Šiber, 2004, 52).

5. CONCLUSION

The importance of nautical tourism in Croatia is significant because Croatia places a lot of development potential on tourism in general. Large direct and indirect effects on the economy are created by the arrivals of foreign sailors who spend their resources in Croatia; local sailors should not be neglected since they promote the achievement of a number of direct and indirect effects. Croatian nautical tourism is an increasingly important component of the economy, however, it still has a great amount of work on development and attracting new and existing guests, and the management of ports has a large role in this.

The purpose of this study is to analyze the general features and competence of management in nautical tourism ports on the basis of the study of 18 nautical tourism ports within ACI d.d. in the Republic of Croatia. Due to the extensiveness of the research in this scientific study, the data relates only to the general competence and management features of nautical ports. The obtained and analyzed data point to the fact that the management of nautical tourism ports is predominantly comprised of people between 51 and 60 years of age who usually belong to a higher level of management. A higher education is prevalent among the management of nautical tourism ports, and is followed by a high and high school education. Economic and technical professions are the most frequent among the management of nautical tourism ports, while there is a lack of university qualifications of maritime orientation which should, along with economic orientation, dominate according to international recommendations.

The analysis of years of employment showed a trend of changing jobs or a problem where younger employees see the company only as a station for further progress and their own career development. Older management is loyal to the company to a greater extent, and has considerable professional experience in the current place of employment and less frequent change of jobs in general, which in the analysis of the sustainability of employment is an important prerequisite since higher levels of management require more experience in the current company in order to know the proper and acceptable way of reacting and dealing with business challenges.

These results in this scientific study paper explain the main features and general competence of management of nautical tourism ports and leave room for analysis of the functioning of management and the effects of certain competencies and characteristics of decision-making in business.

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DENTAL TOURISM – AN OPPORTUNITY FOR CROATIAN TOURISM

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Abstract

Acknowledging a growing demand in the sector of medical tourism as well as a growing demand for dental care from developed countries, this paper discusses the possibilities of successful and sustainable use of dental tourism potential and its marketing activities on a national level. The purpose of this article is to emphasize dental tourism development as an opportunity for Croatian tourism more than just „sea and sun" seasonal tourism products. Research results show that Croatia has the necessary preconditions and key resources for dental tourism development, recognized in the strategic documents of the Republic of Croatia, such include outstanding natural and qualified human resources, but also competitive prices and proximity to the large source markets, however this form of tourism in Croatia has not used its development possibilities due to the lack of systematic national promotion and the absence of a strong sales network in Croatia. The existing market position of dental tourism in Croatia is still insufficiently diversified, relatively unorganized and poorly recognized, and it's determined mainly by the individual efforts of private clinics so the special focus is given to marketing initiatives which influence the international recognisability of Croatia as a popular destination of dental tourism.

The methods used in the research include description, compilation and classification of scientific and professional papers. The primary research was conducted in February 2017 by quota sampling of 15 dental clinics in Primorsko - Goranska County, selected from the Croatian Dental Chamber's list. Selection criteria was made in base of location and the number of employees. The study was focused on gathering qualitative data, focused on the analysis of their websites and an online survey was send to above mentioned dental clinics. The online survey was consisted of 18 questions and structured in a way to meet all research objectives. The sample included employees and managers of dental clinics. The study tested the following hypotheses:

H1 Croatia has developed dental tourism as a health tourism sub-segment.

H2 Dental clinics use marketing activities to promote dental tourisam.

H3 Croatia government doesn`t offer subventions for the marketing activities of dental tourism.

Dental tourism offers Croatia an opportunity to prolong the tourist season throughout the year, as dental patients have teeth problems all year long, which leads to an increasing percentage of capacity utilization, but it can also influence development of tourist facilities and infrastructure (hotels, restaurants, travel agencies) and raise overall employment. Marketing activities in Croatia's dental tourism are insufficiently diversified. Dental clinics should enhance their strategic marketing to lure international clients. Croatia's government should support and evaluate dental tourism development as an economic process and an opportunity for tourism.

Contribution of this study is in assessment of Croatia's dental clinics marketing initiatives and government efforts towards increasing performance and quality of the dental tourism offer. Following global trends and observing the practice and promotional techniques of neighboring countries who are active in the dental tourism market we can find the most appropriate way of implementing such marketing and tourism activity's which can serve as basis for further development with the aim of enhancing Croatia's position on the global dental market. Limitation of the study is that research results couldn't be compared as there is no primer conducted related study in Croatia best to our knowledge. Future research should focus on the number, profile, motives, satisfaction and movements of dental tourists because there is a general lack of research on those subjects.

Keywords: *Medical tourism, Dental tourism, Marketing, Primorsko – Goranska County*

JEL Classification: M31, I10, Z32

1. INTRODUCTION

Acknowledging the fact that dental tourism is a subdivision of medical tourism, it is important to understand and to investigate development of medical tourism and tourism in general. Medical tourism should be considered from the standpoint of its two fundamental elements; health and tourism (Bašan et al. 2014, 9), since it's essentially a combination of medical treatment, hotel accommodation and other services in the tourist destination (Babic et al. 2013, 17). Health is one of the oldest motives to travel (Hitrec, 1998, 2), while tourism is one of the leading activities in Croatia's economy (Breslauter, 2012, 10). In the past, people generally travelled from less developed to more developed countries in order to receive the medical care they could not receive in their own countries (Horowitz et al. 2007, 24). Recent trends indicate an opposite process in which tourists from developed countries are travelling abroad for significantly lower treatment costs.

Connel (2006, 1094) defines medical tourism as a new form of niche tourism "where people travel often long distances overseas to obtain medical, dental and surgical care while simultaneously being holidaymakers". Document of the Croatian Tourist Board defines medical tourism as a "collective term that encompasses travel primarily motivated by the use of medical services (greater or lesser degree of complexity) - dental, surgical, rehabilitation, etc." (Medical tourism -International Trends and Prospects, 2013, 5)

This research is based on the understanding that despite the recession, which has slowed down the global tourism movements (Breslauter, 2012, 11), medical tourism is a product which is globally recognized and has an above-average annual growth rate between 15% and 20% (Development Strategy of Croatian tourism until 2020, 8). Krajnović et al. (2013, 17) also confirm a continued annual growth of medical tourism industry and emphasize its global annual value at $ 60 billion. Although, due to non-compliance of international terminology and statistics it is difficult to estimate the overall market size of medical tourism. Available data is mainly an assessment of various interest groups and associations, and for a significant number of countries there are no indicators. Understanding medical tourism is still limited (Smith, Álvarez, Chanda 2011, 281; Ruggeri et al. 2015, 787), most studies deal with the topic in conceptual terms rather than the empirical studies and there is generally a lack of research on the number, profile, motivation, satisfaction and movements of the patients.

Development of new technologies, availability of online information and more accessible transportation facilitate the development of medical tourism (Horsfall, Lunt, 2015; Lunt, Carrera, 2011; Chen, Wilson, 2015), and also facilitate the process of decision making for the patient that is often complex and dynamic. This topic is investigated by a few authors in Croatia (Kesar, Rimac, 2011, Persic, Jankovic, 2012; Krajnović, et al. 2013), who analysed the possibilities and limitations for Croatia's medical tourism development and concluded that Croatia still does not use its comparative advantages.

As a branch of medical tourism, dental tourism is a relatively new phenomenon and is considered as an example of globalization (Condrea et al. 2014, 588-590). With an increased rate of unemployed people in developed countries and limited medical insurance (Guay, 2004, 1602), dental services tend to be extremely expensive; therefore, they have raised the population's mobility, creating new forms of medical tourism, including dental tourism. Specific forms of tourism like dental tourism can reduce seasonality and could have a positive impact on economy (Krce, Miocic, 2014, 156), as distribution of tourist movements throughout the year is more even, because patient's problems with oral health can occur at any time of year. Low-cost air transport in less developed countries can also contribute to the growth dental tourism (Lunt et al. 2011, 6, Olipra, 2012, 55). Dental services are one of the most common procedures sought out by medical travellers (Lunt, 2011, 7; Kelley, 2013, 3). Dental tourism has reached its popularity due to the fact that dental care is one of the least invasive treatments and recovery time is fast, allowing the international patient to have a lot of free time and energy for a vacation (Loubeau, 2013, 194). Moreover, technological discoveries are now spreading much faster, so the specialists in less developed countries can ensure equal quality of services as developed countries but within a significantly lower price range.

Croatia as a country highly oriented on tourism has the necessary preconditions for the development of dental tourism which are recognized in the Croatian strategic documents and include outstanding natural and qualified human resources, but also competitive prices and proximity to the large source markets, but this form of tourism in Croatia has not used its development opportunities, and it's not competitive on foreign markets (Geić, 2010, 32; Milinovic 2012, 59). Croatia's present position, as one of the world's travel destinations, requires further expansion of its tourist opportunities within the overall tourism industry. Croatia attracts tourists with a rich cultural and historical heritage who appreciate its natural beauty, but it's necessary to include more than just "sea and sun" seasonal tourism products.

Croatia's promotional techniques must be upgraded in order to encourage individuals to travel for dental care. Dental tourism is a lucrative segment of Poland's and Hungary's economy, therefore by observing Croatia's neighbors who are active in the dental tourism market we can find the most appropriate way of implementing such marketing which can promote Croatia as one of the leading countries in dental tourism.

2. DENTAL TOURISM WORLDWIDE

The global medical market shows great possibilities for the expansion of dental tourism. Every year, destinations all around the world increasingly join the ranks of promoting health, medical and wellness tourism (Bristow, Yang, 2015, 118). According to Peršić and Janković (2012, 3), types of medical tourism depend on where patients as tourists seek medical care therefore they can be categorised into three groups:

1. Outbound patients traveling to other countries to receive medical treatments
2. Inbound patients from other countries traveling to a host country to receive medical treatments
3. Intrabound patients travelling domestically for medical treatments

More and more countries engage in medical tourism industry as importers, exporters or both. The leading importing countries (where medical tourists come from) are in Western Europe and North America. The main exporting countries (providers of medical services) are based across all continents, including Latin America, Eastern Europe, Africa, and Asia (Smith et al. 2011, 277).

The growth of medical travel has opened up global options and developed into different selective types of tourism. Many countries in Central and South America market inexpensive cosmetic surgery while Eastern Europe countries advertise low cost dental treatments. Asian countries opened many different medical centres for international patients and have emphasized medical tourism as their national industry (Turner 2008, 391, Sharma et al. 2016, 278). Most medical tourism destinations also offer dental treatments, but there are some countries which specialise in this particular branch. India's dental tourism industry grows approximately 30% annually, due to their marketing initiatives that focus on all-inclusive package tours (Saravana, Krishna, 2015, 286-288). Costa Rica (Warf, 2010, 55) and Mexico also became well-known destinations for dental treatments (Turner 2008, 553). The main advantage of these developing countries is that they offer high quality dental care for more affordable prices including the costs of flight and accommodation (Barrowman et al. 2010, 441). Treatments such as dental implants; which are often perceived as being very expensive and 'out of reach' have been made more affordable.

For the development of dental tourism in Europe, there is an important directive on patients' rights in cross-border healthcare (2011/24/ EU), which gives the possibility to harmonize health systems and reduce the difference in cost of health services of the EU countries (Quinn, De Hert, 2011, 502). Approximately 1 percent of the total cost of health care in Europe takes place in cross-border healthcare, but this amount is variable and is growing (Carrera, Lunt, 2010, 475).

The leading dental tourism destination in Europe is Hungary (Dhama et al. 2016, 4). Terry (2007, 419), refers to Hungary as the dental capital of the world and just by observing their medical tourism websites we can see a wide range of procedures that are being actively marketed to tourists. The origin of dental tourism dates to the late 1980s, when Austrian citizens travelled to obtain dental care in Hungary, due to a considerable difference in prices of dental treatments in these two countries, Hungarian dental clinics also provided travel and accommodation packages to attract incoming patients from neighbouring countries (Zoltan, Maggi 2012, 2).

Österle, Balazs and Delgado (2009) in their research concluded that the price-quality ratio is the main motivation for dental tourism in developing/ nonindustrialized countries, above helps the fact that the treatment and the recovery time is relatively quick, so it allows the international patient to enjoy the tourist destination (Kovacs, Szocska, 2013, 417).

The demographic profile of the dental tourist coming to Hungary is from between 45 to 60 years old, mostly from countries such as Austria, Great Britain, Ireland, Germany, Switzerland, Italy, the USA, France, Norway, Denmark, and the Netherlands. On average, they spend between 3.000 to 4.000 Euros which is 50-70 % cost saving (Zoltan, Maggi 2012, 5). Most Hungarian agencies and clinics have agreements with 3-star partner hotels or apartments where they usually accommodate dental tourists (Zoltan, Maggi 2012, 4).

Dental tourism is a growing branch, and in Croatia, unfortunately, we are worse off than our Eastern neighbours. In comparison, according to Croatian national tourist board, the Hungarian government offers subventions as part of the development of dental tourism through state funding, Hungarian dentists also use various EU supports. According to the Ministry of tourism's strategic document for the development of Croatian health tourism, potential competitors on the market of dental tourism are Romania, Bulgaria and Serbia.

3. DENTAL TOURISM IN CROATIA

The process of choosing a country for dental tourism involves more factors than choosing an ordinary touristic destination for a vacation. From that perspective, Croatia's geographical position in Europe and within the Mediterranean region is considered an advantage due to its easy accessibility and direct flights all around Europe. Croatia joined the European Union as its 28th member state on July 1st 2013, which allowed greater mobility for foreign tourists from EU countries to travel to Croatia for health and dental treatments. Due to a long history of medical scientific research and education, medical staff in Croatia has been recognized as one of the most respective in Europe. Croatian medical schools have traditionally had a good reputation and internationally accredited study programs as those graduated from these schools become top specialists through further practice and education (Kesar and Rimac 2011, p. 107). According to Croatian institute of public health a significant number of practices without a contract with Croatian Health Insurance Institute were registered in Croatia. More than half of those private practices are in Zagreb, Kvarner and Istria (Sečan, 2015, 29). Most of these clinics were opened to attract Italian patients which can save up a significant amount of money comparing to the Italian prices. This kind of private clinics can generate substantial profits this way, and have the possibility to invest in infrastructure, which is not the case for dentists in public sector, whose budgets depend on frequent revisions and cuts.

As already mentioned, the prices for the treatments are one of the main reasons for the development of dental tourism. The potential patients come from developed markets looking for lower prices, which is especially important to millions of uninsured people who cannot afford simple surgical procedures in their own country as they are not covered by health insurance (Horton, Cole, 2011, 1848). So, if a price for a dental implant costs up to €585 in the UK, while the price for the same implant is about 160 € in Croatia, potential patients in most cases prefer to save their money. Moreover, prices for dental implants are also very competitive from one dental clinic to another. Analysing the estimated prices of dental treatments by country, we find that, the prices in Croatia are very affordable. To support that fact, we present comparatively costs for some of the dental treatments used in healthcare systems in Table 1.

Table 1: Average cost for dental treatments in different EU countries

Country	CERAMIC CROWN	ZIRCONIA - CERAMIC CROWN	IMPLANTS	VENEERS	PROTHESIS	TEETH WHITENING
UK	585€	850€	1800€	530€	680€	590€
ITALY	600€	750€	1300€	410€	720€	430€
SLOVENIA	350€	450€	1300€	420€	780€	450€
GERMANY	320€	581€	1000€	510€	519€	348€
CROATIA	160€	333€	800€	250€	360€	267€

Source: CroMedicor, (portal for medical tourism), has published a comprehensive analysis of the cost of dental services in the EU http://www.dentaltribune.com/htdocs/uploads/printarchive/editions/986d9a5cc973fad15300e5548366b68b_19-19.pdf, (08.01.2017)

4. POSSIBILITES FOR CROATIA'S DENTAL TOURISM DEVELOPMENT

4.1. Research topic

This study provides an overview of current business activities in dental practice, services offered, communication skills of employees, use of modern equipment, marketing activities, level of knowledge about dental tourism and possibilities for its growth.

4.2. Methodology

The research was conducted in February 2017, in Primorsko – Goranska County, by quota sampling of 15 significant dental clinics selected from the Croatian Dental Chamber's list. Selection criteria were made in base of location and the number of employees. The methods used in the research include description, compilation and classification of scientific and professional papers. The online survey, consisted of 18 questions, was structured in a way to meet all research objectives and was sent to above mentioned dental clinics with the purpose of providing quantitative and qualitative information about dental tourism development in Primorsko – Goranska County, which has a long tradition in health tourism. The sample included employees and managers of dental clinics. The study tested the following hypotheses:

H1 Croatia has developed dental tourism as a health tourism sub-segment.

H2 Dental clinics use marketing activities to promote dental tourisam.

H3 Croatia government doesn`t offer subventions for the marketing activities of dental tourism.

4.3. Findings

Nine dental clinics participated in the study, which accounts for 60% of surveyed dental clinics. Research results show that the majority of clinics who participated in the study are in private ownership (89%), furthermore, a minor part of them (11%) have a contract with Croatian Health Insurance Fundation. More than a half of dental clinics have over 40 employees (56%), there is a lower percentage of clinics with 10 to 20 employees (22%), 21 to 30 employees (11%) and 5 to 10 employees (11%). Based on the analysis of the research results, it can be concluded that majority of responders (56%) are neither satisfied nor dissatisfied with the engagement of local public authorities in the sector of dental tourism and its development, fewer respondents are dissatisfied (22%) or distinctly dissatisfied (11%). Only 11% of respondents are satisfied with the abovementioned. Regarding the efforts of private clinics in promoting dental services to foreign markets, a significant percentage of the clinics are dissatisfied (33%) or indecisive (33%). Fewer respondents are extremely dissatisfied (11%), while only 23% of them are satisfied with overall promotion activities of dental clinics. A significant number of the clinics are extremely dissatisfied (45%) or dissatisfied (11%) with marketing activities subsidized by government bodies, fewer percentage of surveyed clinics are neither satisfied nor dissatisfied (33%) while only 11% of them are satisfied. The surveyed clinics in majority responded that of the clinics are content (22 %), or extremely content (78%), with their customer satisfaction with dental treatments in clinics.

In all surveyed clinics foreign patients come in organized group visits. Majority of the clinics (78%) have contracts with foreign travel agencies that procure patients for them. In a large percentage (89%), respondents believe that their prices are competitive in the market and that their prices rates are in accordance with the Croatian Chamber of Dental Medicine regulations. All of the clinics attract new patients with additional marketing activities. Nearly half of the clinics (45%) admit to not having adequate knowledge on the development of dental tourism. Surveyed clinics (89%) consider that the introduction of additional taxes would have a negative impact on their business. All of the surveyed clinics have multilingual websites and all of their doctors speak English and Italian, additionally they can comunicate in Slovenian and German language (44%). All front desk staff speak English and Italian, 78% of them speak German, 33% speak Slovenian, while 22% of the employees speak French.

The most commonly used dental services in clinics are in 100% of the clinics ceramic crowns, dental implants (89%), dental prostheses (56%), treatment of dental root channels (45%), composite tooth fillings, dental scaling, extractions (33%), inlays / onlays (22%), and ceramic veneers (11%). Majority of the clinics use high quality materials for dental services (78%), while fewer of them use new materials with a good cost-quality balance (22%). The last significant investment in dental equipment was in most cases a new dental unit or a CAD / CAM device.

In addition to dental medicine service, clinics offer their patients accommodation (89%), organization of transport (78%), a tourist guide (33%), and sometimes package of free accommodation and transport (11%). More then a half of mentioned clinics dentists (56%) continuously educate themselves up to four times a year, and the rest of clinics (44%) educate their dentists regularly, 2-3 times a year. We can conclude form the research results that the core market for incoming patients for surveyd clinics is Italy (89%) and the significatly lower percent (11%) come from Slovenia. Foreign patients mostly visit due to an excellent price-quality ratio, in 67% of clinics, and due to cheaper dental service when compared to their domicile country, in 33% of the cases. The extent to which marketing activities affect the decision of patients on the use of dental service clinics is 67%, and a marked influence was recorded in 11% of the cases. As for promotional activities, all the clinics use leaflets, brochures, stickers, and other promotional materials. Most of the clinics (89%) use newspaper advertising, promotion through the Internet and their own websites as their promotional tehniques, furthermore, in most cases (78%), they use SEO (Search engine optimization). Advertising through social networks is used by 67% of the clinics, they also advertise by search engines (56%), on the radio (44%), TV advertising (33%), and newsletter or email marketing campaigns (22%). For the promotion of their services most clinics hire a marketing manager (56%), or use the services of marketing agencies (33%), and only 11% of the clinics design their own ads.

4.4. Contribution

The expected contribution of the study is to raise awareness of regional authorities about the opportunities offered by the development of dental tourism, also in assessment of Croatia's dental clinics marketing initiatives and government efforts towards increasing performance and quality of the dental tourism offer.

Limitation of the study is that research results couldn't be compared as there is no primer conducted related study in Croatia best to our knowledge. Future research should focus on the number, profile, motives, satisfaction and movements of dental tourists because there is a general lack of research on those subjects.

5. CONCLUSION

The results of this research indicate that there are many previously identified competitive advantages (natural and qualified human resources, but also competitive prices and proximity to the large source markets) for dental tourism development in Croatia which are not yet sufficiently recognized or utilized. The above mentioned confirms the fact that nearly half of the surveyed clinics admit they don`t have adequate knowledge on the development of dental tourism and a significantly low percentage of them are satisfied with the engagement of local public authorities in the sector of dental tourism and its development. We can conclude that the most important factors for choosing Croatia as a dental tourism destination are affordable prices, high quality of materials used for dental services, trained medical staff, state-of-the-art technology and the attractiveness as a touristic destination. Such touristic potentials combined with growing demand for dental treatments from developed countries, could give a big contribution to the country's image and to help prolong seasonality. We can conclude that dental tourism in Croatia can be highly cost-effective for citizens of West European countries and also that for Primorsko-Goranska County the core market is Italy. Majority of the surveyed clinics have contracts with foreign travel agencies that procure patients for them and can generate substantial profits this way, also have the possibility to increase the percentage of capacity utilization, influence the development of tourist facilities and infrastructure (hotels, restaurants, travel agencies) and raise overall employment. Marketing activities in Croatia's dental tourism are insufficiently diversified and should be strategigly enhanced to lure international clients. Croatia can significantly profit from its position which gives an excellent access point to the dental tourism market niche and its economic advantages. To be able to use all of these benefits, all the efforts should be supported by the government, especially through the strategies of the Ministries of health and tourism. Hungarian government offers subventions as part of the development of dental tourism through state funding, but that is not the case in Croatia where marketing activities are not subsidized by government bodies. These strategies should be an important part of the countries development and economic growth as Croatia has all the necessary preconditions to become the market leader in dental tourism in Eastern Europe.

From this study, we can identify factors that are necessary for further development of dental tourism:

- build awareness and improve knowledge of dental tourism development through marketing activities
- enhance strategic marketing of dental clinics instead of relying on traditional advertising channels (which are often one-size-fits-all) using uniquely customized dental newsletters, dental postcards, brochures and social media content
- highlight what sets dental practices in Croatia apart and brand dental tourism destinations
- upgrade the dental tourism offer by expanding services to improve value and strengthen competitive position

- connect dental offices in a way they could appear in the market as a cluster,
- work on networking accommodation and tourist capacities so they can offer a wide range of service packages, therefore increase percentage of capacity utilization
- developing new dental tourism destinations, outside the coastal areas
- benchmarking with competitive countries like Hungary and Poland
- provide an all year-round business by prolonging the season

To achieve the before mentioned goals, it is necessary to adequately position dental tourism in strategic development documents, considering global best practices, therefore developing sustainable and competitive Croatian dental tourism and strategic marketing planning of dental clinics.

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IMPACT OF DIGITAL TECHNOLOGY IN THE DEVELOPMENT OF HUMAN RESOURCES

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Abstract

Human resources present the knowledge generated in the process of education. Considering the perspective of enterprise, human resources present the total intellectual knowledge that organizations can use to achieve their goals. In order to develop knowledge-based economy it is necessary to have quality and efficient management of human resources. Encouraging innovation, adoption of new knowledge and the development of quality becomes a carrier of the development organization and the economy in general. Development of human resources and knowledge management emerges as the main source of competitive advantage. Today it is necessary to adapt to the challenges that arise in the market. In order to give a timely response to the challenges it is necessary to constantly invest into knowledge and competence of human resources. Economy of scale is unsustainable, organizations today are struggling with entry into the knowledge economy, or into the production of high value and quality.

The components of the economy then and now are different. With the arrival of digital technology information are spreading and changing faster than ever. Requests for transfer of knowledge have been changed. For human resources, today it is necessary to systematically and continuously upgrade the knowledge and new skills. Due to their specific requirements, sometimes it is difficult to organize group training that would include the necessary topics. Individual approach is necessary. Digital technology allows the combination of individual *and group access to new knowledge, as well as defining new challenges and solving problems. Digital technologies enable learning without additional spatial and temporal resources. They allow education in the workplace during working hours.*

In this paper models of human resources are considered, both traditional and contemporary. It analyzes the existing models of development, their benefits, risks and the impact. Furthermore, the paper discusses the role of digital technology in the development of human resources in organizations. The research will be carried out in organizations in Eastern Croatia.

Keywords: *human resources, digital technology, development*

JEL Classification: J2, J24

1. INTRODUCTION

Human resources present the knowledge generated in the process of education. Considering the perspective of enterprise, human resources present the total intellectual knowledge that organizations can use to achieve their goals. In order to develop knowledge-based economy it is necessary to have quality and efficient management of human resources

Development of human resources and knowledge management emerges as the main source of competitive advantage. Today it is necessary to adapt to the challenges that arise in the market. In order to give a timely response to the challenges it is necessary to constantly invest into knowledge and competence of human resources.

Requests for transfer of knowledge have been changed. For human resources, today it is necessary to systematically and continuously upgrade the knowledge and new skills. Due to their specific requirements, sometimes it is difficult to organize group training that would include the necessary topics. Individual approach is necessary. Digital technology allows the combination of individual and group access to new knowledge, as well as defining new challenges and solving problems. Digital technologies enable learning without additional spatial and temporal resources. They allow education in the workplace during working hours. Depending on the capabilities and resources at their disposal, organization used various methods of human resources development. There are two main methods of human resources development: individual and group methods of human resources development.

To study the impact of digital technology on the development of human resources was carried out using a questionnaire. Tested companies in eastern Croatian (five counties) and are included in three sizes of companies: small, medium and large.

2. HUMAN RESOURCES

Human Resources is a concept whose primary meaning in the economy relates to the workforce. In large organizations, the term means the individuals within the company and their capabilities, but also on the part of an organization that deals with hiring, firing, training and other activities related to personnel.

Employees are one of the most important resources of the company. The importance of human resources is growing, the management of these resources is considered essential interests of organizations that deal with higher levels of management / administration.

The concept of human resources is relatively new. In fact, entered into service with much criticism. While critics of the term think that it humiliating for people because they are equated with the object management, supporters point out that the expression thus stops the practice to which all other resources are more important than people. The concept of human resources and gets a new meaning - denotes not only employees, but also their overall potential.

Human resources employees see as valuable to the organization, and given that it increases the value of development, human resources departments focus on growth and development human potential and skills. (Jović, 2016)

According to estimates by the organization that operating successfully, they invest 5% profit on employee education. Consequently they find it is from 5% to 10% of working time should be invested in the development of employees, depending on the type of work that the employee performs. According to research highly educated should be between 20% and 25% of working time to spend studying new knowledge in the field that deals with how to maintain their value to the employer. (Zager, Dečman, 2015)

Human resource management is defined as a strategic and coherent approach to the management of the most valuable assets of the organization - people who work in it in order to achieve the objectives of the organization.

Under the management of human resources are inter-related activities, of which the most important are: (Jović, 2016)

1. planning job offers and search for human resources,
2. analysis tasks,
3. recruitment of potential candidates for employment,
4. selection of candidates,
5. socialization of new employees,
6. Training and development of employees,
7. performance management and behavior,
8. motivation,
9. compliance with legislation,
10. discharge.

The implementation of these processes may be performed therefore human resources department or an external partner organization - a company dealing with human resources. If these processes are implemented effectively, can significantly affect the financial profits of the organization.

3. HUMAN RESOURCES DEVELOPMENT

As a result of the developmental changes in all aspects of social and economic developments there are a number of innovative solutions to facilitate human life and work. Strategic human resources management becomes crucial for finding original solutions in the manufacturing and services sector in order to meet the increasing market demands and to improve the competitive position of enterprises. By including all the planning and development of human resources in the long-term development policy, it is possible to increase innovation and achieve high development goals companies. (Aksentijević, Ježić, Đurić, 2008)

Depending on the capabilities and resources at their disposal, organization used various methods of human resources development. There are two main methods of human resources development: individual and group methods of human resources development.

In the United States, 2/3 of people working in the service sector, 50% of the fastest growing and most developed companies are those based on knowledge whose employees are highly educated, and the job is solving customer problems by providing expert advice (financial, managerial, legal), with the aim of improving the work of the client (the software that performs a task, sales promotion or higher efficiency), where the main resources and outputs of their work the same - knowledge, creativity and intelligence in finding solutions. (Aksentijević, Ježić, Đurić, 2008)

3.1. INDIVIDUAL HUMAN RESOURCE DEVELOPMENT

Individual human resource development refers to the development of specific knowledge and skills that are important for the performance of which the employee is engaged. The advantages of the method of individual development is that an individual is assessed individually according to their preferences and needs.

What initially makes the difference between an employee and what the future business development should be adjusted to the characteristics of the people that they bring with them into the organization. There are many individual differences in the type of skills (including intelligence) and biographical characteristics (height, weight, race, length of service, etc.). (Robbins, Judge, 2010, p. 42)

Biographical characteristics that affect performance at work are: age, sex, race and years of service. There is a widespread belief that productivity declines with age. However, the conclusion is that the requirements of most jobs, even physical not so much the end to losses in physical skills, that you could be attributed to age, have an impact on productivity. (Robbins, Judge, 2010, p. 49)

Talking about the relations and efficiency at work occur misconceptions and unfounded opinions. Psychological studies have shown that women are more willing to submit to authority, and that men are more aggressive and more likely to expect success than women. It turned out that between men and women is no significant difference in performance on the job. (Robbins, Judge, 2010, p. 50)

Length of service is the last biographical feature that will be considered. If the internship is defined as the time spent on a particular job, it can be said that the recent data found a positive relationship between years of service and operational efficiency. When reviewing the age and years of service, it seems that the years of service consistent and stable predictor of job satisfaction than chronological age. (Robbins, Judge, 2010, p. 52)

3.2. GROUP HUMAN RESOURCES DEVELOPMENT

Widespread application teams creates the potential that organizations realize greater product without much input. Teams can do different things. They can create products, provide services, making new contracts, manage projects and more. There are four common types of teams: problem teams, self-guided work teams, cross functional teams and virtual teams. (Robbins, Judge, 2010, p. 336)

Problem teams indicate teams that consist of permanent staff in the same department who are working to improve the quality, efficiency and working environment.

Self-guided work teams are groups of employees who perform closely related and interdependent tasks and take over a large part of the responsibilities formerly had their executives. Working with suppliers, customers and elected by its members. (Robbins, Judge, 2010, p. 339)

Teams of employees from the same hierarchical level but from different fields work together to solve a task called cross functional teams. Cross functional teams are an effective way to get people from different areas of work in the organization allow the exchange of information, development of new ideas and problem solving, and coordinate complex projects. (Robbins, Judge, 2010, p. 341)

Previously mentioned teams work face to face. Virtual teams use computer technology in order to connect in a common goal. There are three main differences from other virtual three types of teams: the absence paraverbal and non-verbal signals, limited social context, the ability to overcome time and space constraints. (Robbins, Judge, 2010, p. 342)

4. CONTEMPORARY DESIGNS MODELS OF HUMAN RESOURCE DEVELOPMENT

A new way of learning is called programmed instruction, and it involves self-study and consists of three parts: (Dessler, 2015, p. 303)

a) presentation of the issues, facts or problems trainee

b) allow the person to respond

c) provide feedback on the accuracy of the answers

There are seven types of human resource development supported by digital technology: (Dessler, 2015, p. 305)

1. Strengthening which serves audiovisual materials: in that way involves the application of techniques such as DVD, movies, PowerPoint and audio tapes. Audio-visual aids are more expensive than lectures, or have their advantages: the ability to display a certain order over time, the ability to stop, slow display, it is possible to make a visual tour of the plant or operation which can not attend.
2. Training in the vicinity of the workplace: a form of training where trainees learn to actual or stimulated the equipment that will be used on the job.
3. Development of distance learning and videoconferencing - refers to the process of training in one head of a center teaches a group of employees at remote locations.
4. Electronic support system working efficiency - represents computer tools automate training, documentation and telephone support. Systems support work efficiency are modern business tools. Business supplies represent a set of instructions, diagrams and similar methods that are available to the employee in the workplace and serve him as a guide.
5. Training via computer - leaders used interactive computer systems in order to increase knowledge and skills of employees. As an example, consider an interactive multimedia training a combination of text, video, graphic material, animation and sound.
6. Stimulated learning - represents the most modern ways to develop the skills of employees. Virtual reality is an example stimulated learning, where employees put in an artificially created environment that stimulates the events and situations.
7. Training via the Internet - increasingly replaced by other types of training and becomes dominant. There are various portals for learning that enable companies to select courses for their employees and that employees take them at no additional cost.

Each of these seven types of modern methods of employee development is equally successful.

5. THE ECONOMY OF EASTERN CROATIAN

Slavonia region historical and geographical region in the eastern part of the Croatian, between the Sava and Drava in the south to the north (Croatian space between the rivers), and river Ilova in the west of the state border in the east, and the Bosut and the Vuka in the southeast. Together with Baranja and Srijem part of the geographic region of Eastern Croatian. Although the conditions of modern traffic and social cohesion the Croatian Slavonia is not homogeneous is not an isolated entity, the name was widely used. It covers Pozega-Slavonia and Brod-Posavina County, much of the Osijek-Baranja County, parts of Virovitica-Podravina, Bjelovar-Bilogora and smaller parts of Sisak-Moslavina and Vukovar-Srijem. (Http://www.enciklopedija.hr/natuknica.aspx?id=56610)

Although fertile Eastern Croatia when it comes to its economic state ranks at the very end of the list of economically developed regions. Once the industry, especially in the Brod-Posavina County was at its peak, but now she is reduced to a minimum.

Economy of Eastern Croatian is very weak. Most companies are small eastern Croatian companies that do not exercise the significant profit. Small businesses in Eastern Croatia make up 99 percent of the total number of enterprises. If one looks at the number of large enterprises they make up less than 1 percent of the total number of enterprises.

Companies of Eastern Croatian opportunity for salvation see in the Council for the project Slavonia where all ministers associated with the conduct of the Project, the mayors of five Slavonian counties, directors Slavonian county agencies as well as members of parliament from the Slavonia.

Minister of Regional Development and EU Funds Gabriel Sting announced in Vinkovci establishment of the Council for the project Slavonia at the level of Government.

These large project is related to the development of the region Slavonia for which EU funds can withdraw 2.5 billion euro by 2020.

6. THE IMPACT OF DIGITAL TECHNOLOGIES ON HUMAN RESOURCE DEVELOPMENT

Study of the impact of digital technology on the development of human resources was carried out using a questionnaire. Tested companies are in the area of Eastern Croatian and included three sizes of enterprises: small, medium and large.

Figure 1 shows a graph with the answers to the question of using models of human resource development, where it can be seen that 71% of surveyed companies use at least one model of human resource development.

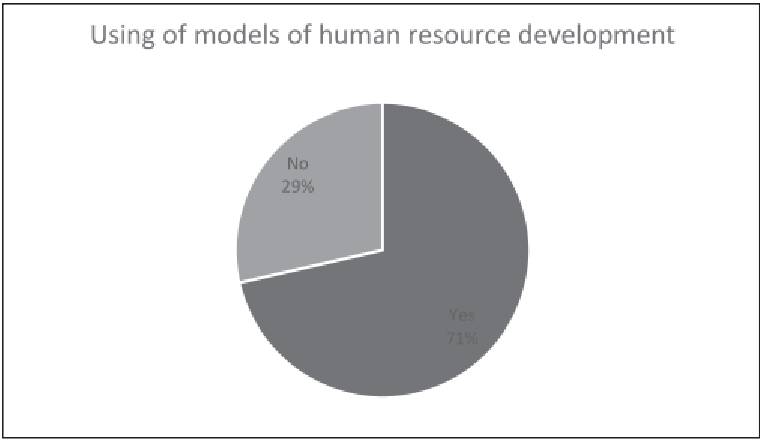

Figure 1. Using of models of human resource development

Figure 2 shows a graph with the structure of the use of models of human resource development, where it can be seen that the companies most commonly used method training at workplace with more than 72% representation, and after that model, the model of digital technologies (audiovisual devices , computer and internet) of nearly 39%.

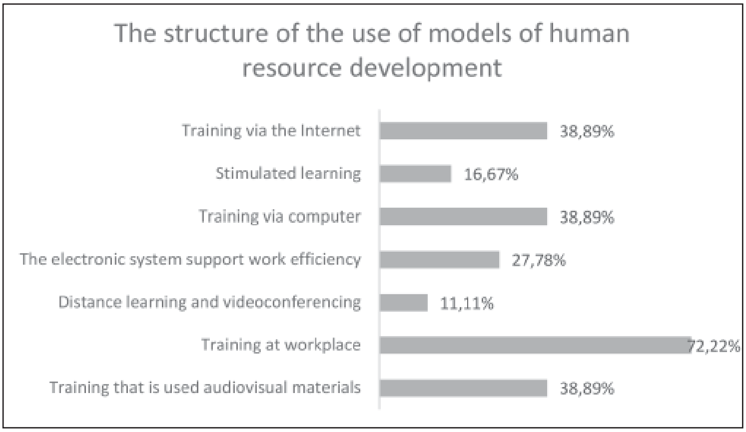

Figure 2. The structure of the use of models of human resource development

Figure 3 shows a graph of the structure of the use of models of human resources by type of employee that is evident that the group of employees most training. The representation of the operational part of human resources is more than 94%, while the administration significantly less frequent.

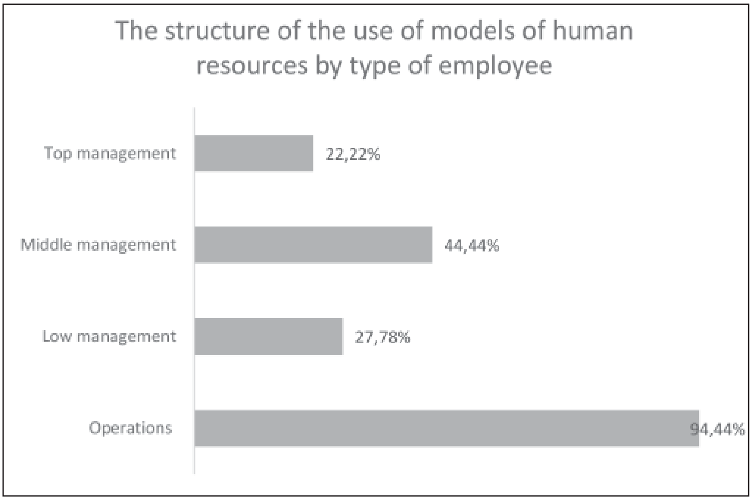

Figure 3. The structure of the use of models of human resources by type of employee

Figure 4 shows a graph where can be seen information about companies that use model for human resource development. It is evident that in 61% of the surveyed companies made progress but 17% did not.

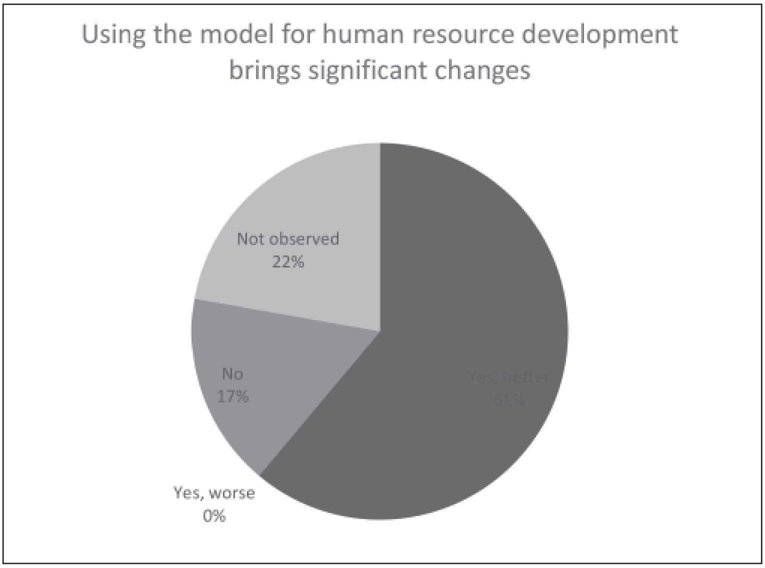

Figure 4. Using the model for human resource development brings significant changes

Figure 5. shows the use of digital technology in business where one can see the structure of the use of digital technology in business. Digital technology is the most used in everyday communication and Internet payment. Digital technologies for the purpose of Education and Human Resource Development is used significantly less or more frequent periodic and, if necessary.

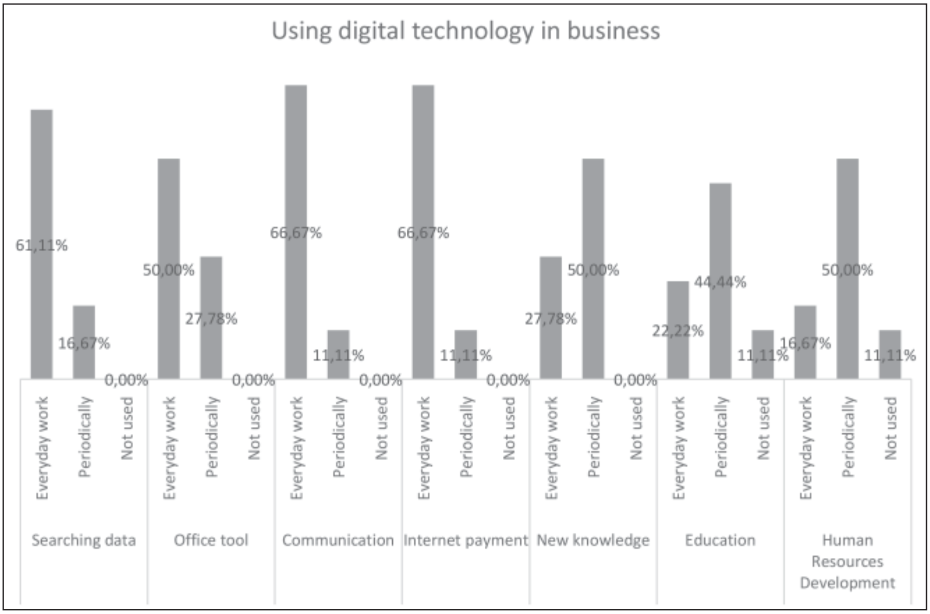

Figure 5. Using digital technology in business

Figure 6 shows an opinion on the impact of digital technologies on human resource development where it is evident that most of the company believes that digital technology completely or partially assist in the development of human resources.

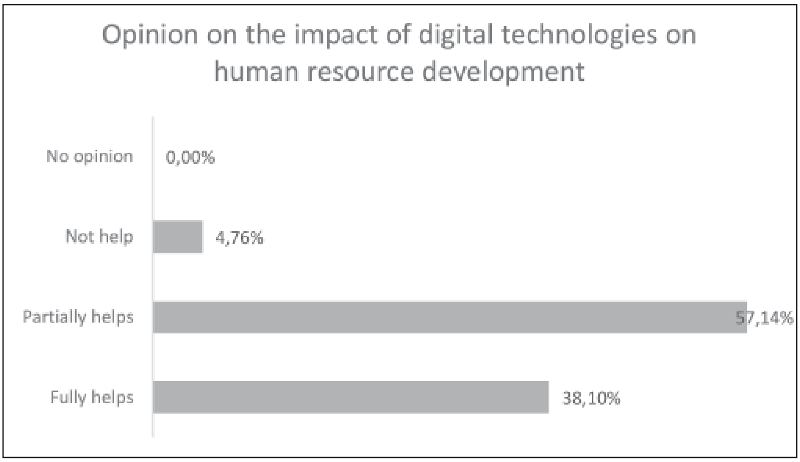

Figure 6. Opinion on the impact of digital technologies on human resource development

Figure 7 shows a graph with the structure of the use of the system for human resource development supported by the digital technologies where it can be seen that all tested enterprises used Internet site for help in the development of human resources. Most enterprises use and video presentations and internet encyclopedia for help in the development of human resources. It is evident that companies most often improvise with the content of Human Resources Development. In a small extent (only 20%) of enterprises use specialized systems for teaching and learning.

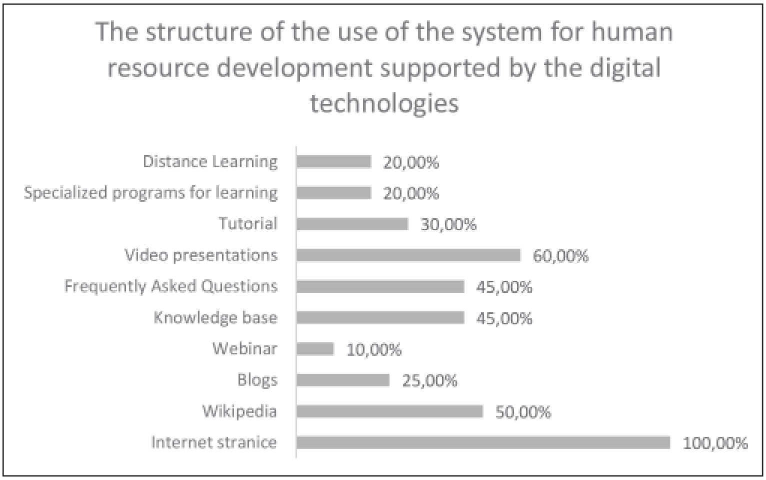

Figure 7. The structure of the use of the system for human resource development supported by the digital technologies

Figure 8 shows a graph Using the model for human resource development supported by digital technologies brings significant changes which shows that 63% of surveyed companies have noted progress using digital technology in the development of human resources. It should be noted that no company does not consider that digital technology can bring bad changes.

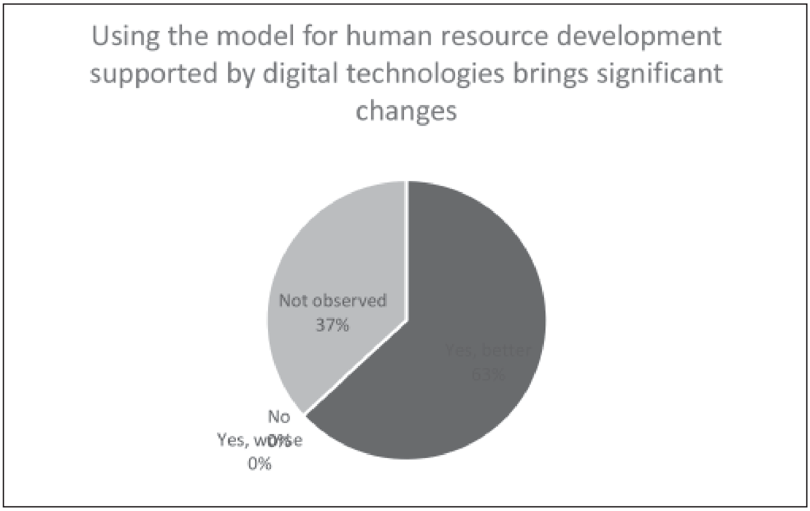

Figure 8 Using the model for human resource development supported by digital technologies brings significant changes

7. CONCLUSION

Human resources have proven to be the concept whose primary importance in the economy is significant. In large organizations, the term means the individuals within the company and its capabilities, but on the part of an organization that deals with hiring, firing, training and other activities related to personnel.

Employees are one of the most important resources of the company. The importance of human resources is growing. Human resource management is of great importance and interest to those who are on the higher levels of government / state.

Strategic human resources management becomes crucial for finding original solutions in the manufacturing and services sector in order to meet the increasing market demands and to improve the competitive position of enterprises.

According to research conducted can be concluded that most of the companies used model for human resource development and that tangible progress. It can also be concluded that companies use digital technology in their daily work. However, it is clear, even though most of the companies believes that digital technology is useful for the development of human resources that digital technology is not used every day, routinely and systematically for education and human resources development.

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ANALYSIS OF ATTITUDES ON POTENTIAL TRENDS IN THE INSURANCE OF CROP, PLANTATION AND FRUIT

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Abstract

In this paper the authors prove, by using empirical research, the set hypothesis in risk management insurance of crop, plantation and fruit by comparing insurance markets of different countries with the insurance market of agricultural production in the Republic of Croatia. The authors show the possible development paths of this segment of market insurance in the Republic of Croatia and countries in the region. The insurance market in agricultural production is insufficiently developed and has a great possibility for growth in the coming period. To achieve this, the producers have to be aware of the need to insure their production. Also, new products which can be insured have to be developed and governmental institutions and the public sector have to create more successful insurance models in agriculture – one of which is introduced in this paper.

Keywords: *risk management, insurance, agriculture*

JEL Classification: G2, G22

1. INTRODUCTORY CONSIDERATIONS

There is no single definition for the term insurance. It can be defined from the point of view of economists, lawyers, historians, actuaries, sociologists or risk theory. Insurance is a transfer of risk from the insured to the insurer who accepts compensation for damage to those in which they occurred and distribute them to all members of the risk community. (Klobučar, 2007:22) Insurance coverage is obtained by entering into an insurance contract, whereby the insurer receives the insurance premium and is obliged to compensate the damage to the insured or a third person if the insured case happens.

Protecting people and their property from consequences of natural forces and other dangers has always been of great importance not only to the individual but also to the society as a whole. Economic freedom was easier to achieve in community by the principles of reciprocity and solidarity than one would achieve as an individual. The motive and purpose of protection remained the same - as simple forms of mutual assistance within a narrow or broader circle of the community to the modern economic protection that insurance provides today, which is a compensation for the incurred damages. In today's economic development insurance has thus become an irreplaceable protection. Only prefunded, dedicated security funds can cover the negative consequences of the achieved risks. (Andrijašević et.al., 1999)

The development of the economy and technological achievements has developed new unforeseeable dangers, so the insurance as material damage compensation becomes increasingly important. The economic sense of insurance is included in compensation for property damage and the insurance of people.

The task of insurance is to reallocate numerous dangers, to which the insured are exposed, to all insured persons and to pay a certain compensation for the damage sustained in accordance with the contract signed with the insured. When signing an insurance contract, the insured person turns his variable costs into fixed costs by paying the insurance premium, and the economic consequences of the occurrence of a certain event causing the damage is hereby transferred to the insurer. The insurer then carries an insurance – technical risk, i.e.

the risk that the premium it has received for the assumed risks will not be sufficient to cover any damages it has to compensate for. (Gerathewohl, 1976:22)

2. INSURANCE OF CROP, PLANTATION AND FRUIT

Crop, plantation and fruit insurance represent a transfer of risk, with compensation, from farmers to the insurance company. The insurance reduces the producer risk and stabilizes the income of the family farm (http://agririsk.agr.hr/), with the fee being expressed as the insurance premium.

The agricultural sector is also characterized by a special type of risk that, in the absence of a loss-prevention system, can undermine the positive effect of good agricultural policies. Agriculture is exposed to the effects of nature that are difficult to predict and which make this sector extremely insecure. Agricultural production insurance is often the only way for agricultural producers, at least partially, to protect against potentially harmful impacts caused by increasingly visible climate changes. The insurance culture is different in countries with different levels of development. In many poor countries (lower insurance culture) the insurance premium is considered a luxury that many small and poor farmers can not afford. In the world there are many models of insurance in agriculture that often depend on tradition and insurance culture, different developmental opportunities and different possibilities for farmers to participate in insurance programs. In creating an insurance model in agriculture, governmental institutions and the public sector play an especially important role. As we have already concluded, insurance is the only way to prevent, to a certain extent, large income losses in agriculture by shifting risks from farmers to the insurance, and the cost of risk transfer is paid in the form of premiums. (http://vpi.ba/wp-content/uploads/2016/05/analiza_polj_osiguranje_2.pdf) Although all types of activity can be provided in the agricultural sector, the largest part of the premium globally refers to crop and fruit, which account for around 90% of worldwide premiums collected. When it comes to geographical dispersion of agricultural insurance most of the premiums refers to the US and Canada, on the second place is Europe with 17% participation, followed by Asia with about 15%. The steady growth of the global premium on agricultural insurance indicates an increase in the vulnerability of the agricultural sector as a result of global climate changes.

As the agricultural sector is not typical, the insurance activities are unpopular for the insurance sector. Here we think of the increasingly active involvement of governments and their institutions in creating supports for agricultural insurance models. The most common form of governmental and public institutions participation is reflected in the partial or total financing of insurance premiums. Although the insurance sector is basically a private sector, the public sector's participation in the dispersion of risks in agriculture is often explained by the fact that even when the market economy functions in other sectors, the agricultural sector market tends not to function due to sector vulnerability and lack of capital. In addition, the problems of agricultural activity monitoring that often lead to opportunistic behavior of farmers and difficulties in re-insurance of agricultural insurance distract further the presence of commercial insurance companies. The existence of a systemic risk which threatens to endanger a large number of economic production units simultaneously represents a platform on which the government finds space to take over indirectly a part of the risk of loss. In addition, according to the high level of risk and possible frequency of situations that may have adverse effects on agricultural incomes such as hail, droughts, floods and so on, commercial insurance have no interest to insure agricultural producers against loss from natural disasters. If there are commercial insurances that provide them in case of natural disasters, then premiums are too high for individual farmers, especially in poorer countries. For this reason, there is a part of the market that is unfilled in the absence of commercial interest. In such situations it is quite natural that governments, in order to protect the agricultural income, but also to maintain the economy at a certain level, participate in the financing of part of the insurance premium. (http://vpi.ba/wp-content/uploads/2016/05/analiza_polj_osiguranje_2.pdf)

Nevertheless, in spite of governmental involvement in co-financing of insurance premiums, most producers in underdeveloped countries do not secure their crops mainly because of the shortage of insurance culture, observing the premium as a cost that can rarely be paid off. In addition, the government needs to develop a risk assessment infrastructure in agriculture, such as weather and natural disaster databases, so farmers and insurance companies could also have tools to assess the degree of exposure to certain natural disasters. Governmental involvement in the support system of agricultural production insurance also implies the existence of a legal framework and quality monitoring mechanisms in agriculture that would regulate issues in this area and minimize the possibility of opportunistic behavior.

3. THE MODEL OF AGRICULTURAL INSURANCE

This paper presents a part of the empirical research conducted on a random sample of 174 business entities (family farms) in eastern Croatia during May 2016.

Analyzing respondents according to sociodemographic features, it is evident that in the owner structure is a predominance of men (93.7%) in the age of 36-55 with over 10 years of working experience (86.2%). Out of the total number of respondents, 64.9% have completed high school education - mostly agriculture (agricultural technician and / or similar). Considering the farm size, a relatively large number of respondents owns 50 to 150 ha of land (39.7%), 35.6% up to 50 ha and 24.7% more than 150 ha. It is an important fact which is shown by the empirical research that most respondents (75.9%) use insurance protection and 59.8% have a clearly defined risk philosophy.

For the purposes of this paper, only information on the necessity of introducing new insurance products of crop, plantation and fruit are shown, as a result of public and private initiative.

Table 1. Analysis of the significance of differences in the attitudes of owners or managers of agricultural business subjects with regard to work experience (Mann-Whitney's Test)

Claim	Average rank		Z	p
	Up to 10 years	More than 10 years		
It is necessary to encourage the introduction of crop, plantation and fruit insurance as compulsory insurance for business systems involved in this activity.	69,83	90,33	-1,905	0,057
Crop, plantation and fruit insurance reduce the risk for producers and stabilize the income of family agricultural economies.	75,88	89,36	-1,282	0,200
Existing insurance programs are insufficiently defined and do not work to reduce business risk	82,54	88,29	-0,536	0,592
The problem of crop, plantation and fruit insurance should be solved by institutions (The Ministry) in the interest of all agricultural producers.	71,42	90,07	-1,810	0,070
It is necessary, in line with trends, to introduce new crop, plantation and fruit insurance products as a result of public and private initiative.	68,58	90,53	-2,143	0,032

Table 2. Descriptive statistical indicators for attitudes of respondents about potential trends in crop, plantation and fruit insurance with regard to the education degree

Claim	Primary school		High school		Faculty education	
	Arithmetic mean	median	Arithmetic mean	median	Arithmetic mean	median
It is necessary to encourage the introduction of crop, plantation and fruit insurance as compulsory insurance for business systems involved in this activity.	3,50	3,00	3,47	4,00	3,26	3,00
Crop, plantation and fruit insurance reduces the risk for producers and stabilizes the income of family agricultural economies	3,82	4,00	3,94	4,00	4,08	4,00
Existing insurance programs are insufficiently defined and do not work to reduce business risk.	3,64	3,50	3,40	3,00	3,44	3,00
The problem of crop, plantation and fruit insurance should be solved by institutions (The Ministry) in the interest of all agricultural producers.	4,18	4,50	4,04	4,00	3,97	4,00
It is necessary, in line with trends, to introduce new crop, plantation and fruit insurance products as a result of public and private initiative.	4,23	4,50	4,11	5,00	4,10	4,00

Table 3. Descriptive statistical indicators for attitudes of respondents about potential trends in the insurance of crop, plantation and fruit given by the size of the agricultural economy

Claim	Up to 50 ha		From 50 to 150 ha		More than 150 ha	
	aritmetička sredina	medijan	aritmetička sredina	medijan	aritmetička sredina	medijan
It is necessary to encourage the introduction of crop, plantation and fruit insurance as compulsory insurance for business systems involved in this activity.	3,11	3,00	3,78	4,00	3,30	3,00
Crop, plantation and fruit insurance reduces the risk for producers and stabilizes the income of family agricultural economies	3,84	4,00	4,00	4,00	4,05	4,00
Existing insurance programs are insufficiently defined and do not work to reduce business risk.	3,31	3,00	3,54	3,00	3,47	3,00
The problem of crop, plantation and fruit insurance should be solved by institutions (The Ministry) in the interest of all agricultural producers.	3,89	4,00	4,16	5,00	4,07	4,00
It is necessary, in line with trends, to introduce new crop, plantation and fruit insurance products as a result of public and private initiative.	4,06	4,00	4,01	5,00	4,37	5,00

In accordance with the risk management strategy of the agricultural business system, respondents also agree with the statement: **Insurance of crop, plantation and fruit reduces the producer risk and stabilizes the income of family farms,** and this is higher for respondents with more than 10 years of working life

There is also a statistically significant difference stated in the statement **It is necessary, in line with trends, to introduce new crop, plantation and fruit insurance products as a result of public and private initiative,** where a higher average rank was calculated for owners with more than 10 years of work experience.

According to Kruskal-Wallis's test, in the analysis of the significance of differences in attitudes of the respondents (the owner and / or the manager) there is a statistically significant difference in the statement **It is necessary to encourage the introduction of crop, plantation and fruit insurance as com-**

pulsory insurance for business systems involved in this activity where a higher average rank was calculated for owners and / or managers of 50 to 150 ha, and the lowest for owners up to 50 ha.

Speaking about the attitudes of respondents about potential trends in crop, plantation and fruit insurance with regard to the use of insurance protection, the results of the Mann-Whitney test show that greater values of the average rankings were calculated for stacking in two claims:

1. **It is necessary to encourage the introduction of crop, plantation and fruit insurance as compulsory insurance for business systems involved in this activity.**
2. **Crop, plantation and fruit insurance reduces the risk for producers and stabilizes the income of family farms.**

Thus, owners and / or managers of agricultural business subjects expressed a greater degree of agreement with the stated claims. As a result, it can be concluded that certain new insurance products enable the introduction of crop, plantation and fruit insurance as compulsory insurance at least in one segment.

4. INSTEAD OF CONCLUSION

Based on the empirical research carried out and the processed and presented research results it is to conclude hat the area of crop, plantation and fruit insurance is a very specific area of insurance. There are numerous reasons for insurance and / or non-insurance of crops, plantation and fruit, but in this paper the following reasons have been theoretically and statistically proven:

Table 4: The main reasons for not using and / or using crop, plantation and fruit insurance

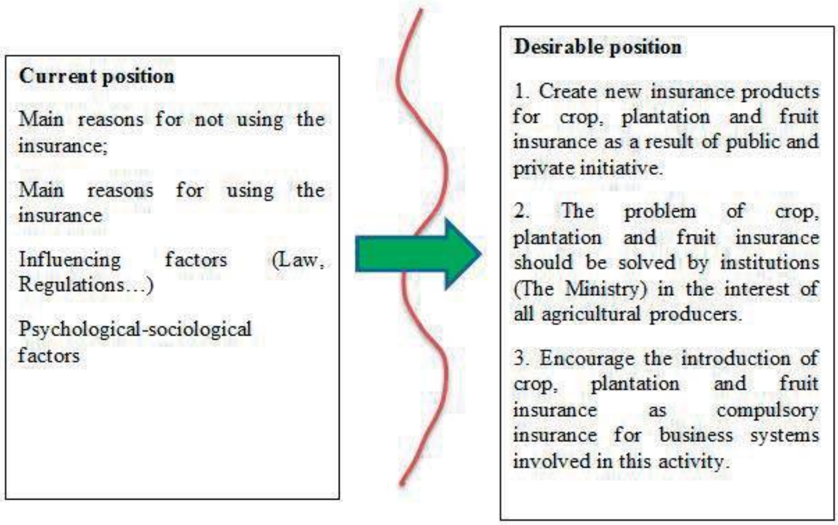
Main reasons for NOT USING crop, plantation and fruit insurance	Main reasons for USING crop, plantation and fruit insurance
• the premium amount • insufficient damage coverage of the insurance • insufficient offer of crop, plantation and fruit insurance • reliance on state aid in case of an elemental disaster • reliance on a hail defense system.	• the premium amount • exposure of the production site to climate risks • insurance premium subsidy.

Source: created by the authors

Table 4 shows the basic reasons for the use and / or non-use of crop, plantation and fruit insurance. It can be concluded that the main reason for using or not using insurance in the insurance of crop, plantations and fruits is precisely **the amount of insurance premiums**. The insurance premium depends, of course, on numerous factors, but also on the socio-demographic characteristics of decision-makers and can be interpreted in various ways, depending on the readiness of risk taking and managerial abilities of the owner or manager of the agricultural business system.

In accordance with all the above mentioned, a basic theoretical model of risk management in the segment of crop, plantation and fruit insurance is imposed.

Figure 1: Theoretical model of risk management in the segment of crop, plantation and fruit insurance.



Source: Created by the authors

Based on the presented model and the results of the empirical research we can see that a greater diversification of risk, the use of insurance instruments and risk transfer are the prerequisites for providing insurance for the most vulnerable categories of the insured.

The current position of the model is observed through the conducted primary empirical research and the mentioned model variables are analytically discussed, interpreted and make as such the basis of the baseline model. Based on the empirically researched variables and the obtained statistically significant results the desired position of the insurance company and the insured was also created in relation to the observed current position.

By real transfer to a desirable position, crop, plantation and fruits insurance reduces the producer risk and stabilizes the income of a family farm. It also allows the insurance companies uninterrupted operation and flow of information, better terms of protection for the insured, optimal premium level, and other key elements that enable greater risk dispersion.

The following are some recommendations for future activities and research, risk management and potential development of crop, plantation and fruit insurance:

1. As there is a readiness of agricultural business systems, it is necessary to determine the real needs of crop, plantation and fruit insurance.

2. To identify the reasons why the owners partially or completely fail to insure crop, plantation and fruit and to anticipate solutions.

3. Continue to apply a managerial way of thinking and acting in the context of increasing the number of insured agricultural business subjects.

4. Alert by additional education the owners or managers of agricultural businesses to the importance of securing crop, plantation and fruit as well as models that can be applied in that area.

5. It is necessary, in line with trends, to introduce new crop, plantation and fruit insurance products as a result of public and private initiatives.

6. It is necessary to institutionalize the problem of insurance of crop, plantation and fruit in the interests of all agricultural producers (at the level of The Ministry).

7. It is necessary to encourage the introduction of insurance for crop, plantation and fruit as compulsory insurance for business systems involved in this activity.

The general and empirical conclusion of this paper is based on the fact that risk management in the area of crop, plantation and fruit insurance is a very demanding task requiring constant changes and commitment to insurance users. But, the most important is a managing approach in solving the problem and introduction of new models and products for crop, plantation and fruit insurance.

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Rizik u poljoprivredi: http://agririsk.agr.hr/

PLANNED MANAGEMENT OF HUMAN RESOURCES

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Abstract

With the aim of minimizing the consequences of bad management of human resources it is important to know the basics of planned management of human resources. Leadership means the activitiy of planning, organizing, leading and controlling. By using leadership the instructiions are given to the executer to execute the work tasks. Thanks to the leadership the foreseen objectives can bi achieved – business results in predeterminated period of time.

This study wants to show the importance of quality of leadership management to realize the best results. One of the important factors in this process are certainly human resources in terms of full development of the workers and getting the maximum of each individual. Only by high-quality and professional leadership or management the set goals and objectives can be achieved. In order to managethe human resources as better as possible it is necessary to know the methods, styles of leadership which are as follows: autocraticstyle, democratic style and freestyle (laisses-faire), and here are also listed likert styles which consists of four styles. Bad management of human resources leads to certain consequences that affect the entire business, in a way that leads absenteeism, employee turnover, unproductive and other phenomena among employees.

The aim of this study is to describe ways or styles of leadership and which one would be applied to make business successful and profitable, and also sustainable for employees.

Keywords: *human resources, management, leadership styles, bad leadership of human resources*

JEL Classification: J2, J24

1. INTRODUCTION

In order to minimize the consequences of bad management of human resources it is important to know the basics of planned management of intellectual capital. Leadership marks the activity of planning, organizing, leading and controlling. By leadership the executors are instructed to execute the activities. This work wants to emphasize the importance of quality management in leadership to achieve the best possible results. One of the important factor in this process is certainly human resources or intellectual capital. Only with high-quality and professional leadership and management the set goals and objectives can be realized. In order to manage the human resources as much better as possible it is necessary to know methods, styles of leadership.

The theme of the work is management of human resources. The work refers to the styles of management, the tasks of the manager as well as the consequences of bad management of human resources. Iti s also necessary to identify which of the leadership styles are most appropriate concerning to the type of work and the profiles of the employees, perhaps the intellectual capital which is available to the company. The manager represents a person with a great knowledge, especially the knowledge concerning the business subject where he works. To manage the certain company well he used to know all stages of production to be able to hire the best candidates for the mentioned job and to know which compentences they must have. Talking about styles of leadership we distinguish between several kinds of leadership which are described in this work. The manager has the task to assess whicg style of leadership will satisfy the companies objectives and at the same time be accepted by the majority of employees. The styles are different, starting with strict autocratic style where all authority belongs to one person who has an unlimited power of decision, to laisses-faire which includes a high stage of employee independence.The employees are left to determinate the objectives independently and to derminate the mediums for its reachment. And primarily the main role of the manager is to assist in work.

2. ASSESSMENT AND DEVELOPMENT OF HUMAN POTENTIALS

The managers have to take care of their employees to have the abilities which are necessary for doing the actual and future work.

The managers must have the detailed information about all business in their working team to understand the working process. Besides, understanding of this working process is necessary when the manager decides to preform certain aspects to increase the success or effectiveness. Also the managers have to know about the claims of the work to make a smart decision. Often they make the interwies with the candidates and propose whom to offer a job.

The manager have to evaluate how good every person do his job and to warm those whose results have to be improved.[1]

The manager is a person who leads a certain system especially takes care of the employees and about their current and future perfection.

2.1. Leading

Leading represents this function of management in which it is necessary that every actor of the working process is directed to the desired goal.[2]

Leading is a conscious activity of directing business activities and development of the trader by making and implement business decisions. Intelectual capital is the name for investment in increasing the abilities of a human to work creative using his education, professionalism, talent, skills and knowledge.

Definition of leadership:[3]

Leadership is a very important function of management concerning the interpersonal aspects and involves communication, motivation, leadership styles as well as understandings of behavior and attitudes of individuals and groups. To lead means to influence on people to contribute to the organization and group goals.

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1 Raymond A. Noe, et al., *„Menadžment ljudskih potencijala"*, third edition, Zagreb Mate, 2006

2 Buble M, *„Poslovno vođenje"*, Sinergija-publishing, Zagreb, 2011, page 9

3 http://web.efzg.hr/dok/OIM/imaric/Upravljanje%20ljudskim%20potencijalima%20+%20voenje.pptx (of 20th November 2016)

As leadership "considers a process, the activities in the process can be called functions of leadership".

In his model, Kotter sets out three core functions of leadership:[4]

1. Setting directions: vision developments of future, often distant future and strategies which are necessary for making changes to fulfill the set vision.
2. Directing people: Communication by directing words and deeds to all who used to need the cooperation, to influence to create teams and coalitions who would understand the vision and strategy and accept their validity.
3. Motivating and inspiring: To energize people to overcome major political and bureaucratic and resource barriers of changings by satisfying basic but often unfulfilled human needs.

Yukl talks about three types of variables which are relevant to understand the effectiveness of leadership, they are as follows: characteristics of leader, characteristics of followers and characteristics of the situation.[5]

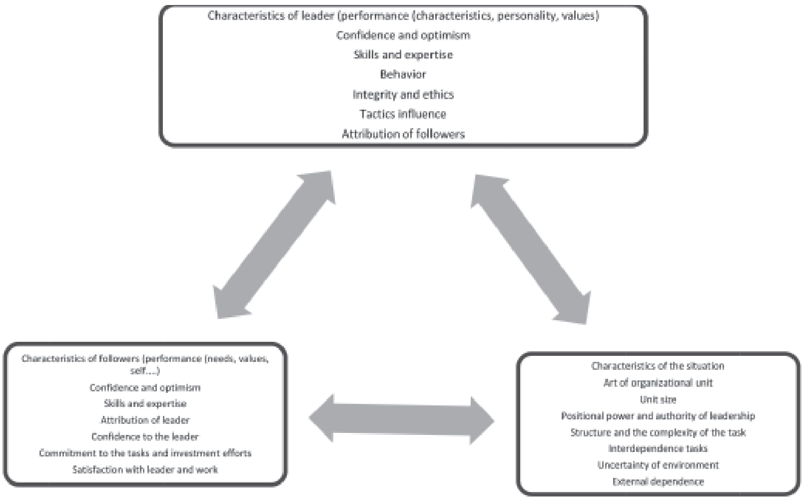

Figure 1. Variables of the effectiveness of leadership

Source: Buble, M.: Poslovno vođenje, Sinergija- nakladništvo, Zagreb, 2011. p.20

As it is visible in the picture above there exist an indispensable importance of correlation between the characteristics of the leader, characteristics of the

[4] http://e-lib.efst.hr/2013/2103001.pdf (of 20th November 2016)

[5] Buble M., *„Poslovno vođenje"*, Sinergija- nakladništvo, Zagreb, 2011. page 20

follower and characteristics of the situation. In fact, all three variables are important and have to match and be interdependent to achieve the set tasks and reach the maximum goals.

2. MANAGER LEADING STYLES

Talking about manager leading styles we make a difference between several types of styles as follows:[6]

2.1. Autocratic style

The autocratic style is such a leadership style where all the power is concentrated in the hands of one person who has an unlimited power in making decisions. Autocratic style of leadership is characteristic for a leader who plans all the activities by himself and make all the business decisions. In his work the autocratic leader defines the tasks for all the employees and controls their finish.

The leader-autocrat orders using punishments and rewards. Tasks or order come from the manager and go to the subordinate. The one who stands for this leading style think that its advantage is that the manager has superiority position which increase his power and therefore largely can impact on performance and on productivity and profitability.

The advantage of this style is usually the permanent communication to the employees and fast execution of working tasks.

Disadvantage of this style is the impossibility to lead a great number of subordinate.

In the autocratic leading style comes to absence of creativity, innovation and two-way communication between subordinate employees and the manager.

The authority represents the organizational power which is necessary for the function of the manager. By help of the authority the subordinate are focused on the execution of the planned tasks. There is a difference between the formal and personal authority. The formal authority is determined by the position in the organizational structure and it can be delegate in form of authorization to the subordinate. The autocratic style often upgrades to the formal authority.

[6] http://www.poslovniforum.hr/management/stil.asp (of 15th December 2016)

The personal authority depends on characteristics of the person of leader and it cannot be delegate to subordinates.

2.2. Democratic style

Opposite to the autocratic style of leadership is the democratic style. It is characteristic in the democratic style that the associates are involved in the process of making decisions. In fact, the employees are not subordinates because the manager consults them they cooperate or participate in making decisions.

The democratic style of leadership characterizes the manager who plans the most activities with his leading team and together they make business decisions. The democratic leader originates in his work the creativity and innovation of the subordinate employees and the leader.

Contrary to the autocratic style, in the democratic style there are be-directional connections as well as between the manager and his staff and between the staff itself. The foundation of this style is the interpersonal relationship and a great attention is paid to interpersonal relationships. The proponents of this style have the opinion that the great interpersonal relationships will result in a greater satisfaction of the employees and this satisfaction will give better results. There is no doubt that the penitents of the autocratic style have a negative point of view concerning the subordinates which is, when it is extra expressed, stated like distrust, disdain and arrogance. As opposite to that, the leader with a democratic style is positive oriented, have more understanding, encourage his employees and gives them support.

2.3. Laisses-faire style

The laisses-faire style of leadership is a leadership with minimum of entanglement of the manager into the work of the employees who in this case have free hand and a high level of making decisions about their own behavior in work. The manager with his free hand uses his power, if he use it at all, in a very low level giving the subordinates a high level of independence in their procedures. Such kind of leaders allow their subordinates to set their own goals and determine the medium for reaching them. The employees are left to self-determination objectives and determining the mediums of achieving them, and the role of the manager is to assist in work in the first place by obtaining the necessary information for work and connecting with the external environment.

The opinion is that this leading style can be used in companies with high-educated staff where the employees represent experts in their area and they need to have freedom in their expert work.

With different approaches they should be considered complementary and observe their inner similarities that stand out to successful management depends on the manager and his qualities, style of management that is applied, the characteristics of employees and a number of situational factors.

Table 1. Three reference styles of leadership

AUTHORITARIAN	DEMOCRATIC	LAISSES-FAIREZ
•leader has his power and responsibility, •leader arranges employees to clear defined tasks, •the direction of communication is from below using down	•leader delegates big part of his power while keeping the final responsibility, •work is shared and arranged on the basis of participation in decision-making, •direction of communication is bi-directional- from below using down and from down using below	•leader minors responsibility and disclaims power, •team members are instructed to choose their tasks and do what they can best, •direction of communication is primary horizontal between equal team members

PRIMARY ADVANTAGE		
Pressures are quick, clean and give the expected performance	Raising personal liability participation	Allows self-moving in its vision regardless

PRIMARY MISSING		
Approach tends stifling individual initiative	Democratic process is a waste of time	Groups can be carried aimlessly in the absence of leaders

Source: Buble, M.: Management, Ekonomski fakultet Split, Split 2000. p.521.

The table describes three reference styles of leadership in which is described what it does represent and their advantages and disadvantages. Besides the mentioned styles we know some other and in this work there will be described the Likert style of leadership.

3. LIKERT STYLE OF LEADERSHIP

Likerts style is based on empirical research that are focused on determining the characteristics of management in successful and unsuccessful companies from which Rensis Likert (1961) defined four systems of leading management, which are as follows:[7]

1. Exploitative-authoritarian system
2. Benevolently-authoritarian system
3. Consultative system
4. Participatory system

In the *exploitative-authoritarian system* the manager does not have trust or faith in his subordinates. All decisions are made on the top. The subordinates are forced to work in fear, threats, punishments and sometimes also with awards. The function of control is concentrated in the hands of top management. Parallel with formal organization very often develops a non-formal organization which often fixes goals opposite to the goals of the formal organization.

In the *benevolently-authoritarian system* the manager has some trust in his subordinates. The top management makes the goals of the organization and makes decisions, although some routine decisions are made at all levels of the hierarchy. Awards and potential penalties are used as medium for motivation of the employees. The control function is concentrated in the top management, although in a certain extent it is delegate to the middle level of hierarchy.

In the *consultative system*,the management has a quite but not completely trust in his subordinates. The subordinates are allowed to make some less important decisions on lower lever hierarchy. The lines of communication in the organization go in both directions: top-down and bottom-up. Awards but sometimes also punishments are used as the most important medium of motivation. The interaction between superior – subordinate proceed with a certain amount of trust. Important aspects of the control function are delegated to the lower level of the hierarchy. Non-formal organization can develop but its goals are in harmony with the formal organization or it only partially opposite.

In *participatory system* the management has a full trust in his subordinates. The process of making decisions is spread on all levels of the organization hi-

[7] http://e-lib.efst.hr/2013/2103001.pdf (of 20th November 2016)

erarchy. The communications does not only develop top-down and bottom-up (vertical communication) but also in all directions (horizontal communication). The employees are motivated by participation, cooperation in making organization goals and satisfaction with the reached results. Goals of the formal and non-formal organization often correspond and all is directed to reaching predefined organizational goals.

The above mentioned styles of leadership by Rensis Likert describe several styles from strong authoritarian where the subordinates are forced to work under fear, threats, punishments and sometimes also awards, to participatory which is liberal and where the management has a full trust in his subordinates.

When we talk about ways of leading we should take account of what kind of company we are talking about. The described leading styles are not universal and always the goals have to be fixed and after that the way of leading. All of the mentioned ways are specified and the manager is that person who determines how to lead a certain company or human resources.

4. CONSEQUENCES OF BAD MANAGEMENT

The source of the most common problems of the employer in managing the human resources are connected to: bad choice of employees and difficulty in finding new employees, bad defined expectations and criteria of choice of the employer, the work is organized and managed in the way which does not motivate the employees in their work, less competence of the manager, inadequate communication.

The consequences of bad management and low quality procedures currently reflected in the production processes and on long term in the whole business.

Manifestations of poor management are:

1. Absenteeism – psychological and physical absence of employees
2. Fluctuation – employees do not deliberately and quickly leave the workplace
3. Unproductive – production results were below the expectations of plan

4.1. Absenteeism of the employees

Absenteeism means ever absence from the work no matter for how long or the reasons of the absence. The most common reasons for absenteeism are as follows:

- Family problems
- Disease
- Personal needs
- Stress

Absenteeism does not come alone. Usually it comes as a result of dissatisfaction of the employees with the work of the organization, the working conditions or the human relations. Frequent absenteeism is a sign for future fluctuation, and a fluctuation is a sign for negative tendencies and problems in the organization.

It is believed that the absence rate is inversely proportional to the competitiveness of employees and competitiveness of employee gets by research the value of human capital. The value of human capital is measured by various indicators such as knowledge and skills of employees, professional experience, age, absenteeism, fluctuation, investment, in education and similar.

According to the research conducted to analyze the human capital in Croatian companies (Pološki and Frajlić, 2003) it is indicated the most presence of absenteeism in the manufacturing companies, medium-sized enterprises and those with majority state ownership. The data indicate that the rate of absenteeism in Croatian companies is relatively low. This means that the Croatian workers are competitive! Unless the reason for the reduced number of absences is not the fear of losing jobs in economical underdeveloped economy like ours (Pološki and Frajlić, 2003). This is just an assumption.[8]

According to the same survey, 75% of Croatian companies, regardless of industry, size and ownership have rates of absenteeism by 10% - which is considered acceptable.[9]

The mentioned manifestations can be linked to the way or style of management because of the bad leadership of human resources. In the autocratic style

[8] http://selekcija.hr/2008/09/apsentizam-zaposlenih/ (of 15th December 2016)

[9] http://selekcija.hr/2008/09/apsentizam-zaposlenih/ (of 15th December 2016)

of leadership can occur fluctuations, because the employees can feel subordinate and therefore often leads to absenteeism, creativity, innovation and two-way communication of the subordinate workers and the manager. In laisses-faire style it can appear absenteeism, unproductiveness and psychological and physical absence, because of lack of control by the supervisors.

4.2. Fluctuation

The employee turnover as intentional (vanishing or inevitable movement of staff from the organization (Bahtijarević-Šiber, 1999, p. 939)

There are a lot of reasons why the employees leave the organization. The simplest division of the reasons of fluctuation is the push and pull factor (Branham, 2005). The push factors are these that pushes the employees out of the companies, therefore factors directly linked to the situation in an organization, like not interesting work or a difficult boss. Difference to that are the pull factors which pull the employees into the organization, like e.g. better working conditions or the pay in another organization. (Branham, 2005).[10]

Thus, e.g. studies of the effect of demographic factors on the fluctuation have shown that:[11]

- Women have a higher percentage of fluctuation of male (Price, 1977; Valentine, 2001; Huang, Lin and Chuang, 2006);
- Younger employees have more opportunity to go (bigger flexibility, less family responsibility and similar) and therefore higher fluctuation (Price, 1977);
- More educated employees, because they have more options for employment, more often fluctuate (Huang, Lin and Chuang, 2006);
- Fluctuation depends on deficiency/oversupply of interest (Kirschenbaum and Mano-Negrin, 2002);

[10] Pološki-Vokić, N., Zaninović, M,. Analiza čimbenika fluktuacije hrvatskih zaposlenika i njihova usporedba s čimbenicima fluktuacije u najrazvijenijim zemljama svijeta, Zbornik Ekonomskog fakulteta u Zagrebu, Vol.8 No.2 Prosinac 2010. page 24

[11] Pološki-Vokić, N., Zaninović, M,. Analiza čimbenika fluktuacije hrvatskih zaposlenika i njihova usporedba s čimbenicima fluktuacije u najrazvijenijim zemljama svijeta, Zbornik Ekonomskog fakulteta u Zagrebu, Vol.8 No.2 Prosinac 2010. pages 25. – 26.

- Possibility for fluctuation bigger as the person is shorter employed in the organization (Mobley, 1982);
- Individual, as long as his working life in the organization of his present employment do not correspond to the expected working conditions referring to the previous experiences will have the intention to leave the organization (Kirschbaum and Mano-Negrin, 2002);
- As the family situation of the individual is more complex and demanding (carrier of the spouse, care for children/older, financial obligations, etc.) the safety of his employment will be more important and therefore will be a stronger wish to keep the job (Huang, Lin and Chuang, 2006);
- The location of home and work are more important while choosing a job and decision of fluctuation (Griffeth and Hom, 2004).

The research of the connection between features of personality of the individual and his/her preferences and frequency of fluctuation shows:[12]

- Person with high level of self-control is more likely to change the situation in general and so the employment if it does not like, than people with low self-control who is more prone to long-term connections (Griffeth and Hom, 2004);
- Person with an inner locus of control experience the time from the feeling of dissatisfaction and intention of fluctuation to leaving the organization is shorter than for a person with outer locus of control (Spector, 1982 concerning Griffeth and Hom, 2004);
- Increasing the emotional stability increase the fluctuation, because as the person is more emotional stable and consider himself more capable, the more he is self-confident and have more faith and enthusiasm, which leads to his opinion that he can do better of what the present organization can offer when he is not satisfied with (Booth and Hamer, 2007);
- Extroversion negatively correlated with the intention fluctuations, or a person who is more open will feel to be a part of the organization and therefore have less intention to leave the company (Griffeth and Hom, 2004);

[12] Pološki-Vokić, N., Zaninović, M,. Analiza čimbenika fluktuacije hrvatskih zaposlenika i njihova usporedba s čimbenicima fluktuacije u najrazvijenijim zemljama svijeta, Zbornik Ekonomskog fakulteta u Zagrebu, Vol.8 No.2 Prosinac 2010. pages 25. – 26.

- People who are open to new experiences of high intellectual curios, and who love diversity and new situations and therefore their intentions of fluctuations is more expressed (Griffeth and Hom, 2004);

If a person is prone to take risks it is more possible that he will realize his intention of fluctuation (Griffeth and Hom, 2004).

5. CONCLUSION

Each company is a specific subject consists of administration, manager and employees. The production processes and the enterprise policies are different. The conclusion is that each company is an individual and that each of them have to be approached individually.

There are various forms of enterprise, and when we talk about family companies of course the form of leadership is that there is no classic leader and subordinates. While in state civil service, the hierarchy is the pillar that regulates all to function according to the rules of service. Referring to all mentioned it can be conclude that no management style is universal, and it is necessary to adjust to changes appear in the company, organization or on the market for the final product to reach its maximum.

While creating the work it was founded that, the correlation is very important between the manager and the employee to work well and to achieve the best possible results and the best profit, if it is about the profit of the organization.

It is also necessary to separate what rather companies or organizations it is about, how is the working force – intellectual capital, which is their degree and type of work they are doing. For example, if it is about the management, marketing when it is not important if the person is physically in the space (office) but the computer can do big part of the work and internet form any point of the world, this is about the globalization. In virtual business when the importance of space, time and structure (telework, telecommuting, hoteling per internet, video conferences and similar) is lost, it is a great difference to work which has to be done physically. For example a surgeon who works in a hospital, where he pronounce physical and intellectual work.

The role of the manager is to use maximum the current state, but to have a developed sense of prediction to be prepared in advance for changings and to prepare the business subject or organization to changings so the fluctuations in the quality of the business become less important or negligible.

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BUSINESS PERFORMANCE OF CROATIAN COMPANIES MEASURED BY BALANCED SCORECARD APPROACH: SIZE, MARKET POSITION AND INTERNATIONAL ORIENTATION DIFFERENCES

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Abstract

Today's business environment is characterized by rapid change and adjustment to market conditions, so companies, unless they need to achieve competitive advantage and success over the competition, they should measure success in achieving strategic goals. The balanced scorecard approach includes four perspectives which are studied during the measuring of the success of the company: customers, internal processes, finance, and learning and growth of employees, and was introduced by Kaplan and Norton at Harvard University in 90-ies of the last century. The aim is to explore the level of performance measured by balanced scorecard approach on a sample of Croatian companies, where we shall examine whether there are differences in the performance of the group companies with regard to their size, market position and international orientation.

Keywords: *balanced scorecard approach, size, market position, international orientation, Croatia*

JEL Classification: E23, F13, F15

1. INTRODUCTION

The balanced scorecard approach is developed by professors at Harvard University in 1990-ies of the last century (Kaplan and Norton, 1996, p. 25). Their intention was to establish a way of measuring the achieved results and their comparison with the plan in order to keep track of business performance. It is important to point out that the balanced scorecard approach arising from company strategy and how it is used for alignment obtained financial results with planned results in the future. Companies that have not developed a business strategy, as well as those that have a strategy, but it is not carried out and not exercising, cannot use the method of performance measurement by balanced scorecard approach (Niven, 2007, p.45). However, the research on the level of business performance measured by the balanced scorecard approach is scarce (e.g. Lončarević, 2006, p. 97). The goal of the paper is to investigate the business performance based on the balanced scorecard approach using sample of Croatian companies, with the particular focus to the company size, market position and international orientation.

2. LITERATURE REVIEW

The history of the balanced scorecard approach

The main factor and initiator of continuous growth of the company in a dynamic market with constant changes is the measurement of business processes performance (Kennerley and Neely, 2003, p.214). The main founders and persons who have contributed to the development of the balanced scorecard approach are Robert Kaplan, professor of accounting at Harvard, and David Norton, founder and president of consulting firm Renaissance Solutions. With their research they began in 1990 when the study was led on ten companies (e.g.: Hewlett-Packard, General Electric, Shell Canada) to explore new methods of performance measurement (Nørreklit, 2003, p.593). The study revealed the following: 5% of employees understand the strategy of the organization in which they works, 25% of managers have bonuses linked to the strategy of the organization, 60% of organizations do not linking budgets with their own strategy, and 85% of top managers monthly spend less than an hour evaluating strategy.

Motivation for implementing the system

The main aim of the application of the balanced scorecard approach is to provide top management with the set of key performance indicators that are the basis of business (Olson and Slater, 2002, p.11). The motivations for the implementation of a balanced scorecard approach in the company are as follows: (i) emphasis on financial accounting in analyzing the operating results was no longer sufficient, (ii) provide overall monitoring the results of the key indicators of success in the turbulent world market. By applying the balanced scorecard approach the company is ready to meet the demands of customers, competitors, employees and management (Jensen, 2001, p.9). In other words, by creating model of balanced scorecards, the company can monitor the results of the key indicators of success within the four perspectives: financial perspective, customer perspective, internal business processes perspective and learning and development of employees (Maltz et al., 2003, P.187).

Implementation of the balanced scorecard approach

In today's business settings, balanced scorecard represents a strategic control system which is connected to the system of rewarding the employees in the company (Malina and Celta, 2001, p.48). It is used by the companies due to the combination and comparison of financial and non-financial indicators, and it is adjusted and improved according to needs and way of doing business (Lingle and Schiemann, 1996, p.56). There are a large number of studies that confirm the application of the balanced scorecard approach in the companies in the USA and Europe (Hoque and James, 2000, p.4). The results of the study showed the following: (i) 60% of organizations with Fortune 1000 lists in the USA use or are in the process of implementation the balanced scorecard approach, (ii) 57% UK organization claims to use the balanced scorecard approach, (iii) 56% of organizations from other countries that do not use the balanced scorecard approach are considering its introduction. Quite number of studies on the topic of balanced scorecards approach proved great success of applying this model regardless of the industry to which the companies belong to (Hoque and James, 2000, p.3). Also, it should be noted that still mostly big American and European companies use a balanced scorecard approach, while their introduction in small and medium enterprises is not yet on the same level as is the case with large enterprises (Fernandes et al., 2006, p. 623).

In addition, the debate is kept about the level within the company to which the balanced scorecard approach should be implemented. According to the founders, Kaplan and Norton, a balanced scorecard approach in large enterprises, should be implemented at the business unit level. While the balanced scorecard approach in small enterprises should have to be introduce at the enterprise level. Research conducted within the small Swiss companies demonstrated how the balanced scorecard approach implemented at company level (Speckbacher et al., 2003, p.361). Research conducted within the 17 companies in Finland showed two different ways of applying the balanced scorecard approach: (i) through a system of balanced scorecard are defined the goals of the organization, and rewarding employees depended on the achievement of set goals, (ii) a balanced scorecard approach was introduced as an information system which represents a tool for managers to improve performance (Malmo, 2001, p.207).

The characteristics of the balanced scorecard approach

The balanced scorecard approach is connecting performance measures and indicators in four different perspectives: Financial, Customer, Innovation and learning, Internal business processes. The financial perspective is a basic factor in the success of the company and this is the result of activities of the other three non-financial perspectives. Clients represent a strategic orientation of the business management. In addition to retaining existing customers it is important to constantly be looking for new clients. Satisfied and loyal customers greatly contribute to the success of the company. Internal processes represent the possibility of growth and development of the business. Internal processes involve improving existing business processes, and introducing innovative ways of doing business. Learning and growth of employees includes development of skills and knowledge of employees, encouraging their motivation, includes the possibilities of the information system, but also creates a working environment perfect for success. These four perspectives are examined through four parameters: (i) Goals - What is needed to make to achieve success?; (ii) Measures - What parameters will be selected and monitored to prove business success ?; (iii) The target value - Which quantitative values will benefit to determine the success of the measurement ?; (iv) Initiative: What to do in order to achieve set goals?

3. METHODOLOGY

Sample description

Research unit is a company registered in Croatia, and the population is a set of all such companies. The frame of choice is a database of the Croatian Chamber of Commerce, from which it will randomly select a sample of companies. Respondent is a president or member of the management of the company, in which case the companies has been previously contacted by telephone in order to establish contact and explain the purpose, but also the confidentiality of research results, as well as their exclusive use for scientific purposes.

The survey was conducted on a stratified sample of Total 60 companies divided into six sub-samples. Of that: (1) 10 small and medium-sized companies in the growth phase (code subsamples: SME growth); (2) 10 small and medium-sized companies in the maturity stage (code subsamples: SME-maturity); (3) 10 small and medium-sized enterprises in the phase of stagnation (Code sub-samples: SMEs stagnation); (4) 10 large companies in the growth phase (code subsamples: Large-growth); (5) 10 large companies in the maturity stage (code subsamples: Large-growth) and (6) 10 large companies in the phase of stagnation (Code sub-samples: Large-stagnation).

Measuring the success of organizations in the sample using balanced scorecard approach

Measuring the success of organizations in the sample was conducted using a questionnaire which measures the performance of the company relative to its competitors in the principal activity, with respect to financial, process, market dimension to the success and the success of knowledge management. Respondents expressed on a scale of 1 to 5 the extent to which they agree with the statement that their company is better than the competition in the sector.

Dimensions of financial success are: F1. Profitability; F2. Actual profit; and F3. Return on Investment. Dimensions of market success are: T1. Customer satisfaction; T2. Market share; and T3. Quality of products / services. Dimensions process successes are: P1. The efficiency of internal processes; P2. Innovation of products / services; and P3. Innovating of the internal processes. Dimensions of the success of knowledge management are: Z1. Employee competence; Z2. Application of new technologies; and Z3. Organizational climate

Statistical analysis

Data collected by primary research has been analyzed by the Mann-Whitney analysis where the average values of respondents answers has been compared according to different company groups: (1) small and medium vs. large companies; (2) stagnating vs. growing companies; (3) companies with the international orientation vs. companies without the international orientation.

4. RESULTS

In this section of work the success of Croatian companies measured by the balanced scorecard approach will be analyzed for all the companies together, and then we shall compare the styles of leadership with regard to company size, market position and international orientation of the company.

4.1. The overall performance of all companies together

Table 1. shows the respondents' answers, managers of board members, to the questions which evaluated the performance of all the companies together measured by the balanced scorecard approach.

Table 1. Performance of all companies together measured by the balanced scorecard approach

	N	Min	Max	Average	St.dev.	Cronbach's alpha
Financial success						
F1. Profitability	60	2	5	3.533	0.833	0.825
F2. Actual profit	60	2	5	3.500	0.893	
F3. Return on investment	60	2	5	3.517	0.930	
Market success						
T1. Customer satisfaction	60	2	5	4.200	0.684	0.710
T2. Market share	60	1	5	3.883	1.027	
T3. Quality of products/services	60	2	5	4.200	0.755	
Process success						
P1. Efficiency of internal processes	60	2	5	3.767	0.767	0.717
P2. Innovation of products/services	60	2	5	4.000	0.781	
P3. Innovating internal processes	60	1	5	3.833	0.886	
Success of knowledge management						
Z1. Competence of employees	60	3	5	4.017	0.624	0.679
Z2. Application of new technologies	60	2	5	4.017	0.854	
Z3. Organizational climate	60	2	5	4.017	0.748	

Source: Copyright Research, May, 2014.

It can be noted that respondent from all companies considers particles as equally important: F1. Profitability, F2. Actual profit and F3. Return on investment within dimension Financial success (average grade 3.50). Within dimension Market success participants of all companies mostly agree with the two particles (T1. Customer satisfaction and T3. Quality of products / services; average grade 4.20). Respondent mostly agree with the particle P2. Innovation of products / services within dimension Process success (average grade 4.00). Respondent from all companies considers as equally important the following particles: Z1. Competence of employees, Z2. Application of new technologies and Z3. The organizational climate within dimension Success of knowledge management (average score 4.2).

Comparing the listed dimensions it can be concluded that the respondent mostly agree with particles T1. Customer satisfaction and T3. Quality of products / services (average grade 4.20) within dimension Market success, while they agree to the least extent with particle F3. Return on investment within dimension Financial success (average grade 3.52). Standard deviations are in the range from 0.62 to 1.03, which indicates that the average grades are representative. For all of the indicators on the dimensions of success, Cronbach's alpha is greater than or about 0.7, indicating their consistency and reliability.

Table 2. shows the average values of the dimensions of balanced scorecard approach for all of the companies together. Market dimension is evaluated with the highest grade (4.094), while the Finance dimension is evaluated with the lowest grade Finance (3,517). Standard deviations are in the range of 0.58 to 0.76, which indicates that the average ratings are representative.

Table 2. Average values dimensions of performance measured by balanced scorecard approach for all companies together

	N	Min	Max	Average	St.dev.
Finance	60	2.000	5.000	3.517	0.763
Market	60	2.333	5.000	4.094	0.664
Processes	60	2.000	5.000	3.867	0.650
Knowledge	60	2.333	5.000	4.017	0.584

Source: Copyright Research, May, 2014.

4.2. The business performance compared according to the company size

Table 3. shows the respondent's answers to the questions which evaluated efficacy of all the companies together measured by balanced scorecard approach due to the company size. It can be noted that the respondents from small and

medium-sized businesses mostly agree with particles T1. Customer satisfaction and T3. Quality of products / services within dimension Market success (average grade 4.30). Respondents agree to the lowest extent with the particle F2. Actual profit from the dimension Financial success (average grade 3.23). Standard deviations are in the range of 0.52 to 0.91, indicating that average grades are representative. Respondents from large enterprises mostly agree with particles T1. Customer satisfaction, dimension Market success (average grade 4.10) and with the particle Z3. The organizational climate, dimension Success of knowledge management (average score 4.10). Examinees agree to the least extent with the particle F1. Profitability, dimension Financial success (average grade 3.60). Respondents from small and medium sized enterprises mostly agree with the particles from the following dimensions: Market success (average grade 4.16), Process success (average grade 2.4) and Success of knowledge management (average score 4.7). Respondents from small and medium sized enterprises agree to the least extend with the particles of dimension Market success (average grade 4.03). Standard deviations are in the range of 0.64 to 1.17, which indicates that the average ratings are representative.

In order to investigate whether detected differences between large and small/medium enterprises are statistically significant Mann-Whitney tests are used to compare their performance measured by balanced scorecard approach regarding the company size (columns Z and P-value):

- Particle F2. Actual profit, dimension Financial success is rated among the examiners of SME companies with an average score of 3.27, and those from large enterprises provided average score of 3.73. The indicated difference. The indicated difference was statistically significant at the 10% probability level ($Z = -1.958$; p-value = 0.050).
- Particle Z2. Application of new technologies, dimension Success of knowledge management is rated among the examiners of SME companies with an average score of 4.23, and those from large enterprises provided average score of 3.80. The indicated difference. The indicated difference was statistically significant at the 10% probability level ($Z = -1.717$; p-value = 0.086).
- Dimension Process success, is rated among the examiners of SME companies with an average score of 4.02, and those from large enterprises provided average score of 3.71. The indicated difference was statistically significant at the 10% probability level ($Z = -1.719$; p-value = 0.086).

Table 3. The business performance according to the company size

	Size	N	Average	St.dev.	Z	P-value
F1. Profitability	SME	30	3.467	0.819	-0.679	0.497
	Big	30	3.600	0.855		
F2. Actual profit	SME	30	3.267	0.907	-1.958	0.050*
	Big	30	3.733	0.828		
F3. Return on investment	SME	30	3.400	0.855	-1.127	0.260
	Big	30	3.633	0.999		
T1. Customer satisfaction	SME	30	4.300	0.535	-0.837	0.403
	Big	30	4.100	0.803		
T2. Market share	SME	30	3.833	0.874	-0.736	0.462
	Big	30	3.933	1.172		
T3. Quality of products / services	SME	30	4.333	0.661	-1.219	0.223
	Big	30	4.067	0.828		
P1. Efficiency of internal processes	SME	30	3.900	0.662	-1.326	0.185
	Big	30	3.633	0.850		
P2. Innovation of products / services	SME	30	4.133	0.730	-1.188	0.235
	Big	30	3.867	0.819		
P3. Innovation of internal processes	SME	30	4.033	0.669	-1.479	0.139
	Big	30	3.633	1.033		
Z1. Competence of employees	SME	30	4.033	0.615	-0.205	0.838
	Big	30	4.000	0.643		
Z2. Application of new technologies	SME	30	4.233	0.679	-1.717	0.086*
	Big	30	3.800	0.961		
Z3. The organizational climate	SME	30	3.933	0.740	-1.005	0.315
	Big	30	4.100	0.759		
The financial success	SME	30	3.378	0.801	-1.529	0.126
	Big	30	3.656	0.708		
Market success	SME	30	4.156	0.579	-0.292	0.770
	Big	30	4.033	0.745		
Process success	SME	30	4.022	0.580	-1.719	0.086*
	Big	30	3.711	0.688		
Success of knowledge management	SME	30	4.067	0.521	-0.128	0.898
	Big	30	3.967	0.645		

Source: Copyright Research, May, 2014.
Reference: * 10%, ** 5%, *** 1% probability

4.3. The business performance according to the market position

Table 4. shows the responses regarding the position of the company at the market. Respondents from companies that are leaders in the market mostly agree with the particles from the following dimensions: Market success (average grade 4.35), Process success (average grade 4.00) and Success of knowledge management (average score 4.10). Respondents from other companies mostly agree with particles from dimension Success of knowledge management (average score 3.89).

Table 4. The business performance according to the market position

	Position on the market	N	Average	St.dev.	Z	P-value
F1. Profitability	Market leader	36	3.69	0.86	-1.877	0.061*
	Other enterprise	24	3.29	0.75		
F2. Actual profit	Market leader	36	3.64	0.87	-1.502	0.133
	Other enterprise	24	3.29	0.91		
F3. Return on investment	Market leader	36	3.56	1.05	-0.452	0.651
	Other enterprise	24	3.46	0.72		
T1.Customer satisfaction	Market leader	36	4.33	0.68	-2.047	0.041**
	Other enterprise	24	4.00	0.66		
T2. Market share	Market leader	36	4.36	0.93	-4.844	0.000***
	Other enterprise	24	3.17	0.70		
T3. Quality of products / services	Market leader	36	4.36	0.80	-2.390	0.017**
	Other enterprise	24	3.96	0.62		
P1. Efficiency of internal processes	Market leader	36	3.89	0.85	-1.353	0.176
	Other enterprise	24	3.58	0.58		
P2.Innovation of products / services	Market leader	36	4.19	0.75	-2.474	0.013**
	Other enterprise	24	3.71	0.75		
P3.Innovation of internal processes	Market leader	36	3.92	1.00	-1.274	0.203
	Other enterprise	24	3.71	0.69		
Z1.Competence of employees	Market leader	36	4.11	0.67	-1.445	0.149
	Other enterprise	24	3.88	0.54		
Z2. Application of new technologies	Market leader	36	4.14	0.87	-1.647	0.100
	Other enterprise	24	3.83	0.82		
Z3. The organizational climate	Market leader	36	4.06	0.83	-0.648	0.517
	Other enterprise	24	3.96	0.62		

	Position on the market	N	Average	St.dev.	Z	P-value
The financial success	Market leader	36	3.63	0.77	-1.877	0.061*
	Other enterprise	24	3.35	0.73		
Market success	Market leader	36	4.35	0.62	-1.502	0.133
	Other enterprise	24	3.71	0.54		
Procedural success	Market leader	36	4.00	0.68	-0.452	0.651
	Other enterprise	24	3.67	0.56		
Success of knowledge management	Market leader	36	4.10	0.63	-2.047	0.041**
	Other enterprise	24	3.89	0.50		

Source: Copyright Research, May, 2014.
Reference: * 10%, ** 5%, *** 1% probability

It can be noted that the respondents from companies that are leaders in the market mostly agree with particles T2. Market share and T3. Quality of products / services within dimension Market success (average grade 4.36). Respondents agree the least with particle F3. The return on investment from dimension Financial success (average grade 3.56). Standard deviations are in the range of 0.67 to 1.05, which indicates that the average ratings are representative. Respondents from other companies mostly agree with particles T1. Customer satisfaction, dimension Market success (average grade 4:00), while they agree to the least with particle T2. Market share, dimension Market success (average grade 3.17). Standard deviations are in the range of 0.54 to 0.91, which indicates that the average ratings are representative.

In order to investigate whether detected differences between market leader and other enterprises are statistically significant Mann-Whitney tests are used to compare their performance measured by balanced scorecard approach regarding the market position (columns Z and P-value). Found differences are for the particles:

- F1. Profitability at 10% (Z=-1.877, p-value = 0.061),
- T1. Customer satisfaction at 5% (Z=-2.047, p-value = 0.041),
- T2. Market share at 1% (Z=-4.844, p-value = 0.000),
- T3. Quality of products / services at 5% (Z=-2.390, p-value = 0.017),
- P2. Innovation products / services at 5% (Z=-2.474, p-value = 0.013),
- Financial success at 10% (Z=-1.877, p-value = 0.061)

- Success of knowledge management employees at 5% (Z=-2.047, p-value = 0.041).

4.4. The business performance according to the international orientation

Table 5. shows the responses regarding the international orientation of the company. Respondents from companies that are oriented to the domestic market mostly agree with particles from dimension Market success (average grade 4.05). Respondents from companies that are oriented to the international market mostly agree with particle from dimension Market success (average grade 4.17) and Success of knowledge management (average score 4.09).

It can be noted that the respondents from companies that are oriented to the domestic market mostly agree with particle T3. Quality of products / services within dimension Market success (average grade 4.21). The respondents agree to the lowest extent with the particle F2. Actual profit from the dimensions Financial success (average grade 3.45).

Standard deviations are in the range of 0.57 to 1.07, which indicates that the average ratings are representative. Respondents from companies that are oriented to the international market mostly agree with particle T1. Customer satisfaction, dimension Market success (average grade 4.27), while they agree to the lowest extent with the particle F3. Return on investment, dimension Financial success (average grade 3.55). Standard deviations are in the range from 0.63 to 0.96, based on which it can be concluded that the average ratings are representative.

In order to investigate whether detected differences between companies with domestic and international orientation are statistically significant Mann-Whitney tests are used to compare their performance measured by balanced scorecard approach regarding the market orientation (columns Z and P-value). It has been found that the only difference is with the particle Z3. Organizational climate, dimension Success of knowledge management (Z = -1.676; p-value = 0.094).

Table 5. The business performance according to the international orientation of the company

	Market orientation	N	Average	St.dev.	Z	P-value
F1. Profitability	Domestic	38	3.474	0.797	-0.655	0.512
	International	22	3.636	0.902		
F2. Actual profit	Domestic	38	3.447	0.860	-0.536	0.592
	International	22	3.591	0.959		
F3. Return on investment	Domestic	38	3.500	0.923	-0.185	0.853
	International	22	3.545	0.963		
T1. Customer satisfaction	Domestic	38	4.158	0.718	-0.516	0.606
	International	22	4.273	0.631		
T2. Market share	Domestic	38	3.789	1.069	-0.843	0.399
	International	22	4.045	0.950		
T3. Quality of products / services	Domestic	38	4.211	0.811	-0.366	0.714
	International	22	4.182	0.664		
P1. Efficiency of internal processes	Domestic	38	3.816	0.766	-0.630	0.529
	International	22	3.682	0.780		
P2. Innovation of products / services	Domestic	38	3.974	0.753	-0.450	0.653
	International	22	4.045	0.844		
P3. Innovation of internal processes	Domestic	38	3.711	0.898	-1.419	0.156
	International	22	4.045	0.844		
Z1. Competence of employees	Domestic	38	4.053	0.567	-0.575	0.565
	International	22	3.955	0.722		
Z2. Application of new technologies	Domestic	38	3.974	0.854	-0.655	0.513
	International	22	4.091	0.868		
Z3. The organizational climate	Domestic	38	3.895	0.689	-1.676	0.094*
	International	22	4.227	0.813		
The financial success	Domestic	38	3.474	0.742	-0.531	0.595
	International	22	3.591	0.810		
Market success	Domestic	38	4.053	0.700	-0.481	0.630
	International	22	4.167	0.606		
Procedural success	Domestic	38	3.833	0.633	-0.782	0.434
	International	22	3.924	0.690		
Success of knowledge management	Domestic	38	3.974	0.566	-0.697	0.486
	International	22	4.091	0.619		

Source: Copyright Research, May, 2014.
Reference: * 10% probability

5. CONCLUSION

In this work the following goals were achieved regarding the performance of companies measured by the balanced scorecard approach. SMEs overall have a lower level of performance measured by the balanced scorecard approach in relation to large enterprises, although there are some differences. SMEs have been successful according to the market success, process success and the success of knowledge management, especially the application of new technologies, while the larger companies are more successful according to the financial success, particularly the actual profit. As expected, the market leaders were significantly more successful in relation to the company followers with considering the following dimensions of success: profitability, customer satisfaction, market share, quality of products/services, innovation of products and services, and with regard to collective variables financial success and success of knowledge management. Companies focused mainly on international markets do not perform significantly better in relation to the companies oriented mainly on the domestic market. The only difference found is that companies focused to the international market had a statistically significantly better organizational climate in relation to companies focused to the domestic market.

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MANAGERIAL EDUCATION OF GOVERNING STRUCTURES OF UNIVERSITY CONSTITUENT UNITS AND QUALITY ASSURANCE IN HIGHER EDUCATION

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Abstract

Ensuring quality in higher education is one of key aspects of success of individual universities and their constituent units, whereby the work on achieving quality necessarily includes the introduction and implementation of certain changes. Due to their unique characteristics, in comparison to other organizations universities require a different approach in institutional management, governance and administration. The aim of this study was to determine the role and importance of managerial education of governing structures of the university and its constituent units in the field of quality assurance in higher education. This study was constituted as a cross-sectional study and was carried out at 25% of Croatian public universities, from June to September 2015 *by means of a specially designed questionnaire, and through the analysis of the results of external evaluation in the field of governance and quality assurance in higher education for every single constituent unit of the mentioned universities. The study showed that there is a connection between the formal education in the field of organization and governance of the management board members of Croatian universities and their success in governance and establishing of an adequate system of quality assurance in higher education at the universities they are employed at, this interrelation being very complex ant influenced by a wide range of other factors which are yet to be determined. Thus, further consideration of the issue which is of utmost importance in Croatia is necessary, taking into consideration that contemporary Croatian universities have to not only develop a sufficient number of good and precisely elaborated ideas for changes, but also ensure that these are put into practice in a consistent and sustainable manner, because only by using this approach will these universities become distinctive as serious candidates in the global field of science and higher education.*

Keywords: *managerial education, organization and governance, university, quality in higher education, Croatia.*

JEL Classification: I2, I23

1. INTRODUCTION

Higher education institutions have unique characteristics which distinguish them from most of other organizations (Patria, 2012: 177). Experts have identified several specific qualities of universities, i.e. higher education institutions as organizations, which are: organizations with often unclear and very disputable aims, organizations oriented towards provision of services to customers, organizations with problematic technology, organizations of high professionalism, organizations with partial shortage of professional staff and organizations in a sensitive business environment (Baldridge, 1983: 38-59). Next to the above mentioned specific characteristics, the researchers classified higher education institutions as organized anarchies (Baldridge et al., 1982:2-25; Baldridge, 1983: 38-59; Giesecke, 1991: 63) and as loosely coupled organizations (Weick, 1976: 1).

In literature, organized anarchies are described as organizations characterized by a problematic orientation, unclear technology and different employee engagement (Patria, 2012: 177). Furthermore, it was highlighted that higher education institutions have problematic aims because it seems that these organizations function based on different inconsistent and undefined settings. People employed in these organizations do not always understand the organizational processes within them, which subsequently results in performing their tasks according to the principle of exploration, or rather attempts and errors. That is also the reason why higher education institutions are perceived as organizations with unclear technology. When explaining the different engagement of the employees, it was stated that most of the higher education institutions differ from each other with regard to the amount of time and effort dedicated to the organization for which they work (Giesecke, 1991: 62-63). As opposed to the previous concept, there is also a concept which describes universities, or rather higher education institutions as loosely coupled organizations (Patria, 2012: 177). In that sense it has been stated that the term "coupling" comprises more components within itself than mere synonyms of the term, such as connection, link or interdependence. Loose coupling means that due to the already existing relationship between them, the two elements interact with each other, during which each of them preserves its own identity and to a certain extent still retains its physical and logical separateness. It was also stated that loose coupling contains within itself a connotation of transience, ability to dissolute this weak tangibility, which are all potentially key features of fusion which hold an organization as such together (Werick, 1976: 3).

Based on all the described simple characteristics, universities certainly require a different approach in institutional management, governance and administration than other organizations (Miškulin, 2016: 19; Legčević, 2014:741). Administration at an university and its constituent units implies that the leader is one of the leading professionals in her or his field, who leads the others in the light of a collegial style, recognizing and promoting quality, encouraging and developing talents, intervening when necessary, training his or her co-workers, whereby the leader in question is a model of appropriate behaviour, taking over risks and functioning as agent of changes (Yusuf et al., 2015: 280; Legčević, 2014:185). In this respect, the aim of this study was to determine the role and importance of managerial education of governance structures of a university and its constituent units in the field of quality assurance in higher education.

2. MATERIALS AND METHODS

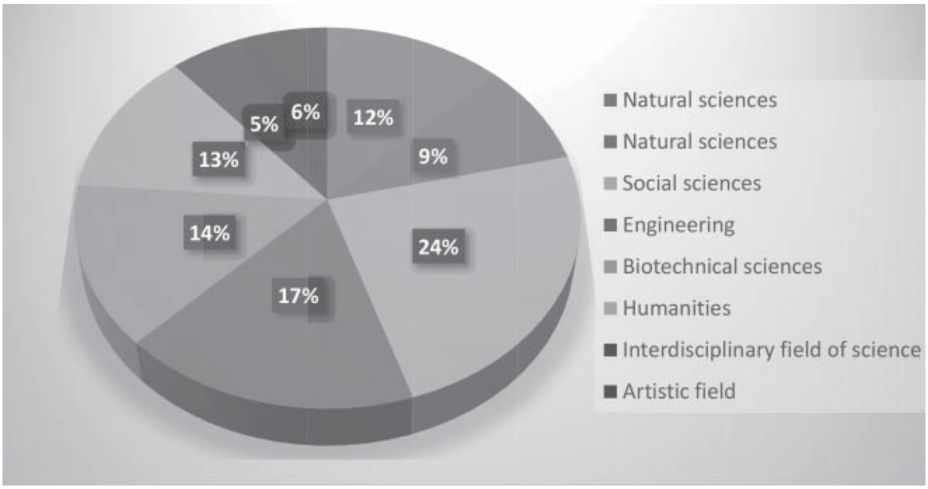
By means of a specially designed questionnaire a cross-sectional study was conducted during the period from June 15th 2015 to September 15th 2015 at two of altogether eight (i.e. at 25%) public universities in Republic of Croatia, to be more precise at the Josip Juraj Strossmayer University in Osijek and Juraj Dobrila University in Pula. The mentioned universities were selected with the aim of the representativeness of the sample itself and involvement of universities of different age, organization, size and geographical position in the Republic of Croatia, or rather by taking into account all the additional variables which can influence the results of the study itself. The study was conducted on an appropriate sample of management board members of the two mentioned Croatian universities. The participation in the study was voluntary, and every potential examinee- management board member of one of the scientific and teaching constituent units, or rather artistic and teaching constituent units of the mentioned two Croatian universities received the questionnaire by post in printed form, and received also detailed instructions on how to complete it, as well as a return-addressed envelope for the return of the completed questionnaire. Altogether 105 questionnaires were distributed, from which 80 were returned, i.e. the response rate in this study was 76,2%. Socio-demographic and occupational characteristics of the examinees – management board members of respective scientific and teaching constituent units, or rather artistic and teaching constituent units of Josip Juraj Strossmayer University in Osijek and Juraj Dobrila University in Pula, were determined by means of the questionnaire (age, sex, respective field of the constituent unit at which the examinee is employed), as well as existence of formal education of the examinees in the field of organization and governance. The results of external evaluation were also analyzed, namely the marks awarded for the field of governance and quality assurance in higher education to every single constituent unit of the mentioned universities, whereby the respective constituent units of both universities were grouped according to the field they belong to.

All the collected data were analyzed using appropriate statistical methods. Descriptive statistical methods were used for the description of frequency distribution of the investigated variables. All of the variables were tested for normality of distribution using the Kolmogorov-Smirnov test. Mean values of continuous variables were expressed as arithmetic mean and standard deviation for normally distributed variables and as median and range for variables which are not distributed normally.

3. RESULTS AND DISCUSSION

Average age of all examinees was 47,5±9,0 years of age (range 32,0 - 68,0 years of age). Among all of the examinees there was 55,0 % (44/80) of men and 45,0% (36/80) of women. By observing all the examinees according to the field they belong to, there were 12,5 % (10/80) examinees belonging to the field of natural sciences, 8,8 % (7/80) examinees belonging to the field of biomedicine and health, 23,8 % (19/80) examinees belonging to the field of social sciences, 17,5 % (14/80) examinees belonging to the field of engineering, 13,8 % (11/80)) examinees belonging to the field of biotechnical sciences, 12,5 % (10/80)) examinees belonging to the field of humanities, 5,0 % (4/80) examinees belonging to the interdisciplinary field of science and 6,3% (5/80) examinees belonging to the artistic field.(Chart 1).

Chart 1. All of the examinees according to the field of science, or rather artistic field they belong to.



Source: Author's calculations

Through analysis of the external evaluation results, i.e. marks awarded for the field of governance and quality assurance in higher education to constituent units of the mentioned universities according to the field which they respectively belong to, it was determined that the average mark awarded to all of the examined constituent units of the two universities included in the study was 3,60±0,70, whereby the highest average mark was awarded to the constituent units belonging to the field of biotechnology (4,55±0,52), and the lowest to the constituent unit belonging to the interdisciplinary field of science (2,00±0,00) (Table 1). Bearing in mind that the constituent units belonging to the field of biotechnology represent the oldest constituent units among the examined universities, it is possible that their excellent mark is a consequence of a long tradition and systematic improvement of their educational processes. On the other hand, considering that the constituent belonging to the interdisciplinary field of science is the youngest of all the constituent units among the examined universities, it is possible that its relatively modest mark is the reflection of the lack of a long tradition, or rather the experience of its management board members in science and higher education.

Table 1. Average mark for the field of governance and quality assurance in higher education awarded to the constituent units of the universities according to the field which they belong to, acquired during the external evaluation.

Field which the constituent belongs to	Number of constituent units of the universities included in the analysis (N)	Average mark awarded for the field of governance and quality assurance of higher education acquired during the external evaluation (± s)
Natural sciences	3	3,70±0,48
Biomedicine and health	1	4,00±0,00
Social sciences	5	3,00±0,00
Engineering	3	3,79±0,43
Biotechnical science	2	4,55±0,52
Humanities	2	4,00±0,00
Interdisciplinary field of science	1	2,00±0,00
Artistic field	1	3,00±0,00

Source: Author's calculations

Further analysis of the interrelation between the determined average marks awarded to the constituent units of the universities that belong to a certain field and the proportion of management board members of the constituent units having formal education in the field of organization and governance was conducted. This analysis showed that the constituent unit that had been awarded the lowest mark was at the same time the constituent unit at which there were no management board members with formal education in the field of organization and governance, which would indicate the possible connection between these two variables. However, the data for other constituent units which demonstrate that some constituent units with high proportion of management board members who received a formal education in the field of organization and governance were also awarded relatively modest marks (constituent units belonging to the field of social sciences, the constituent unit belonging to the artistic field) indicate that next to formal education, there are some additional factors that significantly affect governance and quality assurance in higher education (Table 2). In this respect it is possible to draw a conclusion that universities as organized anarchies (Baldridge et al., 1982:2-25; Baldridge, 1983: 38-59; Giesecke, 1991: 63) and as organizations with loose coupling (Weick, 1976: 1) have peculiar modes of operation in which formal knowledge in the field of organization and governance is not crucial to their success in the subject areas.

Table 2. The relationship between the established average mark of constituents that belong to a particular area and the share of board members of those constituents who have formal education in the field of organization and governance

Field which the constituent belongs to	Average mark for the field of governance and quality assurance of higher education acquired during the external evaluation (± s)	Proportion of the management board members of the constituent units who received formal education in the field of organization and governance
Natural sciences	3,70±0,48	0,10
Biomedicine and health	4,00±0,00	0,14
Social sciences	3,00±0,00	0,32
Engineering	3,79±0,43	0,07
Biotechnical science	4,55±0,52	0,18
Humanities	4,00±0,00	0,10
Interdisciplinary field of science	2,00±0,00	0,00
Artistic field	3,00±0,00	0,40

Source: Author's calculations

Explanation of the above results of this study possibly lies in the fact that the current focus in the field of higher education in fact lies in change, transformation and transition. Concept of changes is thus global and unavoidable, whereby a change includes a risk and demands creation of new systems. A massive change influences all the aspects of society, creating new dimensions and great uncertainty, and the question that society faces today is how to manage such a change. The momentum of the mentioned change inevitably has impact on the structures and activities within the higher education institutions (Govender et al., 2005: 78-79).

Higher education institutions are namely under great pressure to change. The mentioned pressure on the higher education institutions to change comes from a range of interconnected factors including: globalization of higher education, internationalization of higher education, massification of higher education, privatization of higher education, demands for regional development of higher education and greater involvement of graduates in the society, continual expansion of the scope of education and the existence of great diversity in the students' profiles, changes in students' profiles, whereby in the process of life-long education adults emerge more and more as students, the rising pressure of the industry on universities whereby the industry requires creating staff who is ready to address all the challenges of the labour market of the 21st century, pressure from the students, but also from future employers, who have clearly defined expectations from higher education institutions which have to be met, necessary competition, or rather pressure from the competition among the higher education institutions, both on national and international levels, which directs them to enrol higher number of students in order to ensure their own survival, changes in the financing system for the higher education, insufficient funding of higher education, pressure to reduce tuition fees in higher education, requirements for economic sustainability and efficacy of higher education institutions, large and constant technological progress, i.e. primarily a strong revolution in information and communications technology, which subsequently leads to contents of some educational programs and teaching methods quickly becoming obsolete, requirements for achieving and maintaining quality of the educational process at universities, demands for accomplishing high quality studies at universities and after all the endeavours to achieve balance between higher education and scientific-study activities at universities (Miškulin et al., 2016: 180).

Among the above mentioned, especially quality assurance and development in higher education is imposed as one of the key subjects and focus of changes in Croatia, since the system of higher education is becoming more and more flexible, the number of students is dramatically increasing, and higher education institutions are established wherever there is a need for higher education. Subsequently, the question of quality and systematic quality assurance is becoming an increasing challenge to all those who are connected to higher education and has practically become a necessary and inevitable condition for sustaining traditional higher education institutions (Lučin, 2007:4).

Integration of the Croatian higher education system in the European higher education area places emphasis on external and internal quality assurance as parts of the entire quality assurance system. In this light, the Act on Quality Assurance in Science and Higher Education came into force in April of 2009, whereby the Agency for Science and Higher Education became responsible for processes of external quality assurance (OG 45/09). External evaluation is a process in which an authority, which is independent from the higher education institution and the ministry, controls the quality of every aspect of operation of a higher education institution. The evaluation of study programmes and higher education institutions in the Republic of Croatia is conducted by: Agency for Science and Higher Education, for all polytechnic and schools of professional higher education, as well as public universities for their study programmes. Internal quality assurance is a process through which a higher education institution itself controls the quality of its teaching and other activities. For this purpose, offices/committees for quality have been founded at the universities and their constituent units in the Republic of Croatia, and also students are involved in the process itself, in accordance with the positive European practice. One of the main ways in which the involvement of all students in the quality assurance procedures is ensured are student surveys on the quality of teaching and other issues relating to the studies. Student surveys are conducted at most of the higher education institutions in the Republic of Croatia and in the future, they should be a constituent part of the methods by means of which students will be able to influence the quality of teaching at the studies. Besides the student surveys, students can participate in the quality assurance processes also in the way that they address their student representatives and student ombudsmen, who have the authority to participate in drafting study rules, as well as to participate in the protection of student rights (Miškulin, 2016: 74).

Standards and guidelines for quality assurance in higher education were introduced in the Republic of Croatia as early as in 2009 when the Act on Quality Assurance in Science and Higher Education was enacted (Predojević & Kolanović, 2015: 330). Section I of the Act- General provisions clearly defines what is regulated by this Act and to whom the provisions of the Act are applied to. There are also the explanations of certain terms within the meaning of this Act. Section II of the Act- Agency for Science and Higher Education describes the status, activities and the organization of the Agency as a public institution in the Republic of Croatia taking care of quality assurance and development in science and higher education. In Section III of the Act – System of quality assurance and development, the external system of assurance and quality development is clarified in detail (initial accreditation for performing the operation of providing higher education, initial accreditation for carrying out a study programme, initial accreditation for carrying out a scientific activity, re-accreditation of higher education and scientific institutions, external independent periodical assessment of the internal quality assurance system (audit), thematic evaluation, as well as the internal system of quality assurance and development. Section IV of the Act - Transitional and final provisions, defines the ways in which the evaluation processes which had started before this Act enetered into force can be ended and adoption of corresponding subordinate legislation is defined (OG 45/09).

The fact that a part of the newest Strategy for Education, Science and Technology, which was adopted by the Croatian Parliament in October 2014 at the proposal of the Government of the Republic of Croatia, is dedicated to the issue of quality assurance in higher education is indicative of its importance (Miškulin, 2016: 97). In the part of the Strategy relating to the issues of quality assurance in the higher education in the Republic of Croatia, the issue of assuring adequate importance of quality culture and the principles of accountability in higher education was highlighted. In this respect, the encouragement of autonomy of the higher education institutions and developing of quality culture together with taking on responsibility regarding issues of quality assurance and achieving strategic goals of the institution. Regarding the latter, the need to develop an overall programme financing in consideration of national priorities and connecting them to the quality assurance and the achievement of strategic objectives of the higher education institution is once again addressed. Next to that, the need to supplement the existing regulatory framework is emphasised, as are the needs to rationalize evaluation procedures and connect the existing information systems in higher education and science, in order for them to be interoperable and assist in the collection and analysis of data, and also as a basis for making informed decisions (Government of the Republic of Croatia, 2014:130-132).

In conclusion, it is important to emphasise that there is certainly a connection between the formal education of management board members of Croatian universities in organization and governance and their success in governing and establishing an adequate quality assurance system in higher education at universities which they are employed at, whereby this interrelation is very complex and influenced by a number of factors which are yet to be established. In accordance with that, it is necessary to further consider this highly important issue in Croatia, bearing in mind that contemporary Croatian universities have to not only determine a sufficient number of good and precisely elaborated ideas for changes, but also ensure that they are consistently and sustainably applied in practice, because only by means of this approach will these universities become distinctive as serious candidates in the global field of science and higher education.

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REORGANIZATION OF THE CRIMINAL POLICE DIRECTORATE – PARTIAL FUSION OF STRATEGIC AND OPERATIONAL COMPONENT IN THE NEW ORGANIZATIONAL PARADIGM

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Abstract

The essence of the criminal police is achieved by means of conducting criminal investigations, which aim at preventing and combating criminal offences, as well as detecting and prosecuting their perpetrators. The criminal police in the

Republic of Croatia are organised at three levels: operational level (police stations), tactical level (county police administrations) and strategic level (General Police Directorate). Criminal Police Directorate (UKP) operates within the General Police Directorate and its role in general is strategic. Within the organizational corpus of the Criminal Police Directorate, there is its constituent, the "elite" operational unit of the criminal police - National Police Office for Suppression of Corruption and Organized Crime (PNUSKOK). The abovementioned office consists of strategic wing (departments in the head office) and operational wing (departments in the field). Organizational and functional anomalies have led to the imbalance in significance and results between the strategic and operational wing, as well as PNUSKOK and the Criminal Police Directorate in its entirety. By partial fusion of the strategic component of PNUSKOK (strategic departments competent for economic crime and corruption, organized crime and drug crime) and its most powerful operational unit (Zagreb Department), it is planned to achieve the affirmative interaction and synergistic effects, primarily in terms of operational, but also strategic plan. Reorganization of the Criminal Police Directorate includes a series of reorganizational methods or techniques, which can be divided into major (fusion, exportation, importation, reduction) and minor (emancipation, progression, regression, patronization, substitution, denomination, renomination and unification). The result of their implementation in the reorganizational process is the change of organizational paradigm of the Criminal Police Directorate (primarily PNUSKOK) from the existing pyramid-distinctive paradigm to the new monolithic-integrative paradigm. Subject hybrid solution or the new organizational paradigm can be considered adequate as it belongs to the actual time – to the internal and external circumstances. In the future, there is a possibility of new solutions, different from this.

Keywords: *Criminal Police Directorate, reorganization, fusion, strategic and operational component*

JEL Classification: D7, D73

1. INTRODUCTION

The essence of the criminal police is achieved by means of conducting criminal investigations, undertaken when there is a reasonable doubt that criminal offence is being prepared or it is committed. The aim of criminal investigation is to detect criminal offences, to find the perpetrators, to detect and secure traces and relevant items and to collect all notices that can be useful for successful criminal proceedings. The criminal police of the Ministry of the Interior of the Republic of Croatia operate at three hierarchical levels (*police stations, county police administrations and General Police Directorate*), which due to its position and character are called *operational, tactical and strategic*. The above-mentioned levels reflect the severity or complexity of crime, which is divided into *local, regional and national*, according to these criteria. Criminal Police Directorate operates within the General Police Directorate and its formal position is strategic, but in terms of content and form, it does not exclude *the immediate implementation, as well as monitoring of the most complex criminal investigations at the national level*. This important role of the Criminal Police Directorate is not sufficiently implemented in practice and actually does not exist (primarily) in the part of problems within the competence of the National Police Office for Suppression of Corruption and Organised Crime (PNUSKOK), which, as the "elite" police unit, operates within the Criminal Police Directorate. Strict and permanent distance between the strategic and operational component of PNUSKOK leads to their mutual alienation, dysfunction and even animosity. Without an adequate and specific involvement in the most complex criminal investigations, the strategic component cannot fulfil its strategic meaning and role, except in bureaucratic and formalistic way. Functioning of the operational component outside the adequate strategic context causes simplification and marginalization of operational results it achieves. By partial fusion of the strategic component of PNUSKOK (strategic departments competent for economic crime and corruption, organised crime and drug crime) and its most powerful operational unit (Zagreb Department), there is a tendency to achieve the affirmative interaction and synergistic effects, primarily in terms of operational, but also strategic plan. Reorganization of the Criminal Police Directorate includes a series of reorganizational methods or techniques, which can be divided into major and minor with regard to their importance. The result of their implementation in the reorganizational process is the change of organizational paradigm of the Criminal Police Directorate (primarily PNUSKOK) from the existing *pyramid-distinctive* paradigm to the new *monolithic-integrative* paradigm. Reorganizational[1] procedures can cause reorganizational resistance, primarily with

[1] Once selected company organization is not completed task in terms of organization – company organization should be continuously improved. Hence the additional managerial tasks - encouraging organizational development and use of its results (Buble, 2006:14)

the internal subjects involved in the reorganization. The common denominator of such resistance is favouritism or forcing organizational *status quo*.

2. CRIMINAL POLICE DIRECTORATE – SITUATION PRIOR THE REORGANIZATION

Legal framework. Fundamental legal requirements regulating the organization and functioning of the (criminal) police in the Republic of Croatia are the Police Act, the Act on Police Services and Authorities and the Regulation on the Internal Structure of the Ministry of the Interior.

By means of *the Police Act* (Article 2), it is regulated that the police shall provide the protection of citizens' fundamental constitutional rights and freedoms, and the protection of other values protected by the Constitution of the Republic of Croatia. The police, as the central service of the Ministry of the Interior, perform services, stipulated by the law and other regulations. The police (Article 8) are organized at three hierarchical levels: 1. General Police Directorate; 2. county police administrations and 3. police stations. Criminal Police Directorate operates within the General Police Directorate and its position is strategic. General Police Directorate (Article 9) assesses the security situation and risks, defines the priority of actions and makes the strategic Assessment and Strategic Plan of Police Activities. It also adjusts, directs, coordinates and supervises performance of county police administrations; directly performs the tasks within its scope of responsibility and participates in performing certain complex tasks from the scope of county police administrations.

Act on Police Services and Authorities (Article 2, paragraph 1, item 7) defines the meaning of the term "criminal investigation", by means of which the essence of the criminal police is achieved. Criminal investigation represents a totality of those police authorities, measures and actions that are undertaken in accordance with this act or other acts, when there is a reasonable doubt that criminal offence or misdemeanour is to be prepared or committed, whose perpetrators are subject to prosecution *ex-officio*. These police authorities, measures and actions are also undertaken when there is a doubt that certain occurrence endangers or could endanger lives of people, their rights, freedom, security, inviolability and property, as well when it is necessary to detect criminal offence or misdemeanour, whose perpetrators are subject to prosecution *ex-officio*, to find the perpetrator, to prevent perpetrators' hiding or escape, to detect and secure the traces and items that can be used to determine the facts and to collect all information that can be useful for successful criminal or misdemeanour proceedings.

By means of *the Regulation on the Internal Structure of the Ministry of the Interior* (Article 32), it is regulated that the Criminal Police Directorate shall monitor and analyse the status and development of entire crime, as well as co-operate with other structural units, in the field of organization, prevention and control of crime. Criminal Police Directorate *directly conducts the most complex criminal investigations* at the national level, controls the implementation of the above-mentioned, provide its expertise to county police administration in order to detect, find and report the perpetrators, as well as to bring in the perpetrators to judicial authorities.

Organizational framework. The criminal police, as the part of the system of the Police of the Ministry of the Interior of the Republic of Croatia[2], operate at three hierarchical levels (police stations, county police administrations and General Police Directorate). Due to their position and character, these are called *operational, tactical and strategic*. The above-mentioned hierarchical levels reflect the severity or complexity of crime, which is divided into *local, regional and national*, according to these criteria. Rules on Police Officers' Actions (Article 38; Division of crime pursuant to its complexity) stipulates that in order to coordinate the competence of the structural units of the police, the crime, with regard to its complexity and territorial distribution, should be divided as follows: *less complex local crime* (easier cases), *regional complex or organized crime* (difficult cases) and *national complex or organized crime* (complex cases). Police stations are competent for *easier cases*; county police administrations are competent for *difficult cases*, while Criminal Police Directorate is responsible for *complex cases* (Articles 38a-38c).[3]

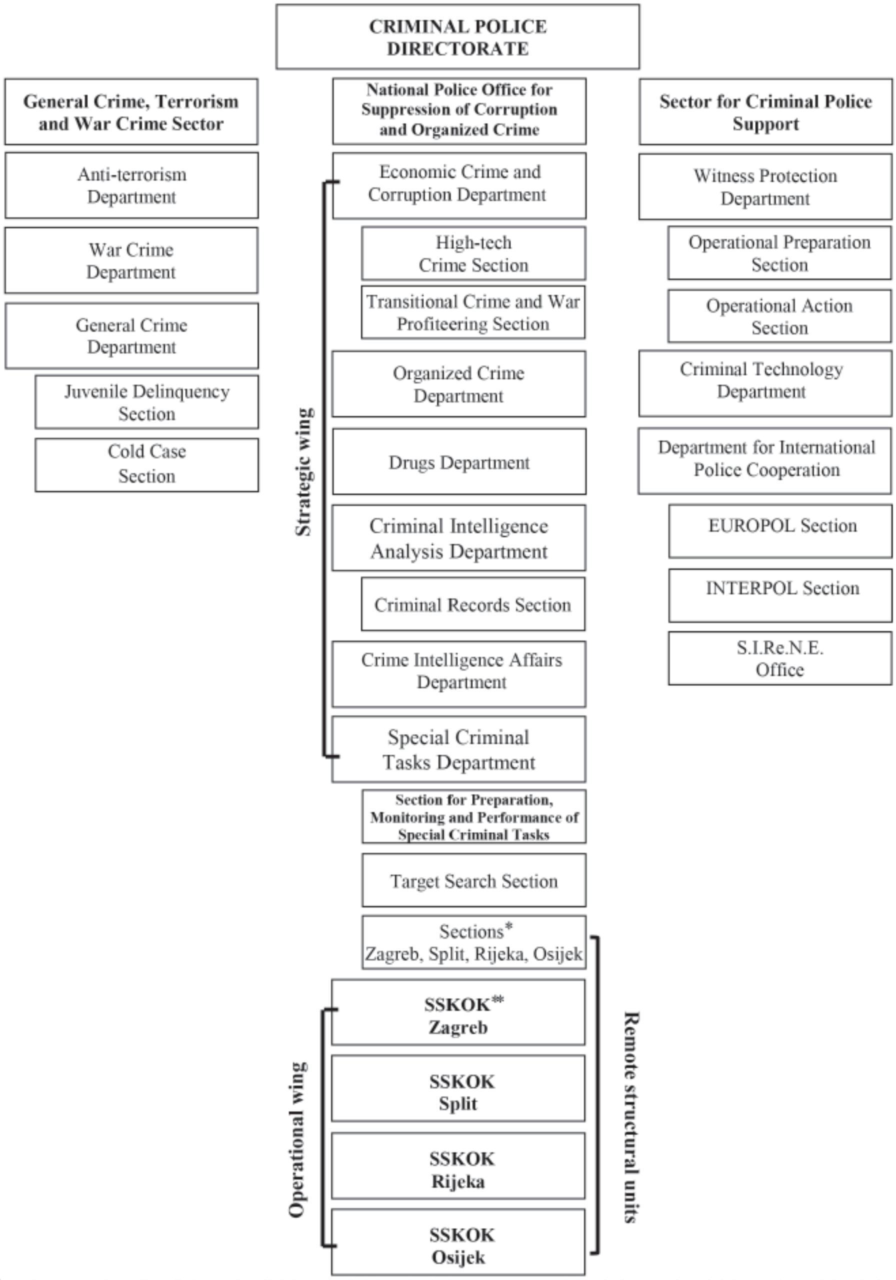
Criminal Police Directorate operates within the General Police Directorate and its position is strategic. Criminal Police Directorate consists of *centralized and remote* structural units (See *Organization chart 1*). Total number of structural units in the Criminal Police Directorate amounts to 43, 27 of which cen-

[2] The police system consists of several units of the police: criminal, regular, traffic, border, intervention, special

[3] In the *Protocol on Joint Work of the Police and State's Attorney Office During the Preliminary and Criminal Proceedings* (executed on 29 August 2011), cases (criminal offences) are categorized in a similar way: easier cases, difficult cases, complex and significant cases (Article 5). https://www.mup.hr/UserDocsImages/minstarstvo/zakoni/mup_dorh_protokol.pdf(14 March 2017)

tralized, and 16 remote units. Centralized units operate in the General Police Directorate head office in Zagreb. Remote units are located in the largest cities with the status of informal regional centres in the Republic of Croatia – Zagreb, Split, Rijeka and Osijek. There are four hierarchical categories of structural units within the General Police Directorate: sectors (2 + PNUSKOK), departments (16), sections (16) and divisions (8).

Organization chart 1. Structure of the Criminal Police Directorate – situation prior the reorganization



*Sections Zagreb, Split, Rijeka, and Osijek have 2 divisions in their structure: Special Criminal Tasks Division and Special Criminal Technology Division (Note: they are not shown in the organization chart due to its better transparency)
**SSKOK = Department for Suppression of Corruption and Organized Crime

National Police Office for Suppression of Corruption and Organized Crime (PNUSKOK) is the most important structural unit of the Criminal Police Directorate. Departments with the competence for *the most complex* forms of *the most significant* types of crime, such as – corruption, economic crime, organized crime and drug crime, operate within this Office. National Police Office for Suppression of Corruption and Organized Crime monitors and studies certain forms of corruption and organized crime, their trends and ways of committing and directly conducts more complex criminal investigations of corruption and organized crime at the national level. Criteria for determination of competence of PNUSKOK are *criminal investigations*: a) carried out on the territory of two or more county police administrations; b) which require international police co-operation and are carried out on the territory of several countries; c) which are directed towards prominent holders of the most serious forms of crimes; and d) which relate to the most complex forms of criminal offences in the domain of complex and organized crime.[4]

PNUSKOK operates simultaneously at two levels – strategic and operational. Accordingly, PNUSKOK structure includes the centre (*strategic wing*) and regional centres (*operational wing*). The centre consists of six specialized departments, three of which are "fundamental" (*Economic Crime and Corruption Department, Organized Crime Department and Drugs Department*). The other three are "logistic" (*Criminal Intelligence Analysis Department, Crime Intelligence Affairs Department and Special Criminal Tasks Department*). The operational wing consists of four operational *departments for suppression of corruption and organized crime* (SSKOK), which are located in Zagreb, Split, Rijeka and Osijek.

By means of *the Regulation on the Internal Structure of the Ministry of the Interior* (Article 32), it is regulated that the Criminal Police Directorate shall, among other things, directly conduct ***the most complex criminal investigations*** at the national level. Although referred to as the most important structural units of the General Police Directorate, PNUSOK departments from its centre or strategic wing, generally act opposite from the above-mentioned. The practice confirms this statement, but the description of scope of the above-mentioned departments shows discrepancy with the description of scope of the General Police Directorate.

[4] Regulation on the Internal Structure of the Ministry of the Interior (Article 33) (OG 70/2012)

For example, in the description of scope of the Organized Crime Department in the Regulation on the Internal Structure of the Ministry of the Interior (Article 34), it is stated that this department *participates in conducting* the most complex criminal processing at the national level; *i.e. it plans, organizes and monitors the inspections* of the most complex criminal offences and operational activities with regard to the implementation of operational projects at the national level. Drugs Department (Article 35) also *participates in conducting the most complex criminal processing at the national level*, as well as the Economic Crime and Corruption Department (Article 36).[5] PNUSKOK departments, belonging to its operational wing, are essentially more coherent with the operational dimension of the activity of the Criminal Police Department, when it comes to description of scope. Descriptions of their scope state that they *directly conduct the most complex criminal processing of corruption and organized crime at the national level.*

However, according to the above-mentioned descriptions of scope of structural units, **the most complex criminal investigations** remain exclusively in the domain of activity of the Criminal Police Directorate. Since this Directorate (generally) does not conduct them in practice, *the most complex*, as well as *more complex* criminal investigations are conducted by departments of the operational wing of PNUSKOK.

3. CRIMINAL POLICE DIRECTORATE – REORGANIZATIONAL IMPULSES

In theory and practice of organization and management, there is a very well-known typical three-level hierarchical structure of organization systems or entities – strategic, tactical and operational. Ideally, each of them has its own determined purpose and role in the functioning of organization. Reorganizational procedures arise from the necessity to improve the functionality of organization. Dysfunction can be the result of *external and/or internal circumstances*. External dysfunction affects those organizations that proved to be unsuccessful in identifi-

[5] It is necessary to emphasize the existence of a significant paradox. Within the Economic Crime and Corruption Department, there are two sections, with the description of scope stating that they *directly conduct* complex criminal investigations, but in practice such activities have almost never been done. Description of scope states that the High-tech Crime Department ***directly conducts*** *complex criminal investigations of criminal offences committed against and by means of computer systems and networks*, while the Transitional Crime and War Profiteering Section ***directly conducts*** *complex criminal investigations of criminal offences committed in transition and criminal offences of war profiteering.*

cation and anticipation of relevant changes in the surroundings, as well as in their own adjustment to them. Internal dysfunction can be caused by inadequate organizational system, whose inadequacy can be a *starting and/or subsequent*. It is possible to make mistakes in the beginning, but over time there is also the possibility of minor or major deviations and deformations in the structure and functioning of the organization or its individual components due to various circumstances.[6]

Reorganization of the Criminal Police Directorate is primarily initiated and inspired by the necessity for reorganization of its central component – the National Police Office for Suppression of Corruption and Organized Crime (PNUSKOK). The most explicit anomalies are recorded in the functioning of its strategic wing, as well as in the relation between strategic and operational wing. For example, these anomalies include *deviation, irrationality, distinction, alienation and uneconomic property*. Deviation of the strategic wing of PNUSKOK is evident in the fact that in its character it does not function as strategic, but as administrative or bureaucratic authority.[7] Irrationality arises from the incoherence of the existence of strategic wing of PNUSKOK, especially in the context of its non-existing or marginal focus and/or presence in specific criminal investigations. Distinction as anomaly is manifested through unnatural self-sufficiency of strategic wing, evident separation/isolation and low level of functional connection with operational wing. Alienation occurs as a result of distinction; it is a situation characterized by high level of alienation between strategic and operational wing, there is only a minimum level of communication between the officials at the strategic and operational level with evident distrust, repulsion, even animosity.

Uneconomic property of the system in question arises from multiple parameters, two of which can be mentioned: a) number of officials and the results achieved – comparison of strategic departments and operational wing – Zagreb Department (See Table 2); b) permanent necessity for hiring additional powers to maintain the functionality of the operational wing – Zagreb Department (even up to 50% of number of officials, estimated by systematization).

[6] Reorganization, the result of which can even be restructuring, is a planned change of the organizational situation for the following reasons: - occurrence of important organizational problems (stagnation, entropy), - introduction of new work processes, - increasing the volume of work, - the existing organization does not comply with the social changes (Jurina, 2008:23-24).

[7] Formulation of good strategy and its successful implementation are the essence and the final result of strategic management (Sikavica, Bahtijarević-Šiber, Pološki-Vokić, 2008:193).

Table 1. Organizational characteristics and work results of the strategic and operational departments of PNUSKOK

Strategic departments of PNUSKOK	Criteria	Operational department of PNUSKOK
Statistics, administration, letters, writs, meetings, work groups, commissions, committees, presentations, control, education, strategic documents, reports, international travels, international investigations (coordination, support) , memberships in the administrative authorities (Republic of Croatia, European Union)…	Main tasks	Criminal investigations, operational work, coordination with the Office for the Suppression of Corruption and Organized Crime (USKOK), cooperation with institutions, inspections of criminal offences, special evidence collection procedures, criminal charges, lookups, arrests, modus operandi, experts analysis, international investigations (executive, cooperation)…
Economic Crime and Corruption Department – 20 Organized Crime Department – 13 Drugs Department –10 Total = 43	Number of officials	Zagreb Department for Suppression of Corruption and Organized Crime = 52
No. of filed criminal charges– 3 No. of reported persons – 6 No. of reported criminal offences – 7 Material damage/benefit – HRK 1 million	Results (description)[8]	No. of filed criminal charges – 31 No. of reported persons – 353 No. of reported criminal offences – 517 Material damage/benefit – HRK 796 million
10% - PNUSKOK strategic departments	Results (share)[9]	40% - SSKOK Zagreb
5% - PNUSKOK logistic departments		15% - SSKOK Rijeka 15% - SSKOK Split 15% - SSKOK Osijek

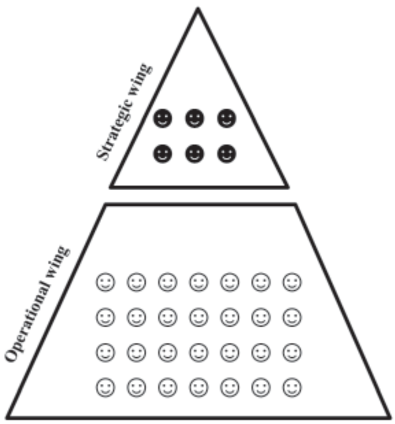
Recovery of the indicated organizational anomalies is carried out by establishing the hybrid model of the organizational structure of PNUSKOK. So far organizational and functional deficiencies, arising from the pseudo-strategic (bureaucratic) wing of PNUSKOK, have been partially compensated by the functionality and continuous personnel surplus of the operational wing of PNUSKOK (Zagreb Department). By fusion of the pseudo-strategic wing and the most powerful department of operational wing (Zagreb Department), it will be possible to achieve the internal balance/neutralization of the indicated illogical properties, as well as organizational balancing of the system, which will become harmonious and optimally functional. Partial fusion of the strategic and operational component of PNUSKOK will change its organizational

[8] Work results – taken form the Crime Review and Work Results of the Criminal Police in 2016 (internal document of the MoI)

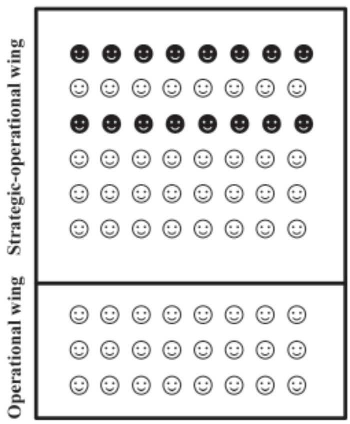
[9] Author's assessment (empirical and statistical approximation for the period of several years)

paradigm, that is, the existing *pyramid-distinctive* paradigm becomes the new *monolithic-integrative* (Scheme 1 and 2).

Without the adequate and specific involvement in the most complex criminal investigations, strategic component of PNUSKOK cannot fulfil its strategic meaning and role, except in bureaucratic and formalistic way. Activities of the operational component outside the adequate strategic context cause simplification and marginalization of the operational results it achieves. Partial fusion aims to achieve affirmative interaction and synergistic effects in functionality of PNUSKOK, primarily in term of operational, but also strategic plan. Every organization is a living organism that changes over time and has its own developmental stages. The subject hybrid solution can be considered as one of the developmental stages that approaches the current time (internal and external circumstances), but it also approaches the organizational structure of the Office for the Suppression of Corruption and Organized Crime (USKOK), which is particularly important fact. USKOK and PNUSKOK are two parallel authorities in charge of criminal prosecution; one belongs to the sphere of the State's Attorney Office, and the other to the Ministry of the Interior.



Scheme 1. Pyramid-distinctive organizational paradigm



Scheme 2. Monolithic-integrative organizational paradigm

It is expected that reorganizational procedures will cause reorganizational resistance or obstruction, whose common denominator is favouritism or forcing organizational *status quo*, as well as initiation and lobbying to implement the reorganization in a way significantly different from the proposed one.[10] The followers of such retrograde ideas primarily are the internal subjects or groups, involved in the reorganizational process. Reasons and forms of their reorganizational nihilism are various (objective, subjective, individual, group, constructive, destructive, egoistic, altruistic, inclusive, exclusive, and others).[11]

4. CRIMINAL POLICE DIRECTORATE – REORGANIZATIONAL INTERVENTIONS

Reorganizational interventions in the organizational structure of the Criminal Police Directorate (*Organization chart 2*), in terms of intensity or character can higher or lower. They are conducted by means of individual approach in a systematic way, using different reorganizational methods or techniques. These methods/techniques can be divided into major and minor (Table 2).

[10] All that is old is known, even if it is not good, it means relatively comfortable status quo. The new disturbs the established balance and faces the resistance directly ... It is much more difficult when the changes are greater because the resistance is greater as well (Marušić, 2006:48).

[11] Reorganizational nihilists often share the same level of solidarity and they consolidate their activities by formation of informal groups. Informal groups (Jurina, 1994:217) are spontaneous, unplanned and related to the satisfaction of certain specific needs of people in the organization.

Organization chart 2. Structure of the Criminal Police Directorate – reorganizational interventions

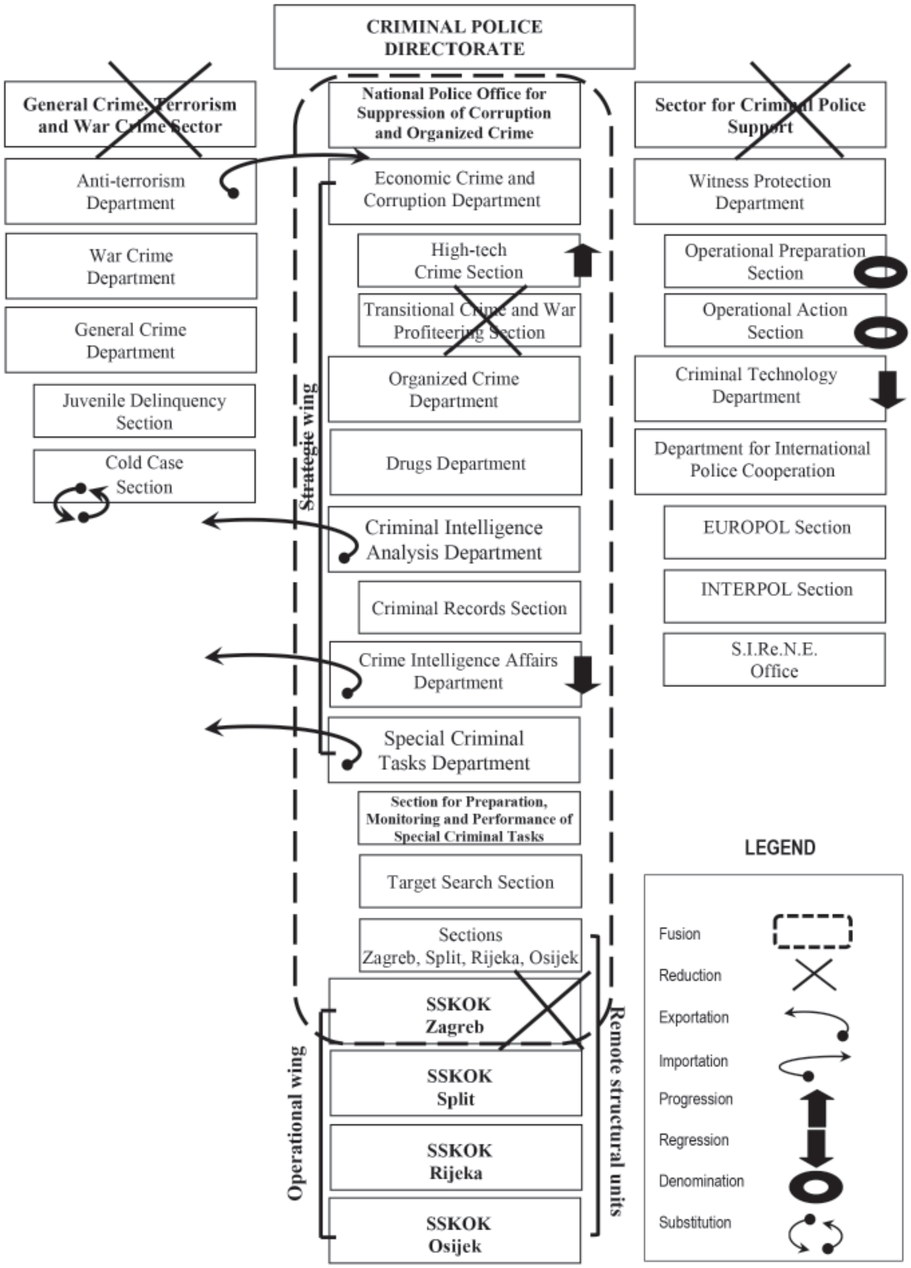


Table 2. Reorganization of the Criminal Police Directorate – reorganizational methods or techniques

Major reorganizational methods/techniques	Minor reorganizational methods/techniques	
Fusion	Emancipation	Denomination Renomination Unification
Exportation	Progression	Restriction
Importation	Regression	
Reduction	Patronization Substitution	

4.1. MAJOR REORGANIZATIONAL METHODS OR TECHNIQUES

Fusion as a reorganizational method or techniques implies not only mechanical, but also systematic, logical and functional integration of two or more existing structural units in a new organizational unit. In case of reorganization of the Criminal Police Directorate, two types of fusion have been carried out – *central and marginal*. *Central or core fusion* includes fusion of specialized line departments of the strategic wing of PNUSKOK (Economic Crime and Corruption Department, Organized Crime Department and Drugs Department) and the most powerful of four remote departments of the operational wing of PNUSKOK (Department for Suppression of Corruption and Organized Crime Zagreb). *Marginal or secondary* fusion includes a functional fusion of related departments that are exported from PNUSKOK by means of reorganization and are not its components anymore, but still stay in the Criminal Police Directorate. It is the Criminal Intelligence Analysis Department and the Crime Intelligence Affairs Department that will fuse, in a way that the latter is joined with the first, after which it will function as its component. This implies that the Criminal Intelligence Affairs Department will lose its current form of *department* and will continue its functioning as a *section*.

Exportation. As s reorganizational method or technique, exportation implies organizational *cleaning* of central structural unit (PNUSKOK) by exporting a part of its existing components into organizational corpus of larger organizational entity (Criminal Police Directorate). These *surplus* components are important for functioning of the central structural unit, but are not indispensable and represent a type of burden for its organizational structure. In the reorganizational processes of certain systems, some components become a surplus for various reasons. In case of reorganization of Criminal Police Directorate

(PNUSKOK), the main reasons for this are *character and area*. The character of the surplus components of PNUSKOK is not essential, but logistic (support), and the area of its activity is larger than the scope of PNUSKOK (it also comprises other structural units of the Criminal Police Directorate). According to these criteria, three of former components of PNUSKOK have been exported from its organizational corpus: the Criminal Intelligence Analysis Department, the Crime Intelligence Affairs Department and the Special Criminal Tasks Department. This is rather radical reorganizational intervention, given the fact that in the strategic wing of PNUSKOK, apart from the above-mentioned three (surplus) departments, there are exactly the same number of (essential, parent) departments that remain in PNUSKOK (meaning that the reorganizational ratio between the surplus and parent departments is 50% - 50%).

Importation as a reorganizational method/technique includes the organizational strengthening of the central structural unit (PNUSKOK) by importing external components from the larger organizational entity (Criminal Police Directorate) in its organizational corpus. Importation in a broad sense also covers the promotion of internal (or latent) components of the central structural unit from lower to higher positions in the organizational structure. These *deficient* components are complementary to existing components in terms of content, with the same or similar level of operational importance. By its importation, the functional integrity of the central structural unit is completed, and its organizational and functional capacities are increased. In the process of reorganization of the Criminal Police Directorate, in accordance with the previous criteria, the Anti-terrorism Department has been imported in the organizational corpus of its central structural unit (PNUSKOK).[12] In addition, importation has been carried out in a broader sense, in a way that the High-tech Crime Section has been extracted from the Economic Crime and Corruption Department and promoted to a higher position. Now it operates as an independent department within PNUSKOK.

Reduction as a reorganizational method or technique implies the organizational compression, primarily in the vertical sense, by means of which unnecessary hierarchical levels, *hybrid* structural units, have been reduced/eliminated. Generally, they do not have a specific purpose in practice, apart from being

[12] In the indicated context, the fact of the existence of the National Strategy for the Prevention and Suppression of Terrorism (Official Gazette 108/2015) is also important.

focal points for concentration (accumulation) and dissemination of information between their superior and subordinate structural units. Indicated hybrid structural units typically do not have any acting party; they have only one executive serving as a coordinator or mediator between two standard levels of management in the organization. Their existence hypothetically can contribute to better flow of information in the vertical, horizontal and diagonal sense, but it can also be the opposite of the above-mentioned. They can be a bottleneck of the communication system, their unnecessary and incoherent link – especially in the context of functional rationalization of the system. In the process of reorganization of the Criminal Police Directorate, in accordance with the above-mentioned criteria, its organizational corpus has been reduced in a way of elimination of its two structural units – the General Crime, Terrorism and War Crime Sector and the Sector for Criminal Police Support.

4.2. MINOR REORGANIZATIONAL METHODS OR TECHNIQUES

Emancipation as a reorganizational method or technique implies a critical stage of development of certain structural unit, when it is mature/ready to separate from its parent unit and to operate independently with full effects. Emancipation depends on internal factors (such as personnel and the other factors: organizational, legal, financial, logistic) and external factors (social, economic, political, legislative). Indicated factors impact the organizational structure of the certain system (organizational flexibility) directly or indirectly, to a major or minor extent. Emancipation is generally, essentially and mutually associated with the *progression* as a reorganizational technique.

Progression. As a reorganizational method/technique, progression includes the promotion of position of a certain structural unit within the organization corpus of certain organizational system or entity in terms of form and content. Progression automatically denotes strengthening of operational or functional capacities of structural unit in terms of personnel and organization, similar to the existing or expected complexity and intensity of problems under its competence. In case of reorganization of the Criminal Police Directorate (PNUSKOK), *emancipation and progression* of the High-tech Crime Section have been carried out in a way that is separated from the guardianship (tutoring) of the

Economic Crime and Corruption Department and its structural form has been changed from section into (independent) department.[13]

Regression as a reorganizational method or technique implies the simplification of position of a certain structural unit in terms of form and/or content, within the organizational corpus of certain organizational system or entity. Regression is basically manifested through lowering of structural form of certain structural unit to a level below the existing one. The reasons can be related to manoeuvring (restructuring) or essence (repositioning). Regression indicates personnel and organization stopping or weakening of operational and functional capacities of the structural unit, similar to the existing or expected complexity and intensity of the problems under its competence.[14] Regression is generally related to *patronization* as a reorganizational technique.

Patronization as a reorganizational method or technique implies putting one structural unit under the guardianship (patronage) of other structural unit or the installation of a structural unit in a lower position to the organizational corpus of the higher-positioned structural unit. Patronization denotes bringing the existing structural unit in a subordinate position in relation to the other structural unit (although previously they were equal or were not even in a direct correlation). They now make a unit with others subordinate structural units in terms of content and function. During the reorganization of the Criminal Police Directorate (PNUSKOK), *regression and patronization* of the Crime Intelligence Affairs Department have been carried out. Its structural form has been changed from department to section and it will now function as a component of the Criminal Intelligence Analysis Department.

Substitution as a reorganizational technique includes the systematic replacement of the existing structural unit with the new unit. This unit is different from the previous one with regard to the content, but they are generally similar. It is considered as necessary and up-to-date and it fits in the context and the continuity of functioning of certain organization system or entity. Substitution can be a result of modernization or updating of certain problems, the consequence of which is necessity for innovations or adaptation of the name or scope

[13] In the indicated context, the existence of the National Cyber Security Strategy and the Action Plan for the Implantation of the National Cyber Security Strategy (OG 108/2015) is also important.

[14] Regression of certain strategic structural unit does not have to imply the automatic regression of the respective work line in its entirety; it can keep the existing positions or even be enhanced at its operational levels.

of structural unit. The scope of the new structural unit that replaces the existing can be *extensive* (it includes the overall scope of the existing unit and the part of new competences) or *restrictive* (the scope of competence is more narrow/selective than the existing scope). During the reorganization of the Criminal Police Directorate, *extensive substitution* of the Cold Case Section has been carried out. It is now substituted by the Section for Suppression of Violent Crimes.

Denomination as a reorganizational technique implies a *nominal neutralization* of the structural unit, by means of which it formally ceases to exist and the tasks it involved have been reviewed and continue to function in a more flexible form of cohesion. Denomination is related to the principles of flexibility and rationalization, primarily in the sense that there is no necessity that every group of similar or related tasks is formally framed in some form of structural units, at all hierarchical levels within the system. By denomination of a structural unit, the position of its *formal* executive is also abolished. He is replaced by an *operational* executive (task manager or coordinator), whose role is *dual* – he is a direct acting party and organizer of performance of group of tasks. In case of reorganization of the Criminal Police Directorate, *denomination* of two sections within the Witness Protection Department (Operational Preparation Section and Operational Action Section) has been carried out, as well as eight divisions within the Special Criminal Tasks Department (Special Criminal Tasks Division and Special Criminal Technology Division).

Renomination as a reorganizational technique implies a *nominal adaptation or correction* of a structural unit in order to achieve conformity between the name and activities of structural unit, that is, a nominal complementarity between the structural unit and organizational system or entity to which it belongs. Renomination of structural units during the reorganization of the Criminal Police Directorate referred to: *emphasizing the purpose/essence* of their existence (for example, by adding the phrase "for suppression", the Anti-terrorism Department became the Department for Suppression of Terrorism), *correction of the description* of their scope (Target Search Section became Target Search and Precise Location Section) and *elimination of the nominal repetitiveness* (in the name of operational departments within the National Police Office for Suppression of Corruption and Organized Crime, description of their scope is removed as it is already found in the name of the structural unit to which they belong).

Unification as a reorganizational technique implies the standardization of terminology and content of related structural units or positions and their reduction to the minimum, while maintaining an optimal level of diversity and related flexibility of work processes. Unification presents the opposite of fragmentation and subspecialty. It eliminates their negative effects. In case of reorganization of the Criminal Police Directorate, the catalogue of positions of PNUSKOK has been significantly unified, in both the strategic and operational departments.

Restriction as a reorganizational technique implies the reduction of the existing dimensions of the structural units or organizational system in quantitative terms (number of employees, number of executives, number of structural units). The purpose of restriction is to maintain or improve the efficiency of certain organization in compliance with the principles of savings (cost reduction). Restriction is a synonym for the rationalization of the system. Reorganization of the Criminal Police Directorate has resulted in restrictive figures regarding the number of employees, executives and structural units.[15]

5. CRIMINAL POLICE DIRECTORATE – SITUATION FOLLOWING THE REORGANIZATION

Reorganization of the Criminal Police Directorate (PNUSKOK) is primarily based on the principles of rationalization and functionality. *Rationalization* implies *organizational cost-effectiveness* or the achievement of a more favourable ratio between the organizational efficiency (output) and organizational costs (input). *Functionality* implies *the organizational effectiveness* (to do the right things) and *the organizational efficiency* (to do things in a right way), that is, fulfilling the organizational mission in an optimal way. Numerical indicators of reorganization of the Criminal Police Directorate are shown in *Table* 3 and 4, and its visual results are presented in the *Organization chart* 3.

[15] The opposite method, expansion, was used only in one case - in establishment Passenger information unit (PIU), established under Service for international police cooperation. This was mandatory organizational engagement which arises from Directive of the European Parliament and of the Council of the EU on the use of passenger name record (PNR) data for the prevention, detection, investigation and prosecution of terrorist offences and serious crime.

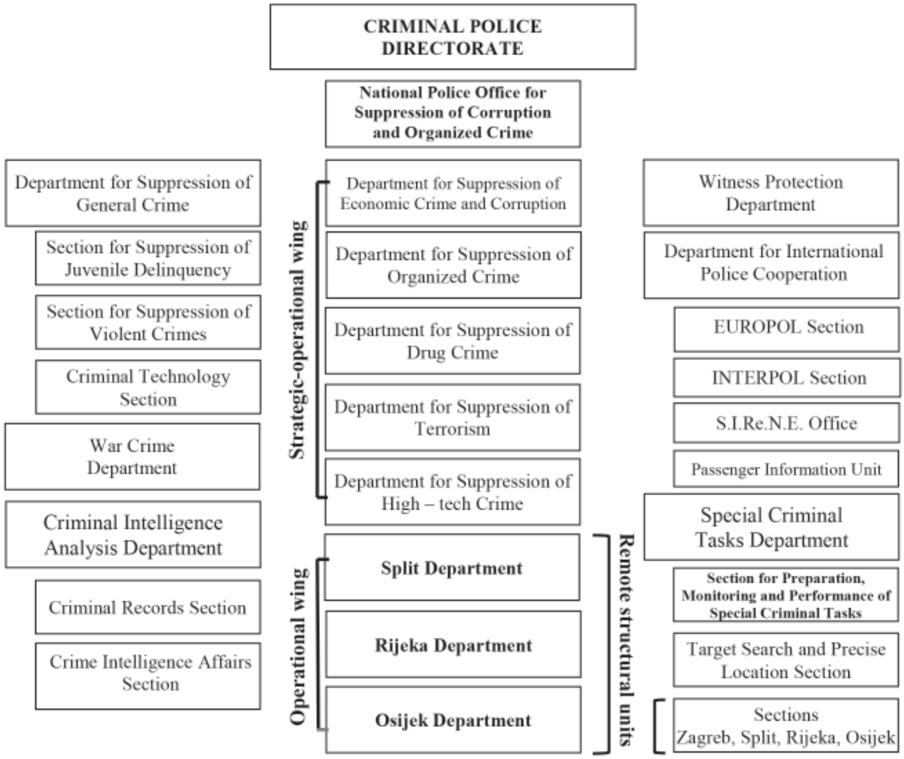
Table 3. Type and number of positions – situation prior and following the reorganization of the Criminal Police Directorate

Type of position	Situation prior the reorganization	Situation following the reorganization	Difference
Manager	51	37	-14
Executor	521	520	-1
Administrative staff	30	20	-10
TOTAL	602	577	-25

Table 4. Type and number of structural units – situation prior and following the reorganization of the Criminal Police Directorate

Type or structural unit	Situation prior the reorganization	Situation following the reorganization	Difference
Sector	3	1	-2
Department	16	14	-2
Section	16	15	-1
Division	8	0	-8
TOTAL	43	30	-13

Organization chart 3. Structure of the Criminal Police Directorate – situation following the reorganization



6. CONCLUSION

The essence of the criminal police is achieved by means of conducting criminal investigations in the structural units, at all three hierarchical levels of the police system: police stations, county police administrations and the General Police Directorate. Criminal Police Directorate operates within the General Police Directorate and it is a central structural unit of the criminal police. Within the Criminal Police Directorate, there is the "elite" unit of the criminal police - National Police Office for Suppression of Corruption and Organized Crime (PNUSKOK). The necessity for the reorganization of PNUSKOK was the main incentive for the reorganization of the Criminal Police Directorate in its entirety. Organizational and functional anomalies of PNUSKOK are evident in the functioning of its strategic wing, as well as between strategic and operational wing. Partial fusion of strategic and operational component of PNUSKOK was rated as an adequate reorganizational intervention, by means of which its organizational paradigm is changed from the existing *pyramid-distinctive* in the new *monolithic-integrative*. Without the adequate involvement in operational criminal investigations, the strategic component cannot be meaningful or functional. Without the adequate strategic context, the operational component can become disoriented and its results relativized. Both components are equally important and they will function only if they act as one organism. In the process of reorganization of the Criminal Police Directorate, a series of reorganizational methods or techniques has been implemented. These methods or techniques can be divided into *major and minor*. Newly established organizational paradigm is a hybrid solution, adequate in the present moment, but in future different organizational solutions are also possible and desirable. Reorganization is a complex issue, which needs to be approached very carefully, but decisively. *Monolithic-integrative paradigm* is a result of reorganizational efforts of current strategic management in the Croatian Police. Time is always important limiting factor and it is also present in this reorganizational context. General consensus of all organizational stakeholders is not possible, just like the ideal organization is not possible, nor it does exist.

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EFFICIENT MANAGEMENT OF COMMUNICATION - THE NEED OF MODERN BUSINESS ORGANIZATIONS

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Abstract

Studying of the role of modern models of communication in the contemporary society was quite neglected.The development and application of new models of Information and Communications Technology (ICT) have contributed to changing attitudes regarding the importance and the role of communication in different areas of the modern society and economic entities thereof. The subject of the paper is modern (new) models of communication in contemporary societies. The aim of the paper is to highlight the importance andthe role of new communication models and their application in all spheres of the modern society. Communicationconsumes most of the time that managers have at their disposal. They communicate with their superiors, subordinates, customers, clients, suppliers, partner companies and thus "knit a golden thread" of successful decision-making and business operations.

Keywords: *communication, new models of communication, information and communications technology.*

JEL Classification: D8, D83

1. INTRODUCTION

Research and education in the field of communications are never quite completed processes.This represents a special challenge for those who are just mastering the basics of communication skills. We can always learn something new, make progress and improve. For this reason, in the fields of education and training we cannot focus ourselves only on personal habits and needs of a single culture. We have to keep track of events especially in the immediate neighborhood, the Balkans, European standards, the theory and practice of business in the USA, and the specific manner of business communication in China and Japan. The times we live in and the information and technological revolution condition a dominant progress in the domain of communication. Changes are inevitable in the conditions of market economy in dynamic environments and high level of competition. They cannot be stopped and the only thing left for us to do is to adapt as quickly as possible. Changes are abundant and diverse. Among such a plethora of changes, the ones that stand out are the ones in the sphere of communication and adequate decision-making and especially in the field of information security. Managers require information for decision-making and obtain it through proper communication within the company and in their surroundings.

There is no communication if the transmitted information is not received and understood. Accordingly, the communication includes sending, receiving and understanding. Its importance for managers is obvious, given that a large portion of their time is spent on communication. Communication involves a transfer and understanding of the meaning of a message. The emphasis on the transfer implies that if no information and ideas are conveyed - there is no communication. A speaker that nobody hears or a writer that nobody reads has no communication. Communication implies understanding of meaning. Communication is obviously a bi-directional process, hence the necessityfor adequate protection.

Communication is a ubiquitous phenomenon, without which we cannot imagine functioning of business organizations. Communications are usually verbal, such as a family agreement, or non-verbal when we send a clear message that we are angry by frowning. In the process of communication, information is transmitted, which is used as the basis for certain decisions. The process of communication is bi-directional and consists of the activities of all participants, connecting a continuous chain of actions and reactions, involving at least two interlocutors, negotiators, partners, etc.In this process, there is no passive observer, even when one of the parties in a dialogue is more active in verbal terms. Interaction consists of the transmission and proper understanding of the message. Whether the recipient will accept and understand the message depends on the content of the message, the selection of specific signals, but also on means of communication and forms of functioning of the system of spoken and written communication.

2. FORMS AND MODELS OF COMMUNICATION

Forms of communication

The most significant moment in the communication process is the transfer of information (notifications, reports, data) that also involves a way of organizing, selecting and creating a specific content. Information should be reliable, validated, controlled and protected but also dynamic and subject to change. In fact, it is a communicative dynamism that plays an important role in the communication process. The process of information flow is complex and consists of: sending and receiving, the correct interpretation of certain messages and feedback reactions. Information and public speaking are sometimes quite wrongly associated solely with the mass media (electronic and printed), which narrows the field of activity for these categories, and exempt an individual from liability in individual contacts. However, responsible conduct is equally important in the contact with a single person, as well as performing in front of a large audience. In this sense, four types of communication are distinguished: intrapersonal, interpersonal, group and mass.

In order to convey messages and various kinds of information, regardless of the type of communication, established signals, signs, terms and other elements are selected. Business interaction and public speaking differ from everyday speech as they require special preparation, apart from the application ofrhetoric skills. Business interaction in the modern sense, requires a mastery of a complex system of verbal communication, and should be: enriched, informative, argumentative, competent, and dynamic. Communicative dynamism is reflected in the way of message transmission. During the transfer of information, the most dynamic parts of a statement can be emphasized and codes which lead to the discovery of the meaning of the message during and exchange of information are chosen. This means that thoughts must be shaped in a simple way (to communicate understandable visualization of ideas) in order for the interlocutors to understand them. A manager, by accepting certain conventions of communication, behavior and conduct, can influence the recipient in the most constructive and most objective ways. He has a complex task: how to convey the message and the meaning to the recipient in the desired context. This means that he needs to find a system of signs which will correspond to the widest audience (employees) and contribute to a clear, specific, realistic and objective communication of the message. In doing so, the employee feedback is an indicator of the degree of understanding. Sometimes it happens that messages are not sufficiently understood or completely misunderstood and misinterpreted, leading to tensions in communication, misunderstanding and even disagreements and conflicts. Therefore, it is not important to convey specific information and ideas (message content) but ratherthe way in which messages are transmitted is what is of essential importance. The methods for establishing and transmitting messages contribute to understanding. Communication can be classified in several ways. However, all aspects of the classification will not be analyzed since more attention will be paid to modern (main) forms of communication, as they are almost inevitable in the work of entrepreneurs and managers.

Intrapersonal communication

Intrapersonal communication implies a conversation with oneself but it is also an exchange of messages with an imaginary interlocutor, a real or metaphysical being, directly or indirectly. Intrapersonal communication is an essential driver of evolutionary nature of the subject, their thinking, feeling, artistic and scientific creation, conscious and unconscious processes. Intrapersonal communication is like an organized thinking in the form of a dialog, i.e. talking to oneself, in a broader philosophical sense "to think is to have a conversation with oneself" (Šušnjić, 1984). Human spirit can talk with oneself because it is in its essence bisectional and contradictory. Itis aware of the bisectional situation and strives to overcome it by talking to someone else within itself. The other part is the unconscious, the source of unimaginable power. "In the absolute solitude, each of us needs at least our own double to contest us in every thought and act; everyone can stagefor themselves spiritual battles in their own heads. In eachman, therehidesa possibility that he may tower over himself, to remember himself, to question himself and be reborn before his own eyes; It takes him towards a deeper and broader understanding of himself and the world around him"(Šušnjić, 1984).

Interpersonal communication

Interpersonal communication is an elementary and the most widespread form of social communication, equally important for a human in a far prehistoric time when it represented the only form of communication practice, in the modern epoch, characterized by a predominance of mass media, as well as in the near or distant future that will be shaped by the electronic chip and multimedia computer network. Boththe elementary nature and omnipresence of interpersonal communication present an expression of the fact that man is a social being oriented towards social life, but not in abstract communities or theoretical social categories, but mainly in primary groups,from families to various referential forms of grouping. The largest part of our social livespasses, in fact, in verbal or non-verbal interpersonal communication. Interpersonal communication represents the reciprocal exchange of messages between two or more individuals, directly or indirectly, with reciprocal switchability of the roles of communicator and recipient and immediate feedback in the process of exchange of messages. People in general, due to their social nature, find themselves in the role of the subject of interpersonal communication, i.e. the communicator and the recipient, on a daily or even better, hourly basis. Such nature that drives them to communication, i.e. dialogue, is determined by three philosophical assumptions. The first is the ontological one: incompleteness of a person who needs anotherperson to achieve the completeness of their own personality. The second assumption is gnoseological: person's search for the truth about themselves, which is always incomplete. And finally, the third assumption is axiological: a desire to create a new value through conversation.

Group communication

Group communication is an exchange of messages between one or more communicators with many recipients, directly or indirectly, within the permanently or ad hoc organized social groups, the criterion of their organization being a common current or permanent interest of individuals for a predetermined content framework for communication in a certain area and within a certain period of time.

In practice, group communication appears in four different forms. The first is to communicate ex cathedra in classrooms, political forums, literary events or in churches. The second is a theatrical communication in theater, opera, ballet and circus. The third is communication in rallies, and the fourth is communication in an arena for all sporting events. In all of these typical forms of group communication, there is always the lowest common denominator of the interests of participants in the process of communication and it is the very content of communication. Unlike the intrapersonal communication, which is an expression of our cognitive predestination, interpersonal communication is the one that the others may impose on us, or the exposure to the mass media communication, which is often a matter of habit and acquired communicative reflexes in the contemporary society, we enterinto group communication with the premeditated intention. We enter a class in school in order to talk and listen about mathematical equations; we go to the theater in order to take part in or watch a particular show; we go to a political rally to ask for or give support and, finally, we go to a football match to score goals or watch them being scored.

In a group communication situation, an individual or a primary group always appears on the side of the communicator (an action group, a writer and several literary critics, a group deciding on the presidency of a political party, a group such as a basketball team). The reception side, however, is determined by forms of group communication.

Mass communication

Mass communication as a form of communicative practice that appeared with Guttenberg's discovery of the printing press in the mid-15th century, is a subject ofa vast number of pages in scientific, professional and artistic books. Mass communication is a civilizational phenomenon which has rotatedhuman universe at an incredible speed. Knowledge about itis not final because every new medium of mass communication has showed the process in a different light, which is largely dependent on the range of social and cultural contexts in which it was implemented, but the mass communicationhas had, in turn, an essential, sometimes even crucial, influence on itschange. Unlike other forms of communication that are implemented directly or indirectly, mass communication is always media mediated communication between communication centers and dispersed audience. Itsother feature is that it is organized and institutionalized. A distributor of a message is no longer a lonely writer from the time before the Bourgeois Revolution in France, if it ever was, but a cumbersome professional organization, a social institution permeating all aspects of social life, embedded in a system of valid social norms, cultural patterns and value standards. The next massive distinction in relation to other forms of communication is that it is necessarily a public type of communication. Mass communication in general could not be organized as a secret communication. Messages that are distributed in the mass media must correspond to the interests of the widest circle of recipients in terms of their relevance.

An important distinction of mass communication in relation to other forms of communication is the inability to establish direct feedback, except fora limited number of cases, between spatially, temporally or both spatially and temporally separated communicators and recipients. The process of expansion of mass culture products received a tremendous acceleration with the changes that are happening in the field of mass communication, which is characterized by: expansion (media technology, production, flow and reception of media content, the struggle for predominance of media moguls), globalization (infrastructure, proprietorship, content, distribution, reception), commercialization (control, content, financing), fragmentation (organizational structure and function), the convergence of different media and security sensitivity. Mass society has entered into its highest stage - the information society, in which we are overwhelmed with an incredible amount of messages, with disproportionately little prospect of their rational reception.

It is true that new media technology has relativized national borders in mass communication and that the former monocentricity in broadcasting is replaced by diversified polycentricity. Namely, the creator of the program package is an individual with a remote control in their hand and the emphasis in the message reception is no longerin the broadcastingunit but in the unit which receives the content. However, a formal possibility of choice within the same form of media is notactually a choice. Media repertoire creates a numerous, media drugged auditorium that switches aimlessly from channel to channel, looking for the lost kind of originality. Communication equality, regardless of the relativization of the role of communication centers through their enormous multiplication and seductive choice in a variety of the samecontent, cannot be established in the process of mass communication.

3. COMMUNICATION IN A BUSINESS SITUATION

The term "communication"signifies an activity of communicating between individuals or groups in order to effectively convey information and understanding thereof. Therefore, communication is one of the components of an organization, because the connections between the elements of the organizational system are establishedthrough their mutual relationship and information exchange. Being well informed is one of the conditions for successful communication. In addition, it is essential that information is not only addressed by one person to another but also to be accepted and understood. Managers of organizations, as well as leaders of other social groups therefore strive to enable better sending and reception of messages and exchange of informationin order to enable their organization to function successfully (Stavrić, Stamatović, Kokeza, 2005). Communication can be explained as a system of connections between people. However, these connectionsare not technical in nature, such as parts of complex devices connected with pipes and wire conductors for the purpose of mass and energy transfer. It is rather a process of transferring information from one person to another, provided there isreception and understanding thereof. For this reason communication is an activity of the management in the process of planning, organizing, human resources, control and protection.

Managers of organizations spend a considerable part of their time on the process of communication. Communications enable managers to inform employees about the planned tasks, to provide them with the information required fordecision-making and to facilitate the coordination of the work of all members of the organization. By communicating, managers persuade, inform, motivate and lead individuals towards achieving the planned target of the organization. When communication is viewed from a broader perspective, it can be concluded that the entire organization appears as a vast network of communication channels and information flows. These are telephone lines, business correspondence, computer reports, meetings of management and professional teams and other forms of communication within the organization, as reflected in the daily operation of the organization.

Communication models

Internal communication is a dynamic and complex process that has gone through different stages. Previous models were focused on the unidirectional transmission of messages, such as S-M-C-R model (Shannon, C., & Weaver, W., 1949), where one source of information encodes the message and delivers it via the selected channel to a certain receiver who decodes it. Subsequent versions of the model added a feedback from the receiver to the sender, but the model still remained focused on the sender. Later models emphasize the transactional nature of the process and how individuals and groups give purpose and meaning to organizations through communication (Harris, T.E. & Nelson, M., 2008). They also emphasize that apartfrom basic elements of the model, what is also important arethe culture in which communication occurs, the attitudes of the sender and recipient, as well as a strategic choice of communication channels.Today'smodels are much more complex, primarily due to the rapid development of technology and new media, but also the ability to encompass more parameters. The foundation of success of a program of internal relations lies in the concept of trust, authority and effective communication (Proctor, T., & Doukakis, I., 2003). Some authors distinguish between communication and efficient communication. Efficient communication may differ from communication (bi-directional exchange of messages without action) and giving information (uni-directional sending the message), (Kalla, H., 2005). To make communication efficient, the message must be received clearly and only as such it can result in action. Another important dimension that should be mentioned is that employees cannot be regarded as a homogeneous group. Sims and Galpin (Sims, D., & Galpin, S., 1998) make a distinction between "elite knowledge workers" and "operative workers". Apart from that, their work depends on factors such as the status of the organization, the structure of the group, as well as the position and amount of "virtual" time spent. Communicationis an organization or an organization cannot exist without communication. This means that communication is closely related to the core of the existence of any organization. Through communication, information is transmitted in order to clearly understand the tasks that should be undertaken as well as the objectives which the organization strives to accomplish. Kalla (2005) defines organizational communication as "a complex and continuous process through which members of the organization create, maintain and change the organization". The very association of organizational communication with the concept of changes gives significance to communication in an age when organizations are faced with a dynamic environment that is constantly changing. Advantages of quality communication, for instance, cover primarily the satisfaction with communication, enhance productivity, reduce absenteeism, increase level of innovation, reduce number of strikes, enable high quality of products and services and reduce costs (Clampitt, P. & Downs, C.W. 1993). All of these activities and characteristicsare the result of the effects of communication channels.

Bi-directional communication is necessary for a successful and efficient operation of an organization. Therefore, it is imperative that organizations implement all methods of communication. Many theoreticians and practitioners claim that many employees do their jobs more efficiently if they participate in the decision-making process, and that is possible only if they are fully informed. Individuals must understand the objectives and feel loyalty. The management must listen to their employees and must respect the ideas and criticisms in order for the communication to be bi-directional. A harmony between employees and management ensures good communication, which focuses on relationship, not just the delivery of information from one side to another. Connection, and not the delivery of information, gives a sense of freedom in cooperation.

4. RESULTS OF RESEARCH IN BUSINESS ORGANIZATIONS

Size of business organization

Business organizations in which the research was conducted have mostly over 100 employees, accounting for 62.5 percent of the total number of companies that participated in this study (Chart 1). However, this does not mean that the situation is similar with the number of business locations. Namely, Chart 2 clearly shows that the percentage of business locations from 11 to 100 and over 100 is the same (37.5%), while 2 participants (25%) stated that they have up to 10 business locations. These data lead to quite a logical conclusion that the number of employees in business organizations is not crucial for the formation of a large number of business locations.

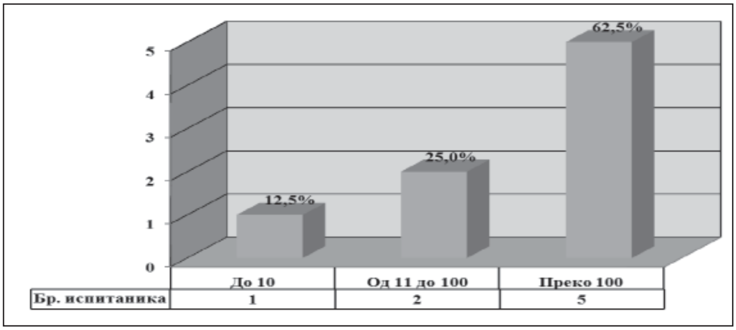

Chart 1: Number of employees

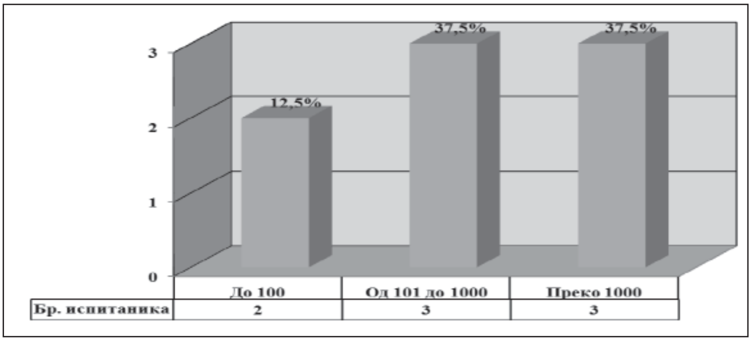

Chart 2: Number of business locations

The level of development of communication systems

It is realistic to expect that the number of communication connections is in accordance with the number of business locations, for reasons of uniformity of industry standards in the field of communication technologies in enterprises, i.e. small businesses and entrepreneurship. (Chart 3).

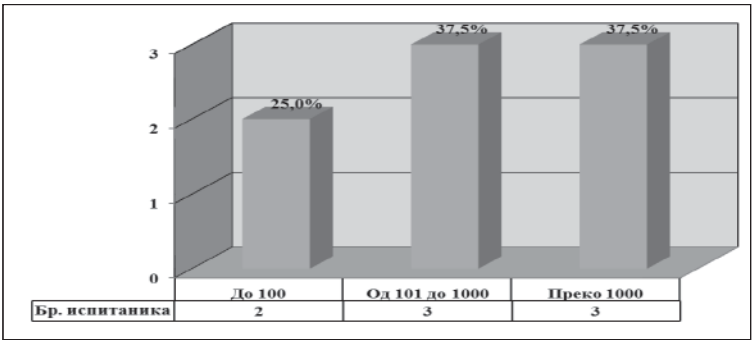

Chart 3: Number of communication connections

A similar trend can be noticed in the number of communication units (including mobile devices) and the number of internet connections, which can be seen in the graphs 4 and 5 respectively. These data point to the conclusion that the level of development of information systems is conditioned by a number of communication connections, communication units and Internet connections.

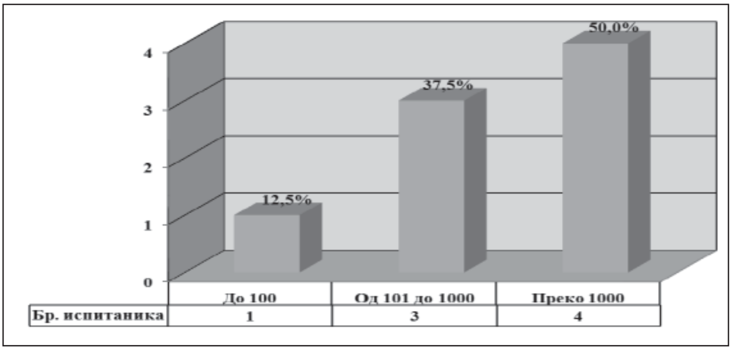

Chart 4: Number of communication units

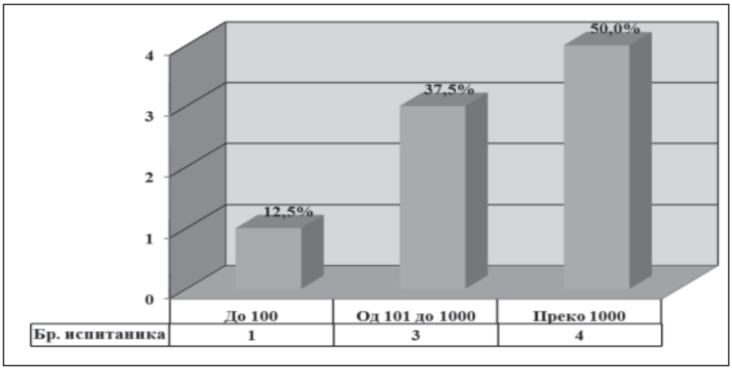

Chart 5: Number of internet connections

A higher level of development of the Information System

Social networks are an increasingly popular way to communicate over the Internet and are perceptibly replacing emails. Social communication has become significantly increased due to the rapid development of social networks and established modes of business models are also changing. Social networks, for example, are becoming the ideal platform for building and managing positive online PR strategies and 'word of mouth' marketing.

However, the results of this research (Chart 6) indicate a certain amount of caution the organization exercise in using social media as a part of the business process. For these reasons, only 37.5 percent of the surveyed organizations use social networks in their business processes and 62.5 percent of them do not.

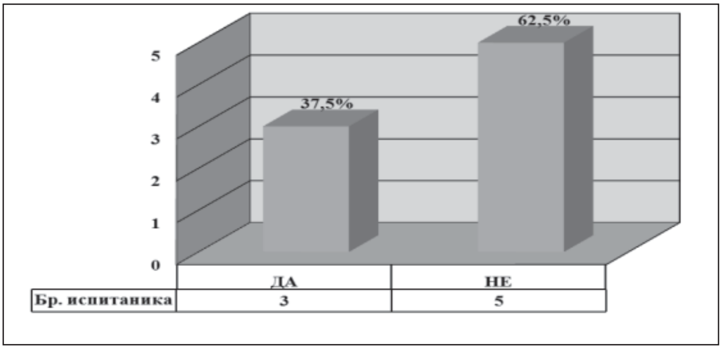

Chart 6: Using social networks as a part of business processes

Today, in the field of communication, there is a growing interest in new information technologies. In this context, we talk about "Cloud Computing", since the information technology will be treated as a service in the future. Despite the many advantages of using cloud computing services, they are poorly represented within the business processes (Chart 7). Namely, only 25 percent of respondents said that their organizations use new technologies in their business processes, while 75 percent of respondents said that they do not.

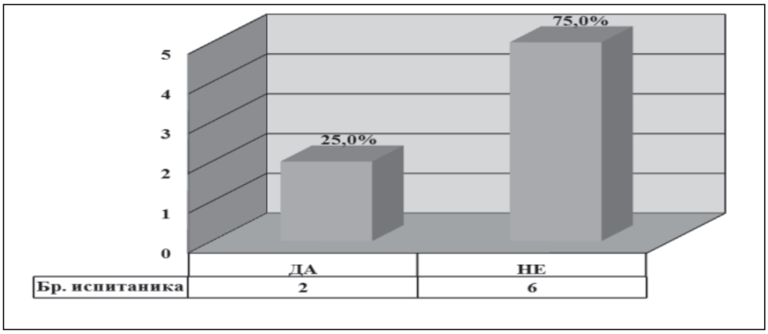

Chart 7: Using computing clouds as a part of business processes

5. CONCLUSION

Business operations and business environment are no longer the same but the fact remains that life itself is not the same as it used to be. Primarily, the aim of this research was toinvestigate the application of new models of communication and its application in business systems, as well as personal relationships and social spheres and to determine the relationship of new technology towards the developmentof new models of communication between employees in the area of vocationally defined fields of internal communication in business organizations. We have researched how a participation in communication networks influences the development of a business organization and the level of satisfaction of employees with communication in organizations. The assumption was that with the measurement of communication performance,various aspects of communication climatein the relations of employees in business organizations can be improved. Communication through new models of communication is useful for several reasons: employees are more satisfied because communication through new models of communication creates a friendly atmosphere, they are more committed, more open, more engaged, more productive and have more confidence, because they feel loyalty to the organization and participate in the management and decision-making processes. Employees identify with the organization, i.e. they identify the goals of the organization with their own goals, which is very important. Communication with colleagues can take place without obstacles, geographical and temporal constraints. We can track the status of colleagues (at which location they are, whether they are busy or available, whether they are in "the mood" for communication), we can exchange information in various and diverse formats such as texts, photos, videos, and so on in a much easier and faster way.

New models of communication are used to inform employees but above all to achieve goals, that is, to achieve an effective and efficient role of management in business organizations.

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MEASURING QUALITATIVE CHARACTERISTICS OF DISCLOSED NON-FINANCIAL REPORTS IN CROATIA

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Abstract

Given that sustainability reporting has not been standardized and the existing frameworks emerge from and reflect a worldview or an ethical system, resulting with sustainability reports differing greatly within the same industry and even within the same (profit) organization (structure, number of pages, information provided, etc.), the quality of the non-financial information disclosed is becoming of a greater concern. The GRI framework sets forth sustainability reporting quality principles and provides tests to assess whether the reporting principle has been applied. The focus of the research were non-financial reports disclosed by companies registered in Croatia as an EU member state, thus being subject to the Directive 2014/95/EU regarding disclosure of non-financial and diversity information by certain large undertakings and groups. The pur-

pose of the research was to assess the quality of sustainability reports measured by the framework set forth by the GRI Standards.

Keywords: *non-financial reports, qualitative characteristics, GRI Standards*

JEL Classification: D6, D63

1. THEORETICAL BACKGROUND

Numerous frameworks dealing with tracking sustainability topics pose a question as to which framework is appropriate to apply in order to deal with sustainability issues in a business organization. Those frameworks differ on the basis of what their purpose is as to their features, and can be classified as aspirational principles and codes of practices (UN Global Compact, OECD Guidelines for MNEs, etc.), management systems and certification schemes (SA 8000, EMAS, EU Eco-label, etc.), rating indices (DJGSI, FTSE4 GOOD, etc.), accountability and reporting framework (GRI, AA 1000S); they also differ on the focal point of sustainability dimension they represent, for not all of them provide guidelines for economic, environmental and social issues (Perrini, 2005, para. 614). Since sustainability is viewed through economic, social and environmental dimension, the preferable framework to apply would be the one dealing with all three dimensions. Based on these features, each organization is to decide which framework suits best its needs.

With some authors considering sustainability reporting process very similar to the conventional financial reporting process, specifying its three elements - inputs, process and outputs (Brockett & Rezaee, 2012, p. 41), and a trend of disclosing non-financial information becoming mandatory in a growing number of countries, the quality of information presented has come into focus of many researchers (Chauvey, Giordano-Spring, Cho, & Patten, 2015; Freundlieb, Gräuler, & Teuteberg, 2014; Hąbek & Wolniak, 2015; Herriott, 2016, 96). Primary attempt of these researches was to define and measure qualitative characteristics from the point of the FASB and IASB, internationally recognized accounting bodies for financial reporting (Freundlieb et al., 2014).

At the end of 2016, the Global Reporting Initiative has begun a process of developing GRI Standards (GRI, n.d.), which are to replace the current GRI Guidelines (GRI, 2014a, 2014b), changing a structure of and an approach to disclosing sustainability information as compared to the guidelines. GRI Standards are so-called latest evolution of the GRI G4 guidelines and are structured as follows:

- GRI Standards – Universal standards:
- GRI 101: Foundation – starting point for using the GRI Standards,
- GRI 102: General Disclosure – to report contextual information about an organization,
- GRI 103: Management Approach – to report management approach for each material topic;
- GRI topic specific standards (emanating from GRI 103, Management Approach):
- GRI 200: economic,
- GRI 300: environmental,
- GRI 400: social impacts.

Being recognized as very similar to the conventional financial reporting process (Brockett & Rezaee, 2012, p. 41), this research framework on non-financial reporting was grounded in the previous research on the quality of financial statements (Beest & Boelens, 2009)comparability, verifiability and timeliness, with an emphasis on the quality of non-financial disclosures defined by one of the globally accepted sustainability reporting guidelines, GRI Standards.

2. RESEARCH SAMPLE, FRAMEWORK, AND METHODOLOGY

The sample for the research was formed according to the list of companies registering 400 and more employees, retrieved from the Croatian Company Directory at the beginning of 2016. In order to assess the quality of non-financial reports disclosed by companies in Croatia, the GRI Standard's definition of quality was utilized for operationalization of the quality of non-financial reports.

2.1. Research sample

With the EU Directive 2014/95/EU oriented towards large undertakings, groups and big companies registering 500 and more employees (EC 2013 art.2; EC 2014), the research conducted in 2016 was focused on companies registered in Croatia having 400 and more employees, with the assumption of their growth in the upcoming years. Content analysis was done on any form of non-financial disclosures (environmental reports, annual reports, social reports, etc.) for the year 2014 for a few reasons:

- these reports are usually made public in the second quarter of the financial year in Croatia, or even later, and reports for 2015 were not available at the time of gathering these reports for analysis;
- being voluntary, companies decide their own pace of publishing non-financial reports (on a yearly basis, every two years, etc.), implicating inconsistency in non-financial reporting and not disclosing these reports on a yearly basis;
- recognizing its importance, companies shift in their reporting practices from non-disclosing non-financial information, to disclosing in annual reports, to reporting these information in a separate report employing one of the internationally accepted frameworks, which prolongs the date of publishing these reports in a financial year, making it inaccessible to the stakeholders.

The list of companies registering 400 and more employees was retrieved from the Croatian Company Directory (Croatian Chamber of Economy, n.d.), resulting in 179 companies registering 500 and more employees, and 42 companies registering 400 – 499 employees in 2014. The websites of those companies were searched for available reports disclosing non-financial information. If reports were not available on their websites, additional research was done via Google search by means of key words that were previously determined.

Directive 2014/95/EU recognizes companies (undertakings) that are members of groups of undertakings and allows consolidated non-financial reports to be prepared so that the information concerning those groups and undertaking can be conveyed to members and third parties (EC, 2014, para. 15). Since many of the companies retrieved belonged to a business group, after their coding there were available only 19 non-financial reports disclosed by companies with 500 plus employees and 19 non-financial reports disclosed by companies not being members of any of the groups. Non-financial reports were searched for these same companies for the year 2015 (or, their latest publication).

2.2. Research Framework and Methodology

In the GRI 101 Foundation, the GRI has provided reporting principles for defining report content and reporting principles defining the report quality. The research framework for measuring and assessing the quality of non-financial reports has been grounded in the GRI Standards defining the report quality (GRI, 2016, p. 7), as shown in table 1.

Table 1: Sustainability reporting qualitative characteristics

Reporting principles for defining report quality	Description
1. Accuracy (AC)	The reported information shall be sufficiently accurate and detailed for stakeholders to assess the reporting organization's performance.
2. Balance (BA)	The reported information shall reflect positive and negative aspects of the reporting organization's performance to enable a reasoned assessment of overall performance.
3. Clarity	The reporting organization shall make information available in a manner that is understandable and accessible to stakeholders using that information.
4. Comparability (CO)	The reporting organization shall select, compile, and report information consistently. The reported information shall be presented in a manner that enables stakeholders to analyze changes in the organization's performance over time, and that could support analysis relative to other organizations.
5. Reliability (RE)	The reporting organization shall gather, record, compile, analyze, and report information and processes used in the preparation of the report in a way that they can be subject to examination, and that establishes the quality and materiality of the information.
6. Timeliness (TI)	The reporting organization shall report on a regular schedule so that information is available in time for stakeholders to make informed decisions.

(GRI, 2016, pp. 13–16)

For each of the qualitative characteristics, the GRI has provided a set of tests, or statements, that are to be used as tools to help organization assess whether it has applied the principles (GRI, 2016, p. 7). The quality of non-financial reports was operationalized by utilizing these qualitative characteristics tests (table 3), on a six-point rating scale to assess the scores of the tests.

Environmental and social information were the focus of the research and were assessed by two independent raters. Due to voluntary nature resulting in diversity of non-financial reports (e.g. title and focus of the report, number of pages, format of presenting information, presenting external links for the disclosed information, numeric information vs. descriptions, etc.), there was an assumption that raters might choose a neutral point, therefore by forming an even scale of assessment, the raters were to decide on the degree of the quality of presented information. Due to individuality of disclosing non-financial information in reports, the raters found it difficult to assess the two following tests, for which reason they were excluded from the assessment (GRI, 2016, p. 13,15):

- Accuracy, pt. 3: the margin of error for quantitative data is not sufficient to influence substantially the ability of stakeholders to reach appropriate and informed conclusions;
- Comparability, pt. 2: the reporting organization's performance can be compared with appropriate benchmarks.

Due to their nature, these tests are to be assessed by the organization's staff preparing these reports. With these two tests excluded, assessment of the quality of non-financial reports was still possible, for every qualitative characteristic had several tests for evaluating the application of the qualitative principal in the reporting process.

3. RESEARCH RESULTS, LIMITATIONS AND DISCUSION

The focus of this section is on the assessment of quality of the non-financial reports as a whole and their individual qualitative characteristics. Although there were some limitations, the research results produced a discussion and suggestions for improvement of the non-financial reports and reporting processes.

3.1. Research results

In order to assess the quality of non-financial reports, standardized scores were computed by adding the scores of each test and dividing by the numbers of tests for each characteristic (table 3). The scores were then computed for all qualitative characteristics (table 2), resulting with a score between 1 and 6 for all qualitative characteristics (1 = non-existing; 2 = very poor; 3 = poor; 4 = good; 5 = very good; 6 = excellent).

Table 2: Analysis results

Qualitative characteristics	Mean	Median	Mode	Std. Dev.	Minimum	Maximum
Accuracy	3,1302	2,8750	2,50	1,33961	1,00	6,00
Balance	2,9745	3,0000	1,67	1,36106	1,00	6,00
Clarity	4,2795	4,5000	4,75	1,00892	1,00	6,00
Comparability	2,7731	2,6667	3,00	1,11892	1,00	5,67
Reliability	2,3403	2,0000	1,00	1,32308	1,00	5,75
Timeliness	4,9340	5,0000	5,00	1,01431	1,00	6,00

Source: Authors' calculations

The qualitative characteristic with the highest score were **timeliness**, scoring 4,9, and **clarity** scoring 4,2, which is not surprising considering the operationalization of these two characteristics. The timeframe was clearly indicated in almost all of reports by indicating the year(s) in the report title, whereas some reports that were created by literally following GRI guidelines had stated the timeframe with further explanation referring to it. Organizations were quite clear in disclosing information that is understandable and accessible to stakeholders, for the information presented were mostly accompanied by tables of contents, maps, links and other aids, like GRI Index, and most of it was presented in a section predicted for non-financial information, and mostly used common wording and phrasing in disclosing those information. Some reports were written in two languages, the mother tongue of the company's headquarter parallel with English language as one of the most commonly used languages in business settings. Nevertheless, some reports were poorly assessed due to presenting excessive and unnecessary details, and piling the number of pages to the report, and thus losing the purpose of reporting.

Table 3: Operationalization of qualitative characteristics of non-financial reports

Qualitative characteristics	Items	Mean	Median	Mode	Std. Dev.	Mini-mum	Maxi-mum
Accuracy							
AC1	The report indicates the data that have been measured.	3,92	4,00	5	1,46	1	6
AC2	The measurements for data, and bases for calculations, are adequately described, and can be replaced with similar results.	2,85	2,00	2	1,62	1	6
AC4	The report indicates which data have been estimated, and the underlying assumptions and techniques used for the estimation, or where that information can be found.	2,82	2,00	2	1,43	1	6
AC5	The qualitative statements in the report are consistent with other reported information and other available evidence.	2,92	3,00	3	1,34	1	6
Balance							
BA1	The report covers both favorable and unfavorable results and topics.	2,99	3,00	2	1,37	1	6
BA2	The information in the report is presented in a format that allows users to see positive and negative trends in performance on a year-to-year basis.	3,40	4,00	4	1,47	1	6
BA3	The emphasis on the various topics in the report reflects their relative priority.	2,53	1,00	1	2,01	1	6
Clarity							
CL1	The report contains the level of information required by stakeholders, but avoids excessive and unnecessary detail.	3,92	4,00	5	1,24	1	6
CL2	Stakeholders can find the specific information they want without unreasonable effort through tables of contents, maps, links, or other aids.	3,86	4,00	6	1,65	1	6
CL3	The report avoids technical terms, acronyms, jargon, or other content likely to be unfamiliar to stakeholders, and includes explanations (where necessary) in the relevant section or in a glossary.	4,56	5,00	5	1,10	1	6
CL4	The information in the report is available to stakeholders, including those with particular accessibility needs, such as differing abilities, language, or technology.	4,77	4,00	4	1,23	1	6
Comparability							
CO1	The report and its information can be compared on a year-to-year basis.	3,71	4,00	5	1,55	1	6

CO3	Any significant variation between reporting periods in the list of material topics, topic Boundaries, length of reporting period, or information covered in the report can be identified and explained.	2,92	3,00	3	1,20	1	6
CO4	When they are available, the report utilizes generally accepted protocols for compiling, measuring, and presenting information, including the information required by the GRI Standards.	1,69	1,00	1	1,33	1	6
Reliability							
RE1	The scope and extent of external assurance is identified.	2,77	1,00	1	2,19	1	6
RE2	The original sources of the information in the report can be identified.	1,87	1,00	1	1,28	1	6
RE3	The organization can identify the original sources of the information in the report.	2,76	2,00	1	1,57	1	6
RE4	Representation is available from the original data or information owners, attesting to its accuracy within acceptable margins of error.	1,96	1,00	1	1,33	1	6
Timeliness							
TI1	Information in the report has been disclosed while it is recent, relative to the reporting period.	5,64	6,00	6	1,00	1	6
TI2	The information in the report clearly indicates the time period to which it relates, when it will be updated, and when the latest updates were made, and separately identifies any restatements of previous disclosures along with the reasons for restatement.	4,23	4,00	4	1,33	1	6

Source: Authors' calculation

The next qualitative characteristic scoring 3,12 is **accuracy**, falling in the category of "good". Most of the data presented have been measured to some extent and then disclosed. Yet, basis for calculations of the quantified information have rarely been provided, just like the qualitative statements were rarely supported by other available evidence or reported information. It is important to notice that there is a discrepancy in reporting environmental and social information, which is rooted in the respective sciences, with environmental sciences establishing an undisputed world view through the cause-and-effect logic, as opposed to the social sciences (Herriott, 2016, p. 52; Chaplin-Kramer & Green, 2016; University of Cambridge Institute for Sustainability Leadership (CISL), 2016). It is also important to consider the nature of both, environmental and social information disclosed, i.e. if those data have been disclosed in absolute measures (or as percentages) or whether they have been measured against another measure or organization's activity. By and large, disclosed information have been presented in absolute measures and/or percentages, whereas very few reports did contain measures that were measured against another measure or activity, i.e. disclosing intensity or productivity measures (Herriott, 2016, p. 81), bringing into question the level of usefulness of the information disclosed. Such measures speak very little (if anything) of themselves, as opposed to the measures compared to e.g. organization's activity, in which case is relatively easy to understand the impact an organization has on environment or society.

In a descending order of the scores, the next qualitative characteristic is **balance**, scoring 2,96 (out of 6). By its score, this qualitative characteristic falls onto the negative side of the scale. In general, GRI Standards expect negative information to be present in the report, and still being voluntary, organizations prefer not disclosing them. Yet, some organizations do disclose such information, but in most cases it is very difficult to locate it and interpret it, and therefore assess it, for several reasons:

- disclosing negative information is bordering with the statement of the law that organizations may not report issues they assume to have negative effect(s) on the business and are to provide explanation for it (Sustainable Stock Exchange Initiative, n.d.);
- negative information have been embedded in other non-financial information, so the stakeholder must read carefully and sometimes look for messages found in between the lines to find them;

- disclosing higher and lower scores of measures when presenting information for few years in a report can be perceived as disclosing negative information.

Qualitative characteristics with the lowest scores are **comparability** (2,77) and **reliability** (2,34). These two characteristics seem to be affected the most by the voluntary nature of non-financial reporting, for very few organizations published non-financial reports that could be (easily) compared on a reporting-period basis, like financial statements are comparable and reliable. The mere fact that some organizations published non-financial reports with considerably more or less number of pages (sometimes it was even twice more, or three times less) than the previous reporting period considered in the research, suggests that comparability of such information is very difficult. Reliability referred to the assurance of non-financial information, mentioning original sources from which disclosed non-financial information had been extracted and available evidence providing a support to assumptions or complex calculations. This characteristic with its score probably sums up the issue of non-financial reporting, for without the sources and evidence for disclosing non-financial information which implies gathering, recording, compiling, analyzing and other procedures in creating disclosures, this kind of non-financial disclosures cannot be taken as seriously and are not as reliable as financial statement are. Low scores of these two characteristics implicate a lack of consistency in sustainability reporting and questionable processes of gathering, recording, compiling, analyzing and reporting non-financial information.

3.2. Discussion

This content analysis pointed to several suggestions for improving non-financial reporting and its process. Depending on the business surroundings, market and the stakeholders, non-financial reports can be presented in two languages and one document. More non-financial information in the disclosures ought to be presented in a way that they are comparable, suggesting that textual reporting should be reduced to a minimum because it impedes comparison of two reporting timeframe disclosures. An organization ought to adhere to the same number of pages of non-financial disclosures throughout the reporting periods, as well as the same title of the report, or at least no to change it on a timeframe-reporting base; the same number of pages would provide easier comparison of and access to information disclosed. When being published on the websites, non-financial reports ought to be found at the one and same place, and not each disclosure of a reporting period with a different name to be placed under different topic dealing with sustainability issues on the website (e.g. social topic, sustainability topic). There is a significant problem with misplacing otherwise terrific non-financial information in non-financial disclosures, or disclosing them in parts of disclosures not related to the topic or defined by the table of content provided at the beginning of the disclosure. Further issue with non-financial disclosures is that some measures may be presented quantitatively and/or compared against another measure or activity in the organization, but presenting just very few information, thus not providing enough information for stakeholders to make decisions. Although some non-financial information have been expressed as absolute numbers or as percentages, those information still count as qualitative data, for they can be extracted and are very likely reconstructed on the basis of the number of orders (of e.g. amount of oil or gas) or the bill amount (of e.g. electricity bill), thus questioning the organization's sustainability management and reliability of information disclosed. For this purpose it is recommended to disclose measures which will be measured against another measure and/or activity. In reports where there are just textual explanations of what (supposedly) happened or what was done, it is virtually impossible to determine which data have been estimated and which have been measured, for these are two different categories, one requiring approximation, the other exactness and precision. A table of content, along with the GRI Index, UN Global Compact, or any other guideline for non-financial reports, is highly advisable.

3.3. Limitations

Like any other, this research has certain limitations, most of which are related to the subjectivity of the raters. Since qualitative characteristics have not been clearly defined and expected to be present in the non-financial disclosures, resulting in different approaches of the raters to understanding, interpreting and expectations as to the disclosed data, this was manifested in different views and understandings of the information presented in non-financial disclosures, as opposed to the qualitative characteristics of financial reports (where the form and the kind of data had been clearly defined). Further analysis of the results proved this limitation to be correct, because scores assigned by one of the raters always seemed somewhat higher than the scores of the other rater. Another possible limitation refers to the rater comparing the later reporting period disclosure to the previous one, and already being familiar with the organization and its non-financial disclosures, might have assigned higher scores.

4. CONCLUSION

Since there are very few companies in Croatia disclosing non-financial reports, the research sample was quite small. This might change with the enactment of the EU Directive 2014/95/EU on disclosing non-financial and diversity information by embedding it into the Croatian Accounting Act published in 2017 (CAA, 2017, para. 21). The research results point to a quite low quality of non-financial reports, with the scores for qualitative characteristics ranging from 2,3 (the lowest) to 4,9 (the highest). The qualitative characteristics with the lowest scores on a 1-6 scale were reliability (2,34) and comparability (2,77) whereas the characteristics with the highest scores were timeliness (4,9) and clarity (4,2). These results show that there is a need for improvement in non-financial reporting with regard to the quality of these reports as a whole, as well as the quality of data presented therein. Further analysis of this content analysis showed that experience and the length of disclosing non-financial reports has very little to do with the quality of the report, for there were some organizations that have created this kind of report for the first time (emphasized in the very report), and following the GRI (G4) Guidelines, have produced a report with the highest score by both raters. What distinguished this report from all other reports in both years, among other things, was a list of employees with their offices and assignments in the organization that were involved in creating this report, indicating that the whole organization is to be involved in the process of creating non-financial reports. Further research could focus on the type and nature of indicators used in disclosing non-financial information. Future research could also explore the scales of measurements by which this information can be traced and later on reported, by finding ways to develop a metric system for evaluating the impacts of social investments, and thus reducing the discrepancy in quality of environmental and social information disclosed in non-financial reports.

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ENTREPRENEURIAL ORIENTATION OF EMPLOYEES

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Abstract

Entrepreneurial orientation is a tendency of businesses to act autonomously and innovative, take risks and is taking proactive initiatives to potential market conditions There is a positive relationship between entrepreneurial orientation and business performance of the company. Although the entrepreneurial orientation commonly referred to as a feature the company and not the individual, since the people are supporting tasks within business, there are defined characteristic behaviors that define the entrepreneurial orientation of individuals. This behavior have so far examined the entrepreneurs, not the employees. This paper aims to determine the extent to which employees in the organization have developed entrepreneurial behavior (vision of their own areas of responsibility development, goal setting needed to achieve the vision, planning of specific activities, actively seeking information, persistence in its realization in spite of obstacles and actively seeking feedback about own performance), and whether employees with more developed entrepreneurial behavior more represented in private companies or in the public sector, and if they have intention to found their own company.

Keywords: *entrepreneurial orientation, entrepreneurial behavior, proactivity*

JEL Classification: J5, J50

1. INTRODUCTION

Entrepreneurial orientation is the tendency of the company to act autonomously and innovatively, to take risks, and to proactively undertake initiatives to reach potential market opportunities. There is a positive correlation between entrepreneurial orientation and company's success in business operation. However entrepreneurial orientation is typically referred to as a characteristic of a company, not an individual; because people are the ones who make the business operation happen, characteristic behaviors that determine the entrepreneurial orientation of individuals have also been defined. These behaviors have been examined in entrepreneurs, not employees. Therefore, the goal of this paper was to determine to what extent employees in organizations have developed their entrepreneurial orientation, as defined by Freese (2010). Additionally, the goal of this paper was to determine whether there are differences in employee entrepreneurial orientation in terms of geographic characteristics, position within the organization, and the characteristics of the organization that employ them.

2. METHODOLOGY

This research has been conducted with an online method in the period from March 1 to March 9, 2017, with 292 people filling in the questionnaire, of which 57.5% were women, and 42.5% were men. 15.1% are owners of the company they are employed at, and 84.9% are not.

Age	%	Qualification	%	Position within the organization	%
25 and younger	0.3	Semi-skilled	0	Employee	29.5
25-34	20.5	Secondary school education	17.1	Junior management	8.9
35-44	37.0	Higher education	11.6	Middle management	17.1
45-54	31.8	University degree	56.8	Senior management	15.1
55 and older	10.4	MA/PhD	14.4	General manager / Board member	29.5

Table 1: Structure of respondents considering age, qualification and position within the organization

Size	%	Ownership	%	Success in 2016	%
10 or less	25.0	Private company	82.2	Did not meet goals	22.9
11-50	15.1	State-owned company	7.8	Met goals	47.7
51-250	22.9	Public service	10.0	Exceeded goals	29.1
251 and more	37.0			N/A	0.3

Table 2: Structure of organizations that employ the respondents, according to size, ownership and success

This research checked the attitudes of employees on personal entrepreneurial orientation in their job position. To this end, a questionnaire was made consisting of 31 statements and a Likert-type scale from 1 to 5, where respondents were asked to rate their level of agreement with the statements, with 1 being strongly disagree, and 5 being strongly agree.

3. RESULTS AND DISCUSSION

By generally observing the rating the employees gave to their entrepreneurial orientation, it can be concluded that they generally think it is relatively highly developed. The arithmetic mean of the results of the highest-rated statement on one's own entrepreneurial orientation is 4.65 (s=0.62), and the lowest-rated 3.86 (s=0.98). By grouping the statements according to individual areas of entrepreneurial orientation, as defined by Freese (2010), the respondents are best assessed by:

- Clarity of their own role and goals
- Dedicated work on realizing their goals and personal enthusiasm
- Analysis of their own efficiency and constant work to improve it
- Active seeking of feedback on their own successfulness from colleagues, users and superiors

Analysis of areas ranked in this way shows that respondents have a clear vision of what they want to achieve and the enthusiasm to make it happen, and these are certainly important factors in entrepreneurial orientation and business success.

In their approach to work, they show somewhat lower levels of analysis of their own success and constant searching for new information on how to improve their success. The reason for this might be the fact that they are too focused on operative performing of tasks, so they lack time to step away from them to analyze their behavior and get more information on new, more efficient behaviors. Another reason might be their expectations that the analysis is something that should be done at the organizational level by their superiors, who should then suggest new, more efficient solutions. In any case, the consequence is that the employees might exhaust themselves by investing a lot of energy and enthusiasm into activities that do not lead to results, and thus feel helpless when facing more demanding obstacles. All of this could be prevented with regular analysis of efficiency of their own activities and continuous work on developing higher professional competence, which would assist them in facing even more demanding business challenges. If no such regular analysis is performed, exhausting efforts could have a negative effect on both their work enthusiasm and their dedication to realizing goals.

The area in which entrepreneurial orientation is least represented is the area of active seeking of feedback regarding their own successfulness from colleagues, users and their superiors. This aspect is extremely important, as success within a job is not measured by how dedicated the employee is to realizing goals and the way they see them, but by how much they have aligned their own goals and business vision with the vision and goals of their team or organization. In order for the employee to know this, it is very important that they keep asking for feedback not only from their superiors and their colleagues, but also the users, as this is the only way the organization as a whole can achieve results. If this is not the case, the organization can become a collection of individuals who all think they are doing an excellent job, but as a group they do not reach success, but it leads them to conflict and shift responsibility to someone else. It is therefore important to develop this segment of entrepreneurial orientation as well, because the two situations described above will not lead to the success of the organization as a whole.

4. DIFFERENCES IN ENTREPRENEURIAL ORIENTATION IN TERMS OF SEX, AGE AND QUALIFICATION OF EMPLOYEES

The only statistically relevant difference in terms of gender is that, statistically, women think they understand the needs of their users much more than men. The explanation of this result might be that men might are more orientated to product characteristics or services to meet their buyers' needs, and that women interact with buyers with behaviors that contribute more to the emotional satisfaction of buyers. However, this hypothesis certainly needs to be examined further.

In terms of age, as well, only a few differences have been found. The first difference is that employees of age 26-35 have a statistically much less clear vision of the direction in which to develop the work that they do, in comparison to employees who are 46 or older ($p<0.05$). The other difference is that employees of the same age group love their job statistically much less, and they perform it with less energy and enthusiasm in comparison to those aged 46-55 ($p<0.05$) and those 56 or older ($p<0.01$). These results can be explained by a large load of work, which is additionally exacerbated by their lack of expertise in comparison to older colleagues. However, it would be a good idea for the employers to keep this difference in mind and to make sure the younger colleagues are provided mentorship so that they can develop their business orientation as fast and easily as possible.

In terms of qualifications, only three statistically relevant differences have been found. The first difference is that employees with a higher education qualification think that their colleagues, superiors and users regard them as experts who they trust much less than they do their colleagues with university education ($p<0.01$). The second difference is that employees with a secondary school education qualification think that their expertise can influence their superiors and their colleagues much less in order to make the soundest business decision, in comparison to employees with a university degree ($p<0.01$). The third difference is that employees with an MA or PhD have a significantly higher intent to establish their own company than employees with a qualification much lower than theirs ($p<0.05$). All of these results show that confidence in their own expertise and influence on colleagues grows with their education level; and this is something that managers should consider in running the organization.

5. DIFFERENCES IN ENTREPRENEURIAL ORIENTATION IN TERMS OF THE POSITION OF EMPLOYEE WITHIN THE ORGANIZATION

This research has found several statistically relevant differences in entrepreneurial orientation of employees precisely in terms of their position within the organization.

Employees who do not have a managerial position, are statistically very different from general managers / Board members in these characteristics:

- They have a less clear idea of why the work they do is important for the organization ($p<0.01$).
- They have a poorer understanding of the way in which their job correlates to other jobs in the organization ($p<0.05$).
- They know less about the goals they are supposed to realize in their job ($p<0.05$).
- They have a less clear vision of the direction in which to develop the job they do ($p<0.01$).
- They like their job less and perform it with less energy and enthusiasm ($p<0.01$).
- They develop less in line with the vision of expertise they wish to achieve ($p<0.01$).
- They think that colleagues, superiors and users think of them less as experts they trust ($p<0.05$).
- They ask significantly less for feedback about their work from colleagues, superiors and/or users in order to be able to further develop in a professional sense ($p<0.01$).
- They significantly less influence their superiors and colleagues with their expertise in order to make the best joint decision about business operation ($p<0.01$).
- They think the organization they work for does not encourage and appreciate a proactive approach to work enough ($p<0.01$).
- They think they have a harder time working with colleagues on mutual adjusting and achieving joint goals ($p<0.05$).

- It is more difficult for them to make decisions and take responsibility for the consequences ($p<0.01$). The same result was obtained for junior management.

All of the characteristics in the above list can be significantly improved by active engagement of managers with employees, as these can be a significant factor in deflating the efficiency of the entire organization in realizing its goals.

It is interesting that there is a statistically significant difference between middle management and general managers/Board members, specifically in middle management:

- Has a less clear idea of why the work they do is important for the organization ($p<0.01$).
- They influence their superiors and colleagues with their expertise in order to make the best joint decision about business operation significantly less ($p<0.01$).
- They think the organization they work for does not encourage and appreciate a proactive approach to work enough ($p<0.01$).

This data is especially indicative, because it demonstrates that middle management think their role is not defined clearly enough, and that they have poor influence on the Board. Since it is middle management that is key for active work and strengthening of the organization's lower levels, it is very important that senior management and the Board work with middle management in order to make their role and efficiency clearer.

Additionally, if they get a task they think is not developed enough, employees and lower management ($p<0.01$), as well as middle management ($p<0.05$) express their opinions and suggestions on how to improve the task statistically less. This data is also indicative, because it shows a lack of two-way communication at all levels other than the Board. Communication is critical for coordinating with the purpose of realizing joint goals, and it is therefore very important to encourage communication so that entrepreneurial orientation can be enhanced on all levels of the organization.

6. DIFFERENCES IN ENTREPRENEURIAL ORIENTATION IN TERMS OF THE OWNERSHIP STRUCTURE OF THE ORGANIZATION

In terms of ownership structure, the following differences have been found. Employees of state-owned companies and the civil service, in comparison to employees of private companies:

- Have a statistically less clear vision of why the work they do is important for the organization ($p<0.01$).
- Have a statistically poorer understanding of the way in which their job correlates to other jobs in the organization ($p<0.01$).
- Think the organization they work for does not encourage and appreciate a proactive approach to work enough ($p<0.01$).

Civil servants show statistically relevant differences in comparison to employees of private companies in the following:

- Poorer knowledge of the goals they should be achieving in their job ($p<0.01$).
- Less active in looking for chances to be more efficient in achieving goals in their job ($p<0.01$).
- Poorer knowledge of the quality of service required by their users ($p<0.05$).
- Less active in listening to the needs of their users and a timely and quality response to those needs ($p<0.05$).
- Poorer experience of their approach to work, as well as results that they achieve, as confirmation of their own professionalism, so they do the best they can ($p<0.01$).
- If they think a given a task is not developed enough, they offer clear opinions and suggestions on how to improve the task in a constructive way much less ($p<0.05$).
- Less regularly ask for feedback on their own work from colleagues, superior and/or users in order to be able to further develop professionally ($p<0.05$).

- Influence their superiors and colleagues with their expertise in order to make the best joint decision about business operation significantly less ($p<0.01$).
- Think the organization they work for does not encourage and appreciate a proactive approach to work enough ($p<0.01$).

All of the characteristics in the above list can be significantly improved by active engagement of managers with employees, as these can be a significant factor in deflating the efficiency of the entire organization in realizing its goals.

7. DIFFERENCES IN ENTREPRENEURIAL ORIENTATION IN TERMS OF THE SUCCESS OF THE ORGANIZATION

Employees of organizations which have exceeded their sales goals in 2016 are statistically different from employees of organizations which have not realized their goals, in the following:

- They know which activities to perform in order to realize their goals ($p<0.01$).
- They are constantly dedicated to the fullest to achieve the quality of service their users need ($p<0.05$).
- They regularly ask for feedback on their own work from colleagues, superiors and/or users, so that they can further develop professionally ($p<0.05$).
- They influence their superiors and colleagues with their expertise in order to make the best joint decision about business operation ($p<0.05$).

Employees of organizations which have realized and exceeded their sales goals in 2016 are statistically different from employees of organizations which have not realized their goals, in the following:

- They easily work with colleagues on coordinating and achieving joint goals ($p<0.01$).
- They think the organization they work for encourages and appreciates a proactive approach to work ($p<0.01$).

As many as three out of the six characteristics that differentiate employees of successful organizations from employees of unsuccessful organizations refer to active cooperation with other members of the organization in achieving joint goals and asking for feedback on one's own work. This means that employees rarely question and consider the quality of their own work and their own goals and talk about it with their colleagues with the purpose of acting in a harmonized way. It is precisely the level of proactive efforts, where employees develop their own area of work and coordinate with other employees in the organization that can lead to above-average organizational efficiency. On the other hand, proactive efforts which only refer to realizing one's own vision of work, without coordinating with the other employees in the organization, can lead to destructive conflict of interest, conflict of values and goals, and it can, in the end, be counterproductive for organizational efficiency. It is therefore an important component of proactive efforts, which should be systematically developed at all levels of an organization.

8. CONCLUSION

The results of this research show that employees in Croatian organizations to a large extent feel they are entrepreneurially orientated, albeit they are more orientated to developing their own vision of business operation and dedicated realization of their own goals rather than coordinating with colleagues on the joint vision and goals. The only organizations that systematically focus on this segment of entrepreneurial orientation are the ones with most market success, making them statistically different from the most unsuccessful organizations. This confirms the extreme importance of constant aligning of one's own vision of business operation and vision with the vision and goals of one's colleagues, which is a key aspect of the success of an organization. One of the respondents, a general manager of a successful organization, wrote: "We encourage professional proactive efforts by guiding them to adopt behaviors characteristic for corporate entrepreneurs (intrapreneurship), and that they seek and implement their ideas, tasks and solutions like entrepreneurs".

Moreover, a statistically higher entrepreneurial orientation has been found in employees on higher managerial levels in comparison to those with no managerial position. Additionally, employees of private companies have also been found to have statistically more entrepreneurial orientation than those working in the civil service. The characteristics of entrepreneurial orientation that all of these employees rate as being not as present in their own approach to work can be easily developed by managers' targeted interventions, which could also have a systematic effect on increasing the success of their organizations. As one of the respondents, a general manager of a successful organization, has noted: "Being proactive is a two-way process. It requires both sides to cooperate, otherwise there is a risk of uncooperativeness easily spiraling".

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THE RANGE OF CONTROL AS A DETERMINANT OF ORGANIZATIONAL LEVELS

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Abstract

Organizational levels depends on several factors. Primarily, the number of organizational levels is affected by the size of an organization. It is normal, for large organizations to have multiple organizational levels in comparison to midsize and smaller organizations.

On the second place, we can point out the design of the organizational structure in a specific organization, or which type of organizational structure in concrete organization is applied in functional terms.

Furthermore, the number of organizational levels within an organization affects the degree of centralization or decentralization of any organization. The growth of decentralization reduces the number of organizational levels.

The last, but by many authors the most important factor that influence on the number of organizational levels is control range. Thus, the number of associates that can, from the side of immediate superior, personally direct, coordinate and monitor.

Number of control range increases from the top of the pyramid to the bottom of the pyramid, therefore the number of control range is the smallest at the top and the largest at the bottom of the pyramid.

The paper main issues were dealt in two ways. The first is a theoretical approach using relevant sources, and the second is an analysis of the range of control in a specific organization (state administrative organization) and the impact on the number of organizational levels.

Keywords: *organization, management, organizational structure, organizational level, control range, centralization, decentralization.*

JEL Classification: L2, L22

1. RELATIONSHIP BETWEEN ORGANIZATIONAL STRUCTURE AND RANGE OF CONTROL

Every organization has an organizational structure, according to many authors, the most important element of any organization. The organizational structure is the socio-technical structure of people and other resources of an organization that consists of various interrelated elements in specific organizational relationships (Jurina; 2011, 35).

At the time of establishing, creating an organization, regardless of whether it is a profit or non-profit organization, a company in the real sector or a public sector institution, its formal organizational structure is formed.

The formal organizational structure identifies all relevant issues of the organization's functioning, namely (Sikavica, Novak; 1999, 153):

A) Identify, describe and link the tasks that are need to be done in the company;

B) Connects factors of work (work, factors of work and subject of work) in narrower and wider groups;

C) Determines the status of people in the organization, the relationship between management and executives;

D) Prescribes the rules and norms of behaviour in the organization, i.e. standard operating procedures in performing the tasks.

Unlike the formal organizational structure in each organization, there is an informal, real (objectively existing) organizational structure. The real organizational structure arises spontaneously in the process of functioning of a formal organizational structure.

The relationship between formal and informal structure is not unambiguous but three-dimensional, influenced by the flow of time. In the moment of creation of an organization, and thus its organizational structure, the actual organizational structure corresponds to the formal one. However, over time there is a break between formal and real organizational structures.

That gap is bigger when the time, from the establishment of a formal organizational structure to the present moment, is longer. The gap between the formal and informal (real) organizational structure is due to changes in each of the elements of the organizational structure.

Without going into a more detailed analysis of different conceptual determinations it can be concluded that the informal organizational structure spontaneously formed a group of employees that work together for some identical goals. An informal organization, often but wrong, is a priori experienced like something negative, which does not have to be true.

An informal organization can be focused on achieving goals of the organization, but also on the realization of some narrow, partial interests of certain informal groups in the organization. In this latter case, if these goals are at odds with the goals of an organization as a whole, then we can talk about the negative impact of an informal organization.

Personnel potential, or employees in the organization, have the most direct influence on the design of formal (informal) organizational structures in the management concept of the company (Sikavica, Novak; 1999, 96). A subtle or shallow management organization, with a narrow or broad range of control, depends on the knowledge and skills of management, but also on the knowledge and abilities of immediate executives.

It is undisputed that the concept of management in two different organizations that are dealing with the same work, along with other unchanged terms, will be different depending on the level of knowledge that the managers and employees have. The number of subordinates that a manager can manage effectively depends on the influence of multiple factors (Weihrich, Koontz; 1993, 249).

In addition to personal abilities, such as a quick understanding, good alignment with people, and the pursuit of loyalty and worship, the most important determinant is the ability of a manager to reduce the time spent with his subordinates.

Of course, this ability differs as much as the managers. Therefore, the principle of the range management is: there is a limit number of subordinates that a manager can effectively supervise but the exact number depends on the impact of the factors that are the basis of a given situation management.

We can therefore conclude that when designing an organization or forming an organizational structure we encounter two essential elements: a specialized division of labor and a range of controls (Sikavica, Novak; 1999, 271). Specialized division of labor, horizontal and vertical, makes the need for coordination necessary.

As the division of labor is deeper and more detailed, the management tasks become more complex and difficult, and the importance of coordination greater. That is whay the conclusion is that the range of control is the main aspect of organizational structure.

2. LEVELS OF MANAGEMENT

The organizational structure of each organization is multilevel, with a greater or lesser level of management (Sikavica et al; 2008, 37). The number of management levels in an organization depends on a number of factors, namely:

A) Types of organizational structure;

B) The degree of centralization or decentralization;

C) The range of control, i.e. the number of associates whose job is directly coordinated, directed and led by one manager.

Control range is primarily determined by the number of levels. Namely, as the number of people who can successfully lead by a manager is still limited (at senior management levels this number is smaller and lower), this will increase with the number of employees in the organization, along with some desired or expected ranges of control, the organization being deeper, there will be a greater number of management levels. A narrower range of controls increases the number of management levels, and expanding it decreases.

Therefore, the number of management levels in any organization is directly due to the organization measured by the number of employees and the range of control range. Organizational levels also imply an organizational hierarchy. Organizational hierarchy is not desirable in itself. It is a result of the division of labour and specialization, with the appropriate range of controls.

Each organizational level makes the organization more expensive, as it increases the number of managers and the need for co-ordination of such subdivided jobs, as well as making it more difficult to communicate and control the organization, especially if such differentiation is very large. Reducing the control range is a mechanism that should increase the pervasive power of the communication channel hierarchy (Buble; 2006, 194).

Namely, by reducing the number of subordinates, whose work is co-ordinated by a manager, the possibility of more efficient action increases. However, this leads to an increase in the number of managers as well as to the increase of hierarchical levels (instances). Starting from the control range of 5 subordinate managers and 20 underperforming executives - a 2,500 direct executing company should design 125 senior management positions (minimum management level), 30 second-level management positions (middle management level) and 5 first-level manager positions (The highest level of management), i.e. a total of 155 management job positions.

We can conclude that the organization has seven hierarchical levels (one of the highest levels of management, five levels of middle management and one of the lowest management levels.) The range of control ranges at the level of the whole organization was one manager compared to slightly more than sixteen immediate executives. It manifests itself in the growth of the hierarchical pyramid, which increases not only management costs but also extends the communication channels, and this again results in the sluggishness in the hierarchy response.

Organizational levels exist because a manager can only effectively monitor a limited number of people, although this number varies depending on the situation (Weihrich, Koontz; 1993, 247). Each organization must decide how many subordinates can be managed by one of the superiors.

Researchers have found in management that this number is usually between four and eight subordinates at higher levels of organization, and between eight and fifteen or more at lower levels.

Although organizational and management theorists still, within the framework of classical theory, at the beginning of the 20th century, have been studying the optimal or desirable range of control, the question can not be answered today (Sikavica, et al; 2008, 320).

The reason for this is that determining the optimal range of control is influenced by three factors:

- Manager's capability;
- Ability of associates;
- Nature of tasks to be performed.

Since people, both managers and associates, are very different, it is difficult to determine the unambiguous range of control that would be worthwhile for all organizations and situations. As for the nature of the tasks to be done, more complex tasks will require narrower, while simpler tasks will be better suited to a wider range of controls.

On the other hand, in the same tasks the range of control determines the ability of managers and associates. While at first glance it may seem strange that at lower management levels are recommended narrower ranges of controls, and at a lower expense, it is completely logical and justified. Although people at higher levels of management are more educated and their associates, and it is to be expected that these ranges of controls are wider as their level of education and knowledge enables faster and easier communication, yet this is not the way since those levels solve complex Issues and makes strategic decisions that require a large number of interactions between managers and their associates, so the range of controls must be smaller.

A company that has a wider range of controls will have a low or lower organizational structure with fewer management levels unlike other companies with a narrow range of controls that will have a high structure with a large number of management levels for the same number of employees. For example, in the organization of 4096 operational workers assuming the average control ranges of 1: 4 (narrow control range) and 1: 8 (broad range of controls) as the arithmetic mean of the control range at all levels of management, we have the following situation. With a narrow range of controls we have seven organizational levels and 1365 managers at all levels, and with a wider range of controls we have only five organizational levels and 585 managers at all levels.

From this example, it is clear that narrowing the control range deepens the organizational structure, increases the number of managers and increases organization, product or service. The width of the control range and the height of the organizational structure is also reflected in the satisfaction of the workforce (Sikavica, et al; 2008, 323).

In those companies where the organizational structure is shallower, where the organization is lower, and the span of control is expanding, workers are more satisfied at work and vice versa.

2.1 Types of Management Levels

Although the rule in a modern organization is that the organizational structure is decentralized to a greater extent and that it has as few management levels to make the organization "shallow" and "walkable", it is possible to talk about several levels in each organization. We can freely add that it is possible to talk about several standard types of management levels in the practice of each organization. According to Management Enzyklopadie it is possible to talk about four levels in the hierarchy of organizations or four levels of management. These levels are:

- Top management;
- Senior management;
- Senior middle management;
- Lower middle management.

According to another source it is possible to talk about three basic levels of management:

- Top Level Managers;
- Middle level managers;
- First level supervisors.

From this it can be concluded that all levels of management can be grouped into three basic categories, three standard levels in each organization, namely:

1. Supreme Management, Strategic Level;
2. Medium Level Management, tactical level;
3. First Level Management, Operational Level.

Senior top managers are: chairmen of the board, president, Chief Executive Officer, Chief Operating Officer and vice president. Middle line managers are: division directors, area managers, plant managers, department managers. The lowest levels managers are: supervisors and office managers.

Distinguishing the individual level management is not only important from the perspective of hierarchy, subordination and superiority, but primarily because of the different roles that are inherent or intended for certain levels of management.

No matter what the management level is about, each manager must devote himself to the basic managerial functions, namely: planning, organizing, managing, and controlling. The difference between them is how much time they spend each day on a particular management function. Thus, for example, senior management will spend the most time on planning and organizing and at least on lead. Quite the opposite time will spend managers at the lowest levels of management.

3. SCOPE OF WORK AND ORGANIZATIONAL STRUCTURE OF THE MINISTRY OF FINANCE

The Ministry of Finance is responsible for the preparation and implementation of government fiscal policy. Its goals are to contribute to a stable growth of the economy, increase prosperity, and quality of life and employment for all Croatian citizens (www.mfin.hr).

3.1 The scope of operation of the Ministry of Finance

In Croatia the scope of work and organizational structure of ministries, central state offices and state administrative organizations are regulated by laws and regulations (Law on Organization and Scope of Ministries and other central state administration bodies). The article eight of the Law defines the scope of work of the Ministry of Finance as follows;

analysis and forecasts of macroeconomic trends which are basis for defining the economic and fiscal policy and the consolidated state budget; Making the basis for financing public needs and drafting the state budget and extra-budgetary users and local budgets; Consolidation of the budget, drafting of the system of financing the public needs and the units of local and regional self-government; Implementation of the state budget; Planning the state budget liquidity; Financial flow management; Budgetary control; Development system of budget accounting and financial reporting, general ledger of the State Treasury and the consolidated financial statements of the budget of the Croatian; The management of budget investments, the preparation of reports on short-term financial needs, the monitoring of the balance of revenues, expenditures and cash resources, registers immediate and suspended public debt obligations, contracts loan credits and conducts the procedure of issuing securities on the domestic and foreign markets in accordance with the established state budget financing bill, Manages the public debt portfolio; Preparation of draft legal and other regulations, as well as the basis for conducting negotiations in the area of foreign financial relations arising from multilateral and bilateral cooperation with international and regional financial institutions, foreign governments and business banks; Operational affairs related to the membership of the Republic of Croatia in international financial organizations; Collecting and processing data on damage caused by the action of elemental disasters; Keeping a registry of concessions; Development, improvement and coordination of the concession policy system; Making suggestions and measures for improving the concession system; Supervision over the implementation of the Concessions Law; Participates in the procedures and analyses the proposals of various concession and model public-private partnerships, proposes and opinions on public-private partnership contract proposals based on budget risks, project ratings and risk assessment in the area of public private partnership from the scope of the Ministry and in accordance with the procedures, Making and realization of public-private partnership project, giving suggestions and opinions for improving public-private partnership system within the scope of the Ministry; Monitoring business activities of companies of particular national interest; Making analyses in company restructuring procedures; Monitoring and analysis of state aid, improvement of the project system and the intensity of the granting of state aid; Making analysis and monitoring of economic trends in the area of the financial system, proposing and implementing measures to improve the system of credit institutions and deposit insurance, the insurance system, the capital market system, investment funds and investor protection, payment systems and financial institution supervision systems, supervision of financial institutions in accordance with statutory authority; The tax system and tax policy, the customs system and the policy of customs and external protection, supervision and inspection activities in the field of taxes, customs and other public revenues, foreign exchange and foreign trade, provision of games of chance and prize games; Taking measures to prevent money laundering and terrorist financing; Construction and maintenance of border crossings.

The Ministry performs administrative and professional tasks related to the establishment and development of the system of internal financial controls in the public sector at national and local levels. And financial management tasks within the framework of the decentralized EC assistance implementation system in the Republic of Croatia.

3.2 The organizational structure of the Ministry of Finance.

To perform the work under the jurisdiction of the Ministry of Finance, Government of Croatia established the organizational structure and the internal structure and operation of the ministry (Regulation on Internal Organization of the Ministry of Finance); The Ministry of Finance, the Cabinet of Ministers, the General Secretariat, the Macroeconomic Analysis Directorate, the Economy, the Financial System, the EU and International Financial Relations, the State Treasury, the Financial Management, Internal Audit and Supervision, the Tax Administration, the Independent Sector for Second Instance Administrative Procedure, Independent Tax Fraud Detection Section, Tax Administration, Customs Administration.

The internal organization of state administration bodies based on Croatian Government is based on the following principles (Regulation on Principles for the Internal Organization of State Administration Bodies):

1. The Principle of Rationalization,
2. Principle of functionality,
3. The principle of vertical and horizontal connections,
4. The principle of harmonization of the fundamental elements of the internal organization,
5. Principle of flexibility of internal organization
6. The Principle of Availability.

The principle of rationalization of the internal organization implies the establishment of an economic organizational structure necessary for efficient performance of the business with the least cost.

The principle of functionality implies organizing the body in such a way that all tasks from the sphere of authority are assigned to certain organizational units. Depending on the scope and importance of a job, one of the organizational units can be assigned several different tasks.

The principle of vertical and horizontal relationships implies that hierarchical lines, lines of responsibility (vertical linkage) and lines of coordination and cooperation (horizontal linkage) are clearly defined.

The principle of harmonization of the fundamental elements of the internal organization implies the harmonization of the basic standards of internal organization, relating to:

- Types and names of internal organizational units,
- Scope and content of the work and number of executors of internal organizational units,
- Conditions in terms of their organization, measured by narrower units or workplaces,
- Conditions regarding the structuring of regional units and other elements of internal organization,
- Conditions for establishing the same level of internal organizational units to perform the same types of jobs in all state administration bodies.

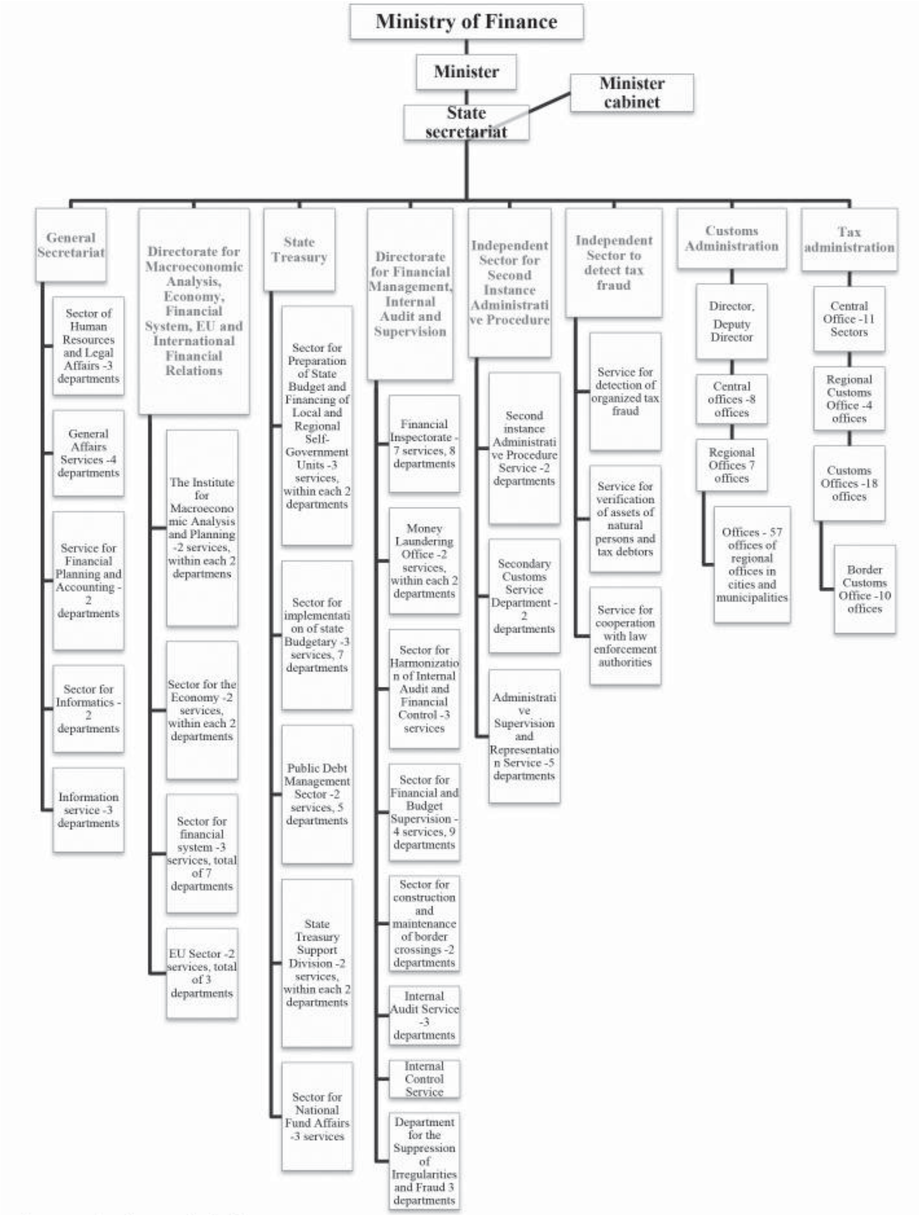
The principle of flexibility in the internal organization implies the possibility of determining the different types of internal organizational units of the types established by this Regulation, when necessary due to the nature and implementation of the activities.

Government bodies could more appropriately and flexibly respond to special or changed circumstances but with respect of other principles of internal organization as set out by this Regulation.

The principle of availability implies an internal organization that maximizes the satisfaction of the needs of citizens and other parties.

In ministries, internal organizational units are established: administrations, institutes, directorates, departments. Special secretariat and the cabinet of ministers are established as a special organizational unit. Below is an overview of the organizational structure shown in Graph 1.

Graph 1. Organizational Structure of the Ministry of Finance



Source: Authors calculations

The scheme of organization of the Ministry of Finance shows that it is possible to talk about the four levels of the organization of the Ministry of Finance at the headquarters. The number of organizational units at the individual organizational level is as follows:

- I organizational level has 8 organizational units,
- II organizational level has 30 organizational units,
- III organizational level has 96 organizational units,
- IV organizational level has 53 organizational units.

In addition to the General Secretariat, four of the Board, the Institute and the Inspectorate in Ministry is also established 15 sectors, 49 services and 92 departments.

The same structure of the Ministry of Finance is a classic functional organizational structure. It is obvious that the structure is medium developed vertically and is strongly developed horizontally.

4. CONCLUSION

Business operations under new conditions, in a more turbulent and complex environment, require the change of traditional, classical or bureaucratic structures with new forms of organization. Thus, as modern forms of organization, more and more are referred to as an organic, free-flowing organization and an innovative organization as the best organizational form adapted to the changing environment.

Changes in organizational structure are, by all kinds of changes, dominant changes in the organization. Today, changes to the organizational structure mean a shift from a classical hierarchical structure to a "shallow organization" and a process-based organization instead of a function-based organization (Sikavica, et al; 2008, 567)

Today's organizations are becoming more decentralized, having less and less organizational levels, and are getting cheaper. Organizations are developing horizontally. Less organizational levels also mean less managers, which reduces organizational processes, products and services on the market.

P.F. Drucker, in his famous work "The Coming of the New Organization", talks about an information-based organization that will characterize enterprises in the 21st century ((Sikavica, et al; 2008, 566). With their organizational structure, these organizations will have very little similarity with typical manufacturing companies from the past, and will increasingly resemble the organization of universities, hospitals or symphony orchestra. This means that the new organization will be low, with a smaller number of hierarchical levels, and will be based on the knowledge of experts.

The importance and role that once existed in a "range of control" in shaping the organization's organizational structure will now take over the "span of communication", which, by the great power of the computer, will enable a broad range of communications and low or shallow organizational structure. The range of control, determines in a certain way the number of possible interactions between managers and their collaborators, is greatly contributing to the development of information technology.

The emergence of new organizational structures of different shapes, developed horizontally with a small number of organizational levels and a high range of control, does not mean a priori, denying classical or bureaucratic structures. In many companies where the environment is relatively stable and simple, the bureaucratic structures will still dominate as the appropriate organizational forms for these conditions. All other forms of organization will have features of "ad hoc" structure as a common name for all forms of flexible organization.

Classical organizational structures, line and functional, are the cornerstones of organizing state administration bodies. Fundamentals of organization in such environments are still underlined by hierarchical relations, strict division of labour and specialization, and a high degree of formalization. Such system of organization, besides the nature of the work that these organizations deal with, contributes to the legal and subordinate regulation, not only of the scope of work, but of the organizational structure itself by the legislator and executive authorities in the country.

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THE IMPORTANCE OF UNDERSTANDING MOBILE MARKETING AND TOURIST MOBILE APPLICATIONS

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Abstract

Modern information and communication technology is the infrastructural prerequisite for implementing marketing activities. Once it is adopted, it is possible to start promoting a tourism destination on the competitive international market. Every tourism destination can online promote a destination globally if it connects and networks with all tourism stakeholders. Modern tourism is based on adaptability offer that is tailored to tourists' needs and satisfies the increasingly complex tourism demand, it is necessary to use electronic resources based on mobile environment. In accordance with specific characteristics of online marketing activities it is necessary to make certain corrections to the usual tourist mobile applications. The aim of paper is to provide a systematic and comprehensive overview of the current situation in using techniques and tools

of electronic marketing in mobile environment in order to establish relevant strategic options aimed at achieving growth of tourism based on tourist mobile applications.

Keywords: *Electronic marketing, mobile marketing, tourist product, loyalty applications*

JEL Classification: L83, Z3

1. INTRODUCTION

Electronic marketing in mobile environment is the backbone of marketing activities in modern business operations as it uses techniques, tools and services to optimally satisfy all the elements of marketing mix. In view of these facts it is valid to emphasize the potential of such activities in all business sectors. Unlike traditional advertising, internet promotion, primary mobile marketing provides the ability to address each customer. Mobile marketing provides information flow of very high speed, at very low cost. Properly designed and detailed Web site, email and newsletters can be as effective as personal sales, so mobile marketing implementations can replace classic sales and provide greater flexibility, greater memory and all this with cost savings. Mobile application is much more flexible than a physical ad or catalogue and can be updated with fresh and current information through new posts, news or status. Focus of the paper is to explore to what extent smartphone users use mobile applications as a source of information for tourist destination. The survey aims to give an overview of the situation regarding the use of mobile marketing services.

2. THEORETICAL INDICATIONS

In recent years, tourism product developers have focused on the transformation of Croatia into a travel destination whose offer extends beyond a family vacation, sun and sea. Emphasis is placed on target market strategies and strategies on tourism product systems aimed at tailoring promotion to each region (Master plan and development strategy of the Croatian tourism). Almost all segments targeted by Croatian tourism use modern information and communications technologies and have, for the most part, adopted electronic marketing resources as tools for searching for and obtaining information. It is therefore necessary to develop a quality strategic approach to targeted market segment, whereby tourism product developers and consumers will be brought together in an online environment. Electronic marketing, as a component of information and communications technologies, is of strategic importance in modern tourism promotion. However, in some types of tourism, these resources are insufficiently used. Online and offline marketing techniques and tools are vital elements of any tourism development strategy, in particular when it concerns the development of a travel destination. Over the past fifteen years, significant changes have occurred in the tourism market worldwide. They primarily concern the development of new travel destinations and new selective types of tourism, as well as the continued growth of tourism, both in terms of quality and quantity, as a result of which it has acquired the status of the fastest-growing industry (Magaš; 2000, 36).

Many authors agree that the information technology has fundamentally changed marketing activities (Persaud & Azhar; 2012, 418-443). The changes are also evident in tourism (Hossain et al; 2015). New opportunities created by the development of information technology have encouraged business entities to develop long-term relationships with their customers, which gave rise to relationship marketing. The Internet enables the customer to have a direct contact with a business entity at any time, day or night, from any location, so that he/she can obtain the information needed and make a purchase. The information can be personalized to the individual customer needs and wants. The Internet also allows customers easy and quick access to information about competitors' products and services. Electronic marketing is the use of information technology in the process of creating, communicating and delivering value to customers, as well as in customer relationship management to the benefit of both the organization and its stakeholders (Strauss; 2016). This is the application of the information technology in traditional marketing practices. All of these definitions, as well as many others, suggest that marketers can use the possibilities of the Internet in all elements of marketing (Ružić et al.; 2010, 3). A general conclusion can be made that electronic marketing complements traditional marketing activities.

Marketing as a business activity is constantly trying to find solutions to reach the customer's consciousness. Mobile marketing as a marketing component represents a complement to marketing, enabling creative development and achievement of marketing strategy. The added value provided by the use of mobile marketing is performance measurability since the targeted strategy can focus on specific groups of consumers. Mobile marketing represents a special area of electronic marketing that implies marketing activities through mobile devices (mobile phones, advanced mobile devices, handhelds, personal digital assistants, etc.) and related technologies (mobile telephony, the Internet) (Škare; 2012, 263-276). According to the Mobile Marketing Association, mobile marketing is a set of practices that allow an organization or a physical person to communicate with audiences (consumers) and to engage them in an interactive and relevant way using any portable device or network (Wehrs, 2012). Shankar and Balasubramanian define mobile marketing as a two-way or multi-directional communication and promotion between business entities and consume rs using a mobile channel, device, or technology (Shankar & Balasubramanian; 2102, 118-129). The essence of the definition lies in how mobility can be viewed through several dimensions of mobility - as a channel of communication, as a device as a means or goal-making technology. Since communication can be performed over two or more devices, it is important to focus on interactivity that may include mobile advertising, promotion, customer support, and other activities that connect consumers and business entities. According to Bolton and others, mobile marketing activities are becoming necessary because of the ever-growing role of mobile technology in modern business. (Bolton et al; 2009, 91-104). With the integration of mobile technology into modern business activities, mobile marketing has created the prerequisites for personalization to users if previous users give permission. James believes permission is a key component that includes users for active participation in creating marketing strategies that also enable the following activities (Timothy et al; 2004):

- Direct and immediate communication anytime, anywhere;
- Focus on target groups;
- Cost Effective Marketing Channel;
- Marketing Impact Assessments for Returns on Investment (ROI), ie funds invested;
- Huge potential for viral marketing, given that users tend to forward message groups;
- Easy integration into media with other media such as television, press, radio.

The definition that puts emphasis on the promotion was given by Kaplan, who believes that mobile marketing with interactive wireless media provides customers timely and timely, personalized information that promotes good, services and ideas that generate value for everyone. Namely, mobile marketing is defined as any marketing activity carried out through the ubiquitous networks that consumers are constantly connected by mobile devices (Kaplan; 2012, 129-139).

If we look at the potentials of mobile marketing, authors believe that by using mobile marketing in tourism, business entities are enabled to create a tourist experience that users can distribute through platforms and services that users can consistently access through mobile devices (Kook et al; 2010, 91-111). Kumar and Zahn in their work state that the use of mobile marketing techniques and tools reduces the travel planning costs and provides a richer user experience since tourists visiting the tourist destination will prepare in advance what they want to visit and consume at the tourist destination and receive all the necessary information during their stay (Kumar et al; 2003, 515-520).

Mobile applications, as part of component mobile marketing is a platform for providing interesting, relevant and useful information, help users in performing daily tasks depending on their preferences. Implementation of mobile applications in tourism marketing develop long-term relationships with their customers, i.e. visitors to travel destinations, by means of relationship marketing, i.e. loyalty programs. Thanks to mobile applications, loyalty programs that have been operated through loyalty cards so far, have become part of the fundamental functions of specific mobile applications and have been integrated into them. Although there are many potential channels that can be used to deliver promotional messages, users need to be guided towards the conclusion of a business cycle – the purchase of a product or a service. We can conclude that mobile marketing brings together all marketing entities - activities, processes, businesses, advertising and media, promotion, related management, CRM, consumer services, loyalty, social marketing, etc. - through the involvement of consumers as individuals and businesses - by initiating relationships, Attracting, triggering activities, encouraging interaction through the ubiquitous networks and platforms that consumers are constantly connected through mobile devices.

3. RESEARCH ON THE FREQUENCY OF USE OF MOBILE APPLICATIONS AS A SOURCE OF TOURIST INFORMATION

To find out the extent use mobile applications as a source of information for tourist products and services primary research was conducted into the preferences of mobile application users. A purposive sample was used for this survey. 161 respondents were surveyed, of which 96 completed the questionnaire online and 65 completed the questionnaire offline. The survey was conducted in Eastern Croatia in the period from January to February 2017. The online questionnaire was posted on Facebook and sent to e-mail addresses (e-mail database included the alumni of the Faculty of Economics in Osijek – graduates at different levels of study and students of continuing education). Offline survey was conducted at the premises of the Faculty of Economics in Osijek. The questionnaire consisted of 22 closed questions, of which 11 questions were designed using the 5-point Likert scale (1 being the minimum and 5 the maximum. Where necessary, e.g. when the respondent does not have the given app and cannot answer, the value 9 was offered). The questionnaire is divided into four sections. The first section of the questionnaire includes questions on the preferences of mobile application users, i.e. the extent to which the respondents consume the content through the smart mobile devices and which content they consume. The second part of the questionnaire relates to the potential of mobile application use in tourism, with an emphasis on loyalty programs. The third section focuses on the respondents' attitudes towards loyalty programs with an emphasis on mobility. The last section includes the psychographic and demographic questions. Survey results were analyzed using SPSS software for statistical data processing. The following methods were also used: descriptive statistics, analysis of variance (ANOVA), and correlation analysis. The sample was divided into two subgroups i. e. profiles:

1. Those who never, rarely and sometimes use mobile applications – light users.
2. Those who often and always use mobile applications – heavy users.

The purpose of the research is to determine the frequency of mobile applications usage in the surveyed sample. Since there are numerous mobile applications for various purposes on the market, further research focused on the number of mobile applications that users downloaded and installed on their devices. At first profile - light users 81% of respondents have between 1 and 10 installed applications. The rest of the respondents have more than 11 mobile applications installed (10%), while 9% occupy those who do not have any installed apps (except serial). In order for a business entity to collect user information, most business applications request the user to register. The respondents were asked to assess the extent to which they were willing to share personal information during registration/before running a mobile application and which data they would be willing to share. More than half of the respondents (55%) are not ready to share personal data on Instagram profile and mobile device number while fully ready to share data such as e-mail (27%) and data form Facebook profile (19%). Since the registration of the users enables businesses to create an effective loyalty program, the research described below focuses on the benefits expected by the respondents from the business entity, i.e. application content creators. The survey results indicate that the majority of respondents (46%) of do not expect the discount as useful in the application, while more than half expect personalized content (54%) and additional content in the application (50%) after registration in mobile application. Given the large number of applications and different categories of purposes, as well as the system of charging for applications, the survey included the question concerning the tourist category and have respondent download and use tourist mobile applications. 13.6% of respondents have installed mobile mobile applications. The survey wanted to found out what information users often use from downloaded tourist mobile applications. 25% of respondents do not use the incentive application to arrive at the destination, while 75% rarely or sometimes. Survey on the destination itself, booking accommodation and sharing experiences are the reasons for half of the respondents (50%) for using mobile travel applications. The results suggest that 27% of respondents never use mobile applications when preparing to go to a tourist resort, 45% rarely / sometimes, while 27% of them use it frequently / always.

Survey included second profile, those who often and always use mobile applications – heavy users. 56% of respondents have between 1 and 10 applications installed, 26% between 11 and 20, 14% between 21 and 30 mobile applications. As in previous profile, the respondents were asked to assess the extent to which they were willing to share personal information. 47% of respondents are not ready to share the number of mobile devices and their current location (35%), while they are fully ready to share data such as e-mail (64%) and networking with Facebook profile (35%) and profile photo (35%). If they register in mobile application, 28% of respondents do not expect discounts and loyalty cards as utility in the application, while more than half expect personalized content and additional content in the app (58%), and loyalty cards (50%). The survey included the question concerning use tourist mobile applications. 34.5% of respondents have installed a mobile mobile application, 53,2% respondents uses mobile applications when preparing to go to a tourist destination. More than half of the respondents (64%) use the mobile mobile application to explore the destination itself.

Furthermore, the paper investigates whether there is a statistical correlation between specific variables. The survey results show that there is a correlation in the sample as follows:

- There is a statistically significant positive correlation between subset within profile (light user) with respect use of mobile application and data and platform that are willing to share (e-mail and data from Facebook profile) (r=,210**[1], p=,007).
- There is a statistically significant positive correlation between subset within profile (light user) with respect use of mobile application and use mobile travel applications while planning a trip, i.e. before arriving at a travel destination of their choice (r=,214**[2], p=,007).
- There is a statistically significant positive correlation between subset within profile (heavy user) with respect use of mobile application and data and platform that are willing to share (e-mail, data from Facebook profile and profile photo) (r=,210**[3], p=,007).
- There is a statistically significant positive correlation between subset within profile (heavy user) with respect use of mobile application and use mobile travel applications while planning a trip, i.e. before arriving at a travel destination of their choice (r=,214**[4], p=,007).

This states that both profiles (i. e. light users and heavy) search for information about a travel destination using mobile applications significantly more frequently, and they are willing to share data from specific platforms and expect

[1] ** Correlation is significant at the 0.01 level (2-tailed).

[2] ** Correlation is significant at the 0.01 level (2-tailed).

[3] ** Correlation is significant at the 0.01 level (2-tailed).

[4] ** Correlation is significant at the 0.01 level (2-tailed).

personalized content and additional content in the application after sharing personal data.

4. CONCLUSION

Potentials associated with mobile marketing are focused on providing information to users before arriving at the destination only with the aim of attracting attention, retaining and making better use of the information obtained by the user or transforming the user - visitor to tourists visiting the tourist destination. In that sense, there are huge potentials and its support services, techniques, tools, applications i. e. the components of mobile marketing. Modern tourists, i.e. so-called online travellers, are willing to participate in loyalty programs through mobile applications on smart mobile devices, but in return they want personalized content and a customized reward program. In addition to theoretical considerations, the paper describes empirical research conducted on a sample of respondents, based on their level of using mobile applications. The aim of the research was to analyze two profile of users mobile marketing – light and heavy users. The results obtained that users want relevant and personalized content where effective loyalty programs play a significant role. To ensure long-term sustainable and competitive results, a more comprehensive use of mobile marketing tools and techniques is needed. The scope of mobile marketing components should be extended to include all social media platforms used by potential customers with an aim to identify and attract them.

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MILLENNIALS' PAY PREFERENCES: EXPLORING THE ATTITUDES OF CIVIL ENGINEERING STUDENTS IN CROATIA

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Abstract

Millennials', also known as Generation Y, represent a demographic segment with birth years between the early 1980s and the late1990s. Researchers attribute specific behavioral characteristics to members of this generation, including their particular work values and motivational needs.

Furthermore, it is important to acknowledge that total reward model includes both financial rewards and non-material rewards, used to attract, motivate and retain talented workers.

Therefore theoretical framework of this paper shall focus on literature findings regarding millennials' characteristics as well as elaborate the structure of modern reward models, primarily financial part of it.

Since this study aimed to investigate pay preferences of civil engineering students in Croatia, empirical part of the paper shall reveal study results. Additionally, results shall be compared by previous studies on pay preferences expressed by business and economics students in Croatia.

Although analysis of relational rewards was left for the second phase of the research, results on financial preferences exposed in this paper are found to be useful both for scholars in the area so for HR managers in the construction industry.

Keywords: *pay preferences, millennials, civil engineering students*

JEL Classification: I2, I21

1. INTRODUCTION

When speaking of organizational performance, compensation has been recognized as one of the key enhancing tools, although it is one of the single greatest operating costs at the same time (Milkowich, Newman, 2008). By continuous performance enhancement, compensation in fact leads to achieving sustained competitiveness, but only if different compensation dimensions are being carefully balanced. The same authors identified several compensation benefits: external competitiveness (e.g. pay level), internal pay structure (e.g. pay hierarchy), employee contributions (e.g. individual and group contributions), benefits (e.g. flexible or fixed) and alternatives to traditional pay systems (e.g. pay at risk).

Each organization balances compensation system elements in a way that would guide employees toward fulfillment of companies' objectives. Therefore, balancing the compensation system elements means shaping a reward strategy. And when it comes to strategy, it must be emphasized that prioritizing certain compensation elements in relation to the others arises not only from work expectations but also organization's culture – its philosophy, values and practices (Cable, Judge, 1994).

And finally, since communication is always bidirectional, effectiveness of a compensation system, except the elements and strategy defined by the organization, depends also on employees and their preferences (Heneman, Judge, 2000). Congruence between the implemented compensation system and employees pay preferences, can have an effect on employees' (dis)satisfaction, consequently affecting performance indicators (Heneman, Judge, 2000)

Despite the importance of these compensation system issues, there has been little research, especially regarding pay preferences in domestic, Croatian context. Therefore this paper will use theoretical framework part in order to make the relevant literature review and analyze both compensation system elements and millennials as the most likely job candidates in the coming period. The following, empirical part of the paper shall present the study and results on pay preferences of civil engineering students in Croatia.

2. THEORETICAL FRAMEWORK

2.1. Rewards model

Nowadays, it is widely recognized that rewards evoke and bolster performance of organizations (Chiang & Birtch, 2012). Employee compensation system plays a major role in efforts to motivate and manage human resources better, which makes creating an efficient compensation system one of the most important management tasks (Galetić, 2015). Drucker (1992) stated that managers are increasingly realizing that the essence of their job is to find the best people, motivate them well and let them do their job in their own way. In order to do so, successful managers/companies today rely on a so called total reward model, which includes all available material (tangible) and non-material (intangible) forms of incentives that employee can receive from the employer in exchange for the work done (Jensen et al., 2006).

As this paper focuses primarily on pay preferences, i.e. on material rewards, so will theoretical framework emphasize relevant aspects only of those material (transactional) rewards, leaving non-material forms of incentives for the second phase of this research.

Brown and Armstrong (1999) developed a model consisted of four basic total reward elements: compensation (pay), benefits, learning and work environment. Compensation and benefits are considered material (transactional) rewards and as such are of interest for this paper. Compensation refers to the fixed base pay, variable pay depending on performance, stocks and profit-share options. Benefits refer to retirement benefits, health benefits, payed absence during vacation as well as perks and benefits in terms of different services to employees.

2.1.1. Compensation

Base pay is a function of both work (job) evaluation as well as the level of competence of the person who performs the work (Galetić, 2015). There are different work evaluation methods but their common characteristic is that they tend to determine the relative value or weight of a particular job. On the other side, in order to be performed successfully, each job requires certain level of know-how and competencies held by an employee. Therefore organizations create their own pay structure, which classifies jobs of similar relative values and similar competences requirements in the same salary range. When aligned with labor market prices, pay structure becomes the basic tool for base pay management.

In addition to base pay, many organizations use also different models of variable pay. Variable pay considers all salary models in which part of the salary or the entire salary depends on work performance or output (Buble, Bakotić, 2013). Because of that, variable pay is often referred to as stimulating pay or performance pay. As such pay depends on achieved results, it implies measurement of performance.

Measurement serves a dual purpose – it is a control instrument, but it should also motivate employees and direct their activities toward defined work goals. Prerequisite of having an objective and fair variable pay system is implementation of a reasonable measurement system. In order to accomplish that, norms, i.e. performance standards should be defined as a benchmark for realized results (Taboršak, 1994).

Variable pay based on exact quantitative and qualitative measurement of performance is usually applied in manufacturing, logistics and trade, i.e. for repetitive operations (Galetić, 2015). There are of course jobs whose work results are impossible or economically unjustified to be measured. In such cases, an adequate remuneration of workers and the application of a variable pay model reckons on different grading systems. For example, managers, experts, consultants, scientists and other highly educated workers could be having part of the whole of their salary as variable. There are many different techniques for grading their performance, which all assume that their results are not to be measured but evaluated (Carell et al. 2000).

One of the most widely used techniques is so called *Management by objectives*, which functions in a way that specific objectives for each employee are defined/agreed at the beginning of the evaluation period. During the period managers have periodical, individual interviews with employees, aiming to determine progress and abolish possible difficulties. At the end of the period, managers evaluate the success in achieving agreed objectives (Bahtijarević Šiber, 1999).

Variable pay relates to any form of payment, according to which salary is at least partially dependent on the achieved performance. It follows that the variable salary can apply for individual performance but also for group performance at a team level (Galetić, 2015). Nevertheless, there are other forms of group incentives, beside variable pay. Well created group incentive models contribute to team work empowerment, develop loyalty towards the organization and increase productivity. The most often used group incentive models, that shall be examined also in the empirical part of this paper, are profit sharing and stock options models.

Profit sharing is a reward system in which the employer pays to chosen employees, as a supplement to their base pay, special money incentives, depending on a profit realized by the company. Usually companies include all management level employees in such a system to a certain degree. Companies using profit-sharing models allocate up to 30% of their total profit for employees' rewards (Bahtijarević Šiber 1999). Profit – sharing has been a recognized compensation model since 19th century, and more recent evidence shows that 27,56% of private companies in Croatia uses profit sharing models (Načinović et al., 2012).

Increasingly popular system of incentive rewards are stock options, giving employees contribution in ownership of the company. It is widely used and even in Croatia 26,83% of private companies already use stock option models for their highly positioned employees (Načinović et al., 2012). Usually, stock options do not go to the extent of changing the ownership structure and as such do not provide employees' control over the business strategy. They provide participation to a degree that associate financial interests of an employee with those of the company, generating so a strong motivational spur for each individual to achieve the best possible results. However, there are similar yet different models called ESOP, designed to include all employees of an organization, providing them possibility to become owners of the organization (Galetić, 2015). As a type of material rewards but also as a business strategy, ESOP is used in 22,62% of companies in the private sector in Croatia (Načinović et al., 2012).

2.1.2. Benefits

Although they are not related to cash incentives, benefits refer to significant material rewards. Studies show (Henderson, 2006:421) that despite the fact that benefits are not directly related to outputs, they increase productivity for two mail reasons:

1. increased satisfaction of employees leads to quality improvements, reduced turnover time and decreased absenteeism

2. they provide to each employee a greater feeling of security

In order to achieve goals meant to be realized through benefits, several issues need to be considered (Armstrong, Murlis, 2004): choice of benefits, size and range of benefits, share of benefits in total rewards, possibilities of choice in terms of flexible benefits, distribution of benefits, alignment of benefits among different groups of employees, market impact, government policy and unions.

In Croatia many benefits are determined by law. In addition to those, there are also benefits chosen by an employer and implemented in order to motivate the employees and demonstrate attitude and policy. Such benefits are defined by internal regulations of an organization.

The most important mandatory benefits in Croatia are benefits for retirement and health insurance, stipulated by the Law on contributions (Zakon o doprinosima, 2016). Furthermore, there are also mandatory benefits concerning salary compensation during the absence of work. Those benefits are regulated by Labor law (Zakon o radu, 2014) and the most important of them are: payed absence during vacation, payed absence for important personal needs, payed maternity leave, payed sick leave, payed absence for the purpose of off-the-job-training.

Beside mandatory benefits, there are also voluntary benefits implemented upon management decisions, depending on depending on the objectives to be achieved by the rewarding strategy and policy of benefits. Such are for example perks and benefits in terms of different services to employees, like provided childcare, sports and recreation opportunities, specialist medical examinations etc.

Empirical part of this paper shall consider majority of the above elaborated compensation and benefits.

2.2. Millennials

Literature suggests that motivational factors vary across employees and over the time (Smola, Sutton, 2002). Further to this, many authors agree that different generations need to be managed differently (Guillot-Soulez, Soulez, 2014). Particular generations seem to develop a unique pattern of behavior based on events from the cultural, political, technological and economic context experienced during their upbringing (Galetić et al., 2016a).

Because of their changed demographic profiles and social norms, the youngest generation of employees, Millennials, foist the biggest challenge for employers (Eisner, O'Grady, 2009; Meier, Crocker, 2010). Having said that, it would be fair to define Millennials, as is done in the literature. There is no consensus on the exact range of years of birth (Martin, 2005), so for the purpose of this paper, as Millennials shall be considered generations between the early 1980s and the late1990s. Additionally, those generations are sometimes referred to as Generation Y, since they are the demographic cohort following Generation X (Galetić et al. 2016 b)

It was interesting to investigate which motivational factors have been identified as important for Millennials in previous studies. Apparently, Millennials acknowledge more intrinsic than extrinsic motivators. In line with this finding, it is elaborated that money is not the primary motivator, whereas opportunities for career growth and advancement as well as a fulfilled balanced life are found to be dominant motivators for Generation Y employees (Kultalahti, Viitala, 2014).

However, financial motivation has been identified as still dominant motivational factor in Croatia (Šandrk Nukić, 2012). Since Millennials represent 24,05% of total population in Croatia (Galetić et al. 2016 a) and will be entering the workforce until around 2022, it is important both for scholars and managers hiring those young people to learn their pay preferences.

A recent research on pay preferences of students from the Faculty of Economics and Business Zagreb (Galetić et al., 2016 a) showed pretty traditional orientation of students, arising from their preferences toward a high base pay (usually attractive to older employees) instead of propensity towards flexible pay schemes depending on performance. We still lack the knowledge are such pay preferences common among Millennials in Croatia or they are not homogenous after all. Therefore, research of pay preferences of a bit different segment – of civil engineering students in Croatia shall be presented hereafter.

3. EMPIRICAL RESEARCH ON MILLENNIALS' PAY PREFERENCES

Pay systems that are incompatible with employee preferences can be costly for organizations (Brown, 2001). Additionally, if organizations knew the pay preferences of their ideal job candidates, it might be possible to increase their attractiveness without affecting labor costs (Cable, Judge, 1994). This idea led to the initial research question: what are Millennials' pay preferences in Croatia, especially attitudes of Civil Engineering students.

It must be said that this paper presents the first phase of the study, focusing on material preferences, while in the second phase also the non-material preferences shall be analyzed and presented.

3.1. Research methods and sampling

The first step in designing the research was to select participants for the empirical research. The idea was to build on the findings regarding pay preferences identified at the Faculty of Business and Economics Zagreb (Galetić et al., 2016 a) and conduct such a research on a similar but somewhat different segment of students, in order to approximate the general preferences of Millennials in Croatia. Therefore data was gathered from students from all civil engineering faculties in Croatia – Faculty of Civil Engineering Osijek, Faculty of Civil Engineering Zagreb, Faculty of Civil Engineering Rijeka, Faculty of Civil Engineering, Architecture and Geodesy Split. As the aim was to study the entire period ascribed to Generation Y (individuals born from mid 1980s till late 1990s), the chosen respondents were 3rd year undergraduate students as well as graduate level students.

The research was conducted using the questionnaire that was designed and used for the same purpose at the Faculty of Economics and Business Zagreb (Galetić et al., 16 a; Galetić et al., 16 b;). The questionnaire consists of several closed-end questions about different pay modalities (e.g., base pay, variable pay, perks and benefits etc.) as well as various nonmaterial motivation strategies (e.g. flexible working hours, recognition, participation in decision making etc.), for which respondents were asked to assign importance using Likert 5-point scale (1 = not important at all, 5 = most important). There were also a couple of open-end questions regarding achieving work-life balance and willingness to work abroad. Finally, the questionnaire includes also different background questions that were used to describe independent characteristics of respondents (e.g., sex, student status, year of birth). The estimated time for fulfilling the questionnaire was approximately 10 to 15 minutes.

Data was gathered among students from January till mid February 2017, while the next phase followed immediatelly after that, when data was analyzed and interpreted. At the end of the collection phase a total of 105 civil engineering students fulfilled the questionnaires. Descriptive statistics of the respondents are given in a summary table below.

Table 1 Descriptive statistics of the respondents

Independent characteristic N=105	Frequency	Percentage
Sex		
Male	61	58%
Female	44	42%
Birth year		
1987-1988	3	3%
1989-1990	6	6%
1991-1992	25	24%
1993-1994	34	32%
1995-1996	35	33%
1997-1998	2	2%
Faculty location		
Zagreb	32	30%
Split	25	24%
Rijeka	30	29%
Osijek	18	17%
Level of studies		
Undergraduate	45	43%
Graduate	60	57%

As it can be seen from Table 1, 58% of the sample is comprised of male students, which corresponds to the general structure of student population at civil engineering faculties. Birth years of the respondents show that the sample was consisted of Millennials. As expected, majority of students is between 21 and 26 years old. However, it is a bit surprising that there are 9% of students older than 26, i.e. 3 students that are 29 and 30 years old! It doesn't affect the results of the study, but it says a lot regarding duration of studies at civil engineering faculties. As for the Faculty the respondents come from, Table 1 shows an equal representation of all 4 civil engineering faculties in Croatia: there are 30% of students from the Faculty of Civil Engineering Zagreb, 24% of students from the Faculty of Civil Engineering, Architecture and Geodesy Split, 29% of students from the Faculty of Civil Engineering Rijeka and 17% of students from the Faculty of Civil Engineering Osijek. Such a distribution relativelly correlates to the size of those faculties. Finally, regarding the level of Millenials' studies, there were 43% of undergraduate students among respondents, and 57% of graduate students.

3.2. Results and discussion

Respondents were asked to assign importance to different elements of pay they would expect from an employer. Results are shown in Table 2.

Table 2 Pay preferences of civil engineering students

Pay element	N=105				
	Mean χ	Median	Minimum	Maximum	Std.Dev.δ
High base pay	3.952	4	1	5	0.825
Off-the-job training	4.133	4	2	5	0.760
Health benefits	4.171	4	2	5	0.882
Retirement and security benefits	4.314	4	2	5	0.738
Perks and benefits in terms of different services to employees	3.314	3	1	5	1.068
Mobility opportunities abroad	3.514	4	2	5	0.962
Profit-sharing	3.419	3	1	5	0.959
Variable individual pay	3.800	4	1	5	0.903
Variable group pay	3.276	3	1	5	0.966
Child care	3.267	3	1	5	0.993
Stock-sharing	3.067	3	1	5	1.049

The analysis of primary data collected among students revealed that out of 11 different pay elements, respondents assign most importance to retirement and security benefits (χ=4.314, δ=0,738), health benefits (χ=4.171, δ=0,882) and off-the job training (χ=4.133, δ=0,760). The first two most preferred benefits are already available to all employees as they are part of Croatian labour and social security policies and as such are employment-based, not an extra award. Additionally, these benefits are usually attractive to older employees but millennials from the Faculty of Economics and Business Zagreb identified exactly those benefits as their top preferences, too! However, civil engineering students assigned importance to training possibilities, whilst economy students did not find them very attractive (Galetić et al., 2016 a). On the other hand, stock sharing (χ=3.067, δ=1,049) and child care (χ=3.267, δ=0,993) are the least important to Millennials. As for the other elements, it is evident that, exactly as at the Faculty of Economics and Business, a high base pay (χ=3.952, δ=0,825) is more important than variable pay options, either individual (χ=3.800, δ=0,903) or group (χ=3.267, δ=0,993).

Table 3 Amount of the net monthly salary that is considered needed for decent standard of living and a job satisfaction

Desired amount of the net monthly salary	Frequency	Percentage
< 5.000,00 HRK	1	1%
5.000,00 - 7.000,00 HRK	13	12%
7.000,00 - 10.000,00 HRK	53	50%
10.000,00 - 13.000,00 HRK	31	30%
> 13.000,00 HRK	7	7%

And what is considered a decent base pay is evident from the table above – half of the respondents find net monthly salary from the range of 7.000-10.000 HRK needed for a normal standard of living and a job satisfaction. Such an attitude is in compliance with average salaries in Croatia (www.dzs.hr). Other ranges are equally distributed.

Among the above listed pay preferences, non-parametric tests revealed only a small number of statistically significant differences in assigning importance to various pay elements. Those differences are presented in Table 4.

Table 4 Statistically significant differences regarding pay elements

Pay element	Independent characteristic of respondents	Statistical test	p-value
Retirement and security benefits	gender	Mann-Whitney U Test	0.0073
Perks and benefits in terms of different services to employees	Faculty location	Kruskal-Wallis ANOVA	0.0013
Profit-sharing	Faculty location	Kruskal-Wallis ANOVA	0.0084

More specifically, Table 5 shows that, at the level of statistical significance p=0,05, analysis of gender as an individual characteristic identified that male Millennials assign less importance to retirement and security benefits than female Millennials. Such a difference was not identified at the Faculty of Economics and Business Zagreb, where students expressed gender related significant differences only towards profit-sharing (Galetić et al., 2016 a).

Table 5 Statistically significant differences regarding retirement and security benefits, in respect of gender

Gender	Frequency	Mean	Std.Dev.
Male	61	4.147541	0.749134
Female	44	4.545455	0.663134

Table 6 Statistically significant differences regarding perks and benefits, in respect of faculty location

Faculty location	Perks and benefits in terms of different services to employees			Profit-sharing		
	Frequency	Mean	Std.Dev.	Frequency	Mean	Std.Dev.
Zagreb	32	3.812	0.738	32	3.875	0.871
Split	25	2.760	1.165	25	3.320	1.180
Rijeka	30	3.400	1.102	30	3.267	0.785
Osijek	18	3.056	0.998	18	3.000	0.767

In addition to that, Table 6 shows that gender is not the only individual characteristic showing statistically significant differences. Location of the faculty seems to generate two statistically significant differences: perks and benefits in terms of different services to employees as well as profit-sharing. Evidently, Millennials studying in the capital assign the most importance to different services by which an employer could materially reward its employees, whilst Millennials from Split to not find those benefits very interesting or important. As for the profit-sharing, it was again the most important to students from the Faculty of Civil Engineering Zagreb, but this time Millennials studying in Osijek did not think profit-sharing was very attractive.

4. CONCLUSION

Overall effectiveness of pay policy is strongly influenced by understanding employee expectations, because (dis)satisfaction of employees correlates with their performance. Therefore learning about those expectations i.e. preferences is an imperative to companies wanting to use pay more effectively (Heneman, Judge, 2000).

Furthermore, Millennials are just entering the workforce and it is expected that very soon this generation will form the largest proportion of the total workforce (Galetić et al 2016 a). As such, their opinion and preferences shall be prevailing.

Because of those reasons, this study tried to find the preferred mix of pay elements, creating so the appropriate, recommended pay package, that would be attractive to Millennials in construction industry in Croatia.

Research results revealed that, even after taking consideration a couple of minor statistically significant differences, civil engineering students in Croatia prefer stability and secure as well as straight forward pay elements. They also assign a great importance to payed off-the-job-training options.

Such result could be associated to country - specific culture identified by Hofstede (Hofstede et al. 2010), which says Croatia is a country with very high preference for avoiding uncertainty, with security as an important individual motivation factor. Additionally, Croatia is a country whose long term orientation index suggests people pay effort in modern education as a way to prepare for the future.

As for the further research, it would be useful to study also other Millennials preferences, and likewise to investigate whether their opinion changes with time and gaining experience.

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TOURISTIC DESTINATION OF ISTRIA – PERSPECTIVES AND MANAGEMENT IN RURAL DEVELOPMENT

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Abstract

Tourism destination management is a complex challenge requiring a multidisciplinary and interdisciplinary approach, synergy and coordination of all tourism entities, leading to the same result. This dissertation provides detailed information on the existing management style as well as findings resulting from the multi-month long field work based on the future of managing Istria as a tourist destination. Furthermore, based on obtained research results, methods of tourism destination quality management have been offered. If tourism destination management is organized and synergistically conducted under agreed guidelines, more quality tourism results in line with those achieved by top destinations in our competitive regions can be expected. The authors analyse the Leader Programme function, its principles and implementation in practice, comparing the European countries' experiences with the development trends in Istria / Croatia. In a realistic way, they show the management issues, but they also point out the paths of rural area development according to other countries' experience. Though the Istrian region has been recognized as a quality tourist destination for years, its possibility for a bigger and better step forward must be pointed out in terms of managing the destination itself. To achieve optimal solutions, professional management modules and innovative guidelines set by world tourism trends must be followed in order to adjust them to our needs and requirements. A certain reorganization of some management branches as well as permanent staff education is essential for tourism in Istria and Croatia as a whole.

Keywords: *destination, tourism, management, perspectives, development, Istria.*

JEL Classification: P2, P25

1. INTRODUCTION

This paper was written as a guideline for achieving a basic goal of presenting new solutions and answers to questions of managing Istria as a quality tourist destination. Having observed an increasing need for a more efficient tourism management, based on a balanced development and the use of potentials i.e. resources, this dissertation explores actual assertions and possibilities of new perspectives. Tourism destination management is a complex challenge requiring a multidisciplinary and interdisciplinary approach, synergy and coordination of all tourism entities, leading to the same result. The authors provided detailed information on the existing management style as well as findings resulting from the multi-month long field work based on the future of managing Istria as a tourist destination.

Resource management are general an extremely important link int he entire touristic development of a destination or region. The professional knoweledge and not the politics is the only possible champion of management and development oft his or any other touristic region. The research has given insight into the presence of management in the delivery of the Istrian rural area development touristic programme, and the findings have shown the insufficient number of elementary expert staff. Due to insufficient founds, unresolved property issues and weak motivation as well as insufficient state incentives, most raw materials are imported and of questionable quality. In view of agriculture as the main business activity in rural areas of Istria, until few years ago, farmers have not been permitted to sell their products to their guests legally and on their own prices, but they were forced to transport their products to larger touristic towns to be sold.

However, the situation today is a little bit different, but the problems of touristic development in rural Istrian areas (int he middle villages), are still an issue to resolve. Rural tourism development associations are still emerging in Croatia lacking professional employees. Schools in many villages are relatively badly equipped. We belive that a large chain of this process has been determined by human resources as a carrier of Istrian development towards a rich and respectable region. Furthermore, based on obtained research results, methods of tourism destination quality management have been offered. If tourism destination management is organized and synergistically conducted under agreed guidelines, more quality tourism results in line with those achieved by top destinations in our competitive regions can be expected.

Though the Istrian region has been recognized as a quality tourist destination for years, its possibility for a bigger and better step forward must be pointed out in terms of managing the destination itself. To achieve optimal solutions, professional management modules and innovative guidelines set by world tourism trends must be followed in order to adjust them to our needs and requirements.

A certain reorganization of some management branches as well as permanent staff education is essential for tourism in Istria and Croatia as a whole. Co-operation between individual administrative bodies in the County is not satisfactory nor systematically organized. It depends on affinities of individual heads and other employees in administrative bodies. In terms of education, there is an insufficient number of employees with university degrees in regional self-government bodies as well as a very low number of the employed with the master's degree (M.sc/M.A.) and a doctorate (Ph.D./D.Sc). One of the key tasks of the new development model must be evaluation and recognition of products and services for each micro-level. In this light, such programme development must include all interested parties, local development carriers from private, public or civil sectors in the County of Istria. Local and regional programming is of extreme importance because it is the only way for determining real local needs and rural touristic development. It is also important to propose a compromise when faced with choosing between local needs and available resources. As this paper has been focused on the issue of management as the basis for the very process of tourism destination development, it has been necessary to obtain opinions, experiences and suggestion from local tourism institutions and players to reach correct solutions based on obtained research information. The existing condition of Istrian tourism management as well as the condition of the destination itself is certainly not unsatisfactory.

2. IMPLEMENTATION OF MANAGEMENT PRINCIPLES IN RURAL DEVELOPMENT

"Apart from the increase in agricultural production competitiveness, it also includes protection of the environment, land management, diversification, improvement of life in rural areas and LEADER approach (Liaison Entre Actions de Développement de l'Economie rurale), which means that all the initiatives for starting of activities should come from the local community" (Moehler, 2006, p. 56). "One of the basic characteristics of rural development implementation in rural communities is putting an accent on local population, by which it is validated as a main factor of the overall rural area development. It is this particularity of trust in people who live in rural areas and in their abilities to discover what suits best their environment, culture, work traditions and skills itself that makes the LEADER Project special". (Štifanić, Debelić, 2009, p. 8). Connecting at the local level brings people together in order for them to exchange their experiences and knowledge, inform themselves and promote rural development activities, find project partners, as well as create a feeling of belonging to a larger entity, such as the local action group.

Plans and programmes are being produced, development strategies and laws are being proposed, legislation is being coordinated with the EU and the means/funds from the EU programmes, intended for those purposes, are being used (CARDS, INTERREG, SAPARD and other). However, in order to implement the rural development plans and programmes, Croatia needs expert consulting assistance from the EU, as well as a greater self-initiative. Given that Croatia is a candidate for accession to the European Union, it should dedicate itself more to familiarising with the experiences of the other EU member countries in the process of rural development in order to avoid other countries' mistakes. The first analyses and evaluations of the EU rural development policy show that the means from the EU funds were mostly spent on structural measures, namely approximately 34%, which includes the increase in competitiveness, i.e. investment in companies and food production, assistance to young farmers and earlier retirement. Approximately 38% of means were spent on environmental protection, soil quality improvement, afforestation and natural resource protection. "A large part of the means was also spent on the preservation of old, traditional crafts, village reconstruction, improvement of life quality in rural areas, as well as the preservation of tradition for the purposes of the development of tourism in rural areas" (Montelone, Storti, 2004, p. 139).

Equally, rural tourism also, "as a growing business in the tourist industry offers many benefits to the local community development. It can be developed locally, in partnership with small businesses, local government, other agencies in the area and its development is not dependent on external or large companies' decisions" (Kumrić, Franić, 2007, p. 135). The Leader approach supports innovative approaches and stimulation of unexploited resource development, or, just a different view on existing issues; the problem of rural areas, its preservation and sustainable development had been recognised in Europe much earlier than in Croatia.

2.1. Managenet /Leader Programme principles

Fundamental principles of the LEADER Programme in the rural communities sustainable development are based on the characteristics of the areas to which they are applied, which means that an attempt has been made to use own unexploited resources. This principle emanates from the participants' need to base their development on local values.

For example, *the bottom-up* approach (typical for Italy), as opposed to the majority of developmental plans, is a completely opposite approach, by which an attempt was made to encompass the largest possible number of participants who would influence the decision making process for an area. Literally everyone who wishes and believes that they can assist the developmental process, whether it concerns the inhabitants or the public, private, or some other sector representatives. "The *bottom-up* approach means that the local factors take part in the decision making processes pertinent to the strategy and selection of the priorities which should be implemented in their local area. The European experience has shown that the bottom-up approach should not be considered as an alternative or contrast for the top-down approaches of national and/or regional authorities, but that they should be combined in order to achieve better overall results". (Štifanić, Debelić, 2009, p.11).

- Sustainable rural development which is based on preservation and development of environmental, human, social and creative/productive capital.
- Approach based on area characteristics, as they form a foundation for quality development.
- Starting up the community, as it lags behind in inclusion in developmental processes and needs support in order to get involved in developmental processes.
- Bottom-up approach – today's development is not possible without involvement of the public. This is why all available forces in local communities should be involved in order to, by richness of ideas and possible solutions, as high a quality as possible development could be achieved.
- Development of local partnerships in approaches and actions – presently, fragmented initiatives are often condemned to failure beforehand, they lack power and trust.

- Networking and cooperation, as well as connecting, synergistic acting in developmental processes, exchange of knowledge and experiences, both in today's modern Europe and here, in Croatia.
- Innovative quality and tradition, together with sustainable rural development, but innovations are essential in order for traditional values to be represented in a new and market competitive way.
- Integral approach – sector division is a frequent cause of problems in development. Horizontally, inter-sector linking, as well as the vertical one, linking of local, regional and national institutions, is of great importance in realisation of sustainable rural development.
- Local financing and project management – it is extremely important that local level activities should also be financed from local budgets.

3. PERSPECTIVES OF MANAGEMENT IN RURAL DEVELOPMENT

Member countries of the European Union apply the rural development programme Leader in strengthening the local development as a counter-balance for europisation. In the period between the years 1991 and 2006, Leader I, Leader II and Leader+ Programmes demonstrated a new approach for integral and sustainable rural area development, strengthening local communities' developmental policies.

In the solution of the problem of a less favourable position of rural Europe in comparison to the urban, the Leader programme represents a new social and economic model (Ray, 2001, p. 280). In analysing rural development programmes in the European Union and in Croatia, an attempt was made to concentrate on the Leader Programme as a new and innovative approach to the development of rural community, village and agriculture. In the period when Croatia is negotiating its accession to the European Union we can observe the results of the Leader Programme and principles and give recommendations for its application in Croatia. The main advantage of the Leader Programme was the bottom-up approach, which helped activate local resources for the purposes of local community development. Additionally, it involves the local population who has the closest insight into the developmental opportunities and who is deemed partly responsible for and more dedicated to the project than the external active participants. Such an approach is not in opposition to the top-down approach in the sense of the influence coming from the top of the state, regional authorities or through relevant ministries. For Croatia, the Leader Programme is considered to be positive for the purposes of rural development and we expect fast adjustment of local active participants in the creation of LAGs, as well as strengthening of their role as developmental factors. For example, we find the first institutional initiative of that kind in the Istrian County's attempts to include the Leader Programme in their rural development (Laginja and Čorić, 2000). One of the non-government organisations using the Leader Programme principles is the Croatian Rural Development Network. After the years of informal work, in January 2006, it was formally registered with the task of gathering and representing civil society organisations which deal with the sustainable rural development of Croatia (www.odraz.hr, of 23. 10. 2011).

4. CONCLUSION

The research provide a good direction and a base for forming a single management and development strategy emphasizing the education of a new management staff, focused on individual growth as well as comprehensive development. Although oriented on the Istrian Region, conclusions can be transferred to other Croatian territories. The main advantage of the Leader Programme was the bottom-up approach, which helped activate local resources for the purposes of local community development. Additionally, it involves the local population who has the closest insight into the developmental opportunities and who is deemed partly responsible for and more dedicated to the project than the external active participants. Such an approach is not in opposition to the top-down approach in the sense of the influence coming from the top of the state, regional authorities or through relevant ministries. Only by managerial approach, respecting all managerial fuctions, is it possible to realise the concept of management and development as, objectively speaking, the situation in rural areas is stagnant and advancement cannot be felt. Regardless of the fact that it concerns the investment in the economic and non-economic sectors, it is possible to realise such an approach. If one wishes to have efficient management in the Istrian Region, one should also establish a system of quality communication, systematic monitoring and provide as much financial support to the entire development as well as to educate new people and work on increased education of the entire population. Equally, a team of people with managerial competences, with knowledge about the matter of rural area management, can and ought to conduct rural development actions and stimulate the implementation of the EU programmes for rural part development.

Cooperation alone in that area goes further than the networking itself. It involves Local Action Groups which carry out a mutual project with another LEADER group, or with a group which has a similar approach in another region, member-country, or even in some third country. "Cooperation can help LEADER groups to bring into focus their local activities. This can enable them to solve particular problems or to add value to local resources". (Štifanić, Debelić, 2009, p.27). The cooperation projects are not only a simple exchange of experiences; they have to include specific mutual projects, ideally conducted within a common structure. This system implies the establishment of institutions which come with costs, which can be non-profits ones, while founds needed for their operation can be found in various incentives and other self-governing measures.

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COMPARATIVE ANALYSIS OF PUBLIC PROCUREMENT PROCEDURES USED IN PROJECTS FINANCED BY EUROPEAN FUNDS

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Abstract

When implementing a project funded by European funds, public authorities in Croatia are obliged to follow a procedures defined by Croatian Public Procurement Act. Other beneficiaries use specific procedures defined for each call, approved by authorized ministry. Each procedure is based on transparent, fair and competitive public procurement across the EU's Single Market area, but with some specific conditions. Some of public procurement procedures used in Croatia during implementation of projects are analyzed in this paper and compared to Croatian Public Procurement Act.

Keywords: *European funds, public procurement, procedures*

JEL Classification: H43, O22

1. INTRODUCTION

When implementing a project funded by European funds, public procurement rules are very important, since they ensure value for money and fair competition in the market as well as actions to ensure that money is spent efficiently and transparently. It is estimated that around 48% of the European Structural and Investment Funds is spent through public procurement. (European Commission, 2015)

Public procurement procedure in the Republic of Croatia is defined by Public Procurement Act (Zakon o javnoj nabavi; "PPA"). It refers to the processs by which public authorities, such as government departments or local authorities, purchase work, goods or services from companies (European Commission). When implementing a project funded by European funds, national rules for public procurement have to be used since Croatia became a full member of the European Union (July 2013) and since we started to use Structural Funds.

Since the 2011 the "old" PPA was in force (published in the Official Gazette 90/2011, with changes and amendments in 83/2013 and 143/2013) and in December 2016, the Croatian Parliament adopted the "new" PPA which entered into force on January 1 2017. The "new" PPA implements the new public procurement specific directives (2014/24/EU and 2014/25/EU) and brings a lot of changes to the Croatian public procurement legal framework.

Below the EU thresholds, the PPA sets out national thresholds of approximately EUR 26,000 for goods and services and EUR 65,000 for works. Procedures very similar to those applied above the EU thresholds apply, with the exception of the shorter time limits for the receipt of tenders and shorter time limits for lodging an appeal. Below the national thresholds, PPA rules do not apply, and each contracting authority has the right and the legal obligation to set its own procedures (European Commission).

Other users of European Union projects' funds (called non-obliged persons – "NOJN"), which include privat legal entities and crafts, have to use specific procedures defined by each contracting authority, to make sure they are implementing transparent, fair and competitive procurement across the EU's Single Market. Recent procurement procedure for NOJN (Anex 03, from April 2016) is defined by the Ministry of Regional Development and EU Funds ("NOJN Procedure") and will be analyzed hereafter.

2. COMPARATIVE ANALYSIS OF DIFFERENT PUBLIC PROCUREMENT PROCEDURES

To make comparative analysis of different public procurement procedures used in projects funded by EU, three different rules regarding public procurement will be compared: "old" PPA which was in force until the end of 2016, "new" PPA which is in force from the beginning of 2017 and "NOJN Procedure" which is are using non-obliged persons when spending EU funds. Comparison will be made on major aspects: principles of public procurement, thresholds, market research, time limits for the receipt of tenders, reasons for exclusion and selection criteria of tenderers, award criterion, tender guarantee, subcontractors, public opening of tenders, award decision, standstill period and lodging an appeal, shown in Table 1.

Table 1: Comparison of public procurement procedures

Aspect of comparison	"old" PPA (2011-2016)	"new" PPA (2017-)	NOJN Procedure
Principles of public procurement	1. freedom of movement of goods 2. freedom of establishment 3. freedom to provide services - competition - equal treatment - non-discrimination - mutual recognition - proportionality - transparency + Effective procurement and efficient spending of public procurement funds	1. freedom of movement of goods 2. freedom of establishment 3. freedom to provide services - competition - equal treatment - non-discrimination - mutual recognition - proportionality - transparency + Effective procurement and efficient spending of public procurement funds	1. Effective procurement and efficient spending of public procurement funds 2. freedom of movement of goods and services 3. freedom of establishment 4. equal treatment and non-discrimination 5. transparency 6. mutual recognition 7. preventing conflicts of interests 8. competition
Thresholds for using the procedure	- open procedure of lesser value: HRK 200.000 (aprox. € 26.600) for goods and services, HRK 500.000 (aprox. € 66.600) for works - open procedure of great value: € 207.000 (HRK 1.558.554) for goods and services, € 5.186.000 (HRK 39.046.431) for works	- open procedure of lesser value: HRK 200.000 (aprox. € 26.600) for goods and services, HRK 500.000 (aprox. € 66.600) for works - open procedure of great value: € 207.000 (HRK 1.558.554) for goods and services, € 5.186.000 (HRK 39.046.431) for works	- contract based on only one offer: HRK 20.000 (aprox. € 2.600) for goods and services and HRK 50.000 (aprox. € 6.600) for works - public announcement of information of procurement: HRK 500.000 (aprox. € 66.600) for goods and services and HRK 1.000.000 (aprox. € 133.300) for works
Market research	Not defined	Obligatory, for procedure of great value	Obligatory, for contracts based on only one offer

Time limits for the receipt of tenders	- open procedure of lesser value: 20 days - open procedure of great value: 40 days	- open procedure of lesser value: according to complexity of the contract - open procedure of great value: 35 days	- contract based on only one offer: 10 days - public announcement of information of procurement: 20 days
Reasons for exclusion and selection criteria of tenderers	Mandatory and other reasons for exclusion are specifically enumerated	Reasons for exclusion are specifically enumerated, as well as selection criteria of tenderers	No mandatory reasons Other reasons: exclusion only if an operator didn't fulfill all conditions from the contract notice
Award criterion	A choice between using "MEAT" or the lowest price	The most economically advantageous tender ("MEAT"), from 1 July 2017	A choice between using "MEAT" or the lowest price
The tender guarantee	Mandatory, stating the means and conditions, must not exceed 5% of the estimated value of procurement	Mandatory, stating the means and conditions, must not exceed 3% of the estimated value of procurement	Tender documens can contain provisions regarding tender guarantee
Subcontractors	The contracting authority may not require or proclaim subcontractors	The contracting authority may not require or proclaim subcontractors	No rules regarding subcontractors
Public opening of tenders	In open procedure, the contracting authority shall open the tenders in a public opening of tenders	In open procedure, the contracting authority shall open the tenders in a public opening of tenders	No rules regarding public opening of tenders
Award decision	Time limit: reasonable, or 30 days from the expiry of the time limit for the receipt of tenders	Time limits for award decision are not defined by the Act	Time limits for award decision are not defined by the Procedure
Standstill period	open procedure of lesser value: 10 days open procedure of great value: 15 days	15 days	Standstill period is not defined by the Procedure
Lodging an appeal	open procedure of lesser value: 5 days open procedure of great value: 10 days	10 days	Period for lodging an appeal is not defined by the Procedure

Source: authors

Principles of public procurement are the same in all procedures, except that NOJN Procedure is emphasizing the principle of preventing conflicts of interests. Since this principle is regulated by separate articles in both PPA's, it is not included in principles of public procurement.

In both PPA's thresholds for using the procedure is HRK 200.000 for goods and services, and HRK 500.000 for works. Thresholds for procedures of great value are defined by European thresholds, in euros. The NOJN Procedure has set up different thresholds. For the value of procurement of HRK 20.000 for good and services, and HRK 50.000 for works a contract can be signed based on only one offer. If the value of procurement is HRK 500.000 for goods and services and HRK 1.000.000 for works or more, a public announcement of information of procurement have to be made. It has to be announced at NOJN's website or at the website of structural and investment funds in Croatia, www.strukturnifondovi.hr.

An obligation to conduct prior market research only for procurement of high value is defined in "new" PPA (Art. 198). Contracting authority has to make market consultations with the interested economic operators on the draft procurement documents, with respect to the subject matter of the tender, technical specifications, criteria for qualitative selection, contract award criteria and special conditions relating to the performance of a contract (Schönherr). Public market consultations have to be made for a minimum period of five days, by publishing information at the website. After this period of consultations, a report on all the comments and proposals received and accepted shall be prepared and published on the website as well. The JOJN Procedure is prescribing an obligatory market research for contract based on only one offer, by internet research or sending a demand for offer to at least three independent subjects who can perform a subject of tender.

Time limits, as well as a principle of calculating time limits, for the receipt of tenders have changed in "new" PPA. In the "old" PPA time limits were strictly defined for procedures of small and great values. In "new" PPA time limits for the receipt of tenders have to be calculated according to complexity of the contract and time required for drawing up tenders, without setting an exact time limit in open procedure of lesser value. In the procedure of great value minimum time is set to 35 days. In NOJN Procedure time limits are exactly defined: for contract based on only one offer minimum time limit is 10 days from receiving an invitation and in the case of public announcement of information of procurement 20 days from the announcement.

The "old" PPA specifically enumerates mandatory (Art. 67) and other (Art. 68) reasons for exclusion of tenderers. Mandatory reasons for exclusion refer to cases if economic operator and/or the person authorized under law to represent the legal person of the economic operator has been the subject of a conviction by final judgment for some criminal acts, if it failed to fulfil the obligation to pay all outstanding tax liabilities and contributions for pension and health insurance or if it has submitted false information at the time of submitting documents. Other reasons for exclusions are mandatory: the contracting authority may exclude tenderer from participation where it is bankrupt or is being wound up, where it is the subject of preliminary proceedings to establish conditions for the declaration of a bankruptcy or the proceedings of compulsory winding up its business, where the economic operator and/or the person authorised under law to represent the legal person of the economic operator has been convicted by a judgment of any offence concerning its professional conduct or has been found guilty of professional misconduct. The "new" PPA enumerates reasons for exclusion (Art. 251-255) (concerning cases of judgments for criminal acts, corruption, cheat, terrorism, money laundering or terrorism financing or child labour, as well as if it failed to fulfil the obligation to pay all outstanding tax liabilities and contributions for pension and health insurance) and selection criteria of tenderers (Art. 256-259). Selection criteria are related to business capacity of tenderer, economic and financial standing and technical and professional suitability. In NOJN Procedure no mandatory reasons for exclusion are mentioned, and other reasons are only connected to the case if tenderer didn't fulfill all conditions from the contract notice.

In the "old" PPA contracting authorities were able to choose between using MEAT or the lowest price award criterion. In the "new" PPA, the only award criterion has to be MEAT, since in practice awarding criterion of the lowest price has been used in more than 98% of cases and since the quality should become an important orientation in public procurement. In this case, the relative weights for price or cost cannot exceed 90%. In the NOJN Procedure, there is a choice o f using MEAT or the lowest price award criterion.

The tender guarantee in the "old" PPA is mandatory (Art. 77), and if required, the means and conditions of the guarantee have to be stated in the contract notice and in the tender documents. The validity of the tender guarantee shall be determined in line with the term of validity of the tender. It shall be stated in the absolute amount, and must not exceed 5% of the estimated value of procurement. According to the "new" PPA (Art. 214-217), the tender guarantee is also mandatory, but it must not exceed 3% of the estimated value of procurement. In the NOJN Procedure, it only states that tender documents can contain provisions regarding tender guarantee.

Rules regarding subcontractors are the same in both PPA-s (Art. 86 of "old" and Art. 282 of "new" PPA), stating that where the economic operator intends to subcontract a share of the contract, it must indicate information concerning the share which it intends to subcontract. The contracting authority may not require the tenderer to subcontract a share of a contract or to engage specific subcontractors. Where a share of a contract is subcontracted, direct payment to the subcontractor has to be done. The NOJN Procedure has no rules regarding subcontractors.

Both PPA-s have the same rules regarding public opening of tenders: in open procedure, the contracting authority shall open the tenders in a public opening of tenders. In NOJN Procedure this rule is not mentioned.

Award decision procedure according to the "old" PPA (Art. 96) has set time limits for the adoption of the award decision. It starts from the expiry of the time limit for the receipt of tenders and shall be reasonable. Where the time limit is not indicated in the tender documents, it shall be 30 days from the expiry of the time limit for the receipt of tenders. Time limits in the "new" PPA are not defined, but shall be defined in specific set of rules afterwards. Time limits for award decision are not at all defined in NOJN Procedure as well.

Standstill period has to be applied starting from the date of the receipt of the award decision. In the "old" PPA time periods have been different in procedures of lesser and high value: for procurement of high value standstill period was 15 days, and for procurement of lesser value was 10 days starting from the date of the receipt of the award decision. In "new" PPA only one standstill period is prescribed for all procedures: 15 days starting from the date of the receipt of the award decision. In the NOJN Procedure standstill period is not defined, because there is no official institution for lodging an appeal.

The appeal regarding the award decision in both PPA's shall be lodged with the State Commission. According to the "old" PPA, in high-value procedure an appeal shall be logged within a period of 10 days, and in procedure of lesser value within a period of 5 days from the date of the receipt of the award decision. In the "new" PPA only one period for lodging an appeal is defined: 10 days from the date of the receipt of the award decision. NOJN Procedure is not defining an institution or periods for lodging an appeal.

3. CONCLUSION

When spending European funds, specific procurement rules are very important because they ensure value for money and fair competition, as well as spending money efficiently and transparently. In order to ensure the full and effective transposition of the EU procurement rules, the new PPA brings a lot of changes to the Croatian public procurement legal framework and it is more comprehensive and complex. The full application of the new law is dependent on its implementation of by-laws, which are still not adopted – it is expected to be adopted in the next six months (by 1 July, 2017).

The most important amendments in the "new" PPA include obligatory market research, the most economically advantageous tender ("MEAT") as the sole award criterion, time limits for the receipt of tenders, award decision and lodging an appeal, value of the tender guarantee and standstill period.

When using EU funds, NOJN's don't have to use procedures defined in PPA, but in specific procedure for each call, that are less complex and less detailed. But, to be sure that conditions for tenderers are precisely described, a recommendation to non-obliged persons, when spending EU funds, is to use rules prescribed in PPA, because they are very detailed and came from the experience of conducting public procurement process.

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FOOD AND BEVERAGE MARKETING AIMED AT CHILDREN AND YOUTH

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Abstract

In the recent years, food and beverage industry is more than ever directed at children and adolescents. Nevertheless, attention is nowadays more than ever paid to quality of children's lives, including their diet. Therefore, the question is how large the impact of the marketing directed at children is, and how to teach children to be selective and resistant to such impacts in order to develop healthy instead of capricious consumer habits. Food and beverages are omnipresent elements in advertising, and children's programmes are particularly abundant with advertisements for junk food, such as candies, fast food and sweetened drinks. The answer to the question why we need restrictions in the promotion of food and drinks intended for children lies in the dramatic increase in the levels of childhood obesity and diet-related diseases in the recent years, with alarming statistics showing the need for action. Taking into consideration the afore-mentioned situation, it is necessary to urge the government and industry to act by imposing restrictions in advertising, as well as parents as the main co-participants who most often buy products that appeal to children. Although there are specific regulations in certain countries or e.g. at the European or global level, some regulations are not in line with each other, and they are generally not comprehensive. In the absence of complete prohibition of marketing of *unhealthy food, which is impossible to implement due to advertising freedom, there is a need for comprehensive and consistent approach that would not only regulate the quantity of advertising the "unhealthy", but also emphasize the need for advertising and imposing high nutritional value diet to children, which is important for their growth and development. Such initiatives would probably result in significant contribution to combating international epidemic of childhood obesity, and increasingly frequent health problems related to nutrition. These problems in children most often relate specifically with the negative influence the media has on children, which is done through promotion of food with low nutritional values, and low-nutrient and high-energy-density food.*

Keywords: *children, food and beverage marketing, advertising, diet, health*

JEL Classification: M3, M31

1. INTRODUCTION

Today's media space offers numerous options for teaching children about undesirable diet. Children's inability to critically observe the offered advertisements and distinguish between the good and the bad ones, as well as susceptibility to addiction, represent the additional categories why children are not even aware of their role in the consumer society. Almost every parent who goes shopping with small children can confirm that it is a real challenge, because children are attracted to shelves with products full of fat and sugar, which are featuring the latest characters that are popular with children. In addition, many restaurant chains offer menu items designed especially for, and marketed to, children. These situations were once largely a private matter, but today they have become an often subject of public debates about the role of the food industry in children's health. The priority should be to create a healthy environment in which children and young people will grow up, and that is reflected in the efforts undertaken in order to achieve such objectives. However, today's diet of children can be described as missed opportunities to eat healthy, or in a worse case, as direct threats to health. Eating habits acquired in childhood shape adult dietary habits and lifestyle. A question that often arises nowadays is how much the marketing of "junk food" directed at the youngest ones contributes to the afore-mentioned situation, and is such marketing one of the causes of the increasing number of obese and sick children. In terms of food and beverages specially aimed at children, it is very important to look at all aspects of marketing.

For example, product packaging is extremely important, because specifically it shows the actual values of a certain meal. Reading the label is the only true way of learning about the ingredients of a product, especially since the EU has strict regulations on labelling the food ingredients. However, it takes a lot of time to read the label of each product, and parents rarely do it. Regardless of the "small print on the backside of the product", it is very easy to deceive young consumers and their parents by using targeted and well-designed advertisements. Therefore, it is very important to conduct research, learn about the real effects of advertising, and if necessary, act on time so advertising would not be misused to the detriment of the health of children.

2. THE CONCEPT OF FOOD AND BEVERAGE MARKETING AIMED AT CHILDREN AND YOUTH

Food and beverage marketing pertains to activities with express or presumed aim of direct or indirect promotion of sale or consumption of food products. This includes, inter alia, promotion through print and electronic media, including television, radio, Internet, mobile and viral marketing, as well as product packaging, design, placement and alike. Advertising aimed at children is also on the rise in Croatia, as in the rest of the world, and the impact of children and teenagers on purchases of their parents is increasing, so sellers find that advertising segment increasingly important.

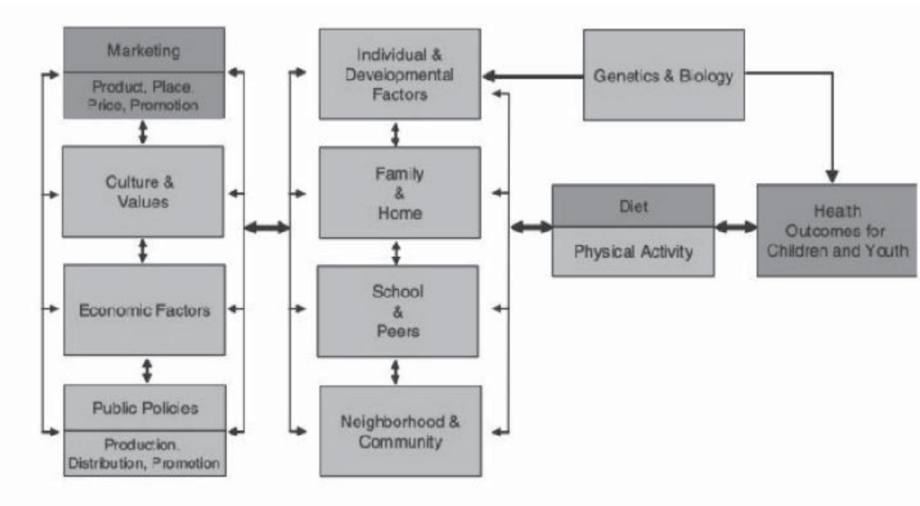
With regard to marketing techniques aimed at children, the following factors are taken into account (http://littledotapp.com...):

1. Overall presentation, features, content, shape and manner
2. Language, colours and images used
3. Whether children are represented
4. Target audience of the media or place in which the promotion is held
5. Whether children are potential recipients of the promotion in significant numbers, regardless of the target audience
6. The use of people, personalities, celebrities, their associates or other persons whose name or image may be familiar to or appeal to children
7. The use of cartoon characters, including brand owned and licensed characters

8. The inclusion of free gifts, toys or collectible items which appeal to children
9. The inclusion of competitions, vouchers or games which appeal to children
10. The shape of novelty value of the food or food packaging
11. Sponsorship of materials, products, people, events, projects, cultural, artistic or sporting activities or places popular with children or with a significant child audience

Dietary and related health patterns of children and youth are shaped by the interplay of many factors - genetics and biology, culture and values, economic status, and physical, social, commercial and media environments – all of which, apart from genetic predispositions, have undergone significant transformation over the past three decades. Among the various environmental influences, none has more rapidly assumed a central socializing role for young people than the media, in its multiple forms. With its growth in variety and penetration has come a concomitant growth in the promotion of branded food and beverage products in the marketplace, and the influence on the diet and related health patterns of children and youth.

Figure 1. Influences on the diets and related health outcomes of children and youth



Source: McGinnis J.M. (2006.) Food marketing to children and youth : threat or opportunity?, National Acad. Press, Washington, DC

Despite all the factors affecting the nutrition and health of children, this paper will further deal with great and, apparently, crucial influence of marketing. Although marketing is much broader and more comprehensive term than advertising, advertising is often considered the main marketing tool.

3. ADVERTISING AND ITS IMPACT ON CHILDREN AND YOUTH

Nowadays, it is much easier to deliver an advertising message than it used to be, because children simultaneously use several different media, e.g. they surf the Internet, watch television at the same time, listen to an iPod and use their smartphones. The average child age 8 or older spends more than seven hours a day watching screens - watching TV, using the computer, playing video games, and using tablet computers (Rideout, 2010). Even much younger children, aged 2-8, spend almost two hours a day with screens (Common Sense Media, 2013). Through almost all the aforementioned media, children are exposed to advertising. In October 2010, Ipsos Puls agency conducted a survey among 500 children aged 7-14 in Croatia. In comparison with other surveys of the aforementioned agency, a significant increase in the use and impact of technology was noticed in that survey (Šmit; 2014.,92). While TV still dominates in advertising directed at children, and it is the most dominant medium in this case, all the greater success of Internet and mobile advertising has been recognised, especially in addressing teenagers and adolescents. In addition, as with advertising other types of products, not just food and beverages, as well as other target consumer groups, not just children, the most effective way is combining different media and advertising methods, that is, integrated marketing campaign. Food and beverage companies today have a wide range of options, and accordingly, every day they find new ways to reach out to their small consumers. Corporations know that advertising content should be seen, on average, only 9 times so that a person can remember and buy it. If this is not succeeded through TV, in which case parents can still control the content, the corporations will incorporate the advertisements in all aspects of life of the average child. They will sponsor the child's sports club, advertise in the vicinity of schools and kindergartens on billboards (or in schools and kindergartens), build and brand children playgrounds, and be present in playrooms and all entertainment centres which children visit. Corporations advertise in children's magazines, offering children free games and applications for mobile phones and tablet computers, sponsoring movies and alike.

3.1. Television and Internet as the most dominant media in advertising directed at children

Television is still the most common medium through which food and beverage manufacturers communicate with children. When creating their video advertisements, corporations hire experts such as psychologists, sociologists and psychiatrists who study the way children think, what they see, what they perceive, to what they react as well as that which they will find most appealing. Results of studies conducted by the Harvard School of Public Health and Children's Hospital in Boston, show that every extra hour spent in front of television results in an increase in children's total daily calorie intake by around 167 calories.

A good example of concrete measures being undertaken against unhealthy food advertising directed at children, can be found in our neighbouring country, Slovenia. In 2016, its Ministry of Health in cooperation with the National Institute of Public Health developed a platform that clearly defines a code of conduct, when it comes to making advertisements for groceries containing substances that have a nutritional or physiological effect, especially fat, trans-fatty acids, salts or sodium and sugar. Slovenian public television adopted strict rules on advertising unhealthy food, in order to nullify its effect on obesity of children and youth. During children's peak viewing times, sweets, chocolates, potato chips and other types of food that drive fat gain and can have a harmful effect on health, may no longer be advertised. This decision is in line with recommendations of the World Health Organization as well as the study carried out by Slovenian Nutrition Institute, which proved that TV commercials are to a large extent responsible for the alarming rise of obesity of children and youth. This one-year research which covered and analysed the program content of Slovenian television stations, showed that 96 per cent of commercials for food products pertains to food the advertising of which should be banned for children and adolescents, according to recommendations of the World Health Organization. As much as 77 per cent of such commercials pertain to products with high content of sugar and other substances that cause weight gain, because of which they are not recommended to children despite their potential nutritional value. During times when children of up to 15 years of age watch television, advertising of all food products that have a negative nutritional or physiological effect, should be banned. It would probably be useful to introduce this type of measure in Croatia as well; albeit, mere ban on advertising represents no solution to the problem of children and youth with unhealthy diets. What is more important is to define a set of objective criteria for identifying ingredients and the content of sugar, fat and other unhealthy ingredients for all foods, as well as to present those data to the public and inform it thereupon.

Online advertising fundamentally changed the nature of marketing directed at children and youth. In the beginning, online advertisements were nothing more than static banners, or a marketing message featuring minimal text. Today, online advertising encompasses not only more sophisticated banner advertisements, but also advergaming, branded web sites and alike. Advergames are games created with the express aim to promote one or more products of a particular company. The task of advergames is to capture child's attention for a longer period of time than television advertisements, which is achieved easily because of the blurred boundaries between entertainment and the content of advertising. In Croatia, an example of such game is Lino Game, owned by the company Podravka, manufacturer of well-known children's food Čokolino.

Moreover, many companies create the already-mentioned, branded web sites with content designed in order to attract children and teenagers. This type of web sites contains elements such as games and competitions, often including prizes in the form of the product that is being advertised. An example of a branded web site available to children in Croatia, the promotion of which has been intensively pursued by the company, is the one owned by McDonald's – HappyMeal.com. This web site offers different contents, ranging from games to interactive puzzles, puzzle pieces, colouring games and alike.

Social media marketing is a type of online marketing, used in order to approach social media users by means of a multidisciplinary marketing campaign, conveying the desired message, the aim of which is predominantly to call to action rather than merely inform. Social media marketing covers a wide array of online advertising techniques, including placement of advertisements on social media such as Twitter or Facebook.

According to a research from 2012, three quarters of teenagers (in the USA) had a profile on one of social networking web sites (Common Sense Media, 2012), whereas today, this number ought to have significantly increased. One of the advantages of social media, when it comes to companies that use them in order to present their products, is their capacity to enable creation of messages on the basis of recipient's interests.

3.2. Product placement and advergames

Nowadays, many companies integrate their products inside, for example, a film or a video game, without their potential consumers being even aware of this. Instead of a classic advertisement for a product or brand, companies are willing to pay as much as necessary, in order that their products or logos might appear during the course of the program itself. Product placement has become widely used, given that it has been proven that its impact is stronger than the one of classic commercials. Although product placement is prohibited in the context of children's television program and although there should be a clear boundary between an advertisement and television content, product placement is nevertheless commonly encountered therein. While watching cartoons, children often identify with characters, and they tend to watch their favourite cartoon dozens of times. Therefore, product placement is more likely to incite children to empathy, compassion and identification, whereas informational advertisements are perceived in a completely different manner. It has been proven that the effect of this type of advertising is stronger, because of the fact that the data are received unconsciously, resulting in a stronger effect.

3.3. Promotional characters

Use of promotional characters is one of the most common advertising techniques, when it comes to promotion of food and beverages intended for children. In connection with promotional characters, what needs to be mentioned in the first place, are characters created by certain brands with the aim of linking their brand to that same character. In most cases, they are either mascots or human characters with special abilities that undoubtedly attract children. One of the most famous promotional characters is Ronald McDonald, who has been smiling to children from the advertisements of McDonald's restaurants for many years now. Following in the footsteps of world leaders in addressing children, Croatian companies have ensured that children in Croatia today, might, without much thinking, recognise promotional characters of certain manufacturers, among which are for example – the teddy bear Lino, promotional character of the company Podravka, one of the leading companies when it comes to children's food production or teddy bear Ledo Medo, character created in order to represent a well-known ice-cream producer in this region – the company Ledo.

Apart from imaginary characters, when promoting their brand, many manufacturers use persons who are famous and popular among children as promotional characters, such as music idols, athletes and alike. By inciting children's admiration towards such persons, we simultaneously encourage their wish to resemble those idols, which basically means that, if a person to whom a child wishes to resemble, consumes a certain product, it is almost inevitable that this same child will want to consume that same product, while at the same time neglecting the question of product's quality and value.

However, when talking about promotional characters today, it is licensed characters that represent the most efficient way to attract children, an example of which are for instance Disney characters. Film industry has never been more popular, and new animated films and cartoons are released at an unbelievable speed, at the same time introducing a large number of new and fun characters. Of course, children do not find all of them equally interesting; but, nevertheless, they tend to appear incredibly fast on almost all products intended for children – cereals, yogurts, juices, ice creams, candy and alike.

At the beginning of this year, Dutch industry undertook to remove animated characters from unhealthy food products. Dutch Food Industry Federation (FNLI), which represents the interests of Dutch food and beverage manufacturers and covers 450 companies, announced that it would limit the use of licenced characters on products intended for children under 13 years of age. This meant that licenced characters such as Disney's Nemo, would be affected, as opposed to characters linked to the brand itself – including Tiger Tony on Kellogg's Frosties or Monkey Coco on Coco Pops. This shall apply to the physical packaging of the product as well as materials intended for target sale, but not to radio, TV, printed and social media. However, when it comes to the effect this will have on packaging, FNLI claims that in the first place, an estimation should be offered, with the aim of ensuring that provisions governing the internal EU market would not be breached (http://www.agrobiz.hr...).

3.4. Children's Receptivity to Advertising

Whether and to what extent children have the ability and inclination to critically process advertising messages is an important public policy and research issue. Critics assert that advertising to children is inherently unfair because children lack the cognitive capacity and life experience needed to understand selling efforts directed at them. What is unique to this medium is the way advertising is presented and the challenges this may pose to young children who are still in the midst of learning what advertising is and how it works (Moore&Rideout;2007,203).

It is well-known that, from early childhood to teenage years, children's ability to understand changes significantly, during which period children mature and acquire the ability to differentiate between advertising and other forms of communication. With less mature skills, young children are the most vulnerable to persuasive attempts, regardless of the advertising medium. Decisions are made quickly, simply, and often on the basis of a single dimension. These children have not yet acquired efficient information-processing strategies, which may be reflected in their inability to distinguish between central and peripheral content in a message. They may be drawn to appealing but irrelevant inputs and have difficulty shifting their attention to more relevant information (Moses and Baldwin 2005). Young children also have trouble holding information in working memory when it arrives quickly and through multiple channels. They may be familiar with specific food brands, but their understanding is largely superficial. They can distinguish advertising from other content but primarily on the basis of salient perceptual cues. A basic understanding of persuasive intent may be in place by the end of this developmental period, but it is not until much later (as children approach adolescence) that they begin to appreciate specific tactics or approaches that marketers use to try to sell their brands (Moore&Rideout;2007,203).

World health organization recommends the following measures in order to control advertising of food products intended for children (https://repozitorij.pbf.unizg.hr...):

1. One of the goals of every state's policy should be to reduce the impact of marketing that promotes children's food with high content of saturated fat, trans-fatty acids, as well as high content of concentrated sources of sugar and salt.

2. Overall policy of marketing should be to reduce the exposure of children to products of low nutrient density.
3. In order to achieve the said objectives, it is necessary to consider different approaches to problem solution.
4. Premises on which children are present and those that are accessible for children, should be free of all forms of marketing advertising food of low nutritive and high energy value. Such premises include schools, school playgrounds, children's hospitals, paediatric institutions and sports and cultural institutions, occupied by children.
5. As part of their activity and for the purpose of attaining the above-mentioned goals, governments should define and develop key components necessary in order to implement such a policy as well as enable standard procedures of implementation of such policy. World health organization considers that a clear prohibition of such advertising or a clear definition of the problems caused by such advertising practices, as well as that of the impact of food of low nutrient density on children, would facilitate uniform application of the said policy, even without any implementing bodies. When defining key segments, states must determine and resolve certain challenges on the national level, so that maximum effect of such policy might be realised on the global level.
6. Governments should become key stakeholders in the development of such policy through platforms for implementation, monitoring and evaluation. While determining and implementing the national policy framework, Governments may choose to allocate certain implementation roles to other stakeholders, while protecting the public interest and avoiding conflict of interests.
7. In order to achieve the goal, states need to consider different approaches, at the same time acting either gradually or comprehensively, in order to reduce marketing of foods of low nutrient and high energy density, directed at children.
8. Considering the resources, benefits and burdens of all stakeholders involved in this process, it is Government's duty to consider the most efficient approach which would reduce the impact of marketing of foods of high energy density, to children. Every approach should be defined within

the framework developed in order to achieve the most efficient and the most objective goal.

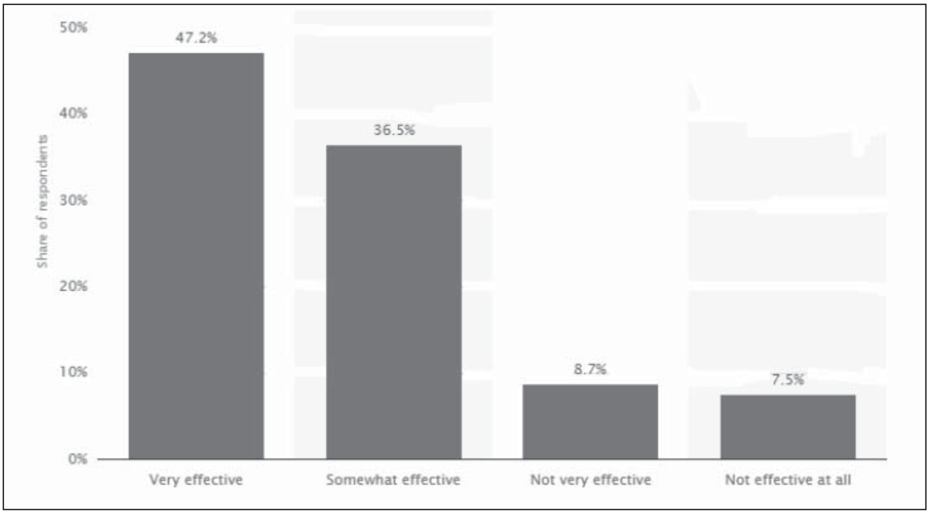
9. The policy framework should specify enforcement mechanisms and establish a quality implementation system. Furthermore, according to the recommendation of World Health Organization, implementation framework of such policy should contain clearly defined sanctions, in case rules are not obeyed, as well as a system of reporting complaints, in case of acts contrary to the defined framework.
10. All policy implementation frameworks must include a monitoring system in order to ensure compliance with the objectives, using clearly defined indicators.
11. Cooperation of all states on a global level is necessary, in order to reduce the impact of cross-border marketing and achieve the best impact on children on the part of every state.
12. Implementation of further activities is inevitable for the purpose of analysing, implementing and evaluating policies aimed at reducing the impact on children, of marketing of food products of low nutrient density.

4. USING TOYS TO MARKET CHILDREN'S MEALS

Fast-food retailers have child-specific menu choices, such as the McDonald's "Happy Meal" and a mainstay of these is a "free" toy which is typically part of a collectable set and therefore encourages several restaurant visits. This strategy has been particularly successful in countries where historically there has been a scarcity of manufactured toys (http://www.who.int...).

The chart shows how effective consumers think toys are in getting kids to want to order kids' meals that come with toys in the United States as of August 2014. This statistic confirms very high success rate of the type of meal with a toy.

Chart 1. Effectiveness of toys on children choosing children's meals



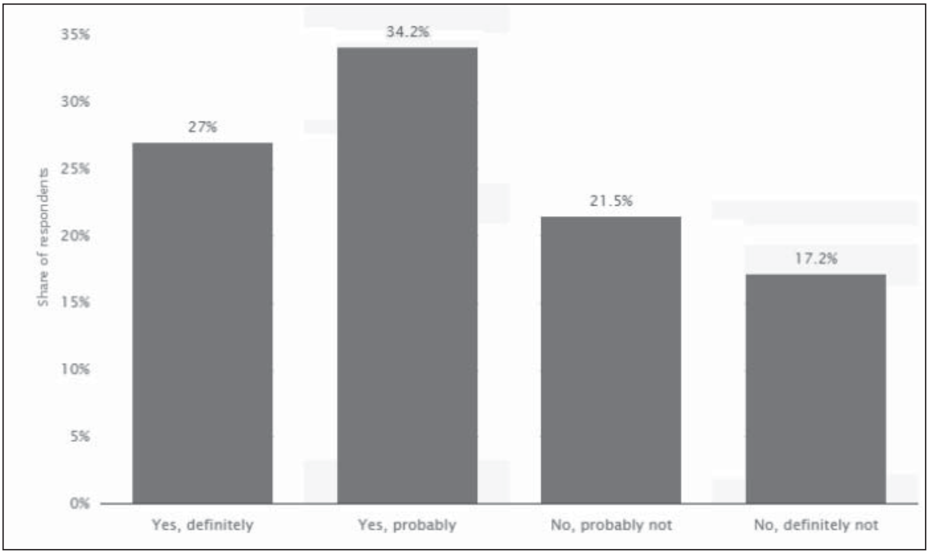
Source: https://www.statista.com/statistics/322389/effectiveness-of-toys-on-children-choosing-kids-meals-us/ (02-2-2017).

Fast food is marketed to children in a variety of ways. The strategies of that marketing address how to best engage the customer and see that they purchase the product and then return at a later date for more. The toy is often tied in with movies or TV shows which act as a transition for children to transfer their feelings about the movie characters or TV shows to McDonald's. The idea that eating should be fun influences children with regards to their food choices. The Happy Meal bag contains games and pictures for children to occupy them while they are eating. It also blends movie characters with Ronald McDonald to further emotional attachments to the McDonald's brand. An emotional attachment between children and a brand is considered a negative influence. As children age, they become more aware of the intent of advertising; however, many children are not aware what marketing is and how it effects the way that the fast food industry has set up kids' meals to keep them coming back and prevent any negative views about the company (https://web.wpi.edu...).

Nevertheless, McDonald's and similar fast food restaurants adjusted their kids' meals by introducing the option of ordering fruit instead of fries, regular water instead of other soft drinks, and alike. Some even took it a bit further, and apart from adjusting the choice of food in kids' meal, they completely removed the toy from kids' meal, as it was done, for example, by KFC.

The following chart shows consumers who would support legislation to ban toys as an incentive for children to order unhealthy kids' meals in the United States as of August 2014. It is evident from the chart that there is an increasing number of consumers who would ban such meals, so it is unclear why their popularity and sales are not declining.

Chart 2. Support for banning toys in unhealthy children's meals



Source: https://www.statista.com/statistics/322394/support-for-banning-toys-in-unhealthy-kids--meals-us/ (02-2-2017).

5. POLICY AND GUIDELINES FOR IMPROVING THE DIET OF CHILDREN AND YOUTH

5.1. At a global level

At the 60th World Health Assembly in 2007, agreement was reached by the Member States of the World *Health* Organisation (WHO) to "develop a set of recommendations on marketing of foods and non-alcoholic beverages to children" (WHO, 2006) as part of the implementation of the Global Strategy on the prevention and control of non-communicable diseases (NCDs)

(Corbett&Colin;2009,87). The document proposed the adoption of the aforementioned set of recommendations in the form of International Code of Marketing, which would be based on the experience of the Consumers International and the International Obesity Task Force. Consumers International (CI) is the global federation of consumer organisations with more than 220 members in 115 countries around the world. These recommendations are based on advice of the members of the CI. The International Obesity Task Force (IOTF) is the policy section of the International Association for the Study of Obesity, which has more than 10,000 members in over 50 countries and regional associations around the world. The recommendations take account of the IOTF's Sydney Principles, which were adopted in order to achieve a high level of protection for children against advertising of food and beverages.

The recommended approach that may contribute to the desired situation is based on the following key points:

1. The importance of restricting the advertisement of high-calorie, nutrient-poor foods and beverages that are high in fat, sugar or salt, to children. At the same time, advertising of food that fulfils the WHO dietary recommendations should further be allowed.
2. The public health imperative to ensure that all children are protected.
3. The importance of equally incorporating and treating all forms of current and potential marketing techniques.

The above stated is in line with the conclusion of the WHO Technical Meeting, according to which: "The goal of any regulatory action should be to protect children from marketing which adversely affects their diets by substantially reducing the volume and impact of advertising energy-dense, nutrient-poor food and beverages to children. Moderate increase of advertising better quality food is considered to be insufficient."

5.2. In Europe

One of the growing concerns in Europe is the issue of marketing unhealthy food to children. The European Commission presented the White Paper on Nutrition, Overweight and Obesity-related Health Issues (Commission of the European Communities, 2007) which calls for restrictions to be placed on food sponsorship schemes in schools, and on unhealthy food promotions specifically targeted at children. The paper recognises the substantial role that industry self-regulation can play in tackling the rise in obesity and diet-related diseases. It specifically refers to the commitments made as part of the EU Platform for Action on Diet, Physical Activity and Health to reduce the advertising of unhealthy foods to children. The platform was founded back in 2005, in order to bring together a range of organisations, from members of the food industry to consumer groups, to come up with voluntary commitments to help tackle these problems, and is held up by the Commission as a kind of initiative that needs to be built upon. Moreover, the Commission has introduced more stringent measures to combat that type of promotion. Persistent efforts resulted in progress, e.g. 13 major food and beverage companies, including Coca-Cola, PepsiCo and Mars, signed the "EU pledge" in December 2007, in which they declare their commitment to change the nature of food advertising to children in the EU. Even though such actions are considered praiseworthy, the problem arises because such decisions only pertain to children under 12 years of age, but not to children up to 16 years of age, and they only pertain to media in which children represent the majority of audience (Corbett&Colin;2009,87).

Denmark, Finland, France, Norway and Great Britain introduced taxes on products high in sugar or fat in order to reduce the consumption of unhealthy products. Switzerland, Hungary and certain other countries also implemented voluntary local regulations for companies with the aim of providing support to parents in ensuring balanced diet for children. The best known voluntary commitment of such type on the territory of Europe is the above-mentioned EU Pledge initiative. Based on the number of countries (21) and the volume of advertising, it covers 80% of food and beverage advertising in Europe, which is why, according to reports made by independent consultancy agencies Accenture and EASA, in the past six years, there has been a reduction of 83% in children's exposure to advertising for products that do not meet nutrition criteria in the morning programmes, whereas reduction accounted for 43% in all programmes, and children saw 32% less advertisements in total (http://www.vecernji.hr...).

5.3. In the Republic of Croatia

The main guidelines for improving nutrition have been defined in the Croatian Nutrition Policy, the document drafted by the Ministry of Health and the Croatian Institute for Public Health, with the support of the Croatian Academy of Medical Sciences and the Croatian National Council of Health (Degač et al., 1999). Guidelines for adults have been designed separately from guidelines for children. Guidelines for children stipulate that it is necessary to consume a variety of foods. It is important to eat cereals, rice or potatoes, as well as fruits and vegetables with every meal, and to consume milk and dairy products, which are rich in calcium and therefore necessary for growth and development. Another important segment is drinking enough fluids, i.e. water, excluding sweetened beverages. Warning was issued for consumption of all kinds of sweets (Degač et al., 2003).

Just as with advertising any other goods or services, in advertising food products, information should be accurate, clear and understandable to consumers. Any incorrect characteristics must not be added to food and beverages, which especially includes "medical" qualities of prevention, treatment or cure of certain diseases. European Union pays great attention to food and its advertising and labelling, and thus the situation in Croatia has improved since Croatia joined the EU.

The most important legislation in Croatia currently includes the Food Act and the Act on the Provision of Food Information to Consumers, which entered into force when Croatia joined the European Union. According to the Government's position, these laws represent the basis for ensuring protection to consumers, taking into account the differences in the perception of consumers and their needs for information, while ensuring smooth functioning of the market. Also important are the Ordinance on Labelling, Advertising and Presenting Foodstuffs (Official Gazette 63/11 and 79/11) and the Ordinance on Nutrition Labelling for Foodstuffs (Official Gazette 29/09). The Act on the Provision of Food Information to Consumers actually entirely refers to the legislation of the European Union, specifically to Regulation (EU) No. 1169/2011 on the provision of food information to consumers. Under the aforementioned acts, misleading of consumers is prohibited, particularly with regard to the characteristics of the food and its composition, nature, identity, quality, durability, country of origin and method of production. In addition, it is prohibited to advertise by attributing to the food effects or properties which it does not possess, which is the most often case with food for children. Moreover, it is prohibited to suggest that the food possesses characteristics of similar food, e.g. specifically emphasising the presence or absence of certain ingredients or nutrients. It is also prohibited to advertise in a manner that misleads due to suggesting, by means of appearance, description or pictorial representation, the presence of an ingredient, while an ingredient has been substituted with a different ingredient (http://www.progressive.com.hr...)

6. INFLUENCE OF MARKETING ON DIET AND DIET-RELATED HEALTH ISSUES OF CHILDREN AND YOUTH

Marketing of food and beverage products is recognized as an important element in etiology of child obesity. Overweight is one of the biggest public health challenges of the 21st century: all countries are affected to varying extents, particularly in the lower socioeconomic groups. Nutrition during childhood and adolescence is essential for growth, development, health and well-being. Furthermore, eating behaviours established during childhood track into adulthood and contribute to long-term health and chronic disease risk.[1]

Children and adolescents are eating more food away from home, drinking more soft drinks, and snacking more frequently.

Growing epidemic of childhood overweight and obesity is a major public health concern. At the moment, 15% of young people in the USA are overweight, and the situation is very similar in other countries, as well as in Croatia. Health-related behaviours, such as eating habits and physical activity patterns develop early in life and often extend into adulthood. A healthy and balanced diet provides recommended amounts of nutrients and other food components to promote normal growth and development, reduces chronic disease risk, and fosters appropriate energy balance and a healthy weight trajectory. Yet, diets of children and adolescents today depart substantially from recommended patterns, which puts their health at risk.

7. CONCLUSION

It is necessary to work on the legislative framework in the Republic of Croatia, as well as to introduce certain strategies that would result in the greater number of healthier children who would become healthy adults. Additional research on this topic should further explore the issues presented in this paper, by using objective methods to familiarize children with nutritious foods.

[1] https://ijbnpa.biomedcentral.com/articles/10.1186/1479-5868-1-3 (05-2-2017).

The use of the accompanying gift with a product, in the form of toy, by using well known or specially created cartoon characters, is very questionable, as is the use of different (children) packaging for the product with composition not appropriate for children, and alike. Further research is also required on the methods and frequency of information provided by the food industry to food manufacturers and retailers about the importance of advertising food with high nutritional value. In addition, it should be investigated what kind of message packaging contains, and what kind of message different media transmit by advertising a certain food product intended for children, because parents are partially responsible for dietary habits of their children as they are those who buy a certain product. If we consider this issue from a narrow point of view, and e.g., we turn off TV and try to keep children away from the advertising content with the hope that craving for junk food or sweets will reduce, we actually have not done much at all. We should take measures to promote healthy dietary habits among children and to eliminate problems related to excess weight and obesity, by using proper means in the right manner. Industry has other priorities besides public health, which is making profit, and it cannot be held responsible for the issue of children's health. Governments, together with parents, are responsible and they should focus their policies on children's health. The lack of punitive measures for manufacturers and retailers who do not meet the conditions also means the absence of initiatives to harmonize laws on the relevant subject. Advertisers' expectations are to make the children spend their allowance and greatly affect purchases of their parents and their decisions when buying. Today, when the entire cultural society is oriented to the needs and satisfaction of children's desires, which become a priority in the family budget, consumer power of children is becoming increasingly higher, and everybody should be aware of that. Food, beverage, restaurant, and marketing industries should work with the government, scientific community, public health and consumer groups to establish and enforce the highest standards for marketing of food, beverages and meals to children and youth.

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THE SMALL AND MEDIUM-SIZED ENTERPRISES IN THE REPUBLIC OF CROATIA: A REVIEW OF THEIR IMPORTANCE, DETERMINANTS AND ACCESS TO FINANCE

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Abstract

The sector of small and medium-sized enterprises (SMEs) has very important role in today's economic activities at both national and international level. According to available data, the small and medium-sized enterprises represent 99% of all businesses in the European Union. Additionally, the sector of SMEs is a key generator of new employment, economic growth, innovation and social integration across the EU and its member states. In order to provide adequate support for development and growth of the SMEs, the EU has created a number of policies and business support programs targeted specifically at these enterprises. Member states are implementing respective EU policies on a national level, as well as they are creating additional regulations, programs and instruments targeting SMEs. The adopted policies and measures are primarily aimed at simplifying the administrative and regulatory framework regarding the establishment and operations of SMEs, as well as at creating financing schemes that provide needed sources of funding for SMEs operations and development. Available data on SMEs in the EU and its member states show that insufficient financing and complex administrative procedures are the main barriers to SMEs business operations. In order to improve access to finance, the European Commission cooperates with local, regional and national authorities and local financial institutions in member states, thus securing needed funding through different financial instruments. Additionally, direct funding for SMEs is available through different funds and funding programs administered by the

EU or its member states. Similar as in the EU, the sector of SMEs is of great importance for economic activities in the Republic of Croatia. It is also suffering from similar problems such as complex administrative procedures and inadequate access to sources of financing. In the same time, the sector has an opportunity to participate in many business-support and financing programs for SMEs both on the EU and national level, as well as to benefit from experiences shared by others. Therefore, the main objective of the paper is to present importance and determinants of the SMEs in the Republic of Croatia in relation to the EU. In the first part, the basic regulatory and institutional framework of SMEs will be presented. Also, the structure of SMEs and its importance with regard to main economic variables on the EU, national and regional level will be introduced. In the second part of the paper, the overall access to finance for SMEs and the main sources of financing aimed at SMEs in Croatia will be explained and presented. The main findings and conclusion remarks will be given in the last part of the paper.

Keywords: *small and medium-sized enterprises, regulatory framework, access to finance for SMEs, SMEs in EU and Croatia.*

JEL Classification: P4, P42

1. INTRODUCTION

The small and medium-sized enterprises (SMEs) have an important role in today's economies at both national and international level. Available data show that SMEs represents 99% of all businesses in the European Union (EU). The sector of SMEs is a key generator of new employment, economic growth, innovation and social integration across the EU and its member states. Therefore, SMEs need adequate support to develop and realized growth potentials in form of different policies and business programs targeting both all and specific categories of SMEs. The EU strategies and directives are being implemented at the member states level and combined with national and local regulations and programs. The general aim is to support entrepreneurship in society, to create a business-friendly environment and simplify administrative and regulatory burden, as well as to provide access to finance for SMEs. The EU cooperates with national authorities and financial institutions in member states in order to, among other things, secure adequate funds and financial instruments for SMEs, thus supporting SMEs business operations. Similarly to EU, SMEs are of great importance in Croatia, facing similar challenges and problems, too. Therefore, the paper aims to present importance and determinants of SMEs in the EU and Croatia. The basic institutional and regulatory framework for SMEs, as well as its structure and key performance indicators, will be presented in the first part of the paper, while overall access to finance and main financing sources will be elaborated on in the second part.

2. DEFINITION OF SMALL AND MEDIUM-SIZED ENTERPRISES (SMEs)

The EC proposed the recommendation concerning the definition of micro, small and medium-sized enterprise in 2003 (2003/361/EC). Unique classification of SMEs at the level of EU should improve the consistency and effectiveness of national and Community policies targeting SMEs and limit the risk of distortion of competition. The recommendation uses a number of employees as the main criterion, as well as turnover and balance sheet total as additional financial criteria (table 1).

Table 1. Classification of micro, small and medium-sized enterprises in the EU

Category of enterprise	Staff headcount	Turnover (in mil. €)	Balance sheet total (in mil. €)
Micro enterprises	< 10	≤ 2	≤ 2
Small enterprises	< 50	≤ 10	≤ 10
Medium-sized enterprises	< 250	≤ 50	≤ 43

Source: EC Recommendation of 6 May 2003 (2003/361/EC)

Croatia has adopted the EC recommendation and regulated SMEs classification by the Small Business Development Promotion Act (OG 29/02, 63/07, 53/12, 56/13, 121/16). Additionally, the Accounting Act (OG 78/15, 134/15, 120/16) regulates the size of enterprises for purposes of financial reporting somewhat differently. The accounting classification uses as criteria the average number of employees during one financial year, the annual amount of revenues and the annual amount of total assets. The enterprise should not exceed two of three criteria for each category (table 2).

Table 2. Classification of enterprises according to the Accounting Act in Croatia

Category of enterprise	Average number of employee	Annual amount of revenues (in mil. HRK)	Annual amount of total assets (in mil. HRK)
Micro enterprises*	10	5.2	2.6
Small enterprises*	50	60	30
Medium-sized enterprises*	250	300	150
Large enterprises**	250	300	300

* If enterprise does not exceed two of three criteria. ** If enterprise exceeds two of three criteria.
Source: Accounting Act (Official Gazette 78/15, 134/15, 120/16)

3. THE BASIC REGULATORY FRAMEWORK OF SMES IN THE EU AND CROATIA

The SMEs are of great importance for modern economies, economic development, and growth. They must be adequately regulated and supported through various policies both at national and EU level. The Lisbon strategy from 2000 and the current "Europe 2020" strategy strongly emphasized the role of entrepreneurship and SMEs as the key elements of the competitive and sustainable economy. In order to further business position of SMEs, the EU adopted the European Charter for Small Enterprises at the European Council in Feira (Portugal) in June 2000. The Charter states that SMEs are the backbone of the economy and a key source of employment, innovations and economic growth, as well as of social and local integration in Europe. Values such as knowledge, commitment, and flexibility of the new economy are highlighted, and principles and main lines of actions are introduced. The implementation of actions will be monitored, assessed and evaluated annually, as well as compared to best practices in the world in order to continually improve own policies and performances. The Charter was followed by the Small Business Act (SBA) for Europe adopted by the European Council in 2008 (COM (2008) 394). Transition to the knowledge-based economy and future prosperity is to a large degree dependent on entrepreneurship and capacities of SMEs for growth and innovations. The overall objective is to make the EU a world-class environment for SMEs with policies that fully respect the principle of subsidiarity and recognize different national and local settings in which SMEs operate. Principle "Think Small First" should take into account the needs of SMEs and results in a business-friendly environment with simple and easy applicable administrative regulation. Although it is not a real act, but primarily an expression of the strong political will to recognize the role of SMEs in the EU, the SBA aims at creating a comprehensive policy framework for SMEs at EU and national level. The framework includes a set of guiding principles for SMEs policy design and implementation, a set of new legislative proposals guided by the "Think Small First" (e.g. the regulation providing for a Statute for a European Private Company (SPE), the directive on reduced VAT rates, an amendment to the directive on late payments in relation to timely payment to SMEs in commercial transactions, etc.), and a set of new policy measures implementing guiding principles (table 3).

Table 3. Small Business Act – ten core principles

#	Principle	Description
1.	Entrepreneurship	Creating an environment in which entrepreneurs and family businesses can thrive and entrepreneurship is rewarded.
2.	Second Chance	Ensuring that honest entrepreneurs who have faced bankruptcy quickly get a second opportunity to succeed.
3.	Think Small First	Designing rules according to the "Think Small First" principle.
4.	Responsive administ.	Making public administrations responsive to SMEs' needs.
5.	State Aid and Public Procurement	Adapting public policy tools to SME needs –SMEs participation in public procurement and ensuring better use of State Aid for SMEs.
6.	Access to Finance	Facilitating SMEs' access to finance and developing a legal and business environment supportive to their requirements, including timely payments in commercial transactions.
7.	Single Market	Helping SMEs to benefit more from the opportunities offered by the Single Market.
8.	Skills and Innovation	Promoting the upgrading of skills in SMEs and all forms of innovation
9.	Environment	Enabling SMEs to turn environmental challenges into opportunities.
10.	Internationalization	Encouraging and supporting SMEs to benefit from the growth of global markets.

Source: Small Business Act, COM (2008) 394

Basic SMEs regulatory framework in Croatia consists of the Strategy for Entrepreneurship Development (SED) in Croatia 2013-2020 (OG 136/13), the Small Business Development Promotion (SBDP) Act (OG 29/02, 63/07, 53/12, 56/13, 121/16), and Entrepreneurial Infrastructure Improvement (EII) Act (OG 93/13, 114/13, 41/14). The SED is comprehensive document aiming to strengthen entrepreneurship potential and promote entrepreneurship culture. Strategy implementation should contribute to the vision of competitive and evenly developed small business sector in Croatia. The overall objective of increasing the competitiveness of SMEs should be achieved by implementation of five strategic goals: (1) improving economic performance (in manufacturing and service sectors with higher investments in R&D, more innovations, increasing of export and further development of business networks and connections), (2) improving access to finances (development of various financial possibilities for SMEs and removal of the funding gap for small businesses), (3) entrepreneurship promotion (supporting the establishment of new businesses, increasing the number of active enterprises, strengthening entrepreneurship supporting institutions), (4) improving entrepreneurship skills (supporting development of management and human resource capacities of SMEs, and lifelong learning of SMEs employees), (5) improving business environment (removing of administrative barriers and easing of business operations). Strategic goals are accompanied with indicative measures and indicators needed to monitor and evaluate implementation. Also, Strategy describes the institutional support to SMEs by entrepreneurship support institutions that includes regional development agencies, entrepreneurship centers, entrepreneurship incubators and technological parks. The ESI, together with enterprise zones, are making entrepreneurship infrastructure, which is regulated by the EII Act. The ESI are providing consulting and education services, supporting innovative businesses and project application processes, as well as securing suitable locations with needed infrastructure for industrial development. The SBDP Act regulates the application of economic policy incentives aimed at development, restructuring and market adjustments of small businesses. The Act categorizes enterprises, crafts, and cooperatives in relation to their size according to the recommendations of the EU. Some supporting measures stated in the Act are the following: providing loans under favorable conditions, subsidizing interest rates, providing loan guarantees, establishing and managing venture (risk) capital and other funds, providing professional and consulting services, simplifying administrative procedures for SMEs, strengthening competitiveness of small businesses, providing educational and professional support to employees, organizing institutional support through networks of entrepreneurs and different organizations, promoting entrepreneurship among different target groups, etc. Additionally, the Act establishes the Croatian Agency for SMEs and Investments (Hamag Invest), which should implement and coordinate support and other measures targeting SMEs. The "Think Small First" principle was incorporated in the Act in 2016 as the SME test, which requires impact assessment of legislative proposals in relation to SMEs. Generally, the SME test implies consultation with SMEs and their representative organizations, identification and preliminary assessment of affected businesses, measurement of the impact on SMEs (cost-benefit analysis), as well as assessment and use of alternative mechanisms and mitigating measures (European Commission, 2015).

4. THE IMPORTANCE OF SMES IN ECONOMIC ACTIVITIES OF THE EU AND CROATIA

The importance of SMEs for economic activities in the EU and its member states is evident from data on SMEs key performance indicators (KPI). The KPIs of SMEs in period 2013 to 2015 at the EU level are presented in table 4. The SMEs made 99.8% of a total number of enterprises active in the non-financial business sector in the EU, with 11.34% increase of SMEs during the period. The micro enterprises with less than 10 employees accounted for almost 93% of total just under 23 million businesses in 2015. Additionally, SMEs employed just over 90 million workers in 2015, which was almost 67% of total workforce. The sector created 3.9 million jobs during the period, making an increase of 4.3%. The value added of SMEs was increased by 13.78% to 3,938 billion euros in 2015, which was 57.4% of total valued added realized by all enterprises in the EU that year. The key sectors for SMEs are (1) manufacturing, (2) construction, (3) business services, (4) accommodation and food, and (5) wholesale and retail trade. These five key sectors accounted in 2015 for 79% of total EU28 SMEs, 78% of the workforce employed by SMEs, and 71% of valued added realized by SMEs (Muller et al., 2016:10). Furthermore, wholesale and retail trade had highest figures of employment and valued added in 2015 (25% and 22%, respectively), followed by manufacturing (20% and 20%), construction (12% and 11%), business services (11% and 14%), and accommodation and food (10% and 4%, respectively) (Muller et al., 2016:16). If the key SMEs performance indicators in 2015 are compared with pre-crises levels in 2008, it is observable that the number of enterprises and value added increased 3.3% (673,000 enterprises) and 8.6% (336 billion €), respectively. On the other hand, the number of jobs has not recovered yet, and it is 2.2% lower (1.15 million jobs) than in 2008.

Table 4. Key performance indicators of SMEs at the EU level, 2013-2015

Enterprises	2013.		2014.		2015.	
	#	%	#	%	#	%
Micro enterprises						
Number of enterprises	18,783,480	92.10	20,710,324	92.70	21,356,252	92.80
Persons employed	37,494,458	28.70	39,274,088	29.20	40,057,408	29.50
Value added (EUR billion)	1,243	21.10	1,358	21.10	1,454	21.20
Small enterprises						
Number of enterprises	1,349,730	6.60	1,373,365	6.10	1,378,702	6.00
Persons employed	26,704,352	20.50	27,452,716	20.40	27,503,428	20.20
Value added (EUR billion)	1,076	18.30	1,169	18.20	1,233	18.00
Medium enterprises						
Number of enterprises	222,628	1.10	224,811	1.00	224,647	1.00
Persons employed	22,615,906	17.30	23,257,412	17.30	23,170,352	17.00
Value added (EUR billion)	1,076	18.30	1,188	18.50	1,251	18.20
Large enterprises						
Number of enterprises	43,454	0.20	43,766	0.20	44,458	0.20
Persons employed	43,787,013	33.50	44,438,724	33.10	45,168,732	33.20
Value added (EUR billion)	2,496	42.40	2,710	42.20	2,924	42.60
Total						
Number of enterprises	20,399,291	100.00	22,352,260	100.00	23,004,059	100.00
Persons employed	130,601,730	100.00	134,422,944	100.00	135,899,904	100.00
Value added (EUR billion)	5,891	100.00	6,425	100.00	6,862	100.00

Source: Muller et al. (2016)

The similar importance of SMEs for the economy can be also found in Croatia. According to EU data (table 5), there was just over 140,000 SMEs in 2015 (99.7% of total number), employing over 709.000 workers (66.6% of total workforce), and realizing 11.4 billion euros of value added (56.2% of total) in the country (SBA Fact sheet 2016). The data somewhat differ if compared to some Croatian sources due to different methodology, but are comparable across the EU. For example, Alpeza et al. (2016:13), write about 106,221 SMEs in 2015 out of 106,569 enterprises in Croatia, which was again 99.7% of the total, as it is presented in table 5.

Table 5. Key performance indicators of SMEs for Croatia in 2015

Class size	Number of enterprises		Employment		Value added	
	Number	Share (%)	Number	Share (%)	Billion €	Share (%)
Micro	137,393	91.9	327,226	30.7	3.9	19.2
Small	9,921	6.6	198,591	18.6	3.5	17.5
Medium-sized	1,692	1.1	183,562	17.2	4.0	19.5
Large	430	0.3	355,853	33.4	8.9	43.8
Total	149,436	100.0	1,065,232	100.0	20.3	100.0

Source: SBA Fact Sheet 2016 – Croatia (2016)

The sector of SMEs has not yet recovered from the financial crises, so the value added and employment in 2015 were still 21% and 11% lower, respectively when compared to pre-crises 2008. Nevertheless, the growth resumed, so the value added increased by 9% in period 2012 to 2015, while employment rose 5% in period 2013 to 2015 (SBA Fact Sheet 2016). According to data of Vukovar-Srijem County, there are 1,617 enterprises in 2015 at the county level, of which micro and small enterprises make 1,571 or 97.16% of the total number (table 6). Available data of the County Chamber Vukovar on revenues, expenses, and profit (corporate) tax by enterprise class size show that SMEs make over 51% of total revenues and expenses, and almost 39% of the total corporate tax in the County. It must be said that data from different sources can differ, so data of County Chamber Vukovar for 2015 include 1,510 enterprises (1,472 micro and small, 30 medium sized and 8 large) that submit their financial reports to public register (RGFI) at Financial Agency (FINA).

Table 6. SMEs in Vukovar-Srijem County, 2015

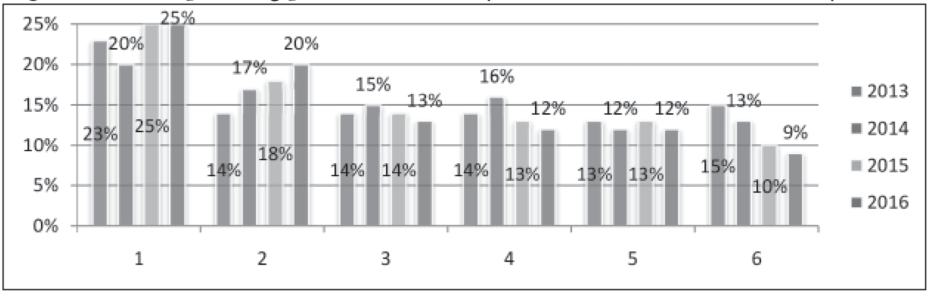
Class size	Number	County share (%)	State share (%)	Reven. (mil. kn)	County share (%)	Expen. (mil. kn)	County share (%)	Profit tax (mil. kn)	County share (%)
Micro	1,353	83.67	1.43	3,901	29.69	3,770	29.74	24.205	28.02
Small	218	13.48	2.19						
Medium-sized	38	2.35	2.79	2,804	21.34	2,738	21.60	9.297	10.76
Large	8	0.49	2.43	6,436	48.98	6,169	48.66	52.870	61.21
Total	1,617	100.00	1.52	13,141	100.00	12,677	100.00	86.372	100.00

Source: Vukovar-Srijem County (2016), CCE – County Chamber Vukovar (2016)

5. SMES AND THEIR ACCESS TO FINANCE

Due to their size and sensitivity to economic activities and overall market trends, SMEs are exposed to many problems in everyday business operations. The ECB and EC have been jointly conducting the Survey on the Access to Finance of Enterprises (SAFE) since 2008 with the purpose to analyze financial conditions and other issues faced by SMEs. Among the most pressing problems of EU28 SMEs in period 2013 to 2016 there are (1) finding customers, (2) availability of skilled staff or experienced managers, (3) competition, (4) regulation (5) cost of production or labor, and (6) access to finance (Figure 1).

Figure 1. Most pressing problems faced by SMEs – EU28 SAFE survey results



Source: According to SAFE (2016)

The most urgent problem for SMEs is to find customers willing to buy their products. The problem of access to finance gradually decreased over the period at EU level with only 9% of SMEs reporting it in 2016. Nevertheless, the finance was still a major issue for 24% of SMEs in some member states like Greece and Cyprus, while only 6% of SMEs in UK and Germany consider it an issue (SAFE, 2016:134-136). Access to finance was the second most important cause for termination of businesses in Croatia in 2014 (23.55% of total termination) compared to the EU where it ranked fourth with only 11.5% of the total. The main reason for cessation in Croatia and the EU was the unprofitable business, 33.24% and 33.60%, respectively (Alpeza et al., 2015:25). Other causes of business cessation (ranked by importance in Croatia) were personal reasons (17.87%), second business opportunity (12.95%), incidental situations (7.26%), retirement (2.51%), planned business exit (1.44%), and selling opportunity (0.83%). According to SAFE (2016), main financing sources for EU SMEs in 2016 are credit lines (55%), bank loans (50%), leasing (47%), and trade credit (35%). Nevertheless, bank loans are not relevant for some SMEs due to high-interest rates (8%), insufficient collateral (4%), too much paperwork (4%), and unavailability of loans (3%). Bank loans are not needed for 74% of SMEs. Additionally, among SMEs that obtained bank loans, 70% received the full amount of requested loan, while 10% received a part of it, 2% of SMEs found the cost of loan too high, 7% rejected to receive a loan, whilst 10% of loans were still pending. The financing was mostly used for fixed investments (38%), inventory and working capital (34%), developing new products (15%), hiring and training employees (15%), refinancing obligations (12%), and other needs (11%). When different types of financing are analyzed, debt financing (credit lines, bank or credit cards overdrafts, leasing and hire-purchases, factoring, trade credits, bank and other loans, grants and subsidized bank loans, and debt securities issues) was of great importance for 85-86% of all SMEs in the period 2014 to 2016 at EU28 level (SAFE, 2016:12). At the same time, debt financing was usual access to finance for 76-82% SMEs in Croatia. The more detailed breakdown of different types of financing of SMEs at the national and EU level, in period April to September 2016, is presented in table 7.

Table 7. Types of SMEs financing in the EU28 and Croatia, April to September 2016

Type of financing	Croatia			EU28		
	Used in the past six months			Used in the past six months		
	Yes (%)	No (%)	Not relevant	Yes (%)	No (%)	Not relevant
Credit line, bank and credit cards overdraft	31	20	49	37	17	46
Bank loans	19	32	49	18	31	51
Leasing or hire-purchase	21	35	44	23	24	53
Trade credit	8	12	80	19	15	66
Grants or subsidized bank loans	8	32	60	7	24	69
Retained earnings or sale of assets	22	15	63	15	11	74
Other loans (e.g. from family and friends, a related enterprise or shareholders)	4	15	81	9	13	78
Factoring	7	11	82	6	4	90
Equity capital	1	22	77	3	11	86

Source: According to SAFE (2016)

Credit lines, bank and credit cards overdrafts were the most used type of finance (31% in Croatia and 37% in the EU). Use of trade credits is more often in the EU (19%) than in Croatia (8%), while the opposite is true for retained earnings and sale of assets (22% in Croatia and 15% in the EU). Additionally, leasing and bank loans were used by 40% of SMEs in Croatia. If external finances are analyzed by amount, data show that 13% of SMEs last obtained loans less than €25,000, 26% of SMEs obtained loans between €25-100,000, 21% obtained loans between €100-250,000, and 38% of SMEs obtained more than €250,000. Those percentages for SMEs in Croatia are 26%, 14%, 19%, and 36%, respectively (SAFE, 2016:56-58). As interest rates are concerned, mean of interest rates on bank overdrafts and credit lines were falling between 2014 and 2016, from 6% to 4.4% to 2.2% in the EU28, and from 7.4% to 5.5% to 3.1% in Croatia (SAFE, 2016:60). Besides usual financing sources available on the market, SMEs can obtain needed funds by applying for projects under the different calls for proposals financed from European funds through various programs. As EU member state, Croatia has access to 10.68 billion € in 2014-2020, allocated in several operative programs for different purposes and open to different subjects. Within one such operative program named "Competitiveness and Cohesion", there are 970 million € (of program's total 6.88 billion €) allocated exclusively for business competitiveness and primarily open to SMEs. The allocated funds are intended for entrepreneurship promotion and SMEs support (table 8).

Table 8. Priority axis "Business Competitiveness" – allocation of funds, 2014-2020

Investment priority	Specific objective	Total allocation 970 mil. €	
		Allocation for specific objective	Allocation for investment priority
3a) Promoting entrepreneurship, in particular by facilitating the economic exploitation of new ideas and fostering the creation of new firms, including through business incubators	3a1) Better access to finance for SMEs	250,000,000 €	483,000,000 €
	3a2) Enabling favorable environment for business creation and development	233,000,000 €	
3d) Supporting the capacity of SMEs to grow in regional, national and international markets, and to engage in innovation processes	3d1) SMEs' development and growth improved in domestic and foreign markets	307,000,000 €	487,000,000 €
	3d2) SMEs innovativeness enhanced	180,000,000 €	

Source: Operative Program Competitiveness and Cohesion 2014-2020

According to OP, total amount of €970M for SMEs will be distributed to finance generic productive investment (549M), research and innovation processes, including voucher schemes, process, design, service and social innovation (80M), advanced support services including management, marketing and design services (123M), support to environ-mentally-friendly production processes and resource efficiency (78M), and business infrastructure for SMEs, including industrial parks and sites (140M). The SMEs will receive the finances as non-repayable grants (€720M), venture and equity capital (€21M), loans (€196M), and guarantees (€33M).

6. CONCLUSION

The SMEs are of great significance for the economy. Analysis of key performance indicators at the EU and national level has shown that SMEs represent 99% of all enterprises and are the key generator of new employment, economic growth, and social integration. The importance of SMEs has forced the EU and its member states to create adequate institutional and regulatory framework for SMEs, with programs aimed at entrepreneurship and SMEs business-friendly environment. Analysis of the pressing issues faced by SMEs showed that access to finance is important. The credit line, bank loan, leasing, and trade credit are the most relevant types of finances for SMEs. Also, the ESI funds (e.g. Croatia) can be obtained and used by SMEs.

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THE EFFECT OF HUMAN RESOURCES ON THE DEVELOPMENT AND ENHANCEMENT OF HUNTING IN CROATIA

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Abstract

The development of any society and its economy rests on its people and their skills, knowledge and abilities. This fact has been confirmed by various theories and their practical applications. Human resources and people's knowledge, skills, talents and interests have a crucial impact on the success of a business entity or an institution, whether it is a non-profit institution or a profit-generating business entity. Human resources are the factor that most contributes to differentiation, to the formation of advantages and to the accomplishment of success in the form of profit, care about the community, or care about the environment. The care about the environment is the mission of hunters' associations and offices and the hunting federation. Hunting, as a primeval human activity, has an increasing effect on the conservation of nature and positive economic effects through hunting tourism. This research-based paper analyses the structure of formal knowledge, skills and experiences of the top management of the Croatian Hunting Federation and county hunting federations, who can and should drive the development of hunting in Croatia.

Keywords: *Human resources, hunting, top management*

JEL Classification: J2, J24

1. INTRODUCTION

During last years, both theory and practice have proven that human resources are the key factor of achieving success, i.e. ofreaching the goals of any business and non-business subject, regardless of its line of business. As pointed out by Požega(2012), the intangible resources, i.e. people with their knowledge and intellectual potential, have the key role in business. In addition, human resources have the key role in the organisation and successful management of hunting activity in the Republic of Croatia Hunting organisations (Croatian Hunting Federation, county hunting federations and hunting associations), led by their presidents, vice-presidents, secretaries and other managerial staff, i.e. their top management, in harmonious acting and cooperation with all other participants, primarily the registered hunters, have to handle multiple tasks in order to achieve the set goals, survive and be accepted by the market, i.e. by the society. Their goals can be defined as care for the nature, protection of wildlife and achieving economic effects through hunting wild animals and hunting tourism. In order to accomplish their tasks, i.e. reach the goals, hunting organisations must employ people who have specific knowledge about the nature and the animals, but who also have to be well-acquainted with economy, psychology, sociology, IT, etc.

The hypothesis of this paper rests on the abovementioned fact that, in addition to specific knowledge related to nature and wild animals obtained through formal education and hunting experience, thehuman resources employed in hunting organisationsneed to have knowledge about and be competent when it comes to planning, organisation, management, communication, leadership and motivating. In order to confirm the above hypothesis and analyse the structure of human resources in the hunting sector in the Republic of Croatia, the exploratory research using a survey questionnaire on a sample of 50 participants (N=50) consisting of the top management level in the Croatian hunting sectorwas conducted.

2. HUMAN RESOURCES

In order to survive and be accepted by the market, i.e. by the society, organisations including the hunting sector organised in the form of hunting federations, hunting offices and associations need to adapt their resources to the challenges and changes in their environment. The organisation comprises of resources, commonly divided into three characteristic groups:

- "material-financial resources (raw materials, materials, energy, assets, financial assets)
- technological-organisationalresources(science, technology, information, work organisation)
- human resources (all employees, the management)" (Jurina;2009,159).

Based on the above division, it is easy to notice that human resources are those resources that drive, influence and shape other resources and that human resources are those that respond to the environmental challenges.Human resources/people with their knowledge, competences, skills and creativity simultaneously represent the potential of the organisation, in which case they are referred to as the human potential.When people use their knowledge and skills to create a new value, we speak about human or intellectual capital. "The term human potential is active in Croatian language as a term that encompasses the characteristics of both human potential and human resources" (Obradović et al.;2015,7)."Human potential represents a sum of knowledge, skills, capabilities, talents, creativity, motivation and loyalty at disposal of certain organisation or an association. It is a total intellectual and psychic energy which can be utilised by an organisation in achieving its goals and developing its operation. In other words, it is a human capital at disposal of an organisation, which can be used to accomplish business and strategic goals" (Bahtijarević-Šiber;2014,6). As Srića (2015) states,there is much more capital/financial resources in the world than the knowledge, ideas and people capable of enriching that capital. For human resources of an organisation, who will lead to the accomplishment of the goals,it is important to establish and develop the relation between the professional and emotional intelligence (Figure 1). According to Srića (2004), people own a certain "hard" professional and expert component, i.e. the knowledge – the PIQ (Professional Intelligence Quotient) and the talents related to relations with other people, i.e. the "soft" component or the skills – the PEQ (Personal Emotional Quotient = the skills and abilities related to interpersonal communication, teamwork, work culture).

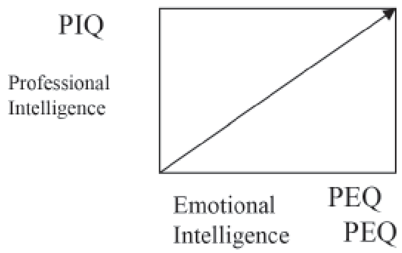

Figure 1: The relation between the professional and emotional intelligence

Source: Srića,V. (2004). Inventivni menadžer u 100 lekcija,Znanje,Zagreb, p.26

As observed in Figure 1, the professional and the emotional intelligence in each organisation need to be monitored and encouraged simultaneously, because both are equally important for the accomplishment of organisational goals.In order to turn human resources in as good human potential as possible, in order to increase the human, i.e. the intellectual capital, leading to the accomplishment of the goals, human resources need to be managed properly.It is the task of human resource management.

3. HUMAN RESOURCE MANAGEMENT

Human resource management, as one of the important managerial functions, represents an extremely demanding and complex process because it deals with people who have their own attitudes, motivation and needs and who influence the operation and the success of the organisation through their professional and emotional intelligence. There are numerous definitions of human resource management and all of them point out the activities that, primarily, ensure the optimal number and structure of employees and stimulate their efficiency and motivation.According to Cook and Cripps (2009), there is a difference between hard and soft human resource management. The hard management aims at the maximisation of the productivity and profit and treats employee as a resource equal to other resources. Soft human resource management is open to employee development and takes their interests into account.

It is important to point out that the goal of human resource management needs to be based on and aligned with other organisational goals, aiming to align and synchronisethe individual and the organisational goals. “The goals can be divided into four groups: strictly business, economic, social and the goals of flexibility and change" (Bahtijarević-Šiber;2014,8). Goals defined in that manner point at the mutual dependence and the importance of human resources and the organisation itself. "By managing human resources, the organisation creates educated and motivated employees, ensuring the implementation of the set strategic goals. On the other hand, human resource management provides support for the employees throughout their entire employment in the organisation, representing the link between the organisation and its employees and ensuring healthy communication between the employees and the organisation."(Obradović et al.;2015,17).

3.1. Human resource manager

In order for manager to perform his demanding and complex job of motivating, leading and managing people, he himself has to have certain knowledge and different skills[1]that can be grouped (Buble, 2010) into two main groups – the basic managerial skills (concepts, working with people, technical and shaping skills) and special managerial skills (planning, organising, managing human potential, leading and controlling). According to Obradović et al.(2015), human potential manager has to have leadership, teamwork and administrative skills. In order to meet their goals with a success, i.e. in order to manage human resources, accomplish a harmonious cooperation with co-workers and subordinates, managers need to work on themselves, continuously acquiring new knowledge and developing skills related to their core business and other areas.

4. HUNTING AND HUNTING ECONOMY

Hunting is the oldest and one of the first human activities.Primarily, hunting served as means of life and a source of food, but through development and changes in the society, it turned into an amusement, practice, sports and occupation.According to one of the definitions, in narrower terms hunting "represents killing and catching wild animals with the purpose of providing meat,

[1] According to Leksikon menadžmenta (Bahtijarević-Šiber,F., ;Sikavica, P.(ed.) 2001,644) the skill is defined as the acquired capability of conducting a meaningful sequence of interconnected learned activities. The term skill also refers to the specific capability of turning knowledge into action, i.e. conducting the specific working and other activities, acquired through practice and experience, i.e. through systematic conduction of an activity.

hide, trophies and animal parts, while in a wider sense it encompasses all actions of the hunters breeding, protecting, hunting and using the hunted wild animals and their parts in order to provide economic, sports and recreational value" (Beuković& Popović; 2014,1). Hunting economy, as a wider notionencompasses other activities besides hunting, related to breeding and protection of wild animals, as well as preserving and keeping their natural habitat.According to Croatian encyclopaedia[2] „hunting economy represents an economic, scientific, educational, tourist, sports-related and recreational component of a series of activities. Hunting economy also encompasses elements of cynology, falconry,trophy hunting, armoury, ballistics, sports riflery and archery."During the past ten years or so, the economic component of the hunting has become more important, because it makes financial profit from trophy hunting tourism and hunting management. Its importance for the society was confirmed by the fact that the hunting economy has become a scientific discipline of an interdisciplinary approach, encompassing the areas of biology, ecology, agriculture, forestry, cynology and tourism.

In Croatia, hunting and hunting economyare defined by theHunting Act[3], and Croatian Hunting Federation is the top-level association in the field of hunting economy, acting through county hunting federations and the Zagreb Hunting Federation, gathering and directing the activity of some 60,000 hunters.As they state on their web site, the goal of the Hunting Federation of the Republic of Croatia and, consequentially, the goal of the hunting as an economic activity is "to act in the field of hunting economy which, as an economic and protective activity of the preservation of the biological and ecological diversity aligns the relations based on wildlife management within the boundaries of hunting rounds, as well as other hunting and non-hunting areas of the Republic of Croatia through breeding, protection, hunting and use of wild animals, preserving their natural habitats, promoting hunters' ethics and customs and preserving the nature and human environment"[4].The optimal organisation of resources and hunting activities through the Federation, the offices and associations and management of human resources represents a complex and demand-

[2] Hrvatska enciklopedija, Internet edition (2016), Hrvatski leksikografski zavod Miroslav Krleža, ed.Ravlić,S.

[3] NN140/05, 75/09, 153/09, 14/14, 21/16, 41/16, 67/16

[4] http://www.hls.com.hr/o-nama/ (15.2.2017.)

ing task of people leading the organisation and assuming the role of top managers and human resource managers.

5. HUMAN RESOURCES IN HUNTING ECONOMY

The distinctiveness of human resources in hunting and hunting economy partially rests on the structure and organisation of hunting in the Republic of Croatia, and partially on the pronounced motivation and affection towards different components of hunting economy. A small number of people is engaged in the system through certain paid functions in the Croatian Hunting Federation, county hunting federations, hunting offices and hunting associations, while most of the members conduct their activities on voluntary basis or as a hobby. Each hunter, as a member of a hunting association, pays an annual membership fee. The fact that people participate in various hunting-related activities on voluntary basis has certain advantages, but it also limits the process of human resource management. The already motivated people are difficult to motivate further, and on the other hand, people motivated in that manner are prepared for cooperation and work in order to achieve the progress of hunting and wildlife management, i.e. all the activities encompassed by hunting economy.

5.1. The structureof human resources in hunting sector in the Republic of Croatia

The conducted research[5], i.e. the *online* survey conducted in the beginning of 2017 attempted to establish and analyse the structure of human resources in Croatian hunting and hunting economy, i.e. its socio-demographic structure(part I of the survey questionnaire), as well as the attitudes related to the perceived importance of education and connections to other institutions (part II of the survey questionnaire).The research was conducted on presidents, deputy presidents and secretaries of hunting federations, i.e. the top management level in huntingsector. The sample (N= 50)comprised 90% of leading people in Croatian hunting sector. The following table (Table 1) lists the socio-demographic characteristics of the participants.

[5] The research and the paper represent a part of the author's PhD thesis.

Table 1: Socio-demographic structure of participants in the research

Characteristic	Number	%
Sex		
Male	48	96%
Female	2	4%
Age		
Less than 30	-	-
31-40	4	8%
41-50	8	16%
51-60	23	46%
More than 60	15	30%
Employment status in the hunting federation		
Full time employee	18	36%
Part-time employee with a fee	8	16%
Volunteering/hobby	24	48%
Education level		
Secondary education	7	14%
Bachelor	20	40%
University degree	18	36%
Master/univ.spec.	4	8%
Doctor	1	2%
Formal education area		
Natural sciences (biology, chemistry, maths, etc.)	4	8%
Technical sciences (engineering,electrical engineering…)	10	20%
Biomedicine and health(medicine, veterinary medicine, pharmacy, etc.)	4	8%
Biotechnology (agriculture, forestry, etc.)	19	38%
Social (economy, law, sociology, etc.)	13	26%
Knowledge of a foreign language /English, German, Italian, Russian/		
No	2	4%
Yes	48	96%
Possession of digital/IT competencies		
No	1	2%
Yes	49	98%
Hunting experience		
Less than 10 years	2	4%
11-20 years	7	14%
21-30 years	12	42%
More than30 years	20	40%

Source: the author

Based on the data presented in the table, it can be concluded that the top management of hunting economy comprises of men aged from 51 to 60 (46%), holding bachelor and university degrees (bachelor=40%; university=36%), who are formally educated in the fields of biotechnical sciences /agriculture, forestry.../(38%), social sciences /economy, law.../ (26%) and technical sciences / engineering, electrical engineering.../ (20%).

Almost all participants (96%) can use one or two foreign languages (English 52%; German 34%; or, to a lesser extent Italian 12% and Russian 10%) either as basic, independent or proficient users (Figure 2).

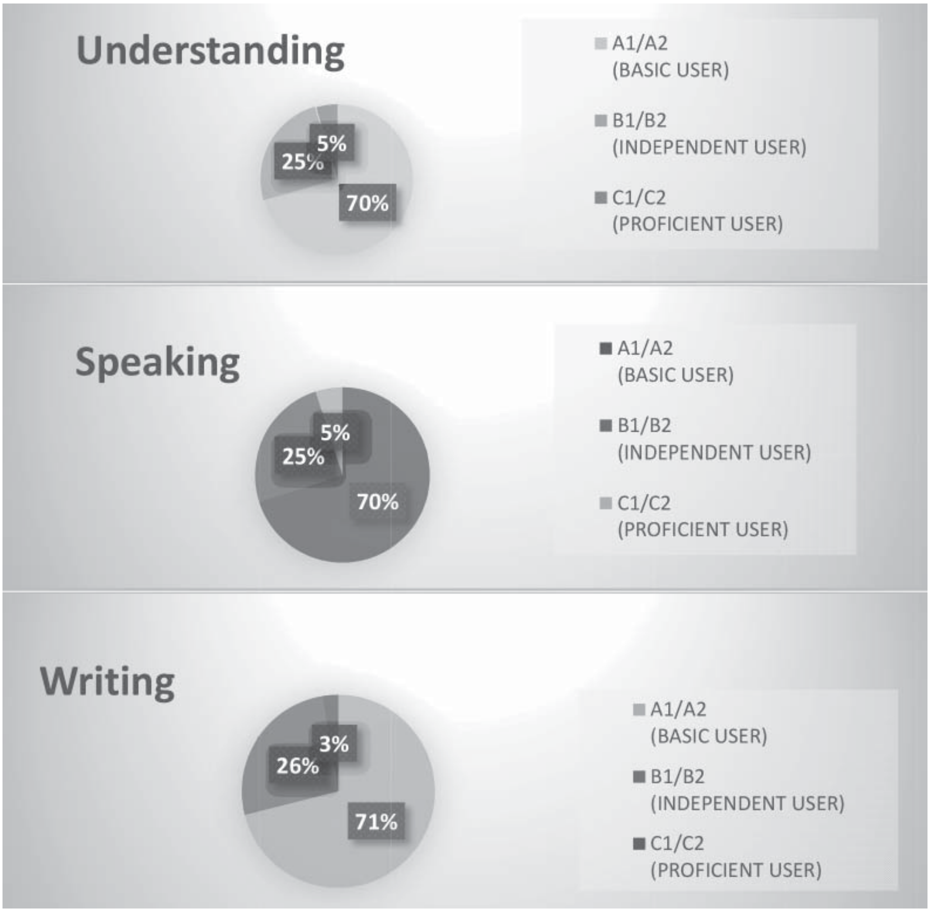

Figure 2: Proficiency levels in foreign languages

Most participants in the survey (94%) have a certain knowledge of digital skills, i.e. they use personal computers and the internet in their work, but only 66% of them use social networks in their work as basic or independent users.

It is important to point out that all participants have been hunters for a certain period, pointing at the fact that they have extensive experience and practical knowledge about the hunting and the hunting economy. Specificity of a part of participants arises from the fact that almost half of them are volunteers (24, i.e. 48%), part of them work as part-time employees with a fee(8, i.e. 16%) and only some are paidfor their work (18, i.e. 36%). The fact points at their high levels of motivation and love for hunting, which certainly guarantee a positive influence on making decisions related to managing other human resources, as well as to work improvement and other resources.

Using the five-level Likert scale,the attitude of participants related to the need of knowledge from various scientific areas, in addition to hunting experience, as a prerequisitefor successful management of hunting federations was established (Figure 3).

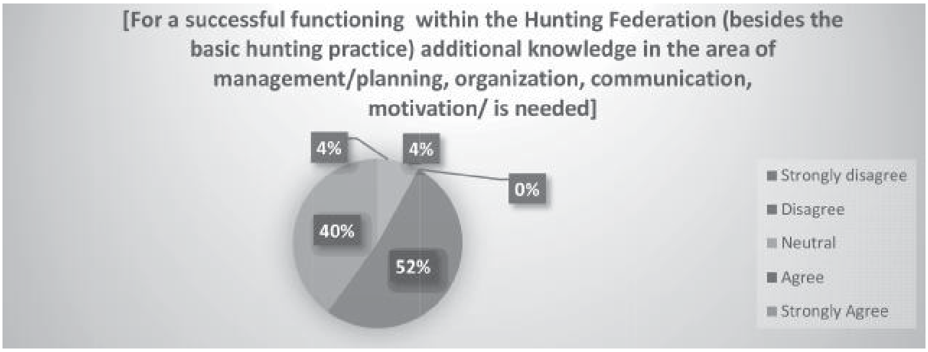

Figure 3: Knowledge of different areas needed for successful hunting and hunting economy

The participants agree (52%) and strongly agree (40%) with the claim that the success of the management depends on knowledge of different scientific areas, in addition to the hunting experience. The claim is corroborated by the participants' attitude (Figure 4) towards the claim that owning a hunting pass is not enough to work in a hunting federation (36% agree, 50% strongly agree).

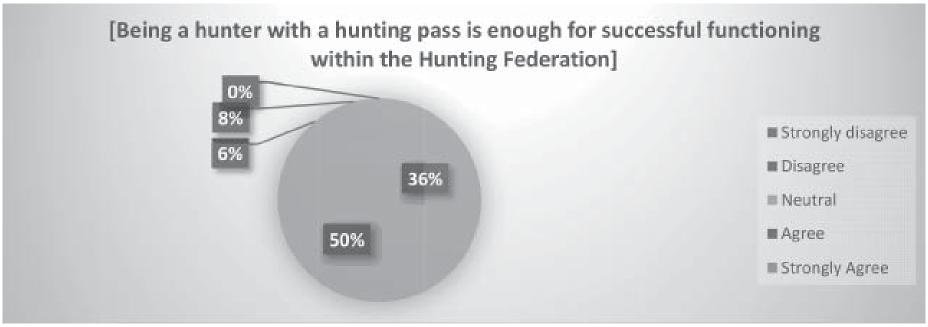

Figure 4: Hunting pass is not enough for successful work in a hunting federation

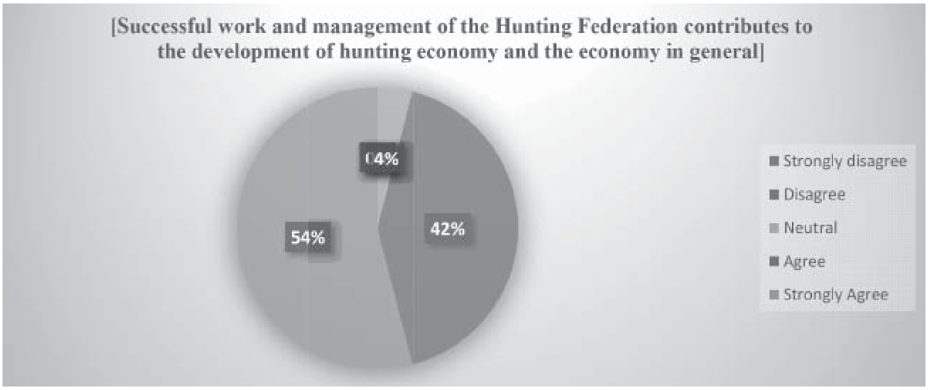

Figure 5: Successful work of the Hunting Federation contributes to the development of hunting economy and the economy in general

The participants show a positive attitude, i.e. they strongly agree (54%) and agree (42%), with the claim that the successfulness of management influences the development of hunting economy, positively influencing the development of economy in general. A total of 96% of the participants believe that a stronger and more intense cooperation of hunting federations with agricultural, tourism and entrepreneurship institutions is necessary for further development of hunting economy. The participants also believe that application and use of EU funds may improve the activities and the resources in the field of hunting economy (Figure6).

Figure 6: Successful operation of the management

6. CONCLUSION

Regardless of their level of obligations and responsibilities, human resources have a key role in accomplishing the set goals, i.e. the success of the subject they operate in, and each successful subject contributes in its own way to the overall success of the economy, i.e. the society as a whole. The fact, i.e. the set hypothesis is confirmed by the conducted research, through the analysis of the knowledge, the competences and the motivation of the top managers in the hunting economy in the Republic of Croatia. The attitudes of the participants also confirm that, in addition to hunting experience, knowledge of different scientific areas is equally important. Communication skills also contribute to the success, because they facilitate achieving harmonious relations within the institution. At the same time, the communication facilitates and encourages networking among different institutions, which become more efficient through synergistic approach.The further development of hunting economy can be expected only under the condition of a good coordination of people and other resources within the Hunting Federation of the Republic of Croatia, and connecting with providers of tourist services, entrepreneurs and ministries, primarily the Ministry of Agriculture, might contribute to accomplishing significant improvements in the development of the economy in general.

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General Economics

WOMEN'S EMPLOYMENT IN ITALY: RECENT CHANGES AND FUTURE CHALLENGES

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Abstract

Italy is at the rear of the European Union countires by the proportion of women in the labor force. In 2015. the general employment rate of women in the Italian labour market (47.2%) is considerably below the EU-28 average (60,4%). Unemployment rate for women in Italy (12,0) is above the EU-27 average (10,6). The economic crisis has left a strong mark in Italian economy. In six years (2008-2014) Italy lost about 800 thousand jobs. Total employment rate decreased from 45,8% to 42,8% and the gap with Europe has become larger. Accordingly, the basic objective of this paper is to explore the impact of the economic crisis on the women employment in Italy and posibilities to achieve more gender equality on the labor market. The resulting findings in this paper are based on the methods of descriptive and inferential statistics.

Keywords: *women, employment, labor market, Italy*

JEL Classification: E2, E23

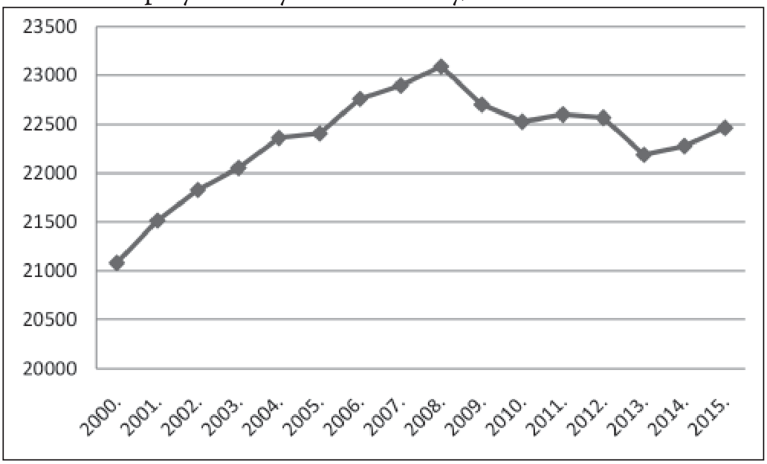
1. INTRODUCTION

Approved in 2010, in the middle of economic crisis, the strategy "Europe 2020"establishes some strategic objectives, as a smart, sustainable and inclusive growth, based on high occupation rate and favored by a social and territorial cohesion. In view of this purpose, the debate about Italy's delay compared with european countries, has become more lively. In 2006, female employment rate between 15 and 64 years old, was equivalent to 46% (14 percentage points under the target defined by European Council of Lisbon), against the 70,7% for men. Except Greece and Spain, all the other Member States had a female employment rate higher than 55% [4]. Italy is not a country for employed women. Accordingly, in this paper we tried to find answer on the question, How women's occupation in Italy reacted to ecnomic crisis?

2. RESEARCH PROBLEM

The employment bilance of seven years of crisis is negative. Italy lost more than 800 thousand job roles (cf. graph 1).

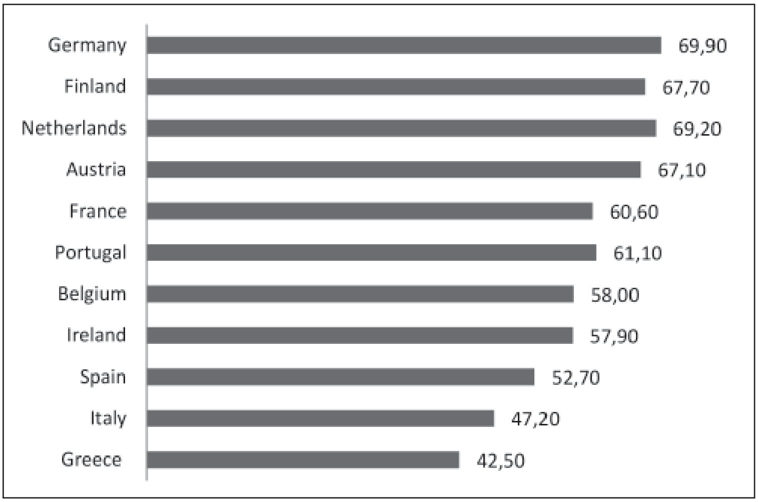
Graph 1. Total employment dynamics in Italy, 2000.-2015.



Source: Prepared by Authors according to https://stats.oecd.org

Italy has one of the lowest female employment rates in Europe (cf. graph 2).

Graph 2. Employment rate of women in major countries of the eu in 2015 Percentage of female population, age group 15-64.

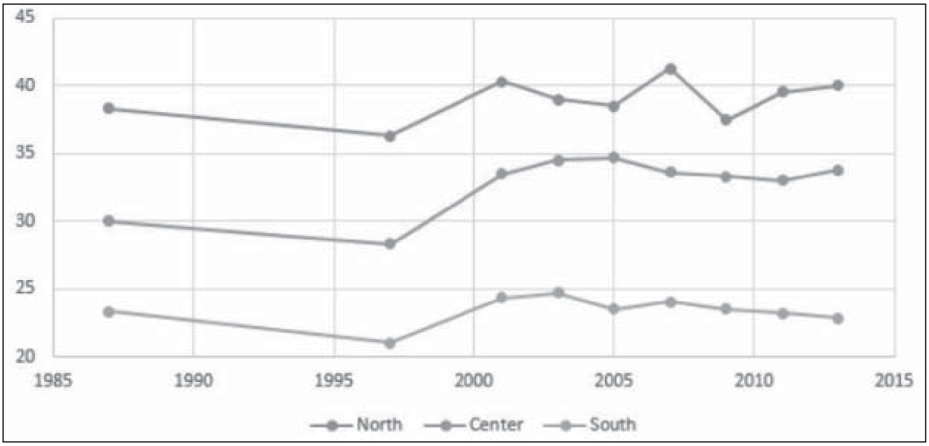


Source: Prepared by Authors according to Eurostat

According to the most recent data published by Eurostat (2015) less than half of the Italian female population between the age of 15 and 64 is currently employed. In 2015, this percentage stopped at 47.20%. Only Greece with 42.5% has a lower rate. Italy continues to stay well below the European average of 60.4%, far from the rates of countries such as France (60.6%) and even more distant from countries as the Austria (67,1), Finland (67,7) Netherlands (69.2%), and Germany (69.9%).

Gender dynamics [8] are also related to territorial distribution. The economic crisis has enlarged the occupational gap between North and South of Italy. During the crisis, the regions of Center-North have been affected by a smaller decline in women's employment, than in South of Italy. Surveys show that South of Italy has never registered a positive trend in women's employment. In the graph 3, we can see that the curve is almost straight, with fewprocess of growth. The gap between North and South has become larger during the last thirty years.

Graph 3. Women's employment rate (15 years old and more)



Source: Prepared by Authors according to Istat, 2015.

Also younger generation's rates are alarming in South of Italy. In 2014, only 8 women out of 100 were employed, against 17% in the North and 15% in the Center. The more virtuous district is Bolzano, where the number of employed women rose up to 8,5%. Other regions with a positive trend are Trentino, Lombardia, Valle d'Aosta, Lazio, Toscana and Basilicata. In the South is still registered a significant stagnation. Economic crisis also, caused a substantial increase in the gap between North of Italy and the other Member States. Until 2008 the distance between them was about 2 percentage points, from 2009 it rose up to 3 points.

3. MATERIAL AND METHODS

To investigate the current and future situation of women in the labor market in Italy, the paper will seek the answer to the question, how are women's employment, total employment and gross domestic product exactly correlated? To answer this in a scientific manner, this study will explore the interdependence between the number of employed women, gross domestic product and total employment in Italy using data from Table 1.

Table 1. Kretanje ukupne zaposlenosti, zaposlenosti žena i GDP u Italiji, 2000.-2015.

Year	Total employment	Women employment	GDP (constant price 2010 euro millions)	GDPp/c (constant 2010 US$)
2000	21079,8	8251	1555551	36182,9
2001	21514,4	8526	1583118,3	36803,5
2002	21829,3	8677	1587053,1	36840,1
2003	22054,3	8719	1589454,6	36732,2
2004	22362,7	8809	1614598,8	37072,5
2005	22407	8806	1629932,1	37241,2
2006	22757,6	9002	1662638,1	37874,4
2007	22894,4	9083	1687143,2	38239,1
2008	23090,3	9270	1669421,4	37258,6
2009	22698,7	9158	1577902,8	35365,5
2010	22526,8	9152	1604514,5	35851,5
2011	22598,2	9258	1613766,5	35996,3
2012	22566	9327	1568274,2	34887,4
2013	22190,5	9276	1541171,9	33889,3
2014	22278,9	9334	1542923,8	33610,7
2015	22464,8	9380	1555008,6	33849,4

Source: Prepared by Authors according to https://stats.oecd.org

In order to make an objective forecast the number of employed women in Italy, a theoretical model should be defined first. This study investigates dependance the number of employed women in Italy (WE) as the dependent variable and the number of total employees (TE) and gross domestic product (GDP) as the independent variables. Accordingly, a model to estimate the number of employed women can be written as a function

$$WE = f\,(GDP, GDPp/c, TE) \tag{1}$$

Where:

WE – number of employd women,

GDP – gross domestic product

GDPp/c - gross domestic product per capita

TE – total employess.

Variable WE is a dependent variable, while GDP, GDPp/c and TE are independent or explanatory variables.

Supposing that the number of employed women depends on the GDP, GDPp/c and the number of total emploees, its linear form would be as following:

$$WE = b_0 + b_1GDP + b_2GDPp/c + b_3TE \quad (2)$$

After formulating the model to estimate the number of employed women in Italy it's will begin on the analysis of individual measures which can and should improve the position of women in the labor market in Italy.

4. RESEARCH RESULTS AND DISCUSSION

Today's economic environment is characterized by a slight economic recovery and exit from the global recession, whose devastating consequences in Italy still visible, and above all the decline in gross domestic product compared to the pre-recession period and reducing the total number of employees. Gross domestic product in 2014 compared to 2007 decreased by 8.55%, while the gross domestic product per capita in 2014 compared to 2007 decreased by 12.1% . Total number of employees in 2014. has decreased by 3.5% compared to 2008. It is interesting that over the observed period the number of employed women in Italy increased by 64,000 while the number of men in the labor force fell by 875,000. After employment's fall between 2008-2010, different dynamics took place. Women's employment rose between 2010-2012, men's employment, instead, kept falling. The 2013 was the worst year, because there was a big inflection in occupation. This caused a reduction in gender gap. Women's occupation reacted better to crisis, increasing every year of 0,4 percentage points more than men's occupation.

Data from Table 2 shows the statistically positive correlation between the number of employed women and the total number of employees and gross domestic product in constant price. Data from Table 2 also shows the statistically weak negative correlation between the number of employed women and gross domestici product per capita.

Table 2. Correlation analysis

Correlations (Italy.sta) Marked correlations are significant at p < ,05000 N=16 (Casewise deletion of missing data)						
	Means	Std.Dev.	TE	WE	GDP	GDPpc
TE	22332	515,35	1,000000	0,783216	0,586930	0,111827
WE	9002	334,32	0,783216	1,000000	0,017503	-0,499343
GDP	1598905	45028,56	0,586930	0,017503	1,000000	0,844751
GDPpc	36106	1437,47	0,111827	-0,499343	0,844751	1,000000

As on the basis of existing data failed to get conclusive regression model in the analysis it's included the gross domestic product expressed in current prices (in USD) and we get the following model to estimate the number of employed women in Italy.

Table 3. Regression analysis

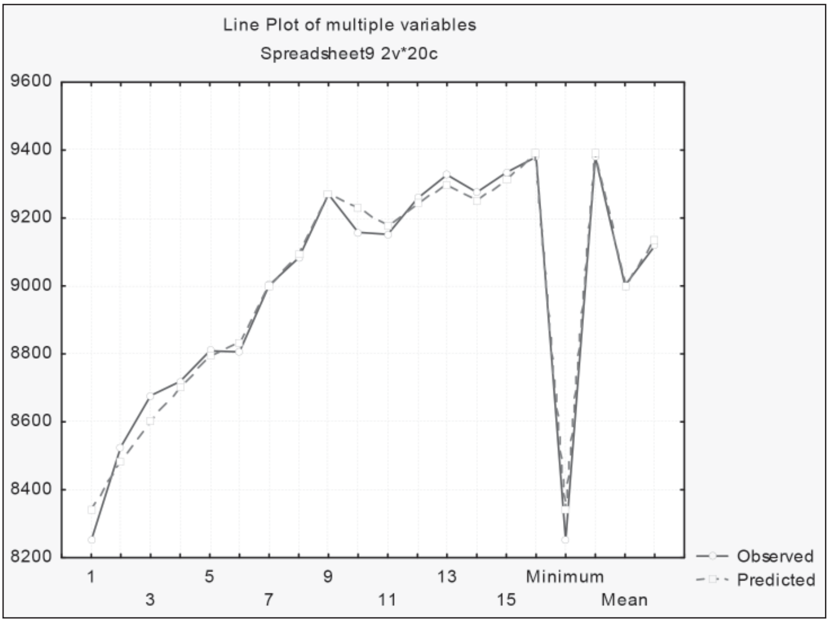
Regression Summary for Dependent Variable: WE (Italy.sta) R= ,99231420 R2= ,98468746 Adjusted R2= ,98085933 F(3,12)=257,22 p						
	Beta	Std.Err. - of Beta	B	Std.Err. - of B	t(12)	p-level
Intercept			2857,879	637,0673	4,48599	0,000745
TE	0,470455	0,097367	0,305	0,0632	4,83179	0,000411
GDPcp	0,512308	0,122242	0,001	0,0002	4,19091	0,001252
GDPpc	-0,238852	0,092131	-0,056	0,0214	-2,59253	0,023548

Regression analysis between number of employed women, total GDP, GDPp/c and total empleyment, give us next model of multidimensional linear regression:

$$\mathbf{Y_{WE} = 2857{,}879 + 0{,}305\ TE + 0{,}001\ GDP - 0{,}056\ GDPp/c} \qquad (3)$$

Graph 4 shows the comparison between the actual values and model predicted values of number of employed women. A satisfactory suitability of model values and the actual values is fairly obvious.

Graph 4. The comparison between the results of the econometric model and the actual data for the number of employed women in Italy



The following analyzes the position of women in the labor market in Italy, the problems faced by and measures which can and should be implement to directly and substantially improve the women's position in the labor market.

Involvment in education. Between 2004 and 2014, the percentage of graduated women, overcome that of men. The trend is growing for men and women, but the latter have improved their literacy level in a more effective way. In 2014, women had a rate of graduated of 1,6 percentage points more than men. This change is remarkable especially in younger generations, where the rate of educated women is higher than the rate of the entire feminine population. Younger women in North of Italy, have a literacy level higher than the national average, against the South with the large number of women that didn't attend compulsory schooling. Despite this rise in women's education, after the crisis, women have more trouble finding jobs. Percentage of graduated men with an occupation is of 57,4% of the entire younger population. Women's rate is of 50%.

During the last years, the situation is changing. Broadly speaking, the quote of employed women is always lower than that of men, but values are becoming more closer. This result is due to a worsening of men's occupation, and not to an improvement for women. As the NEET incidenceproves, the percentage is higher in women (27,7%), but over recent years, men's situation is becoming worst (from 15% to 24,8%).

Reconciling work and family life. In Italy, the obstacles in conciliate work and family life, is still a problem that discourage women's partecipation in labour market. The employment rate of mothers between 25 and 49 years old, is lower than that of women without children. This happens independently of children's age and whether there is a partner or not. In 2014, over 100 employed without children, employed mothers were only 77. With increasing of literacy level, differe nces in participation in labour market between women and mothers, continues to decline. The worst situation is observed in South of Italy. The percentage of employed mothers is 34,2%, against 60% for single women [9]. Thanks to different strategies aiming to support families income, in 2012 a slight improvement was recorded, but the parcentage has decreased again since 2013.

Despite attempts (Law no. 53 of the 8th March 2000, Legislative Decree no. 80/2015) to improve family and work life, a research published by OECD in March 2016, places Italy in the last positions among 27 countries, by level of generosity of parental leave.

Maternity mobbing. Maternity mobbing is a real problem in Italy. Every year, about 1million and a half of women is victim of this discrimination. Legal actions are not so simple, and women usually, give up quickly. This situation hasn't change even after the introduction of Law no. 151/2001, and an increase of 30% was observed during the last five years. Usually, firms don't fired women, but push them to the limit, until they decide to quit. The worst situation occurs in small firms, where women are afraid, discouraged and exhausted because of a real psychological war [7]. In big holding, instead, is easier fight for women's rights, and often they obtain compensation.

Pink quotas. During the last years, Italy made a great improvement with regard of quotas of women. It was one of the first country that adopetd a policy in favor of women, represented by the Law no. 120 of 2011 (Golfo-Mosca Law) . This law obliges all the listed companies to involve women. Is this an additional discrimination against women? Maybe, but they needed this to be more appreciate and, of course, only qualified women are selected. he study of Cs Gender 3000 of Credit Suisse Research Institute (2016), observes that companies that involve women in important role, produce higher output and profit.

Pay gap. International researches reveal that in Italy, the pay gap is not so accentuated. This happens not because men and women are treated equally, but it proves that there is a mechanism of self-selection. Less qualified women, wich earn low salary, are more likely to go away from labour market. In country with high labour intensity, less qualified women have more chances. In Italy, men's retribution are always higher than that of women, it doesn't matter wich kind of work expenrience they have. A reason of this gap, could be the spread of part time jobs, that of course, grant a lower salary than full time jobs [5]. Another reason could be the lack of women holding executive positions. Anyway, the situation in Italy is one of the best in Europe . Women earn 7,3% less than men. Is the 4th country with the smaller pay gap, with a percentage (16,40%) that is less than european's average half.

As regards women's situation, there is the need to adopt flexible politics, that can satisfied women's demands, which change during their working life. The first political choice should be the redistribution of resources toward welfare and service's creation, especially because there is a correlation between feminine job offer and economic growth (an increase in occupation, has a positive impact on PIL). Wider results could be obtained if human capital and feminine productivity are supported. As regard investment in human capital, during the last years, women has reac hed a good level of education, the same of men. But the positive effect of a large number of educated women, pass through their opportunities in labour market. With equal opportunities, women don't quit the job and don't give up in reach higher position.

Participation in labour market, depends on family position. Maternity is combined with a reduction in rate of participation and occupation. In Italy public expenditure for family is less than 1% of GDP and the offer of services satisfies just a little part of demand [1]. For istance, just the 13,5% of children attend public kindergarden. Usually, grandparents look after them (52,3%). Another remarkable issue, is make all these services effectively accessible to all women.

As regard with companies, it's necessary to accept that the price of fertility is not only up to women. They must introduce paternity leave, also to recognize that mother and father sould take care of children together. An increase of job offer and flexibility of work timetable, is demanded. The flexibility should satisfied women's needs with a family. Part-time job is more attractive for women, but there must be the same securities of full time job. Is necessary rethink about our welfare model, based on family with mono-income, where women take care of children and aged relatives. This change could permit to grow more, and improve families's quality life.

5. CONCLUSION

The economic empowerment of women across the rich world is one of the most remarkable revolution of the past 50 years. Women now make up almost half of American workers. They run some of the world's best company. They earn almost 60% of university degrees in America and Europe. Progress has not been uniform. In Italy and Japan employment rates form man are more than 20 percentage points higher than those for women. Although Italy's female employment rate has risen markedly in the past 15 years, it is still below 50%, and more than 20 percentage points below those of Netherland and Germany.

OECD datas, reveal that Italy is one of the worst countries for employed women, as regards the access on higher education, labour force participation, salary, maternity. In Italy women are forced to choose between family and career, not with standing Government support. Italy is not a country for employed women. Blame are distributed, but the major fault is due to a country system with many bureaucratic obstacles, reduced access in higher education, weak maternity protection. Women in Italy, are unable to compete with men. As analysed above, Italy exceeds the OECD average for number of women in company boards. A signal that shows a trend reversal, but which risks to be a bad assumption if remedial measures, fundamental and no more postponed, won't come.

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EFFICIENCY OF BUSINESS INCUBATORS AS GENERATORS FOR DEVELOPMENT OF ENTREPRENEURSHIP

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Abstract

Business incubators as an element of business infrastructure, in the last 15 years in Croatia have become a significant factor in thinking about economic development and promoting of entrepreneurship.

In the strategy of economic development of Croatia, by the construction of economic zones, incubators have a prominent place as a priority for encouraging of local governments that in his area alone provide a greater impetus to the development of entrepreneurship. Of assignment of land without compensation to local governments so there could build enterprise zones and build business incubators, to give stimulus through grants Cohesion Funds of the European Union. Some local governments and institutions have been successful at it and *recognized the importance of such stimulus, while others are lagging in their efforts and are not fully exploit the possibilities provided to them.*

According to the Ministry of Economy, in the Republic of Croatia currently are opened 34 business incubators, most of which are listed as active. How much is real importance of these incubators, the best way to evaluate them, is number of newly established firms in them, the number of new jobs that these companies have opened, and the generated total revenue. The aim of the research is to examine operations of all business incubators, or those active, to show how many companies have been founded in them, and which are successfully went out of the incubator and continued to operate successfully. The research will show how many companies still operates in incubators, how many new jobs has been opened, how much total revenue currently they generated, and what is the importance of them in the scale of the entire national economy. With intention of achieving the aim of the paper, the research will be done by conducting survey of all active business incubators in Croatia, and of all the companies emerged from the incubator who continuously actively operate.

Keywords: *Business incubators, business infrastructure, start-up entrepreneurs*

JEL Classification: L2, L26

1. INTRODUCTION

Founding business incubators at the global level has been more significant in the last 30 years. The concept was conceived in a way so that it helps young entrepreneurs in the early phase of their business development. At the beginning of a life cycle of every business it is necessary to have an impulse that will instigate and be of help especially if it is an entrepreneur with lack of financial means. Basic elements of a business like an office, a desk, personal computer and a production hall are an incentive to a young entrepreneur so that his business venture is started as simply as possible. With listed physical elements, professional help is also an important factor. Entering the world of entrepreneurship is all the more simple for a young entrepreneur if he has bookkeeping services, legal, marketing and tax consultation, especially if those services are free of charge. They are often junctions, intermediaries or HUB because they connect the entrepreneurs with potential investors interested in investing in new ideas and activities (McAdam, Marlow, 2011., 450). Business incubators were not intended as profitable institutions because, in their nature, they are unable to achieve a surplus of revenue over expenditure and because of the free services provided for entrepreneurs they have to be financed by a third party. Their benefit on the behalf of the entire community is of public interest and their co-financing by local communities, educational establishment, and the state or a third party is entirely justified.

Development of entrepreneurial environment and positive acceptance of entrepreneurs by the society and the community is a key factor for economic progress of a country. The media's point of view which is also generally accepted, is that the entrepreneurs are a negative phenomenon which leads to psychological barriers in individuals who have entrepreneurial possibilities, who can carry out their ideas and transfuse them into an entrepreneurial venture. Positive entrepreneurial climate and encouragement of all generations and the entire population to competitiveness and a will for entrepreneurship is a key factor of developed countries in contemporary economics. According to Hirsch et al. 'The entrepreneurs have never been so respected by the general public. Entrepreneurial efforts in United States of America are considered honorable even in cases of prestigious aspirations. The main factor in development of this social approval are the media. The media have played and will continue on playing a strong and constructive part in reporting about general entrepreneurial spirit in United States of America and emphasis of successful cases of the aforementioned spirit's activity. Many newspaper articles like The New York Times, The Wall Street Journal and the Washington Post are focusing on the pioneer spirit of today's entrepreneurs by describing how this spirit is contributing to the society by keeping the technological leadership of United States of America' (Hirsch, Peters, Shepherd, 2008, 19).

Results of international research (Global Entrepreneurship Monitor, Doing Business, Report of global competitiveness, Index of perception of corruption) assert insufficient level of activity in starting new business ventures, small part of growing companies, administrative obstacles for implementing entrepreneurial activity, insufficient development of financial market and lack of education directed into evolution of entrepreneurial skills and knowledges as key problems (Singer, ur., Alpeza, ur., 2016., 7). Prompting growing economy in the Republic of Croatia can be accomplished by positive incentive to entrepreneurs and entrepreneurship by the entire community. From education of primary school pupils to universities, media and other citizens, it is necessary to change the viewpoint that entrepreneurs are those who represent the core of every community. The state can exist only if there are entrepreneurs who create jobs, develop new ideas, advance technology and in doing so they ensure the welfare of all other social groups. It is necessary to emphasize positive examples and present quality entrepreneurs as role models for younger generations so as to create aspiration and encourage the spirit of creativity for making something new and by that leaving a mark for all future generations.

2. INCUBATORS - PLACES FOR CREATION AND REALIZATION OF NEW IDEAS AND BUSINESS COOPERATION

Most developed countries of the world use business incubators as one of the tools for developing national economy and as a basis for development of new ideas and creation of new technologies. They are mostly founded by government bodies or units of local governments, however, a certain number of them work in private ownership.

By the definition of National Business Incubation Association, the term of business incubators encompasses a wide range of procedures which help companies in achieving a lower rate of failure in initial stages of activity and it accelerates progress of those that have the potential to evolve into generators of jobs and welfare. Incubators ensure three main ingredients in growth of successful business: entrepreneurial surroundings and education, access to mentors and investors and the visibility in the market (National Association of Business Incubators, US).

By the way of establishment or funding, incubators can be divided into two groups: 'incubators with walls' and incubators 'without walls'. The former indicate objects that relate to physical infrastructure and the incubation takes place in a specially designed building. Virtual incubators, better known as 'without walls', do not give a specially designed space or a building as a physical object, but they offer their services online on various locations (Moraru, Rusei, 2012., 170).

First business incubator was created by Charles Mancuso in 1959 in New York and it flourished in the 1980s (Epure, Cusu, 2010). According to available data, there are over 1500 active incubators in North America and 1115 of them are in United States of America and there are 400 of them active in Brazil. On the continent of Asia, one of the fastest growing parts of the world, there are over 2000 incubators in business most of which are in China and Japan (Chandra, He, Fealy, 2007).

Business incubators in China are established by the state but with the development of the economy there are more and more private incubators. As a measure for success we do not take only the number of established companies but also the successful management of every new company (Li, et al., 2010). European Union also has a significant number of incubators and Germany precedes with 400, followed by France with 250 and Great Britain with 300.

In the Czech Republic, Croatia and other transitional countries, business incubators started to develop by their joining of the European Union and the significant possibility of using the European funds. The number of incubators and their success rate vary by regions, but their survival rate depends on the support from the ministries and state institutions (Peterková et al., 2014.).

There is a similar situation in Romania where the first incubator was established in 1992 by the state and the Institute for research and technology and there are 60 of them active today (Moraru, Rusei, 2012, 173).

Free market economy is institutionalized so that it provides free expression and development of the entrepreneurial spirit - there is no alternative to such development no matter which country is in question. Attempts made by the state to take over the part as an entrepreneur generally provide bad results and so the valid economic policy is the one which encourages entrepreneurial development with all its measures. In accordance with this, economic progress depends on innovative business people and their readiness to invest and fight for new entrepreneurial ventures. (Škrtić, 2006, 48).

Business incubators are one of the most significant incentives and constant supervision is necessary along with measurement of the success rate and the creation of new measures for improvement of their performance.

As it was shown, all of the most developed countries of the world use business incubators in their development and we can certainly say that incubators played an important role in that development. It is necessary to apply the aforementioned experiences and apply already known recipes taking our own potential and specificity of our surroundings into account.

3. EFFICIENCY RESEARCH OF BUSINESS INCUBATORS IN CROATIA

The research was done on a sample of 16 incubators currently active in Croatia. Since the survey was sent to all 34 incubators which are considered active according to the Ministry of Business and Trade, we can talk about a representative sample of 47, 05%. With additional analysis it was found that out of 34 listed incubators, 7 of them never came to life and they were listed as active for various reasons but they never even had residents nor do they have the conditions to function. If we take out those 7 incubators out of the research we get a sample of 66, 66% respondents that replied to the survey and mailed their business data.

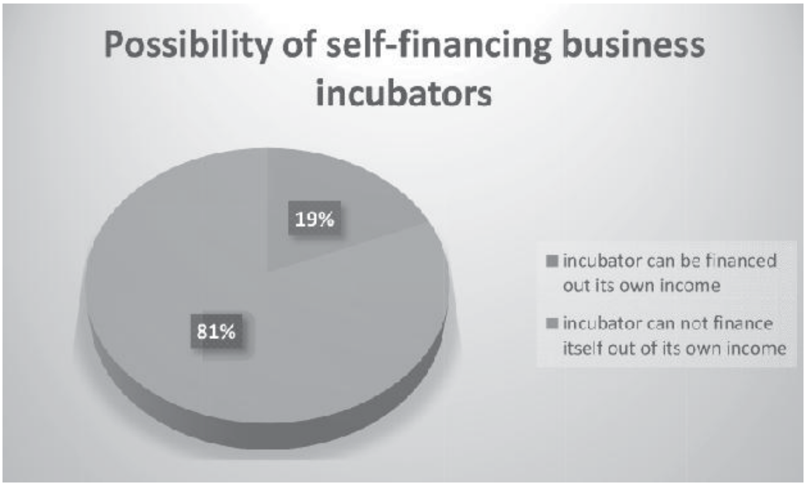
One of the incubators is doing business in a way that was thought different than the classic business incubators so that their comparison would not be relevant. 'HUB-s', 'junctions' or 'co-working' spaces as they call them, offer encounters, connecting and meeting the entrepreneur personally but also the potential investors who are interested in investing in other's ideas which they think of as potential. Hub-s think of themselves as a community and a space which offers basic working infrastructure and various preincubation and incubation programs not just for their residents but for certain target groups (for example young unemployed people, students, women etc.). It is directed on entrepreneurship development not just between young people and beginner entrepreneurs but with a certain focus on business which will make positive social changes. One of the goals is making new business ventures which will generate new values, but indicators of success are complemented with indicators of wider social influence. For a quality analysis and comparison of data these incubators were not taken into account.

Remaining 16 incubators have delivered data about the number of companies which are actively doing business and the number of employees they have and so this data was processed and displayed. Information that should have been given in the research about the total income the companies generate was not entirely available so it was taken out of the analysis because quality display was not possible.

4. PROFITABILITY OF BUSINESS INCUBATORS

The oldest incubator that was included in the research was founded in 1996 which means that it has been working actively for over 20 years. It was founded by a unit of local government and it has also served as a model for establishing other incubators. Other incubators were founded later on, mostly between 2003 and 2013. Most of them are owned by units of local governments or some other institutions as one of the preconditions for their operation because otherwise they would not be able to self-finance. According to responses by our examinees, only 3 of them are self-reliant and are able to finance themselves out of their own income.

Picture 1. Possibility of self-financing business incubators



Source: author

Self-financing is one of the more significant objections to business incubators considering that main objections go towards financing private businesses with public funds which only benefit an individual and serve him for success which would not happen without the help of public funds. Objections are even more noteworthy coming from companies that function on their own on the open market, overcome obstacles of the harsh market environment and fights with competitors. Their resources are put into budgets of local governments in the name of tax benefits which then directly subsidize new competitors that take a piece of their pie and that will maybe, one day, take them out of the market game. This kind of point of view can be seen as justified from one perspective, however if look at things from wider social context and the perspective of national economy, the picture gets a little different. The goal of incubators is to encourage small, new entrepreneurs who never had the chance to work in business but have a perspective business idea. Their success rate is pretty small because the lack of entrepreneurial skills and financial means. Leaving them to free market and cruelty of the competition, very few of them manage to survive their first year of doing business. According to data 60-80% of small companies go under in the first five years of their existence (Sikavica, 2011). If the society wants to open new economy subjects it has to reduce the number of unsuccessful projects and increase the number of those that survive in the long run and because of that help is necessary and very important in the first few years of doing business or at the start of a new business venture. Society and state should put an emphasis on constant increase in number of new economy subjects which contribute to increase in employment, economic prosperity and welfare of the society. Companies in the same branch can be competitors on the local market however progress should be sought after solely on the global international market. The state should view all companies as domestic and should protect their interests and be protective of them when they are represented on the global market. Supporters of the 'European market' will say that domestic market is against the principle of a united Europe and that this kind of standpoint is incorrect. However, only naive observers will believe that other countries of the united Europe have a different point of view and that they see Croatia as an equal to Germany, Austria and France… Free market of the European Union was created solely for the interests of 'great countries of old Europe' and their own progress and gain and those countries protect their manufacturers when they are out of their domestic market and on no account do they make themselves competitors in their own country. Every new player from their backyard is welcome and they will protect and encourage them in every possible way while they are growing, developing or entering the global market.

According to Porter, natural resources are a component in creating the competitive value. Changes in technology, organization and quality of people as institutions of a certain society, are key factors which explain how growth and progress are truly realized and why because of them some countries are competitive than others (Porter, 1990, 67).

Area of Croatia provides enough potential to everyone with a business idea and the concentration of a great number of companies that are in the same activities should not be viewed as negative but we should search a possibility for joining and make an even more significant breakthrough onto the global market. If the incubators are viewed from this standpoint their financing out of the public funds and with the money of taxpayers is completely justified and can even be increased. Encouragement of entrepreneurship, self-employment, generating new ideas, for a small country like Croatia should be a priority and the first sentence in developing strategies for future advancement of the country.

5. CURRENT ACTIVITY OF BUSINESS INCUBATORS IN CROATIA

According to research given data, currently there are 231 company in 16 incubators. It is mostly start-ups which were founded in the last three years. The number of companies in individual incubators differs, which depends on the size and success of every incubator individually. According to responses of our examinees from the sample incubators, in some there are 4 companies doing business while in others there are 41 companies. Taking the representative sample into account, we can determine an average number of companies in an incubator is 14 which truly represents the number of companies in most incubators. Regarding the number of employees in those companies, they also differ and because of that we have companies with only one employee who is the founder himself and companies with a few dozen employees. If we calculate the average number of employees we come to a number of 2, 87 employees per company and that is not an insignificant number at all.

What follows is a list of incubators with the number of companies which are currently doing business, number of employees and the year in which they were founded.

Table 1. Review of the number of companies which are currently doing business in individual incubators, number of employees and the year in which they were founded

	Number of companies currently in an incubator	Current nuber of employees in companies	Year of founding the incubator
Incubator 1	9	25	2003.
Incubator 2	4	10	2011.
Incubator 3	8	20	2005.
Incubator 4	11	40	2006.
Incubator 5	12	35	2007.
Incubator 6	5	42	2003.
Incubator 7	29	70	2002.
Incubator 8	41	150	1996.
Incubator 9	20	32	2013.
Incubator 10	12	40	2014.
Incubator 11	7	18	2001.
Incubator 12	20	47	2013.
Incubator 13	16	28	2010.
Incubator 14	16	48	2009.
Incubator 15	9	25	2013.
Incubator 16	12	34	2013.
TOTAL	231	664	

Source: author

Listed data can be an indicative of (un)successfulness of each individual incubator and an indicator to those who wish to be more successful in their future businesses. It is visible that the current number of residents in each incubator does not depend on the year of foundation but other factors and strategies of attracting new residents. Except 'incubator no. 8' which is the oldest and has the largest number of residents, in other incubators, the year of foundation has no direct correlation with the number of residents currently doing business in it. Number of employees per company also has no direct correlation with the year of founding the incubator. Number of employees depends more on the work that each company is doing. It is necessary to emphasize that most incubators see companies that are in production activity or are related to informatics technologies, as desirable residents. Research has shown that companies that are involved in production activities and informatics technologies employ a slightly higher number of people. Since the primary goal is self-employment, creating new jobs and development of local economy, that kind of strategy proves to be correct.

As one of the main problems and obstacles in increasing the number of people interested in starting their own business venture is the lack of entrepreneurial spirit in a significant number of citizens, and those that do want to become entrepreneurs are financially illiterate. Education and creating a culture of entrepreneurship must be set as a goal for the entire community and units of local governments on whose areas they wish to evolve incubators.

Another problem is the lack of skilled workers in certain areas because companies search for specific occupations like informatics technologies, development of software etc. they demand workers with higher levels of knowledge and specially educated. If there are no such workers, companies soon leave the area in search of adequate workers and then incubators lose their purpose. Because of listed reasons it is very important that the local education system and the local economy comply and act in the same direction to attract new residents, build an incubator and determine the strategy for action.

6. RESULTS OF ACTIVE INCUBATOR ACTIVITY

Key indicator of success is the number of residents that left the incubator active and are doing business in their own spaces independent from incubators. The point of this kind of business incentive is making and developing companies that will stay in the local area long term and ensure jobs and the welfare of the entire community. According to research given data, total number of companies that have left incubators and moved into new spaces that they bought or rented in the last 15 years and continued to expand and do business successfully is 342. That exact number is the indicator of success and result of all investments made into this kind of entrepreneurial infrastructure because without that there is very little chance that any of those companies would even begin their life cycle. Those 342 companies on the territory of Republic of Croatia is not insignificant and it gave its contribution to economic progress and the increase of GDP.

It is also necessary to notice that the total number of companies that have left the incubator is bigger by 30-40% depending on the incubator, however a certain number has stopped working and were proven unsuccessful. Research included only the companies which were active and doing business during December of 2016 and January 2017. Moreover there is no guaranty that those same companies will be active in future.

Table 2. Review of active companies that left certain incubators, number of employees and year of foundation of each incubator

	Number of companies that left the incubators and are actively doing business	Total number of employees in all the companies	Year of founding the incubator
Incubator 1	41	127	2003.
Incubator 2	5	17	2011.
Incubator 3	20	64	2005.
Incubator 4	12	27	2006.
Incubator 5	16	49	2007.
Incubator 6	15	48	2003.
Incubator 7	25	72	2002.
Incubator 8	50	124	1996.
Incubator 9	69	193	2013.
Incubator 10	17	36	2014.
Incubator 11	10	28	2001.
Incubator 12	20	48	2013.
Incubator 13	5	24	2010.
Incubator 14	16	46	2009.
Incubator 15	12	33	2013.
Incubator 16	9	36	2013.
TOTAL	342	972	

Source: author

As it was mentioned earlier, indicators of the number of employees in companies that have left the incubator and continue to actively do business is one of key elements in measuring the success of each incubator. Furthermore it should be a motif for further expansion of the network of incubators and opening new ones, especially in underdeveloped areas of Croatia. According to given data, out of 342 companies that have left the incubators and continued to actively do business employ 972 workers. Since it is and average number of about 2,84 workers per company we can conclude that these are still small companies with a small number of employees. However a significant number of them employ much more than the average number so we have companies with over 20 employees with potential to employ many more in the future. It is a fact that certain number of factories out of this research will not survive in the future but a significant number of them will continue to actively do business, employ more people and contribute to the local economy and by doing so they will provide social well-being of the entire Republic of Croatia.

7. CONCLUSION

Conducted research and analysis of the given data show that business incubators have an influence on the economic development of the region they are active in and ultimately on the entire national economy. In further strategic reflections about economic progress we should definitely take incubators into account as one of the most important factors and measures to accelerate the aforementioned progress. The walls themselves and physical space are in no way sufficient for a start of a company's business venture and incubators should incorporate much more than that. Only the synergy of three fundamental resource groups (infrastructure, support of the state and the support of other institutions) makes a foundation for development of successful residents which will have the opportunity of further growth and prosperous survival on the market (Dechang, Lincoln, Qiang, 2012).

Opening of new business incubators will certainly continue to be important for economic progress of Croatia, especially by using the potential given by structural funds of the European Union. This will create a possibility for progress in underdeveloped parts of the country and give an opportunity to everyone who has a good idea, entrepreneurial spirit ad who do not wish to leave their region and want to get wealthier by their personal contribution.

Creating new incubators and offering new possibilities will demand their evolution and improvement with new incentives and new innovative solutions. Moreover, there will have to be new ways for measuring performance and effects of the incubators because just the number of new companies and jobs will not suffice. This will mean assessment of quality of the new jobs, social contribution of new companies and their significance for the community etc. which do not seem very significant at the moment but the factor of their influence will surely grow.

Business incubators will continue to be a measure and an instrument of economic policy of the State and units of the local governments because with their direct help their survival is impossible. Private initiative will be welcome respectively the inclusion of investor's capital. However there is no model in sight which would exclude interventions of support institutions. Key factor in Croatia is the creation of positive entrepreneurial environment, change of attitude towards entrepreneurs as something negative and encouraging excellence, knowledge and technology development. This is the only way which can lead to security and prosperity of future generations.

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SELF-EMPLOYMENT: PERSONAL CHARACTERISTICS OF THE SELF-EMPLOYED AND IMPACT ON ECONOMIC GROWTH

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Abstract

Self-employment is one of the key elements for the restructuring of the labor market and the economic recovery. This paper observes self-employed persons as part of the labor force with the aim to determine their similarity with entrepreneurs and employed persons, but also their specifics that make them a distinctive category. Self-employment is analyzed at the level of an individual based on its personal characteristics as well as a macroeconomic phenomenon. Self-employment is influenced by two groups of factors: "push" (self-employment as an escape from unemployment) and "pull" (self-employment, which resembles the entrepreneurship). The results indicate that self-employment is more common among older people, men, in agriculture and among people without the necessary qualifications for running a sustainable business. While

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the EU underlines self-employment as a driver of the economy and as solution for unemployment in the vulnerable groups of the labor market, the paper shows that self-employment decreases at the EU level. In most countries, the dynamics of self-employment is influenced by the "push" factors, especially during the recession, which greatly affects unemployment. It is concluded that self-employment, in most EU countries, is a result of the discrimination in the labor market and the inability to create new jobs, rather than being a voluntary decision based on a perceived business opportunity. The analysis has shown that self-employment does not have a positive impact on macroeconomic indicators. Furthermore, it has a weak role in the creation of jobs due to the low share of self-employed who act as employers.

Keywords: *self-employment, unemployment, business cycle, "push" and "pull" factors*

JEL Classification: J21, J71

1. INTRODUCTION

Global trends such as globalization, technology advancement and global recession led to the disappearance of demand for certain professions with simultaneous problems in the private sector for the creation of new ones. The resulting disturbances in the labor market caused high levels of unemployment. Therefore, the policy makers of the labor market emphasize the need for its recovery and adjustment to the new requirements. The promotion of entrepreneurship and self-employment is an important part of European, regional and national policies because of the belief in their potential to create jobs, increase innovation, provide opportunities to unemployed and encourage vulnerable groups of the society to participate in the labor market. The single market of capital, goods and services in the EU as well as the digital market have significant roles in the development of entrepreneurship and self-employment. Nevertheless, the question is to what extent the labor market and social policies contribute to job creation and economic growth through self-employment and entrepreneurship. The high unemployment rate is a major economic and social concern, both in the EU, and in Croatia. This study observes the dynamics and characteristics of self-employment in the EU as well as the success of self-employment as a measure for reducing unemployment. According to the economic theory, more entrepreneurship and self-employment have positive effects on the economic growth through new jobs and a positive competition environment. The aim of this paper is to explore the characteristics of the self-employed and determine the connections of self-employment to the macroeconomic business cycle.

2. PERSONAL CHARACTERISTICS OF THE SELF-EMPLOYED

2.1. The fundamental determinants of self-employment

Measuring self-employment is very difficult because the boundaries between self-employment and employment as well as between paid and unpaid work are still unclear. Simply put, there are two types of employees, and two types of contracts: employees and self-employed. The main difference between them is that employees earn by working for the employer, while self-employed work on their own, for their own account, and they also can employ.

In the modern empirical research of self-employment, business ownership and entrepreneurship are used as synonyms for defining people who work on their own account and risk. Such a definition of self-employment makes it very heterogeneous, which creates difficulties in monitoring its dynamics through time and comparing the data between the countries (Toivanen, Mellner and Vinberg, 2014: 22).

Despite all the national differences in defining and understanding of self-employment at the EU level, further dimensions of self-employment are defined as (Eurofound, 2010: 15):

1. Investment of own capital
2. Autonomy in the labor market
3. Responsibility and control over its own work
4. Presence of the employee.

Based on these four criteria, it is possible to identify five basic categories of self-employed (Eurofound, 2010: 15):

1. Entrepreneurs - they operate their business with the help of their workers.
2. Traditional freelancers - they must meet certain requirements, regulations and mandatory rules of the profession and often take an exam in order to be listed in public registers and carry out their activities independently or in cooperation with other professionals or limited number of employees.

3. Craft workers, traders and farmers - traditional forms of self-employment in which the self-employed help family members and may have a small number of employees.
4. Self-employed workers in skilled but unregulated occupations.
5. Self-employed in occupations that require low qualifications - they run business without the help of employees, but sometimes family members help them.

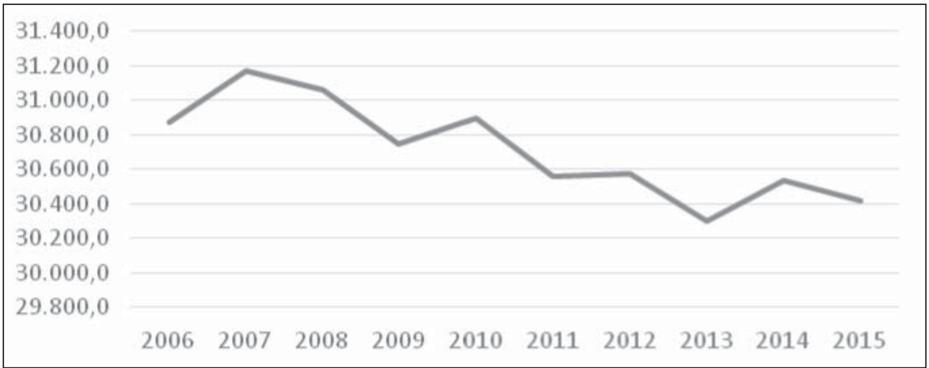
While self-employment is generally associated with running a business, a professional practice or an agricultural farm, entrepreneurship is based on the risk-taking and innovation of individuals who actively and positively affect the economy. Unlike businesses that are associated with taking advantage of good business opportunities, practice shows that self-employment often has very little to do with entrepreneurial activity and often occurs as a response to unfavorable circumstances in the labor market.

Self-employed who do not employ are common in traditional sectors such as agriculture, forestry and fisheries, trade and crafts, construction, transport and freelancers. However, with the development of the service sector and new technologies, independent work has become a main feature of the media sector, including press and the film industry. The growth of information and communication technologies (ICT) has pushed self-employment to expand into activities such as graphic design and entertainment due to the Internet. In addition, the restructuring of companies under the influence of ICT has increased the use of subcontracting, including micro-enterprises and self-employed.

2.2. Tendency towards self-employment

There are different reasons why someone wants to be self-employed. Theoretically, there are two reasons why a person would choose self-employment. The first case assumes a person who, before becoming self-employed, had high income, enjoyed job security and career advancement opportunities and became self-employed in order to be its own boss. These people are the most appropriate description of entrepreneurs able to recognize good business opportunities and have all the necessary knowledge and skill. The second case assumes a person who, before becoming self-employed, had limited job opportunities and self-employment is the only way to participate in the economy and society. These people do not have the necessary knowledge and skill; they are often discriminated and have little chance to succeed in the paid sector. For these reasons, they choose low-paying jobs without advancement opportunities. Self-employed persons in this category start new businesses primarily in industries with low entry barriers and strong competition that leads to low profits and high probability of failure. Between these two extremes, there are many combinations of factors that affect the person decision to be self-employed (Bögenhold, Staber 1991: 226). Based on an analysis of the existing literature, it is possible to observe certain regularity in the dynamics of self-employment. At the EU level, the number of self-employed do not show significant variations. The research of Blanchflower (2000, 2004) on a sample of seventy countries have confirmed that in the EU (European Commission, 2012, 2016) the rate of self-employment continuously decreases. Thus, although the number of self-employed in individual countries grows or reduces, there are no significant changes at the EU average level. Throughout the observed period certain countries have high shares of self-employed, while other have low shares, which leads to the fact that there are no major changes at the average level.

Graph 1: Dynamics of self-employment in the EU between 2006 and 2015 (in thousands)



Source: author based on Eurostat database (2017), Self-employment by sex, age and educational attainment level, (http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsa_esgaed&lang=en , 15.01.2017)

Graph 1 shows that in the observed period self-employment decreases at the EU level. Despite the negative trend, the change is not significant since the base index shows that between 2006 and 2015, self-employment was reduced by 1.29%. The highest number of self-employed was recorded in 2007. In section 2.3. the influence of personal characteristics on self-employment is analyzed.

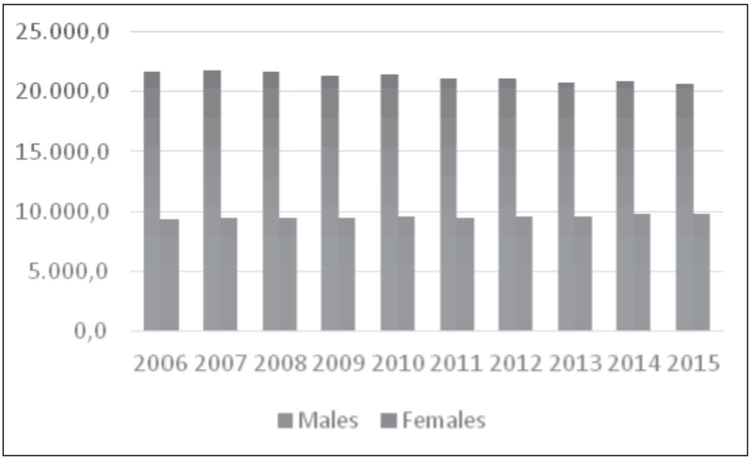
2.3. Age, gender and educational structure of self-employed

The personal characteristics of age, gender and education level affect an individual's decision to become a self-employed.

Analyzing the age of self-employed, the highest share (55,7%) of self-employed European workers is in the age group between 25 and 49 years. Only 2,3% of the self-employed in Europe enters the age group between 15 and 24 years while 42% of the European self-employed are over 50 years of age (Eurostat, 2017). Although the largest share of European self-employed are in the age group from 25 to 49 years, the self-employment rate in the age group over 50 years, observing the total number of employees, is considerably higher than in the other age groups. The reason for that is the labor market discrimination. The job deficiency caused by the global recession generated higher rates of self-employment, especially among vulnerable groups, including older workers. In order to ensure an existence, they had no choice but to become self-employed. The highest self-employment rates in the groups of older workers are recorded in Poland and Spain, with negative tendency, while positive self-employment rates of older workers are recorded in the UK and the Netherlands. For comparison, in Sweden, France and Germany, these rates are low and do not show significant changes in the observed period between 2005 and 2014. Unlike older workers, the share of young self-employed workers is very low throughout the EU and ranges between 1% in Slovenia and 6% in Malta. Poland recorded a decrease of self-employment among young workers, unlike Spain and the Netherlands, which have seen significant increases of self-employed young workers. The increase in self-employment in Spain is explained with the high unemployment rate among young people. High rates of self-employment among young workers have been also recorded in Greece and Italy (Hartfield, 2015: 13).

The data for 2009 shows that 69.6% of the self-employed were men. However, when looking at the age group above 50 years of age, their proportion was only 37.5% (European Commission, 2010: 7). Although self-employment is more common for male workers, growth of self-employment of women in the recent years can indicate the presence of barriers in the labor market. The highest gender imbalance was recorded in Ireland, Sweden and Denmark, and the lowest in Luxembourg, Switzerland and Portugal. Furthermore, it is seen that self-employment of women is higher in the countries of South-East Europe. This can be explained by institutional factors, i.e. marginalized groups are forced to seek alternative employment in countries where the social security system is less developed. In those countries, self-employment is affected by high unemployment levels and nonexistent unemployment benefits. The largest shares of women among the self-employed in 2013 were seen in Lithuania (41.6%), Luxembourg (40.3%) and Latvia (38%) and the lowest in Malta (19.6%) and Ireland (20.8%) (European Commission, 2016: 43). The comparison between countries shows that more than 5% of the women in Cyprus who were unemployed in 2013 have become self-employed in 2014, while in Hungary, Croatia, Greece, Bulgaria and Germany this was less than 1%. For contrast, more than 5% of unemployed men become self-employed in the UK, while this share was less than 1% in Hungary (European Commission, 2016: 42). Hartfield (2015) in his study concludes that for working men is 90% more likely to become self-employed than for working women, with the exception of the UK where the number of self-employed women grew faster than the number of self-employed men. A high proportion of self-employed women is recorded particularly in two sectors: administrative services and support services as well as work related to human health and social work. Self-employment of women has increased in Germany and Romania in the period 2004-2007 and in countries where self-employment of men decreased such as Malta, Denmark and Sweden. In contrast, the share of self-employed women decreased in Finland, Netherlands, Slovakia and Slovenia (European Commission, 2010: 9). Graph 2 shows the dynamics of self-employed workers by gender from 2006 to 2015 at the EU level.

Graph 2: Dynamics of self-employed workers by gender between 2006 and 2015 (in thousands)



Source: author based on Eurostat database, Self-employment by sex, age and educational attainment level, (http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsa_esgaed&lang=en , 15.01.2017)

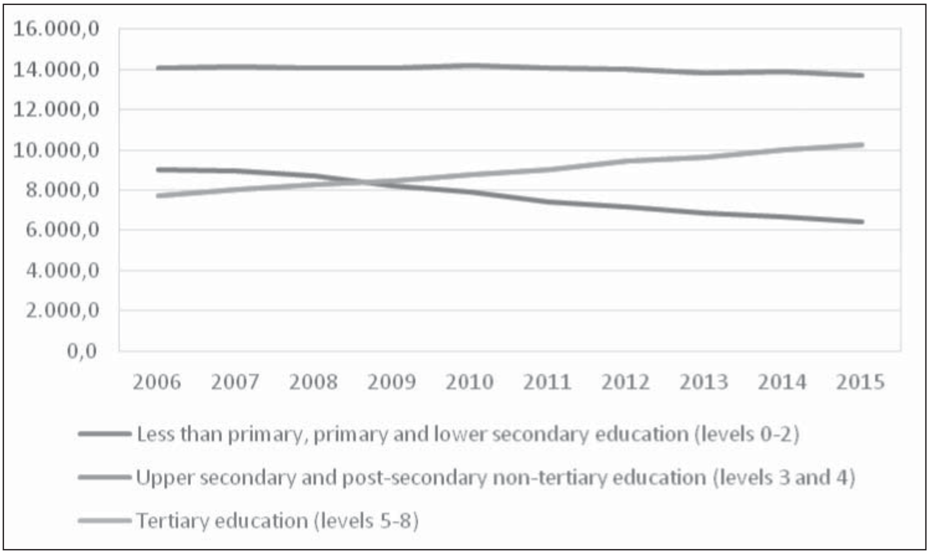
The share of men is significantly higher in total self-employed workers compared to women whose share is around one-third. The growth of self-employment among women in the observed period may indicate the existence of barriers for labor market participation (European Commission, 2016: 43).

The dynamics of self-employment, looking at age and gender, varies among countries, which indicates that their decisions are influenced by many factors specific to the cultural and business environment in which they live.

Blachflower (2004: 2) studied self-employment in 70 countries and concluded that higher levels of education reduce the likelihood for self-employment in Europe and increase it in the United States. Based on this he concludes that people have unrealistically high expectations toward self-employment, which confirms the high proportion of employees who would rather be self-employed, however, relatively few of them become self-employed because they prefer the safety of employment for salary.

Research of self-employment in the EU has shown that the proportion of highly educated self-employed in the UK is growing since 2007 indicating a change in the population. In Europe, during the period 2005-2014, and especially in Western and Nordic countries self-employment is prevalent in occupations that require higher levels of education. In the countries of South-East Europe, due to large shares of agriculture and trade, self-employment is dominated by occupations with lower levels of education. Germany had the largest share of highly educated self-employed, with over 50%. Germany is followed by France, and Netherlands, where the highly educated workforce is more likely to become self-employed. In contrast, United Kingdom had 38% of highly educated among the self-employed (Hartfield, 2015: 22-24).Graph 3 shows the dynamics of educational structure of self-employed in EU countries

Graph 3 Dynamics of educational structure of self-employed in EU countries between 2006 and 2015 (in thousands)



Source: author based on Eurostat database, Self-employment by sex, age and educational attainment level, (http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsa_esgaed&lang=en , 15.01.2017)

Analysis of educational structure of self-employed at the EU-28 level shows that self-employed with upper secondary and post-secondary non-tertiary education are the dominant categories among the self-employed, but with a negative trend. Self-employment with tertiary education in the observed period has constant growth unlike self-employed with less than primary, primary and lower secondary education, which exhibit continuous decrease over the observed period. Table 1 shows the dynamics of self-employed with employees and self-employed without employees in the total self-employment by educational level.

Table 1: Dynamics of self-employed with employees (employers) and self-employed without employees (own-account workers) in self-employment by educational level between 2006 and 2015 (EU-28, in %)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Levels 0-2, employers	7,3	7,3	7,2	6,7	6,3	5,9	5,5	5,2	5,0	5,0
Levels 0-2, own-account workers	22	21,5	20,8	20,0	19,4	18,4	17,9	17,3	16,8	16,1
Levels 3-4, employers	13,8	13,7	13,8	13,7	13,3	13,0	12,6	12,8	12,7	12,6
Levels 3-4, own-account workers	31,9	31,7	31,6	32,1	32,7	33,1	33,2	32,8	32,8	32,6
Levels 5-8, employers	9,7	9,9	10,2	10,4	10,3	10,5	10,7	10,8	10,9	11,0
Levels 5-8, own-account workers	15,4	16,0	16,5	17,2	18,1	19,1	20,2	20,9	21,9	22,7

Source: author based on Eurostat database, Self-employment by sex, age and educational attainment level, (http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsa_esgaed&lang=en , 15.01.2017)

The previous table shows the dynamics of self-employed with and without employees based on educational level. The level of education strongly influence the self-employed on his decision whether to employ or not. The share of self-employed with the lowest levels of education who are also employers is the lowest and showing negative tendency. Self-employed with upper secondary and post-secondary education have the highest share in employing but also with negative tendency. This highest share is expected since this group is dominant among the self-employed. Self-employed with tertiary education, although are not being the dominant group of employers, have constant increase in employing.

The next chapter analyzes the impact of self-employment on the economic growth since self-employment is mentioned in the strategic documents of many countries as one of the key factors that influence the economic growth.

3. IMPACT OF SELF-EMPLOYMENT ON ECONOMIC GROWTH

At the micro level, self-employment is affected by two types of factors: that push ("push") and that pull ("pull") in self-employment. If the connection between unemployment and self-employment is strong, the "push" factors are dominant. The "pull" factors are present when entrepreneurs encourage growth of new jobs and innovation, while the "push" factors are present when workers choose a self-employment due to limited opportunities in the private or public sector or become self-employed as an alternative to unemployment (Franjković, Šebalj, Živković, 2015: 282)..

3.1. The relationship of the business cycle and self-employment

All countries are affected by business cycles and economic fluctuations caused by economic disorders. While there is consensus about the impact of the business cycle on the employment, the impact on self-employment is not completely clear. The business cycle has an important effect on self-employment and it is explained by the "push" and "pull" factors depending on the phase of the business cycle. "Push" factors are related to the phase of recession with high levels of unemployment without business opportunities. In contrast, the "pull" factors occur when macroeconomic conditions are good (phase of expansion). In those circumstances, people with entrepreneurial skills voluntarily choose independence, knowing that if the venture fails, they will easily find another job, which can result from the "unrealistically rosy view" on self-employment. (Blanchflower, 2004: 25). "Push" and "pull" factors have an impact on self-employment, but their relationship varies between countries. The assumption is that self- employment is present in sectors that are sensitive to dynamics in the business cycle. If self-employment serves as an escape from unemployment, then the self-employment is contra-cyclical. On the other hand, when it is associated with entrepreneurship and risk-taking, it is pro-cyclical (Constant, Zimmermann, 2014: 5).

The literature on the impact of the business cycle on the self-employment offers contradictory results. Research of Blanchflower (2000) and of Koellinger and Thurik (2012) indicates that the connection between unemployment and self-employment varies between countries. High unemployment rates have led to an increase in self-employment in the UK, Germany and Sweden, but to a decrease in Austria, while in France there is no connection between these two phenomena. Kumar (2012: 1069) confirms that unemployed are more likely to become self-employed compared to the employed. It also notes that better unemployment benefits reduce the rate of self-employment and self-employment among unemployed, which confirmed the results of a study conducted in Spain (Carrasco 1999) and in the OECD countries (Parker, Robson 2000).

Data show that the crisis of 2008 led to an increase of self-employment in the EU (European Commission, 2012: 8). However, there are significant variations between countries. The highest growth of self-employment during the global recession was recorded in Slovenia, Slovakia and Netherlands, and the highest decrease in Portugal, Cyprus and Latvia. Belgium recorded an increase of bankruptcy, in Ireland the number of self-employed decreased, as well as in Spain and Portugal. In Germany, the number of self-employed workers during the crisis remained relatively stable and there was no significant increase in self-employment caused by increasing unemployment. In Ireland, the crisis had no influence on the self-employment of women, while there was a reduction of 17% in the self-employment of men, which can be explained by the decrease of self-employment in agriculture and construction. In Greece and Turkey, during the crisis, there was an increase in self-employment of women caused by reduced household incomes. Similar evidence was found in the research from 2010. After the start of the crisis there was an increase of self-employment in some countries (e.g. Czech Republic, Greece, Latvia, United Kingdom), while the Netherlands and Croatia, after the initial increase, have experienced a decline (growth of the unofficial economy) (European Commission , 2010: 8).

3.2. SELF-EMPLOYMENT AND JOB CREATION

Governments of different countries often highlight self-employment as a way to reduce poverty and to fight against unequal opportunities. Consequently, they offer a variety of assistance to small businesses. The assumption is that a larger number of firms increases competition and leads to invention, innovation, consumer benefits and new jobs. It is also assumed that self-employment has a positive effect on the self-confidence of workers. EU policies are based on the economic theory stating that self-employment is important for job creation because it reduces unemployment. However, there is not much evidence for this assumption in practice. Studies have shown that small businesses have higher rates of job creation, but also higher rates of job losses, which leads to the conclusion that larger companies characterize job sustainability (Davis, Haltiwanger, Schuh (1996:170) in Blanchflower, 2004: 12).

In order to be able to expand the business and create new job positions, self-employed workers must first ensure their own survival. Studies have shown that the probability of survival increases with the age of the company (Evans 1987:

567), the age of the owner (Storey and Wynarczyk 1996) and the owner's age and education (Bates, 1990). The study of Evans (1987: 567) has also proved a positive relationship between the size of the company and the survival of self-employment businesses. It is possible that entrepreneurs with greater human capital face less uncertainty and are able to adapt more quickly to the market conditions, thereby increasing the probability of its survival. Better education enables self-employed to identify profitable market opportunities and the ability for better utilization of information for its efficient exploitation. The source of financing has an important role in the survival of self-employment businesses. A research for Bosnia and Herzegovina between 2001 and 2004 (Demirgüc– Kunt, Klapper; Panos, 2007: 25) showed that the higher possibility of self-financing is key for sustainable self-employment. This proves a positive correlation between survival of self-employment and banking loans. Banking loans do not have significant impact on starting self-employment businesses, but have positive effects on their sustainability. The study showed that wealthier households are more likely to start a business and for this business to survive. This highlights the important role of self-financing regarding self-employment.

4. SELF-EMPLOYMENT IN CROATIA

In Croatia, self-employment is not defined as a specific group of the workforce, with employees and unemployed, but it is observed in the context of labor market policy. Here, self-employed are identified as entrepreneurs. Measures for self-employment focus on vulnerable groups defined in the European documents, primarily on women, young people and long-term unemployed.

Despite the measures aimed at facilitating self-financing the starting business ventures, people in Croatia consider that the business circumstances do not allow running successful and sustainable businesses and have negative attitude towards entrepreneurship. Although Croatia is investing in entrepreneurial infrastructure, there are a number of limiting factors including: the governmental policy towards the regulatory framework, the presence of significant market entry barriers, the low level of transfer of research to the business sector, cultural and social norms and insufficient contribution of education in creating entrepreneurial competencies of young people. Consequently, the environment for entrepreneurial activities in Croatia is more restrictive than stimulating. In order for changes to happen, it is necessary to coordinate between government policies (which contribute the entrepreneurial culture and environment by removing administrative barriers), educational institutions (which teach young people entrepreneurial knowledge and skills), business sector (whose competitiveness is based on innovation and growth) and individuals (that run businesses based on perceived opportunities).

Table 2 presents the dynamics of GDP, employment, self-employment and unemployment from 2010 to 2015 taking 2010 as the base year.

Table 2: GDP, employment, self-employment and unemployment dynamics (base year: 2010)

	2010	2011	2012	2013	2014	2015
GDP	100	99,34	97,62	96,63	95,50	97,43
Employment	100	96,06	92,69	90,59	93,52	94,84
Self-employment	**100**	**95,17**	**83,30**	**78,03**	**70,38**	**68,48**
Unemployment	100	115,77	133,78	143,24	147,30	139,19

Source: author based on Eurostat database, Self-employment by sex, age and educational attainment level, (http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsa_esgaed&lang=en , 15.01.2017)

Self-employment in Croatia had sustained major decline. Although the other selected categories experienced slight recovery in 2015 after the fall caused by the crisis, self-employment continued its negative trend.

After the liberalization of legislation regarding temporary employment in 2003, a decline of self-employment was expected, but it did not happen. Also, contrary to expectations, the favorable tax system reform of 2000 coincided with the period of self-employment decline, which shows that other factors can overshadow these effects (Matković, 2004: 22). Matković concluded that the implemented employment programs, tax framework reform and labor legislation reform did not lead to significant changes in self-employment. He also argues that GDP growth did not lead to increase in self-employment. Franjković, Šebalj and Živković (2013: 254) explain this with difficulties of the unemployed to access capital and lacking skills required for the job places. An analysis of the educational structure of the self-employed in Croatia has also confirmed that the self-employed in Croatia are less educated compared to employees and cannot contribute to the future economic development. The self-employed are more educated than the average only in the City of Zagreb, in Istria and Primorsko-goranska County because in these areas self-employment is prevalent in the service sector. In addition to that, the self-employed make less income than employees do. Exceptions exist only in the three aforementioned counties where the proportion of self-employed is higher in the service sector. It can be concluded that self-employment in Croatia is a result of necessity, not exploitation of risky opportunities that lead to high profits. It was found that older workers prevail among self-employed and that self-employment of young people (16-25 years) is less likely. Self-employment is less common among women as in other countries. It is interesting that people in Croatia, both with low and higher education are less prone to self-employment, which corresponds to the results for countries in the European Union. (Botrić, 2012: 257). All three studies conducted in Croatia have failed to prove a link between unemployment and self-employment. Furthermore, no connection was found between the dynamics of self-employment and GDP.

The Government of the Republic of Croatia, in order to increase economic growth, on 2 March 2017 adopted a new package of measures of active employment policy called "From measures to career". Nine measures of active employment policy aim to train the unemployed to find a job or acquire additional skills. The emphasis in respect of employment is placed on the most vulnerable, long-term unemployed and people with disabilities. These measures include also the measures for self-employment. They consist of an increase in incentive from 25,000 to 35,000 HRK, and the possibility of pooling more young people in startups (Government of the Republic of Croatia, 2017). Given the target population, the prevalence of "push" factors is expected and the achievement of the set goals is questionable. Policy measures for self-employment should be based on "pull" factors that encourage economic growth, creation of new jobs and innovation.

5. CONLUSION

The term self-employment covers a variety of situations in which the socioeconomic status of employers, workers on own account and employees partially overlap. Inconsistent statistical and legal regulations of different countries increase the number of situations that are considered to be self-employment. This leads to difficulties in determining the employment status. For this reason, it is necessary to create a framework for collecting uniform and high-quality data and unique analytical and statistical tools for their processing at the national and international level.

Analysis of previous studies shows that among the self-employed men predominate over women, older workers over younger, agriculture over other sectors and middle or low levels of education over the highly educated.

Observing the business cycle, during the recession, unemployed people who cannot find paid work, become self-employed. According to this claim, the rate of self-employment during the recession is expected to increase because self-employment appears a way to avoid unemployment. During the expansion phase, unemployed individuals can easily find jobs, but it is more likely that people will choose the security of paid employments rather than self-employment.

The reviewed literature suggests that public policy can reduce unemployment by stimulating self-employment, but this does not necessarily encourage economic growth. On the other hand, other economic schools argue that, economic growth through self-employment and entrepreneurship reduce unemployment. These two points of view have resulted in unclear implications for public policy regarding self-employment. Economic theory suggests that increased unemployment leads to an increase in the number of new companies because the cost of starting a business reduces. However, the unemployed do not have the entrepreneurial skills and capital necessary to start and sustain a new company. This means that high unemployment may be associated with lower levels of entrepreneurial activity. In addition, high rates of unemployment may reduce the level of personal wealth, which reduces the likelihood of an individual to become self-employed.

The results of previous empirical studies are unclear when self-employment and unemployment are observed regarding the business cycle. On the one hand, studies suggest positive impact of the economic crisis to self-employment because it encourages the unemployed to become self-employed. On the other hand, some studies suggest the positive impact of economic growth on self-employment because growth of opportunities causes an increase in entrepreneurial activity. The unemployed workers do not enjoy the benefits of paid employment, which they tend to seek. This means that people are pushed into self-employment. However, is likely that low unemployment will coincide with the dynamic demand for products and services and will draw unemployed into self-employment.

Prevalence of self-employed in the agricultural sector and among less educated population as well as the relationships between unemployment, self-employment and economic growth show that self-employment does not necessarily mean less unemployment and economic growth. Although there are common characteristics among self-employed workers and the dynamics of above mentioned, each country is specific and self-employment differs between countries and regions.

Future research should focus on individual countries and on the development of empirical models able to analyze the connections between self-employment and unemployment, with the aim of bringing public policies closer to the actual national and European labor market.

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CROATIA AND THE POLICY OF STRUCTURAL REFORM

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Abstract

The changes framed in the word "reform" are (in)formally an imperative for behavior and action in developed countries and in those countries that are on the road to becoming developed. The difference lies in the fact that in developed countries the awareness of the need for change is more simply and directly transmitted, both in practical behavior and in the corresponding public policies. On the other hand, in transition limited administrative capacities, and the inertia of events, are a realistic and relevant framework in which reform have unfolded and are unfolding.

The Republic of Croatia, as a country that has had an extended transition and that has also been confronted with a global crisis and entry as a full member into the European Union (EU), is becoming formally and substantively aware of the need to implement reforms aimed at raising the level of effectiveness of the public and economic sectors. One of the essential direction must be the orientation of overall development policy that respects and applies the principles of smart development and a modern industrial policy.

Keywords: *extended transition, economic crisis, structural reforms, European Semester, smart development, reindustrialization.*

JEL Classification: O1

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1. INTRODUCTION

At the EU level, the dominant influence in the sphere of monetary policy has been achieved by the policies that the European Central Bank creates and implements. The influence in fiscal policy and the achievement of macroeconomic equilibrium are increasingly achieved by policies that are formulated within the framework of the European Semester, as a continuing form of monitoring achievements, and corrections and direction in future periods, in three essential areas:

- fiscal policies, with the goal of ensuring that sustainability of public finances in accordance with the Stability and Growth Pact
- preventing excessive macroeconomic imbalances
- structural reforms, with an emphasis on promoting growth and employment in accordance with the Europa 2020 strategy

The area of implementing structural reform in one where progress is the most difficult to achieve, but to a great extent its implementation is left to national economic (and overall) policies, in contrast to the monetary and fiscal spheres, where external influences (ECB, the EU Commission) are much more present and immediate.

How is Croatia acting and participating in these processes in such circumstances and in such an environment (within the framework of the EU since 2013)? What is happening to the implementation of reforms, those that are expected and those that have been announced, and indeed those that are necessary and pressing, is the dominant theme of this work. Which public policies is Croatia encouraging and how is it succeeding in this endeavor; how is carrying out its own Program of National Reform (in coordination with the EU Commission), and what is it doing to raise the level of national competitiveness are further questions and are analyzed in the work and for which appropriate responses must be found. All of this activity is taking place in the context of rapid and dynamic changes, both globally and within the EU, where intensive discussions and deliberations are taking place about how to position the EU as a whole in the future, mostly internally—how to select an appropriate new model of administration—also in relation to other parts of the world, especially the US and the Far East. Another question is that of new relationships after completion of the Brexit process.

The challenge to Croatia is multi-layered: how to prevent the erosion of national and demographic potential that has experienced high rates of emigration and exodus, and without that professionally educated portion of the population there will be no economic recovery and growth. On the other hand, only robust and enduring economic growth can hold people in the home country and also encourage a gradual return, which also has additional significance for overall demographic trends. And all of this is occurring in parallel with a demanding global environment, growing competitive pressures, and an active engagement in creating a new EU position.

2. REFORMS IN THE FRAMEWORK OF THE EU

The EU is becoming aware of the fact that its global economic power and share, relatively speaking, is being reduced. This assertion is clearly confirmed by the data in the following chart.

Table 1. Europe's share of global GDP is shrinking

	2004	2015	
United States of America	28%	24%	↘
EU27	26%	22%	↘
Japan	11%	6%	↘
UK	5%	4%	↘
China	5%	15%	↗
Canada	2%	2%	→
Mexico	2%	2%	→
Brazil	<2%	2%	↗
India	<2%	3%	↗
Rest of the world	18%	21%	↗

Source: Eurostat and UN Statistical Division

Source: White Paper on the Future of Europe - Reflections and scenarios for the EU27 by 2025, European Commission, COM (2017)20125, Brussels 1 March 2017, p. 8.

The situation shown above leads to an unavoidable conclusion: "Europe's relative economic power is also forecast to wane, accounting for much less than 20% of the world's GDP in 2030, down from around 22% today. The rapidly rising influence of emerging economies accentuates the need for Europe to speak with one voice and to act with the collective weight of its individual parts."[2] An awareness of the current situation also informs what to do and how it must be done in the future. In this context, there are five possible scenarios[3] that suggest the possible development of events and behaviors in the future. Each of them defines a certain direction of movement based on the concept of community, but also on observed divisions and various priorities of individual countries or groups of member states. Viewed in aggregate, the explanations of the individual models contain, implicitly and explicitly, the characteristics of future relationships within the EU.

[2] White Paper on the Future of Europe - Reflections and scenarios for the EU27 by 2025, European Commission, COM (2017)20125, Brussels 1 March 2017, p. 8.

[3] Ibidem, p. 29.

Table 2. The five scenarios: a policy overview

	Carrying on	Nothing but the single market	Those who want more do more	Doing less more efficiently	Doing much more together
Single market & trade	Single market is strengthened, including in the energy and digital sectors; the EU27 pursues progressive trade agreements	Single market for goods and capital strengthened; standards continue to differ; free movement of people and services not fully guaranteed	As in "Carrying on", single market is strengthened and the EU27 pursues progressive trade agreements	Common standards set to a minimum but enforcement is strengthened in areas regulated at EU level; trade exclusively dealt with at EU level	Single market strengthened through harmonisation of standards and stronger enforcement; trade exclusively dealt with at EU level
Economic & Monetary Union	Incremental progress on improving the functioning of the euro area	Cooperation in the euro area is limited	As in "Carrying on" except for a group of countries who deepen cooperation in areas such as taxation and social standards	Several steps are taken to consolidate the euro area and ensure its stability; the EU27 does less in some parts of employment and social policy	Economic, financial and fiscal Union is achieved as envisioned in the report of the Five Presidents of June 2015
Schengen, migration & security	Cooperation in the management of external borders stepped up gradually; progress towards a common asylum system; improved coordination on security matters	No single migration or asylum policy; further coordination on security dealt with bilaterally; internal border controls are more systematic	As in "Carrying on" except for a group of countries who deepen cooperation on security and justice matters	Cooperation on border management, asylum policies and counter-terrorism matters are systematic	As in "Doing less more efficiently", cooperation on border management, asylum policies and counter-terrorism matters are systematic
Foreign policy & defence	Progress is made on speaking with one voice on foreign affairs; closer defence cooperation	Some foreign policy issues are increasingly dealt with bilaterally; defence cooperation remains as it is today	As in "Carrying on" except for a group of countries who deepen cooperation on defence, focusing on military coordination and joint equipment	The EU speaks with one voice on all foreign policy issues; a European Defence Union is created	As in "Doing less more efficiently", the EU speaks with one voice on all foreign policy issues; a European Defence Union is created
EU budget	Partly modernised to reflect the reform agenda agreed at 27	Refocused to finance essential functions needed for the single market	As in "Carrying on"; additional budgets are made available by some Member States for the areas where they decide to do more	Significantly redesigned to fit the new priorities agreed at the level of the EU27	Significantly modernised and increased, backed up by own resources; a euro area fiscal stabilisation function is operational
Capacity to deliver	Positive agenda for action yields concrete results; decision-making remains complex to grasp; capacity to deliver does not always match expectations	Decision-making may be easier to understand but capacity to act collectively is limited; issues of common concern often need to be solved bilaterally	As in "Carrying on", a positive agenda for action at 27 yields results; some groups achieve more together in certain domains; decision-making becomes more complex	Initial agreement on tasks to prioritise or give up is challenging; once in place, decision-making may be easier to understand; the EU acts quicker and more decisively where it has a greater role	Decision-making is faster and enforcement is stronger across the board; questions of accountability arise for some who feel that the EU has taken too much power away from the Member States

Source: White Paper on the Future of Europe - Reflections and scenarios for the EU27 by 2025, European Commission, COM (2017)20125, Brussels 1 March 2017, p. 29.

A broad and open discussion within the individual member states is anticipated, as is a multilateral dialogue to analyze specific areas: *the social dimension of Europe, the Economic and Monetary Union, harnessing globalization, security* *and defense, and the future of EU finances*.[4] This document concludes: "The final outcome will undoubtedly look different to the way the scenarios are presented here. The EU27 will decide together which combination of features from the five scenarios they believe will best help advance our project in the interest of our citizens."[5] The final discussion is expected on 14-15 December 2017 at a meeting of the EU 27 during a session of the Council of Europe.

3. REFORMS - NATIONAL FRAMEWORKS

It is evident that Croatia has succeeded in a positive degree of economic growth in the period from the latter half of 2015 until the present day.[6] It is also clear analytically that that growth is especially the consequence of satisfactory (external) developments that have resulted in synergistically positive effects. This means an extended period of low prices for energy and satisfactory conditions for (re)financing on global capital markets, which given the high rate of indebtedness of the public and private sectors, was extremely important. Additional positive effects (external in nature) were growing revenues from the tourism industry and business opportunities for the increased export of goods based on a strengthened EU and global conjuncture.

These assertions are based on several indicators from relevant rankings that evaluate national competitiveness, such as: the Global Competitiveness Report, the World Competitiveness Yearbook, the Report on Human Capital, the Global Talent Competitiveness Index, the Report on the Ease of Doing Busi-

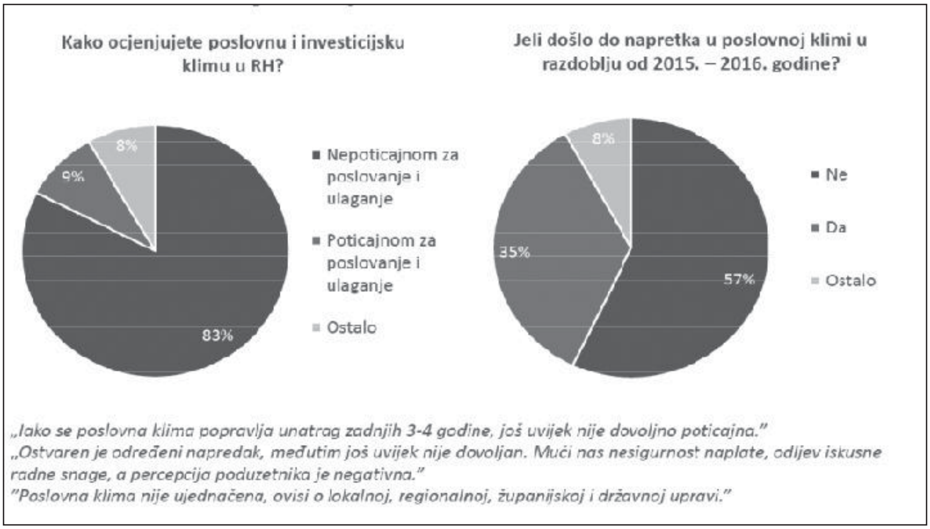
[4] Ibidem, p. 28

[5] Ibidem, p. 15

[6] "Nevertheless, the structure of the Croatian economy continues to be comparatively unsatisfactory. The degree of sophistication of that export of goods continues to be low, and this also applies to the domination of tourism in the export of services. To accelerate growth, it will be necessary to master more complex and more advanced products and services. The first step in that long and difficult should be the removal of barriers that hinder entrepreneurs from doing business. In the view of the entrepreneurs themselves, this should be accomplished mostly by simplifying the unnecessarily complex, frequently inconsistent, and frequently changing business environment, and by the systematic implementation of a new, simpler and more stable regulatory environment." (*Source: Economic Outlook for 2016 - strengthening competitiveness and growth, Boris Vujčić, Governor, Croatian National Bank, 19th Scientific-Professional Conference on the Croatian Money Market, Opatija, 5 May 2016, p. 16*).

ness, and the Global Report on ICT.[7] Another report includes research carried out on a representative model of the corporate sector with the following result:

Graph 1. Evaluation of the business climate in Croatia

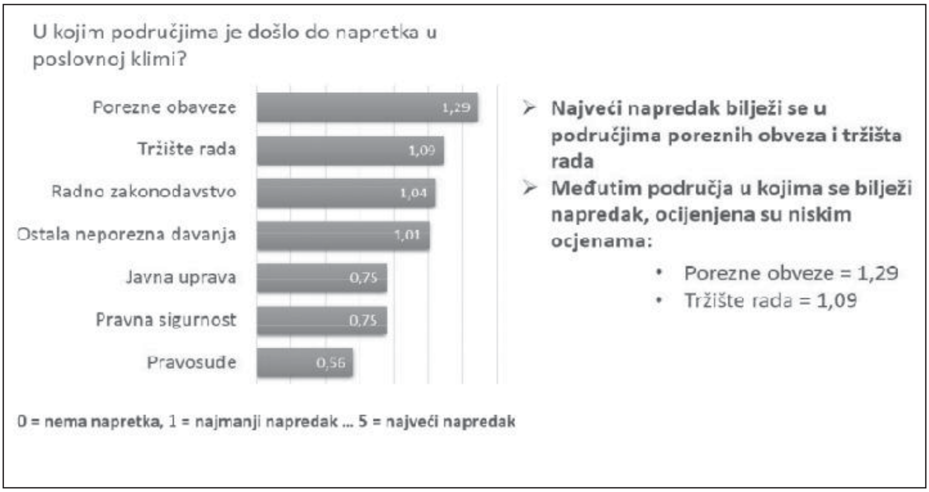


Source: Hrvatska – a desirable country for doing business? – Analysis of the Croatian Chamber of Commerce (HGK) on barriers in business and proposals for improving the business climate, HGK, Zagreb, 14 March 2017, p.5.

What is of special concern is the dynamic depiction - an evaluation of the tempo of changes that have been achieved - of structural reforms in individual areas.

[7] Maletić, Ivana: A comparison of Croatia with other countries on the basis of an international analysis of competitiveness, Information Monthly of the Office of the Representatives in the European Parliament IM, Brussels, January 2017, p. 4.

Graph 2. Evaluation of progress in the business climate in individual areas



Source: Hrvatska – a desirable country for doing business? – Analysis of the Croatian Chamber of Commerce (HGK) on barriers in business and proposals for improving the business climate, HGK, Zagreb, 14 March 2017, p. 6.

The results show that the polled business sector thinks that in the recent period (2016-2107) there essentially was no shift or progress in the areas crucially important for the security and effectiveness of business: the judiciary (0.56), legal security (0.75), and public administration (0.75). Only minimal progress was achieved in the other areas that were analyzed: remaining tax obligations (1.01), labor legislation (1.04), the labor market (1.09), and tax obligations (1.29). An overall evaluation of this situation and behavior is contained in a document of the EU Semester: "**Modest growth prospects remain a key challenge for the economy.** Protractedly slow productivity growth and low and declining utilization of human capital reduce the economy's long term growth prospects. At about 1 %, Croatia's currently estimated potential growth rate is low compared to other catching up economies. Real GDP has been growing above this rate over the past two years and the economy is projected to keep growing above potential over the forecast period. In the medium term, however, the economy is set to return to its long-term potential. This will slow down the convergence process and the unwinding of macroeconomic imbalances. <u>Improv-</u>

ing this long-term scenario will require determination in carrying out structural reforms."[8] (*emphasis: M.V.)*

The cited analytical statement concisely shows what is essential to do in the following period in order to overcome the inertia of events, which ensures economic growth below the level of the average growth of the referent countries and does not enable a reduction of that difference, but potentially widens it. That Croatia, except for the stated chronology of events, has not achieved any significant developmental improvements in the last 15 years is confirmed in the following table.

Table 3. Average annual rate of change in exports in the EU 28

	2001-2015	2001-2008	2010-2015
Latvia	11.0	12.8	9.7
Bulgaria	10.9	13.1	9.2
Romania	10.8	12.0	8.3
Estonia	7.2	7.7	8.1
Poland	10.9	13.9	8.1
Lithuania	10.2	13.2	7.9
Croatia	**5.7**	**6.5**	**7.3**
Slovakia	11.3	15.6	7.
Czech Republic	9.6	12.8	6.8
Cyprus	3.8	3.1	5.7
Slovenia	5.9	8.2	5.2
Hungary	6.7	9.3	4.9
Malta	0.4	-0.5	-2.1

Source: Butorac, G.: The economy under conditions of high indebtedness - the case of Croatia, Economic Institute Zagreb /Consulting HDE: The economic policy of Croatia in 2017, Opatija, October 2016.

In the entire period under consideration (2001-2015), Croatia, with an average rate of export of 5.7% is just approximately half of the value achieved in the same period by Romania, Bulgaria, Poland, Slovakia, and the Czech Republic.

[8] Country Report Croatia 2017, including an in-depth review of the prevention and correction of macroeconomic Council, the European Central Bank, and the Eurogroup; 2017 European Semester: Assessment of progress on structural reforms, prevention and correction of macroeconomic imbalances, and the results of in-depth reviews under Regulation (EU) No 1176/2011 {COM(2017) 90 final} {SWD(2017) 67 final to SWD(2017) 93 final, Brussels, 22.2.2017, p. 1.

Croatia recorded an active result only in comparison to Malta and Cyprus. In a narrower time period (2010-015), Croatia also recorded average or below average results with a tendency toward improvement, and that was primarily indicated by its entry as a full member into the EU (from the second half of 2013).

The need for consistent and operational action was also seen as a problem and encouraged several analyses by domestic and international institutions, which confirmed the fact that the *status quo* as a policy of behavior was not sustainable. Achieving positive shifts was necessary because "various structural weaknesses in Croatia's economy remain unaddressed given the absence of a comprehensive reform agenda from the government. For example, the decline in the country's unemployment rate is driven by an aging population and emigration, leading to a decline in the labour force. Also, Croatia's current high budgetary spending and rigid expenditure structure remain credit weaknesses -- with social benefits, pensions and wages accounting for around 60% of total expenditure -- and this results in limited flexibility to adjust public finances." [9]

What will happen in Croatia if nothing happens is apparent from the following statement from Moody's and its assessment of further tendencies and movements of the credit rating: "Croatia's rating might be downgraded if, in the coming years, the country proves unable to implement a comprehensive structural reform program, given that such failure would be likely to lead to weaker growth and to increases in Croatia's public debt in the long term. Given the lack of fiscal space, a weakening in the growth outlook based upon both domestic and external factors would be credit negative. Downward pressure upon the rating might also result from an assessment that Croatia's external vulnerability metrics have deteriorated to an extent that they fall significantly below those of Ba2-rated peers."[10]

It is evident that Croatia, through a confluence of especially external circumstances, has made a certain positive breakthrough and in that way has bought itself time in which it must clearly and urgently act on the national scene. What to do and how to do it, by which tools and instruments, with which strategy are the fundamental questions and challenges that demand from the Croatian

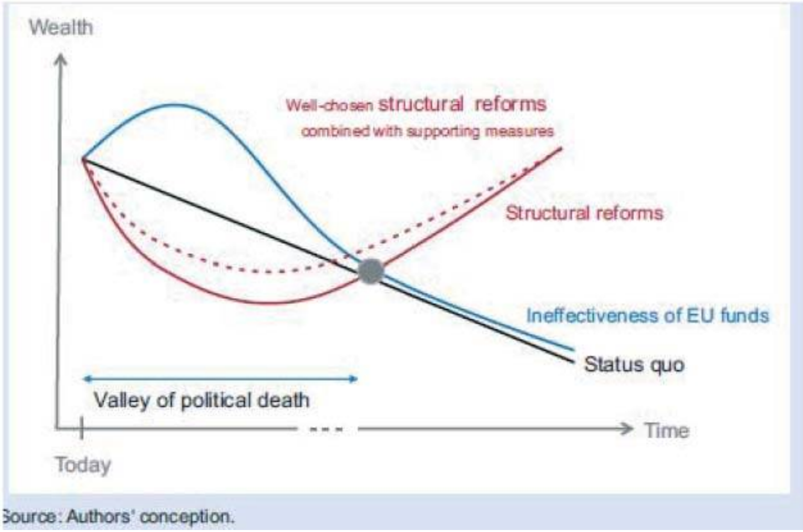
[9] Moody's Investor Service, Rating Action: Moody's changes outlook on the Government of Croatia's Ba2 rating to stable from negative; affirms ratings, 10 March 2017, p.2; available at: https://www.moodys.com/research/Moodys-changes-outlook-on-the-Government-of-Croatias-Ba2-rating--PR_362492

[10] Ibidem, p. 2.

side clear responses and actions and without waiting for a future and better (post-election) period, or after this or that local or national election. One recent opportunity for recognizing the need for action and then taking action based on its own concept was provided by an analysis of the situation and a proposal by the IFO Institute, which stressed and elaborated both the need and a possible framework for implementing structural reforms: "Preserving the status quo did not work out over the past several years and would decrease wealth even further. Resources should be used instead to implement new reforms. There are some political forces counting on additional EU funds to solve the Croatian problems. However, experience shows that economic stimulation with EU funds has only an effect in the short run. For such transfers to exert long-lasting effects, absorptive capacities like human capital and good institutions are crucial. Structural reforms aimed at institutional change and the formation of human capital take longer than real investments such as infrastructure, but the returns in terms of growth are likely to be higher and sustainable. Structural reforms will hurt in the short run, eventually leading to a potential "valley of political death", especially if structural reforms are announced shortly before an election. The key challenge is thus to educate voters regarding both the inevitability and the long-run benefits of the structural reforms. To alleviate the above political dilemma, reforms should be chosen that keep the death valley as short and flat as possible. Some reforms will have an immediate effect, while others will take time to be implemented and to make an impact."[11]

[11] Falck, O., Schonherr, S.: An Economic Reform Agenda for Croatia, IFO institute, Leibnitz Institute for Economic Research at the University of Munich, January 2016, p. 13.

Graph 3. The Valley of Political Death



Source: Falck, O., Schonherr, S.: An Economic Reform Agenda for Croatia, IFO institute, Leibnitz Institute for Economic Research at the University of Munich, January 2016, p. 14.

The graph above and its explanation point to two essential directions: the unavoidability of (un)prepared reforms, but also the importance and significance of informing and educating the public about their importance, and even the unavoidability of a turnaround that can actually be achieved with such understanding and support. Furthermore, it also cites the areas of reforms and the need for their mutual coordination and systematization in implementation.

Box 1. Reform proposals for Croatia

- Macro-financial reforms
- Managed devaluation of the kuna in order to eliminate incentives to borrow in foreign currencies and to increase internal competitiveness
- Introduction of a consumer bankruptcy law
- Revision of consumer protection and bank regulation to further reduce incentives to borrow/lend in foreign currencies
- Labor market
- Increase flexibility of wage-setting and hiring/dismissal
- Activation of the inactive
- Pension reform
- Increase statutory retirement age in accordance with demographic ageing and reduce incentives for early retirement and for receiving disability pensions
- In the future, the benefit level for old-age pensions should be stabilized at its current level or even raised
- Education
- Facilitating the transition from school to work
- Training the low-skilled
- Public budget/Public administration
- Ensure continuity of the tax system to increase confidence in legislation and government
- Broadening of the tax base through zero tolerance of tax avoidance and the shadow economy as well as by increased employment participation
- Increase the efficiency of public administration
- A reduction of the public administration wage premium as a role model for wage-setting in the private sector
- Business environment
- Privatization of non-strategic public companies
- Improvement of the ease of doing business
- Long-term structural framework reforms
- Market-oriented innovation strategy
- Infrastructure strategy that carefully prioritizes transportation projects

Source: Falck, O., Schonherr, S.: An Economic Reform Agenda for Croatia, IFO institute, Leibnitz Institute for Economic Research at the University of Munich, January 2016, pp. 15-16.

With the public announcement of the packet of reforms, the focus, especially of the media, from the beginning was directed at the section of macro-financial reforms, which also contained an active policy of the hard currency exchange rate and pointed to controlled devaluation as one of the essential instruments for raising the level of export competitiveness.[12]

4. INDUSTRIAL POLICY - DEVELOPMENT POLICY

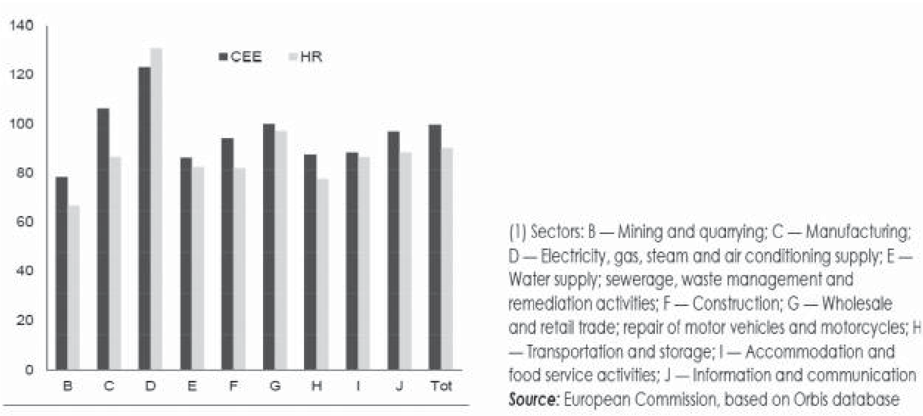
For a period of more than two decades, regardless of a change of the parties in power with various world views as a common denominator of behavior, Croatia has conceptually and in practice ignored any concept of organized management of the national economy - colloquially called the intelligent role of the state as the regulator and catalyst of spontaneous events: the phase of transition and, before that, during the Great Crisis, as well as in the phase of recovery (the present time).

Certain shifts and signs of a possibly different orientation are connected to meeting the requirements arising from the common framework of behavior within the EU. Based on the achieved results, there is also an evaluation of the current situation: "In most industries, Croatia's productivity is well below that of its peers. In 2014, Croatia's TFP was about 10 % lower than that of peer CEE economies. The gap was highest in manufacturing (almost 20 %), mining and quarrying and construction. The only industry in which productivity was above the peer average was energy (see Graph 4.4.5). Provisional data suggest that in 2015 productivity in the food and hotel industry was above peers. A cumbersome business environment prevents more productive firms from growing faster than competitors."[13]

[12] Political turbulence on the national scene, and the two parliamentary that were held in one calendar year, entirely halted further activity in elaborating the proposed program of reforms.

[13] Country Report Croatia 2017 Including an In-Depth Review on the Prevention and Correction of Macroeconomic Imbalances, Accompanying the Document: COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN CENTRAL BANK AND THE EUROGROUP; 2017 European Semester: Assessment of progress on structural reforms, prevention and correction of macroeconomic imbalances, and results of in-depth reviews under Regulation (EU) No 1176/2011 {COM(2017) 90 final} {SWD(2017) 67 final to SWD(2017) 93 final, Brussels, 22.2.2017, p. 42.

Graph 4. Productivity in Croatia and CEE peers by industry (2014, CEE total =100)



Source: Country Report Croatia 2017 Including an In-Depth Review on the Prevention and Correction of Macroeconomic Imbalances, Accompanying the Document: COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN CENTRAL BANK AND THE EUROGROUP; 2017 European Semester: Assessment of progress on structural reforms, prevention and correction of macroeconomic imbalances, and results of in-depth reviews under Regulation (EU) No 1176/2011 {COM(2017) 90 final} {SWD(2017) 67 final to SWD(2017) 93 final, Brussels, 22.2.2017, p. 42.

The graph depicts national inferiority at the level of productivity in all vital sectors, which is a limiting factor for inclusion in an international exchange of goods, with a clear statement that this for a small and open economy this is the only genuine and lasting strategy for exiting the given circumstances and the overall limitations.

The need for a turnaround was recognized among the most economically powerful countries (OECD) at the very beginning of the global crisis, and such a conceptual approach was transformed into a tool of change by individual member states, which can be seen from the quotation in the following box.

Box 2. New approaches to industrial renewal

In a 2008 lecture to The Royal Society for the Encouragement of Arts, Manufactures and Commerce, the UK Secretary of State for Business, Enterprise & Regulatory Reform, Lord Mandelson, described policies for "industrial activism", based on five core principles:

- First, industrial activism does not mean propping up failed companies or running industries, nor protection of industry from international competition, as competition is believed to be in the long-term interest.
- Second, industrial activism means being pragmatic about the ability of markets to enable companies and people to succeed in a rapidly changing global economy. Policy should be activist in the sense that it recognizes that government can and must complement market dynamics to get the best outcomes for our society and economy.
- Third, industrial activism is shaped not just by what is conventionally labelled industrial policy but by all government policies – regulation, planning policy, migration policy, transport policy and a range of others – as well as the way government spends money and encourages innovation and entrepreneurship. The central point about industrial policy is how successfully it aligns all these relevant policies to target and deliver industrial outcomes.
- Fourth, industrial activism means looking strategically at each sector in the economy, not in order to apply top-down political patronage to companies in these sectors but to assess how horizontal policy can secure maximum benefits across all sectors and reinforce particular strengths.
- Fifth, industrial activism means engaging globally to shape the institutions and policies that manage globalization and global regulation and making sure companies are exploiting open markets.

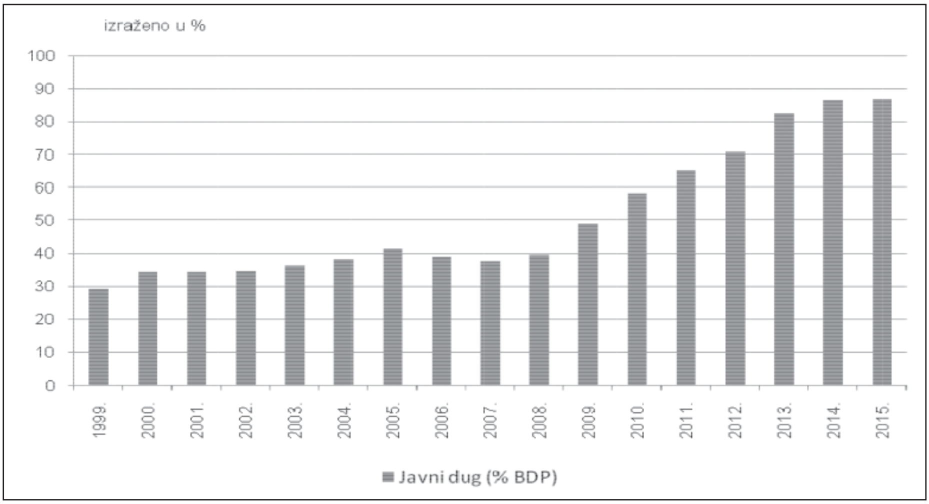
This new approach to industrial policy is reflected in a recent UK Government strategy document (New Industry New Jobs) which stated that "We need to start seeing industrial policy and our competitive strengths in a wider, strategic way. What Government does – or does not do – when it taxes, regulates, buys goods and services or acts in any of a range of ways shapes the conditions in which British businesses and their employees develop and capitalize on their competitive advantages. This means making Britain's economic and industrial renewal the remit not just of the Department for Business, but of all Government departments."(HM Treasury, April 2009).

Source: Responding to the Economic Crisis - Fostering Industrial Restructuring and Renewal; Industry and Innovation, OECD, July 2009, p. 42.

An analysis of and recommendations from the example of Great Britain show how much it was both necessary and possible to actively operate in the given circumstances and in the global environment - especially keeping in mind that the degree of resistance to the crisis in Croatia was considerably less than that of the majority of countries, and keeping in mind all of the weaknesses from the extended transition period. At the same time, this philosophy and strategy of action shows how *industrial activism* and *industrial policy* can become the dominant tools of overall development policy.

Instead of finding an active response, when possible aimed at a *best practice* solution, Croatia turned to a passive response during the crisis period: increasing the indebtedness of the public sector to finance inelastic public expenditures with a simultaneous drastic decline in GDP and employment in the real sector of the economy.

Graph 5. Public debt of Croatia



Source: Butorac, G.: The economy in condition of high indebtedness - the case of Croatia, Economic Institute of Zagreb /Consulting Economist/ Opatija, October 2016.

What happened in the meantime, and what is happening as the basis for an real turnaround and the achievement of a *catch up* strategy on a global level that in today's times and circumstances becomes in a short period also an imperative of national strategies for growth and development can be discerned in the following statement: "We are witnessing profound shifts across all industries, marked by the emergence of new business models, the disruption of incumbents and the reshaping of production, consumption, transportation and delivery systems. On the societal front, a paradigm shift is underway in how we work and communicate, as well as how we express, inform and entertain ourselves. Equally, governments and institutions are being reshaped, as are systems of education, healthcare and transportation, among many others. New ways of using technology to change behavior and our systems of production and consumption also offer the potential for supporting the regeneration and preservation of natural environments, rather than creating hidden costs in the form of externalities. The changes are historic in terms of their size, speed and scope."[14]

The reality of globalization warns, and at the same time mobilizes, national economies to act. This means recognizing trends and to incorporate them into your concept of development.

Box 3. A Fourth Industrial Revolution

I am well aware that some academics and professionals consider the developments that I am looking at as simply a part of the third industrial revolution. Three reasons, however, underpin my conviction that a fourth and distinct revolution is underway:

Velocity: Contrary to the previous industrial revolutions, this one is evolving at an exponential rather than linear pace. This is the result of the multifaceted, deeply interconnected world we live in and the fact that new technology begets newer and ever more capable technology.

Breadth and depth: It builds on the digital revolution and combines multiple technologies that are leading to unprecedented paradigm shifts in the economy, business, society, and individually. It is not only changing the "what" and the "how" of doing things but also "who" we are.

Systems Impact: It involves the transformation of entire systems, across (and within) countries, companies, industries and society as a whole.

Source: Schwab, Klaus: The Fourth Industrial Revolution, World Economic Forum - Random House, Munich 2016; available at:

http://www3.weforum.org/docs/Media/KSC_4IR.pdf

That such a new and different policy of development (industrial policy) has not been present (for several years) only in the EU, partly as a consequence of an awareness of the loss of its own importance and position in the global economy is also confirmed by the announcement of a new and different economic policy from the US, a country that at the same time has become a society that pays the price for development of such a concept: "According to the National Association of Manufacturers (NAM), "for every one worker in manufacturing, there are another four employees hired elsewhere." In addition, "for every $1.00 spent in manufacturing, another $1.81 is added to the economy" and this is "the highest multiplier effect of any economic sector." (In the calculations below for trade effects, we will conservatively assume a discounted multiplier of 1.0 based on this 1.81 NAM multiplier.)[15]

[14] Schwab, Klaus: The Fourth Industrial Revolution, World Economic Forum - Random House, Munich, 2016; available at: http://www3.weforum.org/docs/Media/KSC_4IR.pdf

[15] Navarro, P., Ross, W.: Scoring the Trump Economic Plan: Trade, Regulatory & Energy Policy Impacts, September 29, 2016, p. 7.

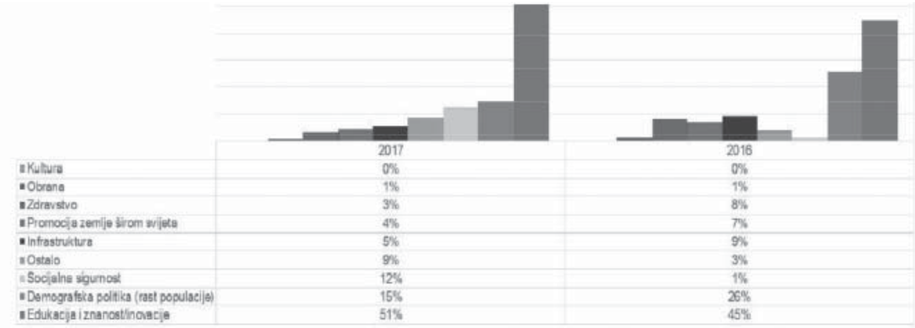
To argue and structure their viewpoint even further, the authors add: "To be clear, when we are talking about manufacturing, we are not just talking about cheap t-shirts and plastic toys. We are talking about aerospace, biomedical equipment, chemicals, computer chips, electronics, engines, motor vehicles, pharmaceuticals, railroad rolling stock, robotics, 3-D printing, resins, shipbuilding, and more." 16 That this academic and theoretical analysis is confirmed by actual events, including in countries from the cited areas and policies is reflected in the results they have achieved.17 All of this is confirmation that all, even those that are the best, in order to become and to survive in the overall competitive environment, are changing and adapting (reforms!) to the present time led by principles of smart re-industrialization.

To what extent the protagonists of the executive government of Croatia are aware of these events, and of the needed modifications in creating changes for future development is a fundamental questions for which an answer must be found. How leading firms, considered in aggregate, are trying to find the answers in the business sector can be observed in data from recent research. What the corporate sector thinks that the Croatian government would have to do to maintain its priorities in the next three-year period can be seen in the following graph.

[16] Ibidem, p. 10

[17] This underscores an even more important issue, which is that the nature of globalization had already begun to shift before Mr. Trump took office. Small and midsized businesses in the US have grabbed market share relative to larger competitors, as technology allows them to service local markets more efficiently and cross borders more easily. US manufacturing jobs as a whole are actually up 7 per cent since 2010, as multinationals localize more production for a variety of reasons: rising Chinese wages, supply chain complexity that brings economic and political risks and local production which allows goods to reach fickle consumers more quickly. (*Source: Financial Times: /Foroohar, R.: Trump's trade policies won't help my town/, Monday 6 March 2017, p. 11; https://www.ft.com/content/6b753c9c-ff77-11e6-96f8-3700c5664d30*)

Graph 6. Which areas should the Croatian government make a priority in the period 2017 - 2019?

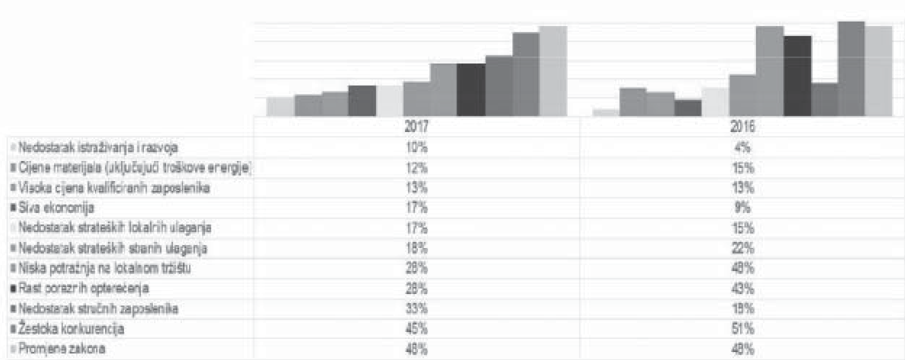


	2017	2016
Kultura	0%	0%
Obrana	1%	1%
Zdravstvo	3%	8%
Promocija zemlje širom svijeta	4%	7%
Infrastruktura	5%	9%
Ostalo	9%	3%
Socijalna sigurnost	12%	1%
Demografska politika (rast populacije)	15%	26%
Edukacija i znanost/inovacije	51%	45%

Source: The Pulse of Economies - Predictions for 2017 - Research by KPMG in Central and Eastern Europe Carried out in 2016, KPMG, p. 9.

In first place are the categories Education and Knowledge/Innovation, followed by Demographic Policy (population growth), and in 2017 was the category Social Security. All of these results confirm that there is neither interest nor understanding for a policy of expectation and postponement, populism and laissez *faire*.

Graph 7. In the current economic situation what are the three key areas that should be the focus of your company?



	2017	2016
Nedostatak istraživanja i razvoja	10%	4%
Cijena materijala (uključujući troškove energije)	12%	15%
Visoka cijena kvalificiranih zaposlenika	13%	13%
Siva ekonomija	17%	9%
Nedostatak strateških lokalnih ulaganja	17%	15%
Nedostatak strateških stranih ulaganja	18%	22%
Niska potražnja na lokalnom tržištu	28%	48%
Rast poreznih opterećenja	28%	43%
Nedostatak stručnih zaposlenika	33%	18%
Žestoka konkurencija	45%	51%
Promjena zakona	48%	48%

Source: The Pulse of Economies - Predictions for 2017 - Research by KPMG in Central and Eastern Europe Carried out in 2016, KPMG, p. 15.

5. CONCLUSION

In its recent history Croatia again finds itself at an important crossroads. The first period was that of independence, aggression and war, followed by international recognition. The second period encompassed the complete liberation of the country. The third period was a stronger presence on the international scene (after the year 2000). The fourth era was the (non)confrontation with the global crisis (2009). Finally, there was the long preparatory period for entry as a full member into the EU in 2013. It is apparent that the presence and role of political (and wartime) events dominated, while the economy and general development in one way or another is the background. The price that was paid was high when compared and measured against the achievements of other transition countries in the same period.

Such a social framework of events has influenced Croatia's economic and development results that determine its status and position both in absolute categories and in relation to the referent countries, which was shown in chapter three of this work. The previous chapter portrayed the dilemmas and deliberations on future relations with the EU, which is the most dominant and significant environment for Croatia, and possible options for the future.

But the core of the work is the analysis contained in chapter four, which is devoted to evaluating the options that Croatia can, and indeed must, take to achieve a turnaround in the current status of its positioning, according to the majority of economic and social indicators, at the bottom of the development rankings within the EU. Measured by these same parameters, this ranking is close to the position of Cyprus and Greece, and based on the dynamic of development and the implementation of structural changes, lagging behind the accomplishments of Bulgaria and Romania. In this context, the need to achieve a coherent program of structural reforms that provide a platform for the implementation of an effective industrial policy as the basis for an overall development policy should be especially emphasized. The implementation of reforms as an inevitable step can be observed in several documents of government institutions, which parallel those from institutions outside of Croatia - the EU Commission, EBRD, the World Bank, the IMF, and international ratings agencies - which were to a great extent set aside, that is, accepted and implemented only minimally in order to fulfill reporting obligations and in no way as an expression of the awareness that such changes were really necessary.

The work has also emphasized that the current improvement of certain parameters - the rate of growth of GDP beginning in 2015, curbing the budget deficit and stabilizing public debt (although at still high levels) are welcome developments. But they are primarily conditioned by satisfactory external events and in no way a consequence of well-designed, consistently applied and continuously implemented reforms that have an essential influence on the business environment and the development dynamic. Such reforms would have to include harmonization of laws and regulations, a more efficient judiciary and public administration, modernization of the educational system, important changes in the retirement and healthcare systems, a more adequate management and allocation of the resources from EU funds, and encouraging innovation and technological progress, which only creates products of greater added value, and which is one of the critical prerequisites for the necessary growth of the export capacity of the national economy.

This analysis is the basic goal of the work: recognizing the timeframe in which changes at last have to start to be achieved in an organized way. Other possible scenarios and risks from the global market (rising energy prices and the price of capital) and the restructuring of the EU into a two-speed, or more, union make Croatia's position vulnerable and can fundamentally threaten the initial signs of economic recovery. The danger is that in such a context and circumstances the government will search for reasons to delay further the implementation of structural reforms. The consequences of the model of passive behavior from 2009, and the absence of an organized public effort for an active response to the emerging global crisis that soon arrived in Croatia too, is a mortgage that greatly burdened the following period and that today serves as an additional obligation for action.

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Microeconomics, Macroeconomics and Monetary Economics

ANALYSIS OF COMPETITIVENESS OF CROATIA AND EU10 COUNTRIES - IS CROATIA'S ECONOMY TRAPPED IN NON-COMPETITIVENESS?

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Abstract

Croatia belongs to the group of Central and East European (CEE) countries, but it suffered the deepest and longest recession after 2008, compared to the other 10 CEE countries (EU10 countries). This was influenced by structural and institutional low competitiveness compared to the EU10 countries. Although a number of macroeconomic indicators showed visible economic recovery in the last two years, consequences of the long-term inadequate model of economic development (imports –consumption v production – exports) are reflected in the low competitiveness of the Croatian economy and a relative immobility of Croatian competitiveness over the years compared to other countries. Namely, based on the analysis of the pillars/indicators of competitiveness, it seems that the Croatian economy is in the long-lasting state of relative immobility, i.e. not recording upward movements in the relative position compared to the rest of the world and the EU10 countries. Moreover, Croatia has lagged behind the average of the EU10 in almost all competitiveness indicators over a longer period of time. Therefore, it can be concluded that Croatia is in the "state of prolonged stagnation of the competitiveness of the national economy" compared to the EU10 countries.

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The goal of this analysis is to determine the dynamics of competitiveness in the EU10 and a relative immobility in the competitiveness of the Croatian economy, which is a reflection of a slow and inefficient restructuring of the Croatian economy and inadequate institutional efficiency.

This paper tends to warn on: 1) the issue of long-lasting neglect of the need for a clear positioning of the Croatian economy, 2) insufficient improvements of the Croatian economic structure (inability in the process of developing the value-added economy) due to the relative non-competitiveness of the Croatian economy compared to the EU10 countries and the immobility of the competitiveness indicators, when compared to the indicators of other world economies over time.

Keywords: *EU10, national competitiveness, immobility of competitiveness, Croatian development challenges*

JEL Classification: E02, E44

1. INTRODUCTORY REMARKS

Competitiveness is at the heart of economic thought of both developed and developing countries. According to the OECD definition, competitiveness is the degree to which a nation can, under free trade and fair market conditions, produce goods and services, which meet the test of international markets, while simultaneously maintaining and expanding the real income of its people over the long-term. Traditionally, the international competitiveness of countries is explained by the theories of international exchange (trade), which originated from Adam Smith. However, today's global economy is too complex to be explained by traditional theories. The result of this is the classic "The Competitive Advantage of Nations"[2] by the Harvard professor, Michael Porter, in which he proposes a new competitiveness theory, according to which national prosperity is not inherited, but created by strategic choices.

In this new theory, national prosperity is created, not inherited. It does not grow out of a country's natural endowments, its labour pool, its interest rates, or its currency's value, as classical economics insists.

[2] Porter, M.E. (1990, 1998) *The Competitive Advantage of Nations,* Free Press, New York, 1990.

A nation's competitiveness depends on the capacity of its industry to innovate and upgrade. Companies gain advantage against the world's best competitors because of pressure and challenge. They benefit from having strong domestic rivals, aggressive home-based suppliers, and demanding local customers.

In a world of increasingly global competition, nations have become more, not less, important. As the basis of competition has shifted more and more to the creation and assimilation of knowledge, the role of the nation has grown. Competitive advantage is created and sustained through a highly localized process. Differences in national values, culture, economic structures, institutions, and histories all contribute to competitive success. There are striking differences in the patterns of competitiveness in every country; no nation can or will be competitive in every or even most industries. Ultimately, nations succeed in particular industries because their home environment is the most forward-looking, dynamic, and challenging.[3] For Porter, it is not important which products you manufacture, but how they are manufactured.

While in the past a country's development was based on comparative advantages, such as cheap labour and natural resources, today, advanced factors based on knowledge and developed infrastructure, high technology and innovations are considered to be the basis for economic development.

Since the creation of knowledge and infrastructure depend on public and private capacities of a country, it is essential to link them, i.e. to link both public and private capacities. Although different by their basic roles, the public and private sectors are interconnected in the creation of a productive and competitive economy. As much as sound fiscal and monetary policies, an efficient legal system and a set of stable democratic institutions are necessary for a healthy economy, they are not sufficient. Finally, wealth is created at the microeconomic level of the economy, rooted in the quality of the microeconomic business environment and operating practices and strategies at the company level. Due to all of the above, competitiveness is a multidimensional phenomenon – necessarily present at the level of the company, the sector and the nation as a whole.[4] The analysis of an individual country's competitiveness, i.e. the comparative presentation of the individual pillars of competitiveness of a country compared to others, but also the monitoring of the movements of competitiveness of a country

[3] https://hbr.org/1990/03/the-competitive-advantage-of-nations

[4] http://www.konkurentnost.hr/Default.aspx?sec=77

through time, gives insight into the expected direction and dynamics of growth of a country's economy. In addition, an insight is also given into the weaknesses of a country, including the basis for the promotion of those public and private knowledge and infrastructure, which are necessary for the development of competitive advantages of a country and boosting its economy.

In this context, the analysis of the condition of trends in the competitive position of Croatia through time and relative to comparable countries, provides an answer to the question on which competitive weaknesses require action in order to improve the relative competitiveness of Croatia and to boost the economic recovery further and catch up with the average of development of comparable CEE countries.

2. DEVELOPMENT DYNAMICS OF CROATIA AND EU10 COUNTRIES

2.1 Ratio of the development of Croatia and the EU10 countries

In order for a country to develop its competitive advantages, first it has to be aware of its geostrategic position and development potentials in the context of overall economic growth. In the case of Croatia, the positioning and economic growth are placed in the context of Central and Eastern Europe. Within the circle of the CEE countries (the current members of the European Union, which due to the process of transition can be compared to Croatia), Croatia has suffered the deepest and longest recession after 2008. It was only in 2015 that Croatia started to record positive economic growth rates. For comparison purposes, after the economic downturn in 2009, Bulgaria, the Czech Republic, Estonia, Lithuania, Hungary, Slovenia and Slovakia started to record positive real GDP growth rates already in 2010, Romania and Latvia in 2011, while Poland recorded uninterrupted economic growth.

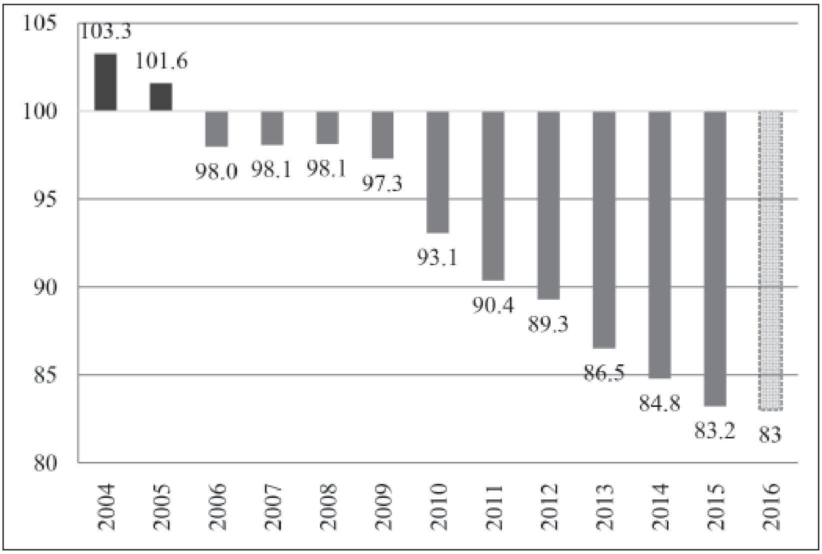
The reasons why Croatia and the above countries responded differently to the economic crisis, which hit almost the whole world in 2009, should be sought among the structural characteristics of the economic system (competitiveness and systemic efficiency). The Croatian economic development model has not changed significantly in the past two and a half decades, which has long-lasting consequences. For this reason, this is also a stagnation phase of the national economy's competitiveness relative to the comparable countries, which has affected Croatia's lagging behind the average development of the EU28 and the EU10 over the past years.

Over the six years of decline in real GDP (2009 – 2015), Croatia lost 11% of its real value, due to which, in comparing the IMF data, it was ranked the seventh country in the world with the deepest recession. The recession was deeper mostly in the countries from a completely different part of the world and/or economic and political context, apart from Greece (Libya, Yemen, Central African Republic, Ukraine, Equatorial Guinea and San Marino).

At the same time, all of the EU10 countries[5] went through the recession (decline in GDP) much faster: the longest one was recorded during three years in Lithuania, the Czech Republic and Slovenia, and in others in one or two years (except Poland, which did not have a decline at all). Consequently, in all of the above countries, except Slovenia and Latvia, GDP was higher in 2015 than in 2008, and in 2016 (according to the European Commission's growth forecasts) the lagging behind 2008 persisted only in Slovenia and Croatia. According to the European Commission's estimates, in 2016, GDP will remain at 8.8% in Croatia and in Slovenia at 2.5%, much lower than in 2008. However, it should be taken into account that the degree of development (GDP per capita according to the purchasing power parity) of Slovenia in 2015 was 17% below the EU28 average and 19% above the EU10 average, while the degree of development of Croatia was 42% below the EU28 average and 17% below the EU10 average.

[5] EU10: Bulgaria, Romania, Poland, the Czech Republic, Slovakia, Lithuania, Latvia, Hungary, Estonia and Slovenia.

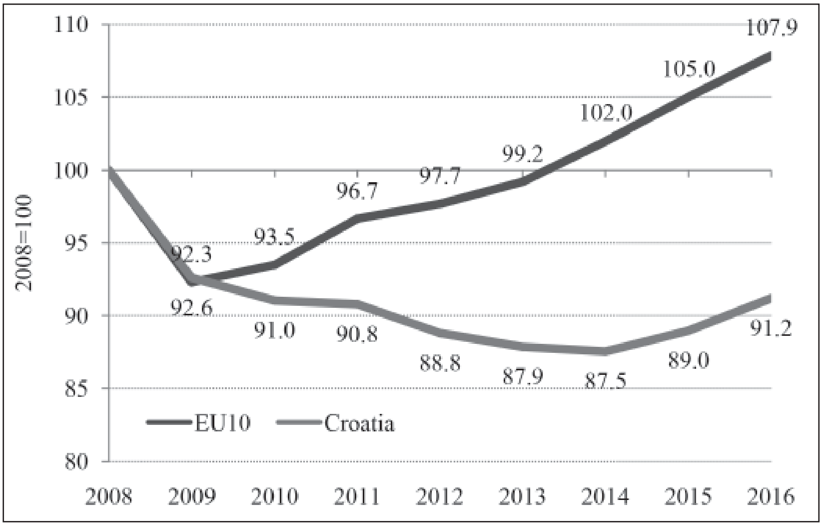
Graph 1: GDP p/c at PPP, EU10=100



Source: Eurostat, 2016 estimate.

On this basis, the growth Croatia has achieved in the past two years (1.6% in 2015 and 2.9% in 2016) was clearly too slow and resulted in a further divergence from the average development of the E10 and the entire EU28.

Graph 2: GDP movements, real, 2008=100



Source: Eurostat and Croatian Bureau of Statistics.

Table 1: GDP change in %, real

2008=100	2015/2008	2016/2008
European Union (28 countries)	2.9	4.9
Bulgaria	5.5	9.2
Czech Republic	5.3	7.8
Estonia	3.5	5.1
Croatia	–11.1	–8.5
Latvia	–1.8	0.1
Lithuania	4.0	6.3
Hungary	3.2	5.1
Poland	23.6	26.5
Romania	4.0	9.0
Slovenia	–4.6	–2.2
Slovakia	12.2	15.9

Source: Eurostat.

2.2 Economic growth – exports and competitiveness

In 2016, economic growth in Croatia stood at 2.9%, which was definitely a good news for Croatia, both individually and as a growth trend for the second consecutive year. It is particularly worth noting that GDP growth was based on the growth of all demand categories and all groups of activities as analysed in the GDP structure by the Croatian Bureau of Statistics, except the primary ones, with gross value added (GVA) dropping merely by 0.1%. In addition, the fact that growth was achieved in the conditions of continued deleveraging of households and other sectors and the decrease in external debt, even the stagnation of the general government debt is important. However, it should be emphasised that in 2016, growth was still at a low basis, i.e. low economic activity levels, 8.4% lower than in 2008, that it was still achieved under the described favourable external conditions, mostly with a still relatively low price of crude oil and other energy and that it was not considerably more dynamic relative to other EU countries or relative to the EU10 members. Therefore, the success of the recovery and economic policy can be measured only by the acceleration of growth rates in this and subsequent years, i.e. predominantly based on the accelerated growth rate of the exports of goods.

In this regard, i.e. the acceleration of goods exports, relative (non)competitiveness of Croatia should be considered because it is a limiting factor to faster and stronger exports, including overall economic growth.

3. IMMOBILITY OF COMPETITIVENESS OF THE CROATIAN ECONOMY

3.1 Global competitiveness index

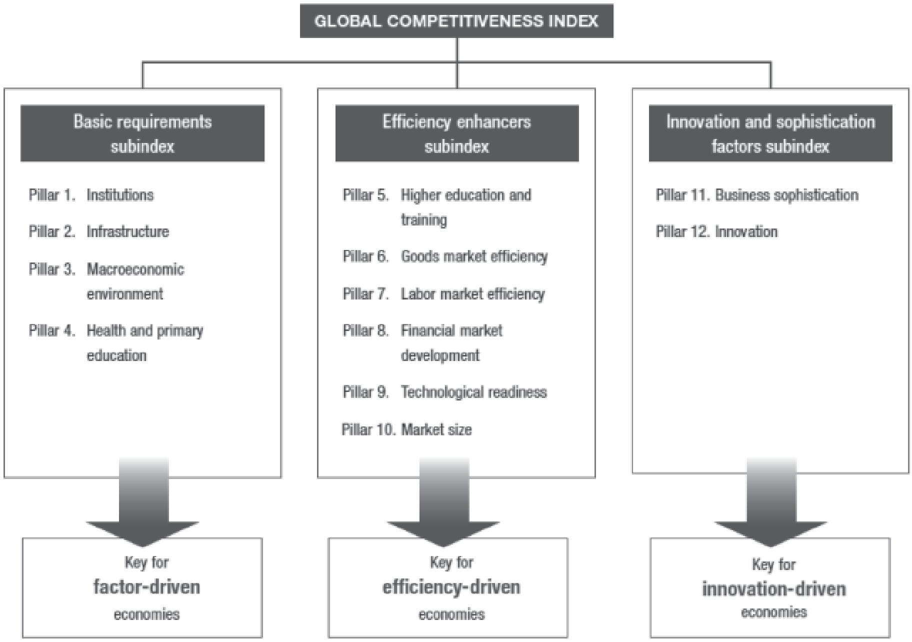
The answer to the question why Croatia is lagging behind the EU10 countries can be provided by the indicators of the position and development of the Croatian competitiveness ranking compared to other countries.

The World Economic Forum assesses the competitiveness for a number of countries in the whole world annually. Results are based on a survey of businesses and statistical data from the two previous years.

The World Economic Forum defines competitiveness as the set of institutions, policies, and factors that determine the level of productivity of an economy, which in turn sets the level of prosperity that the country can achieve.

Since 2005, building on Klaus Schwab's original idea of 1979, the World Economic Forum has published the Global Competitiveness Index (GCI) developed by Xavier Sala-i-Martín in collaboration with the Forum. The GCI combines 114 indicators that capture concepts that matter for productivity and long-term prosperity. These indicators are grouped into 12 pillars (Figure 1): institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labour market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation. These pillars are in turn organized into three subindexes: basic requirements, efficiency enhancers, and innovation and sophistication factors. The three subindexes are given different weights in the calculation of the overall Index, depending on each economy's stage of development, as proxied by its GDP per capita and the share of exports represented by raw materials.

Figure 1: The Global Competitiveness Index framework



Source: The Global Competitiveness Report 2016 – 2017, World Economic Forum, 2016, page 5.

In brief, in the preparation of the rankings of competitiveness, movements in the 12 pillars are assessed, which comprise three subindexes:

1. Basic requirements (pillars: Institutions, Infrastructure, Macroeconomic environment, Health and primary education)
2. Efficiency enhancers (pillars: Higher education and training, Goods market efficiency, Labour market efficiency, Financial market development, Technological readiness, Market size)
3. Innovation and sophistication factors (pillars: Business sophistication, Innovation)

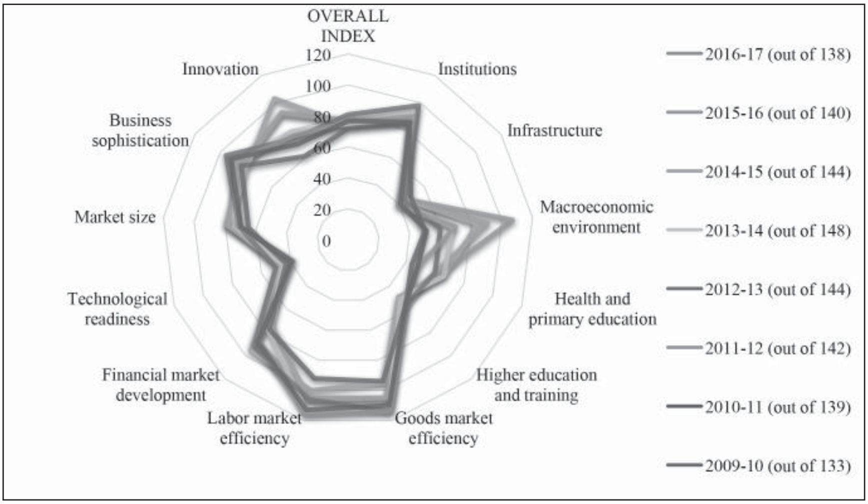
3.2 Dynamics/stagnation of Croatia according to the Global Competitiveness Index

The current poor position of Croatia corresponds with the low rates of the current economic growth, as well as its potential in the future, just as the previous development of competitiveness corresponded with GDP trends in the previous six years. The dynamics of the competitiveness ranking of Croatia from 2009 onwards and the comparisons of its dynamics with the average competitiveness ranking of the EU10 shows its relative stagnation.

Croatia's relative non-competitiveness would not be a problem by itself if Croatia were the last relative to the average of the CEE countries only shortly. Also, the current relative non-competitiveness would not be worrying in the long run if it were possible to establish, based on an analysis of the previous years that Croatia is gradually improving its position in the global competitiveness ranking, i.e. that it is improving its position according to the overall competitiveness index.

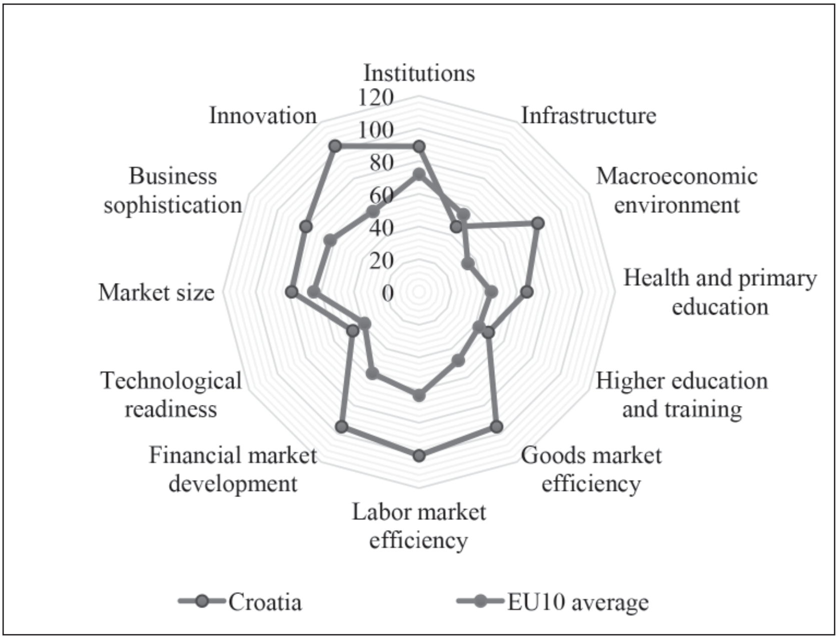
However, if movements of the overall competitiveness index and all of the 12 individual pillars of competitiveness are observed, a considerable immobility of the Croatian economy is noticeable, i.e. the Croatian economy has not shown positive trends over time against any of the indicators of global competitiveness. According to the majority of competitiveness indicators, Croatia has not moved much in the global competitiveness ranking since 2009, i.e. it has not improved its relative position in the world. Precisely such indicators disclose the static character of the Croatian economy through time, i.e. in the years in which the other CEE countries (EU10) record gradual economic growth, which is faster than the EU average and, as a result, narrow the gap in development relative to the EU28 average.

Figure 2: The Global Competitiveness Index, Croatia rank, 2009 – 2017 edition



Source: World Economic Forum.
Note: The number in the legend following after "out of" denotes the total number of world countries for which the data were collected.

Figure 3: The Global Competitiveness Index, Croatia and EU10 rank, 2016-2017 edition



Source: World Economic Forum.

According to the indicators of competitiveness of institutions, infrastructure, higher education and training, labour market efficiency, technological readiness, market size and business sophistication, Croatia has mostly stagnated since 2009, while according to the indicators of the macroeconomic environment, health and primary education and innovation, Croatia has recorded a downward trend since 2009. By the above indicators and trends, Croatia does not impact the improvement of its competitiveness.

The position of Croatia, among other countries, according to the global competitiveness index shows the space in which Croatia is moving relative to the other countries of the world according to the above index. From 2009 until present, Croatia had the best position in the 2009 – 2010 report when it was the 72th of 133 countries. The least favourable position according to the global competitiveness index was the 81st position of the 144 observed countries in the 2012 – 2013 report.

Table 4: Competitiveness position of Croatia's economy, trend for the 2009 – 2016 period

GLOBAL COMPETITIVENESS INDEX (GCI)	Among % best performing in the world, 2009 – 2016
Overall index	51% – 56%
PILLARS OF GCI	Among % best performing in the world, 2009 – 2016
Institutions	60% – 68%
Infrastructure	27% – 37%
Macroeconomic environment	37% – 76%
Health and primary education	33% – 48%
Higher education and training	34% – 42%
Goods market efficiency	69% – 80%
Labour market efficiency	69% – 82%
Financial market development	51% – 69%
Technological readiness	27% – 35%
Market size	49% – 57%
Business sophistication	58% – 67%
Innovation	46% – 75%

Source: World Economic Forum, The Global Competitiveness Report 2016 – 2017, author's calculation.

If the relative position of Croatia was calculated in all of the observed years (since the number of countries covered by the index calculation varies from year to year and ranges from 133 in 2009 to 148 in 2013), it could be concluded that the Croatia's position according to the global competitiveness index in the 2009 – 2016 period ranged between the first 51% to 56% of the countries, i.e. it held a rather static position in the past eight reports of the World Economic Forum.

Table 5: Global Competitiveness Index, trends in Croatia

GLOBAL COMPETITIVENESS INDEX (GCI)	Trend 2009 --> 2016
Overall index	stagnation
PILLARS OF GCI	Trend 2009 --> 2016
Institutions	stagnation
Infrastructure	stagnation
Macroeconomic environment	deterioration
Health and primary education	deterioration
Higher education and training	stagnation
Goods market efficiency	slight improvement
Labour market efficiency	stagnation
Financial market development	oscillations
Technological readiness	stagnation
Market size	stagnation
Business sophistication	stagnation
Innovation	deterioration

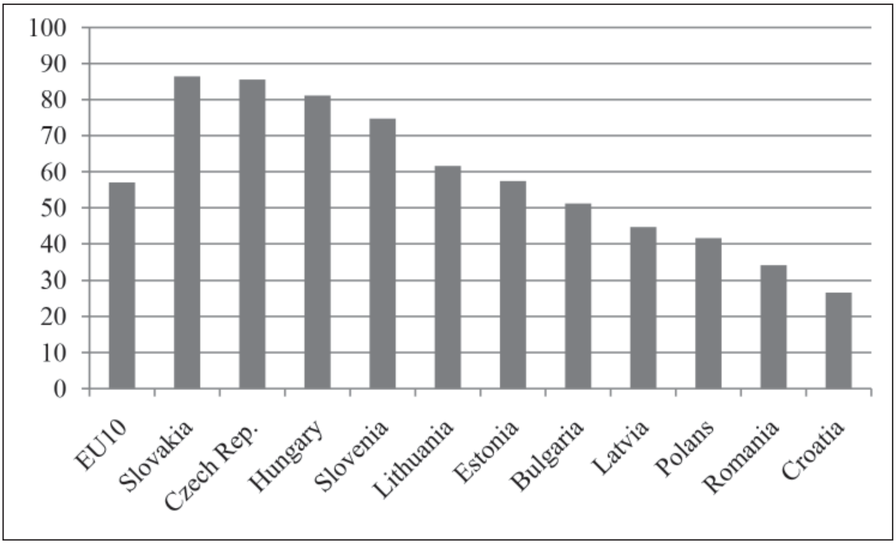
Source: World Economic Forum, The Global Competitiveness Report 2016 – 2017, author's calculation.

Such a situation in competitiveness indicators present in the past few years can be explained by the poor structure of the Croatian economy, as the economic policy-makers have not adjusted to the market trends in order for the situation to change significantly. In addition, the structure of the economy is not adequate, i.e. it is not sufficiently adjusted to the market and external demand. It is worth noting that Croatia has very small goods exports relative to the size of the economy, which is the basis for economic growth in some countries.

The value of the exports of goods to GDP ratio stands at about 27% in Croatia, which is the lowest among all of the EU10 countries and half the average of this group of countries. According to this indicator, Slovakia and the Czech

Republic stand out, with the shares of about 86%, which places them not only among the first two countries of the EU10 group, but also among the first three EU28 countries (Belgium having the largest share, around 88%).

Graph 3: Exports of goods to GDP ratio, in %, 2015



Source: Eurostat.

The relative non-competitiveness of Croatia, which is shown through the global competitiveness index, suggests that it will be very difficult for Croatia to increase the share of goods exports in GDP in a short term. Another aggravating circumstance for Croatia is the too small dispersion of economic activity, which is connected with the exports of goods.

Based on the above, it can be concluded that during the past years Croatia was lacking an economic growth model, which would be based on the recognition and development of Croatian competitive advantages and enable a dynamic and long-term GDP growth. Individual periods, marked by dynamic growth were primarily attributed to the previous low level of economic activity, long-term unsustainable growth factors, i.e. a considerable increase in internal and external debt and favourable circumstances in the global environment. This is especially shown when Croatia is compared with peer countries, i.e. former transition countries, which have made much larger improvements in their economies. In addition, GDP movements suggest the need for further improvement in the economic policy. The current expectations on further GDP growth result again from forecasts of a further growth of the value of goods and services, significantly connected with yet another good tourist season, increased personal consumption facilitated by the latest amendments to the income tax system, the increase in wages in public services, the growth of pensions and a further recovery of credit activity. An important growth factor is also the growth of investment, to a great extent connected with a better absorption of EU funds. However, these are mostly not the sources of growth, which by themselves ensure a long-term acceptable growth model, so that it is necessary to concentrate on finding the model, which would boost investment in production and increase the value of the exports of goods. Despite falling behind the majority of indicators, the difference in the dynamics of goods export growth stands out as the key in the long-term lagging behind of Croatia relative to other peer countries. The strengthening of competitiveness of the Croatian economy, and indirectly the competitiveness of Croatian goods and services in foreign markets, would impact the improvement of the position of Croatia.

3.3 Dynamics/stagnation in the Doing Business Index rankings

The answer to the question why Croatia is lagging behind the EU10 countries can also be provided by the indicators of the position and development of the doing business ranking in Croatia compared to other countries. The changes in the position relative to the EU10 are slightly more dynamic than in the competitiveness index, however, this means that the improvements made here have not reflected on competitiveness, i.e. they have been insufficient.

The World Bank assesses and ranks countries according to the ease of doing business for a number of countries all over the world. The changes in regulations that enhance or constrain business activity, i.e. activity in the implementation of reforms are surveyed. Finally, it provides quantitative indicators of business regulation (the number of procedures and their time and cost requirement), and it basically measures and assesses the efficiency of economic policies.

Doing Business measures aspects of regulation affecting 11 areas of the life of a business. Ten of these areas are included in last year's ranking[6] on the ease of doing business:

[6] Doing Business 2017, International Bank for Reconstruction and Development/The World Bank.

1. starting a business,
2. dealing with construction permits,
3. getting electricity,
4. registering property,
5. getting credit,
6. protecting minority investors,
7. paying taxes,
8. trading across borders,
9. enforcing contracts,
10. resolving insolvency.

Although the movement of Croatia's rankings by years before 2016 cannot be compared because of the changes in methodology, the ratios of the rankings of Croatia and the average of the EU10 countries can be compared. It is obvious, however, that Croatia was the worst ranked country during the entire observed period, the only exception being the 2016 report, when Hungary way ranked worse by one position.

The comparison of the difference in the rankings of Croatia and the EU10 shows a relative stagnation in the major part of the observed period, in particular from 2011 to 2014, when the ratio of the Croatia's ranking and the EU10 average oscillated within the range of only three positions.

Table 6: Position of Croatia in Doing Business reports

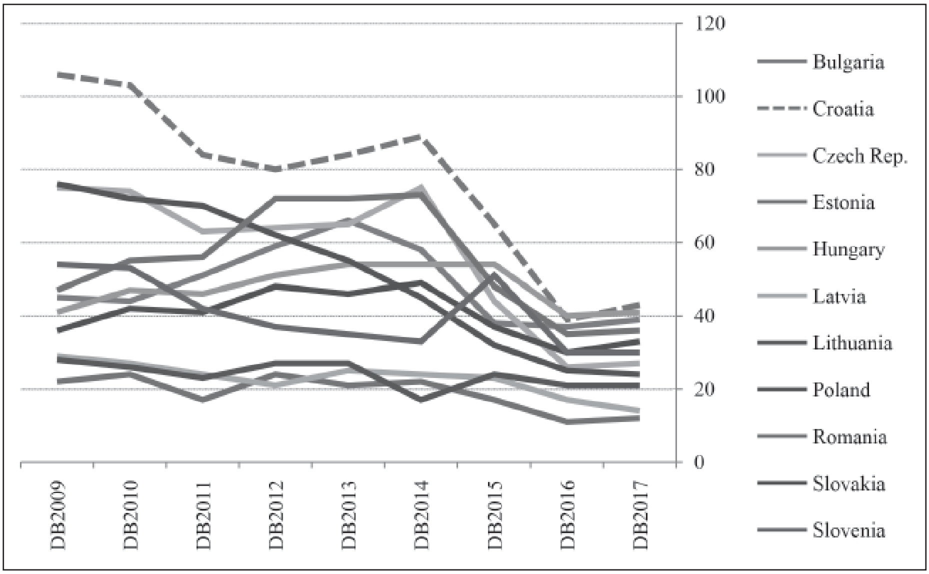
DB report	Number of countries ranked	Position of Croatia	Croatia among % best performing in the world
DB2017	190	43	23%
DB2016	189	39	21%
DB2015	189	65	34%
DB2014	189	89	47%
DB2013	185	84	45%
DB2012	183	80	44%
DB2011	183	84	46%
DB2010	183	103	56%
DB2009	181	106	59%

Source: The World Bank, Doing Business reports, author's calculation.

Until 2014, stagnation was also visible when the positioning of the Croatia's ranking was compared with the total number of the countries ranked (varying from 181 to 190). The position of Croatia according to the ease of doing business index from 2009 to 2014 ranged from the first 47% to 59% of the countries, i.e. it held a rather static position during the six years, in particular between 2011 and 2014, when the range was from 44% to 47%. Therefore, Croatia was "frozen" in relative movements for years, which would make it a faster growing economy because reforms were constantly delayed, which would make the system more efficient and competitive.

It is a positive sign that during the past two years, the gap between the Croatian ranking and the ranking of the EU10 narrowed considerably (and Croatia jointed the first fifth of the best performing countries in the world). However, the trend of convergence with the EU10 did not remain steady and in the 2017 report, the difference increased from the previous year because of the deterioration in the Croatia's score, which fell back to the position of the worst ranked country among the EU10 countries.

Graph 4: Doing Business ranks



Source: The World Bank, Doing Business reports
Note: The smaller the number, the better the position.

In the context of this index, starting a business and dealing with construction permits are emphasised as the areas that are constantly among the worst ones and the most remote from the EU10 average. Therefore, the areas that are most connected with public administration efficiency, which is repeatedly mentioned in the context of obstacles for a higher and better inflow of foreign investment, in particular in the sector of internationally traded goods (exports). This also limits the growth of goods exports, without which small and medium-size enterprises cannot reach significant economic growth rates.

The examples of interrelation between goods exports and good quality foreign investment in the sector of internationally traded goods can be pointed out in the case of the Czech Republic and Slovakia, which have the highest ratio of the value of goods exports to the GDP value among the EU10 countries (as previously mentioned, about 86%). Large manufacturing companies entered in the markets in both countries: Hyundai in the Czech Republic and KIA in Slovakia.

When Hyundai opened a big plant in the Czech Republic in 2006, the percentage ratio of the value of Czech exports and Czech GDP was at the level of 61%, and since then, it has increased by 25 percentage points. In addition, in Slovakia, KIA opened its plant in 2004, when the percentage ratio of the value of Slovak exports and GDP was at the level of 64%, 22 percentage points lower than at present.

4. CONCLUSION

Since the beginning of the crisis, i.e. from 2009, Croatia has been "trapped" in the condition of relative non-competitiveness compared to the CEE countries. In addition, Croatia has stagnated in the observed period according to numerous competitiveness indicators, i.e. almost without any positive improvements through time in global competitiveness rankings. For this reason, Croatia needs a systemic reform, which will have impact on gradually recording positive relative movements in the competitiveness and ease of doing business rankings from the condition of a static economy, in order for Croatia to reach the average levels of competitiveness of CEE countries, attract investment, boost exports, and thereby impact the incentives to economic growth. This would create conditions to stop the fall in relative development of Croatia compared to the EU28 countries and for its return at least to the relative development position, which it held in the pre-crisis 2008. In 2008, Croatia was at the level of 63% of development of the present-day EU28, when four of the EU10 countries were at the lower level of development than Croatia (Latvia at 60%, Poland at 54%, Romania at 48% and Bulgaria at 45% of the EU average), and two were at the same level (Lithuania and Hungary). According to the latest Eurostat data, in 2015, Croatia was at the 58% of development of the EU average, while Romania grew to 58% and Bulgaria to 46%. Since Romania is growing at the rates higher than Croatia, it is very probable that already in 2016 Romania will surpass Croatia in terms of development, which would thus become the second most under-developed country of the EU28. Additionally, Slovenia, along with Croatia, was the only transition EU member country the share of which in the average level of development decreased between 2008 and 2015. Croatia fell from the mentioned 63% to 58%, and Slovenia from 89% to 83%.

The above clearly shows that Croatia needs reforms, which should create a favourable investment and business climate, i.e. they should ensure legal predictability, administrative efficiency, the transparency at both national and local level, boost innovation, research and development and investments in human capital. By creating a favourable investment climate, the potentials for the growth of good quality foreign investment are created, in particular those in the sector of internationally traded goods, which raise the levels of the growth of exports, their share in GDP and the GDP itself. According to the FICC (Foreign Investors Council Croatia)[7], studies show that 1% increase in FDI increases total investment of 0.5% – 1.3%, and GDP growth to 0.5% – 1.0%.

In addition to the reforms, which will facilitate operations and boost competitiveness, it is necessary to intensify the absorption of EU funds. Only from the funds of the EU regional (cohesion) policy, for the 2014 to 2020 period Croatia is entitled to about EUR 8.6bn from the EU budget for the co-financing of its development projects. According to the estimates of the Croatian Chamber of Economy, presented in the 2015 analysis "EU Funds and Juncker Plan – the Potentials to be Used", the absorption of the full potential of the EU Cohesion policy funds, Croatia could increase its GDP growth by two to three percentage points. This is an exceptional potential, whose successful absorption should become a priority for the acceleration of economic growth, in particular because Croatia lost 11% of its GDP from 2008 to 2015, and the European Commission in its Spring 2016 Economic Forecast states that the long-term potential GDP growth is estimated at "below 1%".

[7] The 2016 White Book, Foreign Investors Council – FIC, 2016, Zagreb.

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SHADOW ECONOMY AND TOURISM RECEIPTS: EVIDENCE FROM EUROPE

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Abstract

Service industries like tourism and hospitality, use a good deal of the time of households that never enter into labor input, firm output and price series, or therefore into measures of official GDP. The main factor of flourishing gray economy caused by tourism activity is seasonal and other casual/temporary work. This study aims to test whether shadow economy-tourism model predictions are valid for 30 European countries' economies. We used a dynamic panel data estimation method i.e. the general method of moments (GMM). Values for the shadow economy as percent of official GDP variable that is considered to represent shadow economic growth and tourism receipts as a percent of official GDP variable that is considered to represent tourism activities have been obtained from the Schneider (2015) and World Bank Database. The analysis of the annual data between 2003 and 2015 try to suggest that either shadow economic growth Granger-causes tourism receipts, or there is no evidence to suggest that tourism receipts have an impact on shadow economic growth.

Keywords: *shadow economy, tourism receipts, dynamic panel, GMM, Granger-cause, Europe*

JEL Classification: J2, J24

1. INTRODUCTION

Most people in European countries that are specialized highly in tourism earn at least part of their livelihood through work in their own, partly unregistered enterprises, or selling their own labor as illegal workers. Moreover, they often consume at least a portion of the unregistered output of their illegitimate productive activities, and household labor (members of household can be children, wife, relatives) is often an important but untaxed input into production process of the enterprise (furthermore SMTE). Consequently, individuals make simultaneous decisions about tourism production (the level of registered or unregistered output, the demand for factors bought with or without issued bill from supplier) and consumption (labor supply and commodity demand). This mixture of the economics of the SMTEs (small hotel, restaurant, travel agency) and of the household is characteristic of the situation of most families in countries specialized in tourism industry and provides the starting point for our analysis.

SMTEs have a unique potential in the tourism sector, as the consumer comes to the producer enabling SMTEs to be part of the global European economy. Along the European countries, the significant proportions of self-employment by migrant workers but not only by them indicate that for many members of minority group, tourism entrepreneurship may be an economic necessity rather than a business opportunity. Moreover, substantial parts of these firms operate in the informal sector and are therefore unable to access available finance sources, although they do re-invest their hidden small profits. While SMTEs are in general less capital intensive (excluding connectivity infrastructure), the heterogeneity of the sector means that different SMTEs face different financing challenges, ranging from the young and innovative firms such as application developers for city guides, to the more traditional hotel resorts, restaurants, or recreational services.

SMTEs thus face the constraints of being extremely atomic, with a preference to operating in the shadow economy away from existing credit opportunities or fiscal obligations to the public sector. Other constraints in accessing external finance include the lack of a financial culture and difficulties justifying incomes stream as firms generally transact in cash and do not register business flows, and are prone on stashing their (or part of them) earnings away from public eyes.

The major problem of our research question is the issue of causality. Is the shadow economy driving force to tourism receipt concentration in country export or is it that tourism receipts originate shadow economy in our European data sample?

The paper is organized as follows. The next section begins by mapping out the research strategy, including the theoretical framework, the literature preview, the dataset, the model specification and the variables. The subsequent section presents and discusses the empirical results, and the final section concludes by providing implications for economic policy and further research.

2. LITERATURE PREVIEW

The line of causality direction among shadow economy and tourism in tourism countries are interest topics among many researchers especially of that interest in world economy. Among them Din et al. (2016) examines the short-run and long-run relationships between international tourism receipts and shadow economy for 149 countries over the period 1995-2008. They use a generalized one-step error-correction model (ECM) in combination with a system Generalized Method of Moments (GMM) to explore the long-run relationship between these two variables. The main result of their study is that the long-run elasticities indicate a negative impact of the shadow economy on the tourism sector suggesting that increase in shadow economy activities will adversely affecting the tourism industry. In second study carried out for 141 countries over the period 1995-2008 by the same authors they find that the long-run coefficients indicate a negative impact of the shadow economy on the tourism arrivals (Din et al., 2015). In the existing literature, we have not found other paper that can make venue of similar topic.

The work (Skalpe, 2007) that somehow countenances our main thesis proposes that the smaller tourism industry players conceal economic performance from the official accounts, while such conduct is riskier and thus less widespread in larger firms. It is suggested that these and other indicators provide circumstantial evidence of hidden economic activities within the tourism sector.

Alternative approach in research is given in paper of Vladimirov (2015), in this study based on structured questionnaire attempt was to reveal the main factors influencing the e-business adoption by the small tourism firms in Bulgaria with a special attention on the role played by the shadow economic practices in this process. These practices, according to author are related to undeclared work, undeclared deals, and sales underreporting by legally registered firms. The main finding in this work is that negative expectations among 282 small tourism firms' managers in Bulgaria and particularly the perceptions of the spread up of shadow economic practices in the sector were more likely to work against the e-business adoption by small tourism firms. Hjalager (2008) estimates the economic importance and employment consequences of shadow activities in the Danish restaurant sector; in it some of the known illegal methods used in the restaurant business, for example tax fiddles, employment of illegal or undeclared labor, and illegal import of supplies are discusses.

We will refer only to a very few of recent research relating to shadow economy and some economic indicator outside from tourism. The paper (Davidescu & Dobre, 2012) aims to investigate the long-run equilibrium relationship and the direction of causality between U.S. shadow economy and unemployment rate using bounds test for co-integration and granger causality approach. The Granger causality test, in this study, identifies a unique direction of causality that runs from unemployment rate to shadow economy but only in the short term. In the paper wrote by Mikulića & Nagyszombaty (2013) panel data method is used in econometric models in which various indicators of the intensity of regulations, tax burden, institutional framework and labor market conditions are used as potential factors able to explain cross-country differences economy in new member EU states (NMS) in the sizes and trends in the unofficial economies.

3. THEORETICAL FRAMEWORKS

International tourism operators use the currency market daily. In the currency market, both tourism (tour operators, restaurants, travel agencies, transport carriers, and hospitality firms) and tourists operate (although under somewhat different conditions) carrying out two fundamental types of transactions. First, transactions between tourism firms, for example a German tour operator that purchases accommodation services from a hotel in Croatia must pay in Euro; analogously, a travel agency that intends to purchase some seats from Swiss airline must pay in Swiss franc. Second, transactions between tourists and tourism firms, for example a Dutch tourist who decides to spend her holidays in the Croatia must buy Croatian Kuna from her bank in Netherland (which in turn buys Croatian Kuna from other financial institutions) and pay in Kuna tourism services in the destination.

The transactions between big tourism firms often involve large figures, since they refer to the wholesale production of holidays, while the transactions carried directly by tourists and SMTE are normally of more modest amount, but they be relevant when aggregated, due to the large flows of international tour-high frequency with which the transactions take place (cf. Candela & Figini, p.503). Those transactions carried out by tourism as particular type of export formally form part of tourism receipts. Taking into account the definition of informality in processing transactions we have made in the previous section, it is crucial to understand the precise association between informality and SMTE performance, especially through informal sector's effect of SMTEs on the effectiveness of national tourism receipts gathering. We assume, it is a higher probability that illegal transaction occur directly in communication line between tourist and SMTE than in the first case (the transactions between big tourism firms).

However, it comes to the same thing; it is one large figure, saying 6 monetary units and half a dozen of the other smaller transactions that amount 1 monetary unit per item. In this metrics, a fraction of the illegal transaction is a consequence from SMTE and tourist exchange line. The currency market transforms the legal and informal tourism flow into tourism receipts. Hence, we assume furthermore that tourism receipt as a whole indicate degree in order to proxy the development of the shadow tourism economy over time. The presence of informal economies in tourism cannot be overlooked as it is heavily related to both tax paying enforcement and preferences to tax evasion. Naturally, there is a wide variability from country to country is same praxis. Since we are committed to hold the thing simple in modelling our research question, we will develop and then empirically test the following hypothesis:

- the effect of tourism receipts on shadow economy is neither necessarily negative nor obviously clear under the presence of transaction among big tourism firms but transaction on the total level of receipts, when we add SMTEs transactions, somehow undermines regulatory vision of the economy, hence tourism concentration cause shadow economy.

4. METHODOLOGY

The formal presentation in this chapter presents a vision of casual structure in terms of the relationships among variable. The question to be addressed in this part of the paper is the general adequacy of that vision. The casual question should be generic: "does the destination with a higher share of tourism in the economy cause a higher quota of shadow economy in the national export"? We refer to generic terms like "share of tourism in the economy" as types. On the other hand, terms like "share of tourism in particular year, in 2008 for example" refers as instance or token. Casual question can be retrospective as "did unregulated economy cause a boom in tourism investment" or prospective "will a cut in the value added tax rates on tourism and catering consumption cause a reduction in shadow economy". Yet, our pragmatic interests (and lack of analytic data) focus our question that involve the casual relationship among types and not token, and neither retrospectives or prospective involving causality (cf. Hoover, p. 70, 2001). We can't set apart (aside from total tourism receipts) for receipts that are coming out only from SMTEs, for this reason we are coerce into choosing tourism receipts in aggregate state that cause shadow economy.

In this study the causal relationship between shadow economy and tourism receipts is examined by using panel data vector autoregressive models. Panel VAR models have been increasingly used in applied research. Panel VARs have been used to address a variety of issues of interest to applied macroeconomists and policymakers (Canova & Ciccarelli, 2013) since this technique combines the traditional VAR approach (Sims, 1980), in which all variables are treated as endogenous and interdependent, with the panel data approach, which allows for unobserved individual heterogeneity (Love & Zicchino 2006).

In our analysis panel VAR methodology places well with our purposes, because there is not a prior strong theory regarding the causal relations between the variables, namely, shadow economy and tourism receipts. Our prior contemplation about the phenomenon did not constitute a sound theory but only weak conjecture about possible interrelation of shadow economy and tourism concentration. In such a framework, all variables are treated as endogenous in a system of equations, while the short-run dynamics may be identified at a later stage (Drakos & Konstantinou, 2011). We specify a panel model with the first order as follows:

$$Y_{i,t} = \alpha_i + \Gamma(L)\ Y_{i,t} + \mu I + \varepsilon_{i,t} \quad (1)$$

where *i* (*i*=1,…, N) denotes the European country and *t* (*t=1,…,* T) denotes the year. *Yi,t* is the vector of endogenous stationary variables, in our analysis shadow economy divided by GDP (*shadtogdp*) and tourism receipts divided by export (*rectoexp*). *Γ(L)* is a matrix polynomial in the lag operator *L, μi* is the vector of country specific effects, and εi,t represents the vector of idiosyncratic errors.

In our analysis we used "shadow economy to GDP ratio" (*shadtogdp)* and "tourism receipts to export" (*rectoexp*) to perform panel bi-variate VAR estimation. We used "shadow economy/GDP" as a proxy of shadow economy because estimation of unofficial business transactions is originally offered as % of GDP according to Schneider (2015). This situation shall not cause miscalculations since our other variable "Tourism receipt/export" may not be related to GDP denominator in *shadtogdp*. However, we will match percentage variable with percentage variable that differ somehow in denominators. The economic theory says if we may recall that: GDP = C+I+G+NX. Since the net export (NX) is by definition part of GDP that matching of variables is allowed.

Estimating equation (1) with pooled OLS presents an endogeneity problem since if the dummy variables (country-specific effects) affect variable in one period they presumably affected them in the previous period also (cf. Nickell, 1981). The first step into the direction of correcting this endogeneity problem in dynamic panels is to take the first difference of all variables and to thereby eliminate the individual effects. Still, there remains a correlation between the lagged dependent variable, which is now in differences, and the error term. As a way around this problem, Arellano and Bond (1991) have proposed to use lags of the dependent variable from at least two periods earlier (in levels) as well as lags of the right hand side variables as instruments in a Generalized Method of Moments (GMM) estimator.

In the next section, we will present results using the Arellano-Bond one-step system GMM, and Arellano-Bond two-step system GMM estimators.

5. DATA

In order to determine the causal relationship between "share of tourism in the economy" and "shadow economy in the national export", we collected yearly data from 30 European countries between 2003 and 2015. The list of countries that we used in our analysis can be found in Table 1 in Appendix.

The time anchor in our sample is 2003 because the earliest size of the Shadow Economy variable (in % of GDP data) available dated back to that year. The second variable that is used in this study is tourism receipt (% of export). According to this definition, international tourism receipts include all payments and prepayments made by an international visitor for goods and services. The share of international tourism in exports is calculated as a ratio of receipts to exports of all goods and services, which denotes the percentage of exports attributable to international tourism receipts for a particular country (tourism concentration). The variables used in this study and their descriptive statistics are shown in Table 2.

6. RESULTS

A reasonable first step in empirical analysis is a visual inspection of the data. Figure 1 show the histograms of the *rectoexp*, and *shadtogdp* for our sample of 30 countries. Both variables exhibit outliers (especially the first variable). Another way to look at the data is to examine bi-variate pooled scatter graph. Figures 2 show no pronounced contemporaneous association between *rectoexp* and *shadtogdp*, but a positive association our variables is yet indicated by the increasing slope. Outliers become apparent here also.

It is essential to verify that all variables are stationary prior to panel VAR model estimation. The Granger-causality tests require stationary time series. In the recent past a number of tests such as Levin et al. (2002), Im et al. (2003), Maddala and Wu (1999), and Hadri (2000) have been developed to detect unit roots. Because of the balanced structure of our sample, after we imputed very few missing observation in *rectoexp* variable we were able to perform the battery of panel unit root tests in order to detect whether there would be possible cointegrations with the second variable *shadtogdp*.

The results of panel unit root test are reported in Table 3 (see Appendix). As can be seen from Table 3, unit root test results show that all the variables are stationary in levels for all countries.

Since Granger-causality test results are sensitive to the choice of lag length m in the time stationary VAR model given by equation (6), it is important to specify the lag structure appropriately. Table 4 shows that – based on this criterion – the optimal lag length is 1.

The estimations of Arellano and Bond (1991) began by transforming all regressors from GMM (Hansen, 1982) and designed the Arellano and Bond estimator for small T and large N panels. The data in our sample are organized into a panel of 30 countries and 13 years. The Arellano-Bond framework implies a necessity to transform the data into first differences and use lagged instruments. For such reason, the final estimation sample drops to 11 years, resulting a total of 330 observations.

Tables 5 & 6 show the results for estimating the VAR model, with the Arellano-Bond one-and two-step system GMM estimator, respectively. The GMM specifications include period-specific effects (as is recommended in the literature). Lags of the dependent variable from at least one period earlier serve as GMM-style instruments.

The three bottom lines of the table report specification test results for the GMM estimations. The Sargan test is a test of the null hypothesis that the instruments are uncorrelated with the error term u_{it} (which they must be in order to be valid instruments). Table 5 & 6 show that the null hypothesis is always accepted. The Arellano-Bond test of no second-order autocorrelation in the disturbances of the first differenced equation is used to detect first-order autocorrelation in the underlying level variables, which must not be present. The test accepts the null hypothesis at the five percent level but only in the two step GMM model. Thus, the AR(1) tests backed exclusively the legitimacy estimator of the two step system GMM.

The upper part of Table 5 reports the estimated coefficients, which can be used to draw inferences on whether shadow economy level is related to tourism receipts/export. According to these results, one time lagged shadow economy has a positive and significant effect on own contemporary variable but on tourism receipts has not. This "*rectoexp*" variable is always insignificant in the Table 5, and the Wald test rejects the hypothesis that the coefficients are jointly equal to zero in the ono step GMM model but not in two step estimation. Yet, we are according to the early mentioned diagnostics, toward that insight unperturbed. It seems that "*rectoexp*" does not Granger-cause "*shadtogdp*" as we assumed according to our theory. Or better saying, we are left without statistically valid conclusion about Granger-causality analyzing Table 5 and we are giving upon analysis of Table 6.

We will zero in only on Arellano-Bond two step GMM model in Table 6. As deduced from panel VAR results (see Table 6), paradoxically "*shadtogdp*" Granger-causes "*rectoexp*" at %1 level.

Generally, in VAR analysis, the discussion of the results mostly focuses on impulse response functions that are derived from the coefficients which are reported in Table 5& 6. In Fig. 3, we present graphs of the impulse response function and the 5% error bands generated by Monte Carlo simulation. Additionally, Table 7 reports the variance decompositions derived from the orthogonalized impulse response coefficient matrices. For reasons of space, Fig. 3 and later on Table 7 are not considered to be included in this paper.

According to Fig. 3, orthogonal impulse response from "*rectoexp*" (tourism receipts) to one standard deviation shock of "*shadtogdp*" is positive. The impact of shadow economy shock is slowly decreasing within time horizon, but never died out and is not absorbed. However, impact of shadow economy on tourism receipts is not significant.

It can be seen that the forecast error variance decompositions in Table 7 support the results obtained in this paper. Based on estimates, variations in shadow economy reach up to 14.2 % of total variation can be explained by tourism receipts. On the other hand, almost 99.8 % variation in tourism receipts is based on itself.

7. CONCLUSION

In this paper we have used a GMM technique to examine the association between shadow economy and tourism receipts for 30 European countries. Due to weak but positive contemporaneous association between *rectoexp* and *shadtogdp*, the failure to find significant link among variables comes not as a surprise. Next, we used panel Granger causality tests based on a Arellano-Bond two step estimation and Wald statistics to examine the existence of causality relationships *rectoexp* and *shadtogdp*. A uni-directional causality was found to exist between shadow economy share in GDP and tourism receipts share in export; this finding is somewhat different to that of what we did conjure in our theory about the complexities among tourism transactions and shadow economy direction of flow. An implication of this finding is that European countries would be successful in raising official economy growth through better controlling of tourism economy receipts. This may eventually improve the well-being of the population, as well as global welfare in the long run, and eventually mitigate shadow economy strength in nowadays Europe.

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Appendix

Table 1: List of countries analyzed

Austria	Belgium	Bulgaria	Croatia	Cyprus
Czech Republic	Denmark	Finland	France	Germany
Greece	Hungary	Ireland	Italy	Latvia
Lithuania	Luxembourg	Malta	Netherlands	Norway
Poland	Portugal	Romania	Slovak Republic	Slovenia
Spain	Sweden	Switzerland	Turkey	United Kingdom

Table 2: Definition of variables, source, and descriptive statistics

Variables		Source	Mean	SD	Min	Max
The tourism receipt (% of export)	*rectoexp*	World Bank's World Development Indicators	9.53	8.65	1.80	47.24
The Shadow Economy (in % of GDP data)	*shadtogdp*	Schneider (p. 6, 2015)	20.35	7.35	7.53	35.90

Source: Own calculation

Table 3: Panel unit root test results

	Maddala-Wu	Levin-Lin-Chu	Im-Pesaran-Shin	Hadri
rectoexp	469.67***	-5.323***	-8.409***	14.952***
shadtogdp	413.47***	-5.092***	-8.134***	36.28***

Source: Own calculation; Note: H0, all panels contain unit roots; Ha, at least one panel is stationary. Reject the null of unit root at the level of significance *** 1%

Table 4: Optimal lag length for equation

Selection	AIC(n)	HQ(n)	SC(n)	FPE(n)
No.of lags	1	1	1	1

Source: Own calculation

Table 5: Panel VAR results (system GMM) for **shadtogdp** as an dependent variable

	(1) Arellano-Bond one step GMM model	(2) Arellano-Bond two step GMM model
shadtogdp t-1	0.563 (0.0638)***	0.432 (0.201)*
rectoexp	0.007 (0.0193)	-0.024 (0.042)
rectoexp t-1	0.009 (0.0214)	0.037 (0.046)
Sargan Test: p-value	0.976	0.878
Wald Test Coefficients: p-value	0.000	0.175
AB test: p-value	0.000	0.083

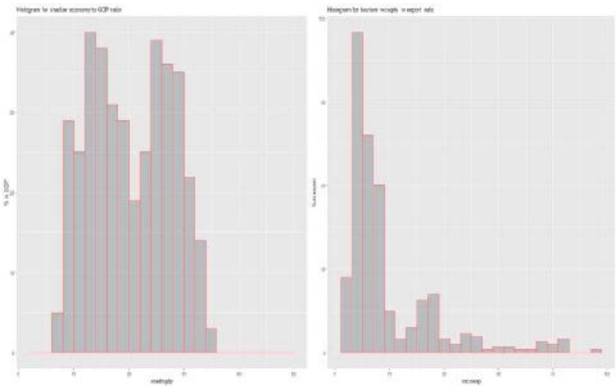
Source: Own calculation; Note: ***p < 0.001, **p < 0.01, *p < 0.05; n =30,T=13,Num. obs.=390, Num.obs.used=330

Table 6: Panel VAR results (system GMM) for **rectoexp** as an dependent variable

	(1) Arellano-Bond one step GMM model	(2) Arellano-Bond two step GMM model
rectoexp t-1	0.479 (0.104)***	0.512 (0.119)***
shadtogdp	0.064 (0.143)	-0.128 (0.427)
shadtogdp t-1	0.045 (0.179)	0.2626 (0.444)
Sargan Test: p-value	0.987	0.896
Wald Test Coefficients: p-value	0.000	0.0001
AB test: p-value	0.011	0.052

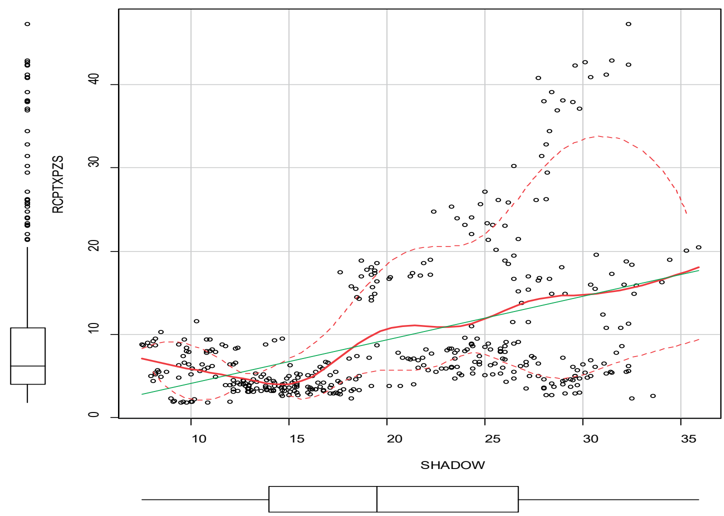
Source: Ibidem

Fig. 1 Histogram of "shadow economy to GDP ratio" & "tourism receipts to export"



Source: Own calculation for 30 European countries, 2003-2015

Fig. 2 Scatter graph of "shadow economy to GDP ratio" *versus* "tourism receipts to export"



Source: Ibidem

THE IMPACT OF POLITICAL RISK ON INTERNATIONAL BUSINESS TRANSACTIONS OF CROATIAN COMPANIES

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Abstract

The purpose of the paper is to evaluate the influence of political risk on international business transactions of Croatian companies and suggest ways and instruments to manage political risk. The scientific goal of this paper is to highlight the importance of the political risk in the course of international transactions by Croatian companies in order to contribute to theoretical discussion of the importance and impact of political risk in managing companies with international business operations. The expected contribution to economic science stems from the development of scientific findings about the impact of political risk on international transactions. Practical objectives of the research will attempt to identify and assess to what degree and in what way Croatian companies manage political risk, and further, we will analyze the perceptions and attitudes of the management board by Croatian companies on the importance of political risk in international business. Finally, we will try to suggest methods and instruments to manage political risk in order to increase the competitiveness of companies. The expected contribution to economic science in application terms is based on empirical research and methods to reduce exposure of Croatian companies to political risk which will be proposed and based on the analyzed results.

Keywords: *risk, politics, political risk, international business transactions, management.*

JEL Classification: D81

1. INTRODUCTION

The Republic of Croatia is a small country with a small economy. As such it cannot fully rely on its market to ensure economic growth. To test the hypothesis that the main political risk may have a significant impact on international transactions of Croatian companies, we decided to conduct a study which tested the correlation between exports and the index that measures the level of political risk. According to the Association of Croatian exporters in the Republic of Croatia, there are more than 18,000 companies engaged in exports of goods and services.

Political environment in which companies operate has always been crucial for their success or failure. Changes in political environment caused by actions of a state or other political actors which in turn influences business could be viewed as political risk. Political risk represents the probability that certain political action will lead to adverse effects for companies' business. International business transactions can be defined as transections, often defined by contract, between two parties from different nation states. Exchange of goods or value over national borders can be construed as international transaction.

Influence of politics on businesses of Croatian companies abroad, particularly exports and investments, which is viewed by some economist as the only way for Croatian economy to grow, represents quite new and unexplored problem in Croatian economic science literature. There are multiple possible reasons for this, one of which can be the fact that export industry is poorly developed and that there is small number of investments made by Croatian companies in other countries. The fact that the political risk is so differently defined and hard to measure is also the reasons for it being seldom present in scientific literature. Considering all the knowledge amassed until now about political risk and the influence it has on international business the purpose of this paper is to assess the influence the political risk has on international business transactions of Croatian companies. Furthermore, the paper tries to suggest ways and means by which to manage political risk.

For that purpose and using the data of exports we conducted correlation analyses between value of exports from Croatia to selected countries and the level of political risk in those countries using various risk indexes for given time. Results of research have enabled for hypotheses to be either accepted or dismissed as well as to define the comprehensive framework for political risk management. This framework can in turn be used by Croatian companies engaged in international business transactions.

2. THEORETICAL FINDINGS OF RISK MANAGEMENT

At the beginning, it is necessary first to define the concept of risk and its types. There are three possible situations of decisions making that each individual faces every day, including the management of each company:

1. Certainty - the outcome of a decision is sure; the probability of the event is 1
2. Risk - known outcomes and their probabilities
3. Uncertainty - outcomes and their probabilities are unknown.

According to Karić (2011) risk is a situation where the outcome of a decision is not known in advance, there is a possibility of negative impact on the company (damage, injury or loss). The risk exists whenever the future is unknown and companies are daily exposed to risks. Situations where we have at least two possible outcomes there is a risk. Each manager or entrepreneur needs to know which are the biggest risks for his company in order to be able to better protect the firm and to minimize the losses.

Size of risk in companies is measured using the formula:

Risk = the likelihood of damage * weight damage

Hopkin (2012) in his work states that risk is used to signify negative consequences. However, taking a risk can also result in positive outcome. A third possibility is that risk is related to uncertainty of outcome. According to him, the Institute of Risk Management (IRM) defines risk as the combination of the probability of an event and its consequence. Consequences can range from positive to negative. This is widely applicable and practical definition that can be easily applied.

Basic risk classification is on the static and dynamic risk. Static (pure) risk does not depend on the operations of the company and its only result is the emergence of a negative event. It is possible to insure against this type of risk, but only when it is possible (by using historical data) to calculate the probability of unwanted events. Sources of static risks are usually the following threats: social, technological, competitive, political, economic. In accordance with the previous, we can claim that the political risk is type of static risk, and that does not depend directly on the decisions taken by the company.

On the other hand, dynamic (speculative) risk depends on the operations of the company, and binds the formation of undesired and desired events (gain or loss). It provides the possibility of realizing a loss and it is linked with opportunities to generate gain. Typical dynamic risks: market risk, credit risk, liquidity risk and operational (business) risk.

Known probability of an unwanted event directly binds knowledge of probability of desirable events. So, here we can define the concept of chance as opposed term to risk. The probability of occurrence of desirable events or chance is equal to:

1 - the probability of undesirable events (risk)

We can say that the risk is a complex term that implies the possibility of adverse events. The study of risks therefore requires the identification and detection of variables (probability and consequence).

3. THE METHODOLOGY AND ELEMENTARY RESEARCH SETTINGS

To determine whether there is a correlation between the level of political risk in each country and the value of exports by Croatian companies in that country we calculated the Pearson correlation coefficient using the value of exports from the Croatia to each country and the measure for political risk (Political Risk Index - PRI) which is created (calculated) by the PRS group and Worldwide Governance Indicators from the World Bank. PRI is not only a measure of political risk, but it can be used for a measure of the total risk of a country. In the measure of risk PRS group included 16 different components that are described in the methodology of the PRS Group. In the case of Serbia, in the absence of PRI data we used the data from the World Bank and its Worldwide

Governance Indicators, specific indicator linked to political stability and terrorism as a kind of surrogate benchmarks levels of political risk, since it includes a whole range of indicators of country risk including that of the PRS Group.

The components used to calculate the PRI mostly are largely determined by political developments inside and outside the surveyed countries and therefore represent an adequate benchmark for the level of political risk. According to the methodology used by the PRS Group 12 components are used to assess the level of risk for each country in the next 18 months (PRS 2016)[1]:

1. ***Turmoil -*** Actions that can result in threats or harm to people or property by political groups or foreign governments, operating within the country or from an external base:
   - Riots and demonstrations
   - Politically motivated strikes
   - Disputes with other countries that may affect business
   - Terrorism and guerrilla activities
   - Civil or international war
   - Street crime that might affect international business personnel
   - Organized crime having an impact on political stability or foreign business

Not included in turmoil are legal, work-related labor strikes that do not lead to violence.

2. ***Equity Restrictions -*** Limitations on the foreign ownership of businesses, emphasizing sectors where limitations are either especially liberal or especially restrictive.
3. ***Operations Restrictions -*** Restrictions on procurement, hiring foreign personnel, or locating business activities, as well as the efficiency and honesty of officials with whom business executives must deal and the effectiveness and integrity of the judicial system.
4. ***Taxation Discrimination -*** The formal and informal tax policies that either lead to bias against, or special advantages favoring international business.

[1] http://www.prsgroup.com/about-us/our-two-methodologies/prs (18.10.2016.)

5. ***Repatriation Restrictions*** - Formal and informal rules regarding the reparation of profits, dividends, and investment capital.
6. ***Exchange Controls*** - Formal policies, informal practices, and financial conditions that either ease or inhibit converting local currency to foreign currency, normally a firm's home currency.
7. ***Tariff Barriers*** - The average and range of financial costs imposed on imports.
8. ***Other Import Barriers*** - Formal and informal quotas, licensing provisions, or other restrictions on imports.
9. ***Payment Delays*** - The punctuality, or otherwise, with which government and private importers pay their foreign creditors, based on government policies, domestic economic conditions, and international financial conditions.
10. ***Fiscal and Monetary Expansion*** - An assessment of the effect of the government's spending, taxing, interest rate and other monetary policies. The assessment is based on a judgment as to whether the expansion is inadequate for a healthy business climate, acceptably expansionist, or so excessively expansionist as to threaten inflation or other economic disorder.
11. ***Labor Policies*** - Government policies, trade union activity, and productivity of the labor force that create either high or low costs for businesses.
12. ***Foreign Debt*** - The magnitude of all foreign debt relative to the size of the economy and the ability of the country's public and private institutions to repay debt service obligations promptly.

The remaining four components PRI is using to make a forecast for a longer period or for the next five years (PRS 2016)[2]:

1. ***Investment Restrictions*** - The current base and likely changes in the general climate for restricting foreign investments.
2. ***Trade Restrictions*** - The current base and the likely changes in the general climate for restricting the entry of foreign trade.
3. ***Domestic Economic Problems*** - A country's ranking according to its most recent five-year performance record in per capita GDP, GDP growth, inflation, unemployment, capital investment, and budget balance.

[2] http://www.prsgroup.com/about-us/our-two-methodologies/prs (18.10.2016.)

4. ***International Economic Problems -*** A country's ranking according to its most recent five-year performance record in current account (as a percentage of GDP), the ratio of debt service to exports, and the annual percentage change in the value of the currency.

These components and their values are then summed up together and the index shows the level of risk on a scale from 0 to 100, where countries with the index value 0 have the highest political risk while the country with the index value of 100 representing the country with the best business climate and the smallest risk. For example, the lowest level of risk for international business is in Canada, where since 2011, the PRI index value is above 90 while Zimbabwe in 2013 had the result of 41 which is also the lowest recorded value from 2011 to 2015.

4. RESEARCH RESULTS

To determine whether there is a correlation between the level of political risk in a country and the value of exports of Croatian companies to another country, we decided to choose the countries where the Croatian exporters are presentand where there were great political turmoil and international and civil wars which represent political risk in the most extreme forms. Using available data on exports and the level of political risk represented in the form of PRI index, we came to the result that we present below.

First observed country is Libya. As can be seen from the table 1, in a relatively short period of seven years, Libya has from stable political situation (PRI index has a value of 69) experienced a completely collapsing political and economic system. This has led to an increase of risk and reduction of PRI index, which is reflected in the values of only 44 in 2015. The correlation coefficient of 0.8428 (table 1) in the observed period shows that there is a very strong positive correlation between the level of political risk expressed in the PRI index and the value of exports from the Croatian to Libya.

Table 1: The correlation between the level of political risk and the value of exports to Libya*

LIBYA			
Year	Export from Croatia in thousands of HRK	PRS Risk index	The correlation coefficient
2009	398.994	69	0,8428
2010	266.093	68	
2011	193.063	56	
2012	176.679	57	
2013	225.422	55	
2014	169.114	45	
2015	141.775	44	

**Source:* author's calculations

Table 2: The correlation between the level of political risk and the value of exports to Syria*

SYRIA			
Year	Export from Croatia in thousands of HRK	PRS Risk index	The correlation coefficient
2009	201.169	60	0,8400
2010	135.132	62	
2011	17.235	50	
2012	2.581	53	
2013	61.164	49	
2014	1.226	44	
2015	764	44	

**Source:* author's calculations

Syria is observed in the same period and for the same reason and the fact that there has been civil war and international conflict. The correlation coefficient of 0.8400 in the observed period shows (table 2) that there is a very strong positive correlation between the level of political risk expressed in the PRI index and the value of exports from the Croatian to Syria.

Although in the case of Syria and Libya, we can clearly see that the civil war affects the level of political risk but what we also wanted to know, is how the war between the two countries affects exports from the Croatian companies in that country and whether there is a correlation between the increase in political risk and the value of exports. For this reason, we decided to observe Russia and Ukraine. With the destruction of government in Ukraine in early 2014 began a long-standing crisis between Europe, the US and Ukraine on the one hand and

Russia on the other. The culmination of this conflict resulted in occupation of Crimea and certain parts of eastern Ukraine by Russia. This development has resulted in the imposition of sanctions against Russia by the European Union and the United States. To determine the correlation, we took the five-year period from 2011-2015, although it is important to emphasize that the PRI index for 2015 only covers the period to April, which is why some of the most dramatic are events left out of the calculations of political risk.

Table 3: The correlation between the level of political risk and the value of exports to Russia*

RUSSIA			
Year	Export from Croatia in thousands of HRK	PRS Risk index	The correlation coefficient
2011	1.710.750	61	0,5394
2012	2.489.436	62	
2013	2.141.190	60	
2014	2.091.706	53	
2015	1.473.982	52	

**Source:* author's calculations

Table 4: The correlation between the level of political risk and the value of exports to Ukraine*

UKRAINE			
Year	Export from Croatia in thousands of HRK	PRS Risk index	The correlation coefficient
2011	253.568	62	0,3679
2012	311.473	62	
2013	171.112	61	
2014	325.437	57	
2015	92.283	56	

**Source:* author's calculations

The correlation coefficient from 0.5394 (table 3) in the case of Russia shows that there is a medium strong positive correlation between the level of political risk expressed in the index and the value of exports from the Croatian to Russia. In the case of Ukraine, correlation coefficient from 0.3679 (table 4) in the observed period shows that there is a weak positive correlation between the level of political risk expressed in the index and the value of exports from the Croatian to Ukraine. The relatively weak correlation between the increased political risk and the value of exports in Ukraine can be explained with the fact that only east part of country is covered by the war and possibly the fact that Ukraine is relatively geographically close to Republic of Croatia. However, even a relatively modest value of exports recorded an incredible drop when compared to 2014 and 2015 by 70%. The difference between Syria and Libya in relation to Russia and Ukraine, which should be noted is that in the case of Syria and Libya has been a total collapse of the system while the conflict between Russia and Ukraine did not result in the same disastrous results.

Italy and Serbia are Croatian neighboring countries, and they represent two very important foreign markets for Croatian exporters and as far as political risk goes these countries have according to political risk quite different profiles of the previously observed countries. Although we have not been able to find two of the same scale levels of political risk using PRI index and WGI index prepared by the World Bank.

Table 5: *T*he correlation between the level of political risk and the value of exports to Italy*

ITALY			
Year	Export from Croatia in thousands of HRK	PRS Risk index	The correlation coefficient
2009	10.518.311	77	-0,1024
2010	12.093.892	74	
2011	11.222.613	73	
2012	11.067.679	72	
2013	10.550.888	72	
2014	10.982.090	72	

**Source:* author's calculations

Table 6: The correlation between the level of political risk and the value of exports to Serbia*

SERBIA			
Year	Export from Croatia in thousands of HRK	PRS Risk index	The correlation coefficient
2009	2.939.716	28,90	0,8275
2010	2.545.379	30,70	
2011	2.789.296	37,30	
2012	3.144.030	38,40	
2013	2.890.953	43,10	
2014	3.884.192	53,40	

**Source:* author's calculations

We found that in the case of Italy correlation coefficient by -0.1024 (table 5) shows that there is a very weak negative correlation between the level of political risk and export from the Republic of Croatia in Italy. In the case of Serbia, it was found that there is a very strong positive correlation between the level of political risk and the value of exports from the Croatian companies in Serbia which is reflected in the value of the correlation coefficient by 0.8275 (table 6). This result and the results of the previous cases indicate that it is likely that political risk significantly affects the value of export transactions in those cases where the political situation significantly gets worse or improves in export market.

5. CONCLUSION

There are certain risks that can only result in negative outcomes. These risks are static (pure) risk, and these may be thought of as operational or insurable risks. The political risk belongs to this category because his appearance is most commonly associated with the occurrence of a negative outcome. In general, companies will have a tolerance of political (static) risk and these needs should be managed within the levels of tolerance of the company.

The study included a total of six different countries. The index of political risk in these countries is compared with the value of exports of Croatian companies. By analyzing the research results we can conclude that a reduction of political risk increases the value of international transactions between the two countries. We are aware of the limitations of this study, and in the future, we will work to eliminate them. The main drawback is the fact that export is not the only type of international transactions. Imports and investments abroad are also important for our research, and we will include them in observation. Importers can also be exposed to political risks such as oil shocks, regulatory restrictions, and many other forms of political risk that hinder business. Doing business in the conditions of globalization affects the production and supply chains that are not often seen in the same country, and often not on the same continent. It is important to note that among the largest Croatian exporters also some of the biggest importers and Croatian investors abroad and research in this regard included the relevant companies that helped us in making the recent conclusion.

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International Economics

THE IMPORTANCE OF ROAD TRANSPORTATION FOR SUPPLY CHAIN IN THE EUROPEAN UNION

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Abstract

Globalization is a relatively new trend in the economy which affects the supply chain and transport industry. In today's globalized world, the trend of outsourcing allows the transfer of production capacity to the location where they expect the best returns with the objective of growth and the creation of added value. However, stated requests new solutions within the supply chain. From the perspective of customers, new models, such as virtual organizations, and just-in-time system are strongly influenced by the change in demand for transport services and a strong emphasis is placed on speed, accuracy and reliability of delivery. These characteristics represent the main advantages of road transport, which could, with its flexibility, meet the set requirements. The principal task of this research is to investigate and analyse the importance of road transport of goods within the supply chain. While it is important to manage all the processes of supply chains, transportation is the most important but also the most expensive process within the chain in the European Union. The fundamental advantage is that it can be combined with other forms of transportation that without it were fully ineffective. Therefore, depending on the activity and size of company, it is very important to manage the organization of transport in order to achieve significant savings in this segment. Europe has, after World War II, given great importance to road transport that has become the main link between buyers and suppliers. Analysis of the European Union stressed the *importance and value of road transport of goods for the European transport industry, and thus the supply chain in Europe.*

Keywords: *Supply chain, road transport, transport industry, European Union*

JEL classification: R40, F23, F53

1. INTRODUCTION

The concept of supply chain is in use since the early eighties. However, there is still no theoretical unity in its definitions. Very often this term is identified with the concept of logistics. According to Waters (2010) it comes to the same terms and similar claim Lysons and Gillingham (2003) who say that the coverage area of the supply chain and logistics are deceptively similar. They point out that the supply chain management is coordination of material, information and financial flows between and within all companies that participate in it. Christopher (2011) emphasizes that the supply chain is expanding the concept of logistics, which is interpreted as a process of strategic management of procurement, movement and storage of materials, partially and fully finished products and information throughout the organization and its marketing channels. In the supply chain participate all parties involved in fulfilling customer orders as well as all functions of the company involved in the receipt and execution of orders, and this can be consumers, retailers, wholesalers, distributors, manufacturers, various vendors, carriers (Chopra, 2007) . It can be concluded that the supply chains are composed of a set of activities and organizations through which the material passes from the supplier to the end consumer (Monczka, R. M. et al., 2009).

One of the most important elements of the supply chain and logistics is transportation. It includes specialized activities which enable production of transport services by using traffic superstructure and infrastructure. In order to transport goods, people and energy from one place to another, transport must be organized to overcome spatial and temporal barriers and distance. Transportation is also the most expensive and the most important part of the supply chain, without which it is not possible unwinding of the supply chain and trade in general. Thanks to the development of many forms of transportation, appropriate solution for each commodity and for each company can be found. To meet the needs of the chain, transportation must be sustained as soon as possible, taking into account the cost of delivery and customer satisfaction. The main task of the freight forwarders is to elect the optimal means of transport and transport route at a given time and need. Timely delivery is the highest quality well organized transport (Safran, 2012).

Road transport is nowadays the most important forms of supply in the distribution of products to end consumers. Its role is to transport the goods to the final consumer or the transport of goods between factories and various distribution centers. This type of transport has a monopoly because there is no substitute who would compete in this segment of the supply chain. In addition, it can be combined with other forms of transport of goods that would be absolutely ineffective for the supply chain without the support of road transport. Additionally, roads are still the main way of moving passengers and cargo in Europe. In economic terms, road transport is the main mode of transportation of cargo and represents the largest share of land transport in the European Union. The structure of the road transport of goods in Europe has evolved during the twentieth century, especially after World War II, when road transport is becoming a key supply chain. In the European Union the development of road infrastructure is significantly influenced by the connection of all intra-European market which leads to expansion of trade among European countries.

2. THE IMPORTANCE OF ROAD TRANSPORT FOR THE SUPPLY CHAIN

The increase in integration processes and high technological advances resulted in a significant increase in the transfer of goods, services and passengers which led to complexity in solving traffic issues. Therefore, for resolving such problems, a very important position takes up transport without which no activity between the producer and the consumer would have been impossible. From the perspective of supply chain transport cannot be omitted because without him there would be no products available to customers. Within the supply chain, road transport is the most important form of transport because it has the role of the transport of goods to the end users as well as the role of transport between the factory and various distribution centers.

When it comes to road transport, support in solving problems of physical distribution of goods is provided by freight and free cargo space. Timocom is the most significant European stock exchange. It counts more than 110 000 users from all over Europe and about half million international freights and vehicle exchange are published daily. Every provider of cargo or cargo space has to join the Timocom and pay a monthly fixed fee for the use of freight exchange. Thus gaining access to the stock exchange on which they are seeking a carrier or cargo. Once they find a suitable offer they negotiated with each other on price. This method of operation enables carriers to reduce the number of empty runs, make better use of their capacities and consequently more profits. These types of exchange enhance competitiveness in the market of freight forwarding and transportation imposing lower prices to other transport companies (Prestar, 2012).

The main advantage of road transport is lower costs for short distances and the existence of good infrastructural connections in almost all parts of the world. This allows the transport of goods and delivery to the places that other modes of transport are not available. Another very important advantage of road transport is that it can be combined with rail, sea, river or other means of transportation. Many other ways of delivering the goods would not exist without the combination with road transport. On the other hand, the main disadvantages of road transport are: higher fuel consumption per unit of cargo than other forms of transport, sensitivity to weather conditions, high costs of transport over long distances and a high level of environmental pollution.

3. EUROPEAN UNION ROAD TRANSPORTATION

3.1. The development of transport policy in the European Union

Transport was one of the first areas of common policy in the European Economic Community. Initially, the Governments of the member countries were reluctant to leave supervision of their national transport networks. In addition, significant differences between regulatory and traffic structures in each country were hindered for the creation of a common policy. However, after years of slow progress in the development of the EU transport policy, strategic guidelines that determine the direction of development of transport and its infrastructure in the European Union have been achieved in the 1990s (Office of the European Union, 2014).

The principle of sustainable mobility and transport market opening to competition represent the basis. More specifically, the constant emphasis is placed on construction of integrated transport networks, creating a more modal hub, the improvement of infrastructure in the member states and the continuous strengthening of research, innovation and investment in transport future that will not be dependent solely on oil. The industry is prepared to meet the goals of reducing carbon emissions without reducing mobility. The ultimate goal is the connection of roads across all 28 member states that make up the European Union (Office of the European Union, 2014). Because, observing the transport infrastructure in the EU, it is obvious that European Union is faced with unevenly developed transport infrastructure. In many countries that have recently become full members of the EU, there are no high-speed railway lines and their network of motorways, on average, is less developed than in the old member states.

Resource efficient transport, which takes account of environmental protection in all types of travel, is an important part of the transport policy of the European Union. "Smart, green and integrated transport" has been identified as a major challenge of funding the project within the framework of EU research "Overview 2020" for a period of 2014 till 2020, which seeks to ensure that Europe is always up to date with technology progress in traffic; thus enabling the transport industry of Europe to be among the most competitive in the world. It is the key to reducing carbon emissions from transport because innovation and progress can contribute to improving the efficiency of aircraft and automotive engines or substituting energy sources based on oil. This can be achieved by taking advantage of the larger and cleaner and often cheaper alternatives, such as rail and water transport.

Road transport is one of the examples of how the introduction of innovative technology can help drivers to save fuel, direct them to available parking spaces and help them to avoid traffic jams and collisions. In the field of air transport, research program for air traffic management within the Single European Sky (SESAR) is the technological dimension of the development of the Single European Sky, which should triple the ability of the airspace and safety factor should be increased tenfold. This will be a way to reduce carbon emissions by 10% in each year and the cost of air traffic management by 50%. The aim of the SESAR is to combine fuel efficiency with optimized access aircraft airports and the management of the flight path in order to achieve more sustainable and efficient aviation (Office of the European Union, 2014).

3.2. Trends in road transport in the European Union

From early 80s, Europe took about 10 years to open up its market to international road freight transport and to remove obstacles to competition, such as authorizations that road haulers were required to have for unobstructed access to the market of another country and quotas that limit the amount of road transport and prices. Progress in the area of market opening for services of passenger transport was also very slow. Delicate issue represents tolls and charges for the use of roads. EU policy in this area has two objectives. First, the fees should not be excessive or discriminatory against foreign drivers compared to drivers from the Member States concerned. Second, the fees must be in accordance with the principles of "user pays" and "polluter pays" and serve to maintain and develop transport infrastructure (Office of the European Union, 2014).

The key piece of legislation is the directive Euro vignette, which was adopted in 1999 for the purpose of charging heavy goods vehicles for the use of certain infrastructure, such as highways and expressways, bridges, tunnels and tunnels through the mountains. Euro vignette is a common electronic toll collection system that allows registered vehicle to drive on European roads where tolls are charged on the basis of a single fee corresponding to the weight and size of the vehicle. In certain regions may be charged additional toll to remove the problem of environmental pollution, including poor air quality, or to invest in environmentally-friendly modes of transport, such as railways (Office of the European Union, 2014).

Since the early 1990s many obstacles to the single market have begun to remove through a series of rules which aim to harmonize technical and administrative standards. These rules include rules on maximum dimensions and weight of certain vehicles, the appearance of driving licenses, vehicle registration documents and minimum standards for the training of drivers. Member States took many years to agree on working hours for mobile workers in the road transport of cargo, because it proved particularly sensitive area partly because of national differences in labor relations and working culture. Now, the EU has common rules for the longest working hours and the minimum annual leave for drivers of cargo and passenger vehicles. Since almost 75% of cargo between

Member States is transported by road, truck drivers can plan a European trip much easier and the authorities can check their timetables competently (Office of the European Union, 2014).

Digital tachographs are now mandatory in new commercial vehicles and buses. Security is an integral element of road traffic of the EU. The level of security over the years has increased substantially. In the last decade there was a decrease in mortality on the roads, and 2012 was the most important year with the lowest number of recorded deaths on the road. However, the rate of accidents differs between Member States and European roads, in general, are still not completely safe. While Member States made clear progress in terms of reducing mortality on the roads, the number of injuries is still unacceptably high and their rate is not nearly the same. Commission's program for road safety aims at the number of deaths on the roads cut by half by 2020. It seeks to make better safety measures for trucks and cars, better enforcement of rules on the roads, a new focus on motorcyclists, promotion of modern technology to increase road safety and improving emergency services and rehabilitation, which are only some of its strategic objectives (Office of the European Union, 2014).

3.3. An alternative to the negative consequences of road transport

One of the worst problems is traffic congestion that costs Europe about 1% of its GDP every year. The EU is largely reliant on fossil fuels for the transport sector. Petroleum fuels account for about 96% of the total energy supply in the sector, road transport consumes the largest share of energy among all types of traffic. In order to meet the goal of reducing greenhouse gas emissions by 80% and maintain climate change within safe limits (temperature increase should not exceed 2 °C), emissions in the transport sector by 2050 must be reduced by 60% (Office of the European Union, 2014).

Especially important is the CIVITAS program, which promotes the city's initiatives for vehicles with low emissions, increased safety and reducing congestion. Thanks to the large fleets of buses, taxis and delivery vans in the cities it is possible to encourage the widespread use of alternative fuels and energy sources. On the other hand, in many rural areas lacks the necessary infrastructure. EU strategy for the promotion of clean fuels in transport aims to promote their penetration of the market on which hitherto was not possible to penetrate because of the lack of infrastructure for battery charging and refueling and due to high fuel prices and low acceptance among consumers (Office of the European Union , 2014).

Due to reduced loads of road transport and its environmental impact, European Union is taking steps that by 2020 almost 40% of the transport of cargo is shifted to intermodal model. In other words, emphasizes that international and national transport is redirected as much as possible to rail, short sea and inland navigation. The strategic objectives of the EU transport system (Proago Research, 2013):

- By 2030 30% of road freight over distances greater than 300 km should refocus to other modes of transport, and by 2050 more than 50%. This process should accelerate the construction of efficient and so-called green freight corridors that would require the appropriate infrastructure.
- By 2050 should be finalized a European railway network for high speed trains, triple the length of the existing network and maintain the density of the network in all Member States. By then most of the passenger transport on medium distances should move to rail.
- By 2030, it should build a fully functional main part of a multimodal trans-European transport network. The network by 2050 should be completely finished, have a high quality, high capacity and provide the appropriate set of information services.
- By 2020, should set a framework for the information system, management system and collection within the European multi-modal transport network.

4. EMPIRICAL ANALYSIS OF ROAD TRANSPORT IN THE EUROPEAN UNION

4.1. Transport Industry of the European Union

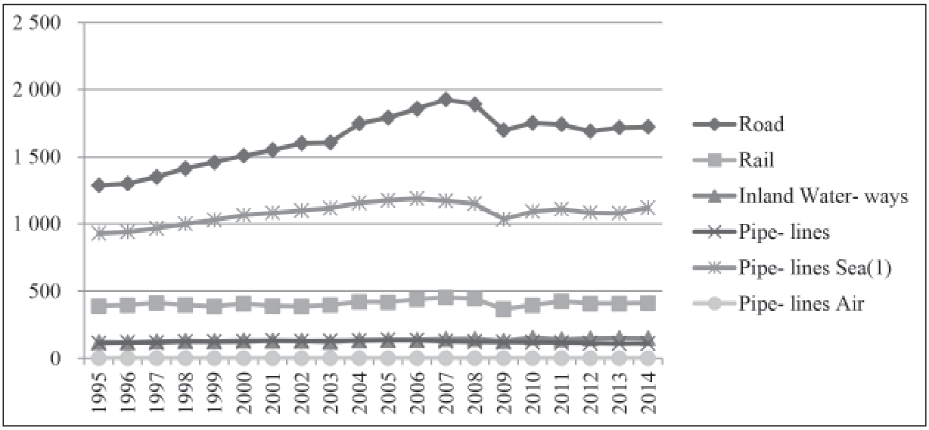
The ability to effectively and fast transport of goods with minimum spends, it is important for international trade, national distribution and economic development. The rapid growth of global trade to the economic and financial crisis, increase integration and market expansion of the European Union cause the relatively fast growth of freight transport in the EU. Therefore, the sector of industrial transport is an essential for the whole economy at national, regional and global level. This sector is a link of many sectors and is an indispensable factor in the creation of added value.

Using the example of the European Union (EU28), transport and storage sector was around € 633 billion or about 5.1% of total gross value added (GVA) in 2014; and by excluding gastronomic activities the transportation sector accounts for some 4.5% of total GVA. In the same year 11 million people were employed within the sector, which represent 5.1% of the total number of employees. About 53% of employees in the sector were employed in the land transport sector (road, rail and pipeline transport), 3% in water transport (sea and inland waterways), 4% in air transport, 25% in storage and other supporting transport activities, and the remaining 16% in the postal and courier activities. Overall spending on transport and related activities, which applies to private households was around € 1,001 billion, which is about 13% of total energy and transport related services (Eurostat, 2016).

Transport activities of passenger transport were about 12,985 km per person. Of these 73.2% were passenger cars, 8% on buses, 6.5% on railways, tram and metro were around 1.5%, intra-EU air traffic 9.2% and intra-EU maritime transport of all 0.6%. Transport of goods was estimated at 3,524 billion tons/km including intra air and maritime transport in the EU28, but no activity between the EU and the rest of the world. Total transport of goods relating to road transport was 49%, rail 11.7%, inland waterways 4.3%, pipeline transport 3.2%, sea transport 31.8%, while the air applies only 0.1 % of the total value of goods transported (Eurostat, 2016).

According to these data it is clear that road transport dominates in the total transport industry, in the transport of passengers and goods in transit. Chart 1 vividly illustrates the dominance of road transport of goods within the European Union in the past 20 years.

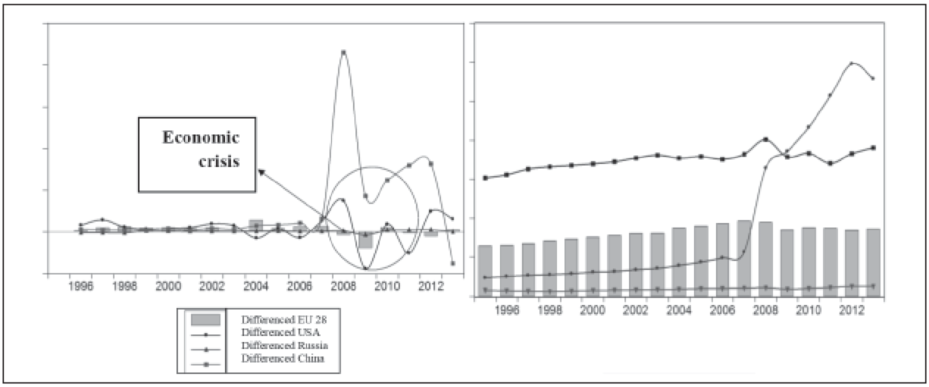
Chart 1. Transportation (billion t /km) by type of transport (EU28) in the period from 1995th to 2014th years



Source: Production of the authors according to Eurostat

Although the EU market has recorded a significant increase in road transport of goods, compared to the US and China, its value is still much lower. According to data for 2013, the total value of road transport EU28 countries was 1,719.4 billion t / km which is twice less than in the US (3,810.5 billion t / km), and more than 3 times less than in China (5573.8 billion tons / km). It should be noted that the road transport of goods in China in the past 20 years had an average growth rate of more than 18% shown clearly in Chart 2 (OECD, 2016).

Chart 2. The movement of road transport of goods (in billion t / km) in the EU28 countries, the US, China and Russia



Source: Production of the authors according to the data from the database of the OECD

4.2. Freight transport by road in the European Union

The structure of road transport in Europe evolved during the twentieth century, especially after World War II, when road transport was becoming a key of the supply chain. In the European Union the development of road infrastructure is significantly influenced by the connection of all intra-European markets which leads to expansion of trade among all European countries. The liberalization of the European market and the expansion of the European Union to any new country cause the increase of road transport after the mid-1990s. Table 1 shows the total amount of goods transported by road transport in the EU28 in the period from 2000 to 2014. The average rate of growth of road transport in the European market in the selected period is 2.76%. The highest growth among the countries of Croatia has the average growth rate of 12.17%.

Table 1. Freight transport by road (billion t/ km) in the EU28 in the period from 2000 to 2014

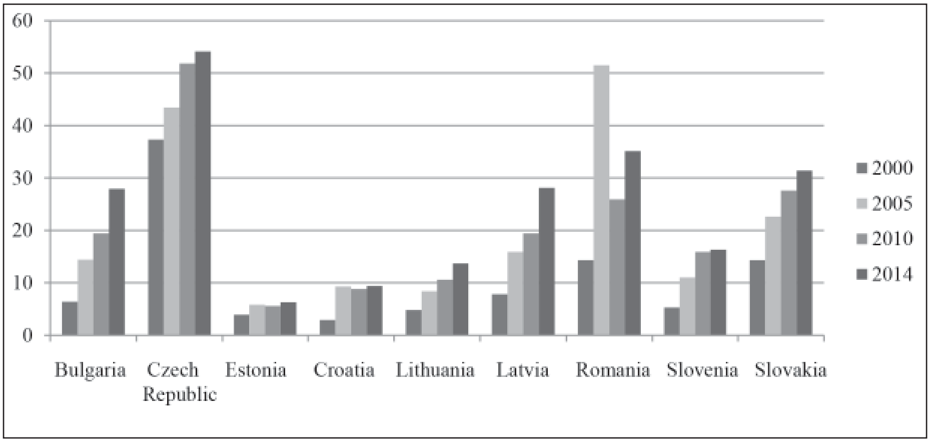
Country	2000	2002	2004	2006	2008	2010	2012	2014	The share of transported cargo in 2014	The average growth rate
Belgium	51	52,9	47,9	43	38,4	35	32,1	31,8	1,84	-3,25
Bulgaria	6,4	8,8	12	13,8	15,3	19,4	24,4	27,9	1,62	11,38
Czech Republic	37,3	43,7	46	50,4	50,9	51,8	51,2	54,1	3,13	3,01
Denmark	24	22,5	23,1	21,3	19,5	15	16,7	16,2	0,94	-2,59
Germany	280,7	285,2	303,8	330	341,5	313,1	307	310,1	17,97	0,80
Estonia	3,9	4,4	5,1	5,5	7,4	5,6	5,8	6,3	0,37	4,46
Ireland	12,3	14,3	17,1	17,5	17,4	10,9	10	9,8	0,57	-0,85
Greece	29	31	36,8	34	28,9	29,8	20,8	19,2	1,11	1,33
Spain	148,7	184,5	220,8	241,8	243	210,1	199,2	195,8	11,35	2,26
France	204	204,4	212,2	211,4	206,3	182,2	172,4	165,2	9,57	-1,34
Croatia	2,9	7,4	8,8	10,2	11	8,8	8,6	9,4	0,54	12,17
Italy	184,7	192,7	197	187,1	180,5	175,8	124	117,8	6,83	-2,78
Cyprus	1,3	1,3	1,1	1,2	1,3	1,1	0,9	0,5	0,03	-5,26
Lithuania	4,8	6,2	7,4	10,8	12,3	10,6	12,2	13,7	0,79	9,07
Latvia	7,8	10,7	12,3	18,1	20,4	19,4	23,4	28,1	1,63	10,05
Luxembourg	7,6	9,2	9,6	8,8	9	8,7	8	9,6	0,56	1,94
Hungary	19,1	17,9	20,6	30,5	35,8	33,7	33,7	37,5	2,17	5,31
Malta	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,02	0,00

Country	2000	2002	2004	2006	2008	2010	2012	2014	The share of transported cargo in 2014	The average growth rate
Netherlands	79,6	77,4	89,7	83,2	78,2	75,8	67,8	70,9	4,11	-0,68
Austria	35,1	38,5	39,2	39,2	34,3	28,7	26,1	24,3	1,41	-2,41
Poland	75	80,3	102,8	128,3	164,9	202,3	222,3	250,9	14,54	9,14
Portugal	26,8	29,7	40,8	44,8	39,1	35,4	32,9	34,9	2,02	2,84
Romania	14,3	25,4	37,2	57,3	56,4	25,9	29,7	35,1	2,03	8,97
Slovenia	5,3	6,6	9	12,1	16,3	15,9	15,9	16,3	0,94	9,02
Slovakia	14,3	14,9	18,5	22,2	29,3	27,6	29,7	31,4	1,82	6,09
Finland	32	32	32,3	29,7	31	29,5	25,5	23,4	1,36	-2,08
Sweden	35,6	36,7	36,9	39,9	42,4	36,3	33,5	42	2,43	1,58
Great Britain	165,6	164	162,7	165,5	160,3	146,7	158,5	143,2	8,30	-0,90
Total	1.509	1.603	1.751	1.858	1.891	1.755	1.693	1.726	100	2,76

Source: Production of the authors according to https://ec.europa.eu/transport/facts-fundings/statistics/pocketbook-2016_en, 20.1.2017).

Apart from Croatia, all other transition countries of the European Union also achieved significant growth. However, it should be considered that, since Global economic crisis, Croatia had a negative growth rate of road transport of goods (-2.74%). In the period from 2000 to 2008, significantly scaling up in the Croatian road transport can be rewritten by the development of road infrastructure. The largest share of the total goods transported by the road in 2014 within the EU28 market had Germany with about 18%. A significant amount of transported goods also had Poland with about 14.5% and Spain with 11.3%. Of smaller countries in transition leads Czech Republic with 3.13%. Croatia had a share of 0.54% of the total goods transported and located at the rear of the society Baltic countries, Ireland, Cyprus, Malta and Luxembourg (Chart 3).

Chart 3. Comparison of road transport (billion tons/ km) in the transition countries of the European Union.



Source: Production of the authors according to https://ec.europa.eu/transport/facts-fundings/statistics/pocketbook-2016_en, (20.1.2017.)

The highest annual growth rate of road transport of goods in 2014 achieved Sweden with growth of as much as 25.37% and Luxembourg with a growth rate of 11.63%. The negative growth rate in 2014 was recorded in France, Portugal, Cyprus, Finland, Belgium, Czech Republic, Italy and the United Kingdom. Croatia recorded a growth rate of 3.3% (Table 2).

In almost all European countries, road transport is dominant means of transport of goods with a share of more than 50% of total goods transport. At the level of the EU28 on average 68.57% of the total goods transported is transported by road in 2014. Countries that have a share of road transport less than 50% are Estonia, Lithuania, Latvia, Netherlands, Slovakia and Romania. The smallest share of road transport has Lithuania, with only 17.10%. Croatia has the share of road transport of goods by 65.70% of the total transport of goods in the country. Of this, 41.49% refers to the national transport of goods and 58.51% on the foreign transport of goods, including a report to the vehicles registered in the Republic of Croatia.

Table 2. Basic indicators of road transport in the EU28 in 2014

Country	Road transport of goods (% of total goods transport in the country)	Road transport of goods (bill. t/km)	The share of national road transport*	The external road transport**	The share of road transport of goods (% of total road transport in the EU	The annual rate of growth of road transport of goods
Belgium	71,20	31,8	60,38	39,62	1,84	-3,05
Bulgaria	53,20	27,9	24,37	75,27	1,62	2,95
Czech Republic	69,00	54,1	31,05	68,95	3,13	-1,46
Denmark	80,00	16,2	79,63	19,75	0,94	0,62
Germany	69,30	310,1	84,81	15,19	17,97	1,44
Estonia	44,80	6,3	23,81	76,19	0,37	5,00
Ireland	98,90	9,8	78,57	20,41	0,57	6,52
Greece	97,10	19,2	78,65	21,35	1,11	1,05
Spain	89,40	195,8	65,47	34,53	11,35	1,66
France	83,30	165,2	91,46	8,54	9,57	-3,67
Croatia	65,70	9,4	41,49	58,51	0,54	3,30
Italy	81,80	117,8	86,93	13,16	6,83	-7,39
Cyprus	100,00	0,5	100,00	0,00	0,03	-16,67
Lithuania	17,10	13,7	19,71	79,56	0,79	7,03
Latvia	31,10	28,1	9,96	90,04	1,63	6,84
Luxembourg	85,50	9,6	11,46	88,54	0,56	11,63
Hungary	58,40	37,5	25,60	74,40	2,17	4,75
Malta	100,00	0,3	66,67	33,33	0,02	0,00
Netherlands	45,10	70,9	44,15	55,85	4,11	1,00
Austria	55,70	24,3	57,61	42,39	1,41	0,41
Poland	65,70	250,9	38,50	61,50	14,54	1,33
Portugal	85,60	34,9	30,09	69,91	2,02	-4,64
Romania	39,80	35,1	34,47	65,53	2,03	3,24
Slovenia	64,00	16,3	12,88	87,12	0,94	2,52
Slovakia	47,70	31,4	16,24	83,76	1,82	4,32
Finland	68,80	23,4	86,75	13,25	1,36	-4,10
Sweden	69,60	42	92,38	7,38	2,43	25,37
Great Britain	82,20	143,2	94,69	5,24	8,30	-2,72
Total	68,57	1725,7	53,14	46,76	100,00	1,69

* National transport of the vehicles registered in the reporting country

** Foreign transport of vehicles registered in the reporting country

Source: Production of the authors according to https://ec.europa.eu/transport/facts-fundings/statistics/pocketbook-2016_en, 20.1.2017)

According to Table 2 it is conspicuous that in the young European economies (former socialist countries) was prevalent a share of foreign road transport based on records of vehicles registered in the reporting country while in the countries of Southern and Western Europe was prevalent share of the national road transport. The smallest share of the national road transport had the Baltic States, Slovenia and Slovakia while the lowest share of foreign road transport had France, Sweden, United Kingdom and Cyprus.

The share of employees in the road transport of goods in the EU is about 2,938 thousand people which is on average about 30% of employees of the total transport industry and associated activities. In most countries, the number of employees is on average 3.1 employees within of the total transport industry. The largest share of those employed in the road transport has Latvia with nearly 50%, while the lowest share, when excluding Cyprus and Malta has Germany with less than 20%. However, one should take into account that Germany is the country with the most employees in the road transport within the perimeter of the countries analyzed. Also, it is the country with the most employees in the total EU transport industry. Croatia has about 20,000 people working in the activities of road transport which is about 26% of the employees within of the total transport industry and associated activities.

The number of companies dealing with road transport within the transport industry of the EU amounts to 563,598, which is about 49% of the total transport industry. The largest number of road transport companies has Spain with 108,173 which is about 20% of the total number of road transport enterprises of EU countries. The largest share of road transport companies in the transport industry has the Czech Republic with a share of 78.93% and Croatia with 66.65%. The smallest share refers to the Netherlands, Greece and Portugal.

In order to realistically value road transport of goods, it is important to estimate the monetary value of road transport in observed countries. Thus, the maximum value of road transport achieves France with more than 43 billion euros, which accounts for about 14% of total road transport of goods of the European Union. Remarkable results realize and other major economies of the European Union. Of smaller countries, the highest value of road transport of goods in the European Union has the Netherlands, Belgium and Austria, and of the former socialist countries, the highest rank achieved Poland with a value of just over 20 billion euros or 6.52% of total road transport of the European Union. Croatia with Luxembourg achieves the minimum value of road transport of goods between the countries of the European Union if we exclude from the analysis Malta and Cyprus (Table 3).

The value of Croatian road transport in 2013 was slightly higher than the 1.2 billion euros or 0.39% of total road transport of the European Union. The greatest value of road transport to the employee and to the company belongs to the most developed states of the European Union, while at the lower end of the scale are the transition countries of the EU including Croatia (Table 3).

Table 3. The value of road transport of goods in the EU28 in 2013

Country	The value of road transport in mil. €	The share values within the transport industry (%)	The share of the total value of road transport in the EU (%)	Number of employees	Number of enterprises	The value per employee in the €	The value of the company in the €
France	43.679	21,21	14,04	351.833	37.676	124.147	1.159.335
Italy	42.562	28,81	13,68	304.949	72.723	139.572	585.265
Germany	39.194	14,60	12,60	409.922	35.852	95.613	1.093.208
Spain	29.996	31,65	9,64	305.836	108.173	98.078	277.296
Great Britain	28.222	15,23	9,07	242.482	33.527	116.390	841.781
Poland	20.281	48,48	6,52	293.595	77.141	69.079	262.911
Netherlands	19.275	25,50	6,19	1.13.526	11.156	169.788	1.727.806
Sweden	11.191	22,80	3,60	75.949	15.006	147.346	745.755
Belgium	10.990	22,81	3,53	59.920	8.201	183.411	1.340.080
Austria	9.087	22,31	2,92	57.905	6.570	156.921	1.383.029
Cheech Republic	7.486	35,52	2,41	113.938	30.739	65.699	243.524
Romania	6.083	47,39	1,95	113.752	22.622	53.479	268.915
Finland	6.024	26,25	1,94	45.499	10.370	132.387	580.858
Denmark	5.453	10,96	1,75	32.795	5.150	166.281	1.058.873
Hungary	4.813	31,62	1,55	65.123	14.149	73.904	340.158
Portugal	4.796	27,37	1,54	58.833	8.287	81.518	578.738
Latvia	3.260	42,82	1,05	52.846	4.891	61.690	666.551
Slovakia	2.961	37,73	0,95	38.895	8.105	76.117	365.281
Bulgaria	2.904	50,69	0,93	55.740	10.575	52.095	274.591
Ireland	2.855	16,57	0,92	19.785	3.939	144.275	724.676
Greece	2.668	23,24	0,86	34.812	19.351	76.625	137.848
Slovenia	2.118	44,82	0,68	20.443	5.561	103.619	380.920
Lithuania	1.389	26,27	0,45	23.868	3.310	58.186	419.577
Estonia	1.259	24,60	0,40	15.062	2.873	83.587	438.218
Croatia	1.204	33,32	0,39	20.128	5.891	59.797	204.311

Country	The value of road transport in mil. €	The share values within the transport industry (%)	The share of the total value of road transport in the EU (%)	Number of employees	Number of enterprises	The value per employee in the €	The value of the company in the €
Luxembourg	1.201	24,57	0,39	7.593	461	158.119	2.604.338
Cyprus	129	5,53	0,04	1.912	895	67.468	144.134
Malta	103	9,00	0,03	1.059	404	97.748	256.109
Total	311.181	27,56	100,00	2.938.000	563.598	2.912.950	19.104.089

Source: Production of the authors according to https://ec.europa.eu/transport/facts-fundings/statistics/pocketbook-2016_en, 20.1.2017)

When it comes to road transport, it is important to mention road cabotage and international transport. Road cabotage allows the performance of road freight transport services in another Member State provided that such services operate temporarily (maximum permitted three cabotage operations within seven days after an international transport to the host country, cabotage). Cabotage can be viewed as a national transportation of a country taken over by the carrier from another country. It represents a small percentage of total road transport of goods.

Table 4. Road cabotage in EU countries (million t/ km)

Country	2000	2005	2010	2014	2015	The growth rate of road cabotage in 2015 (%)
Germany	2.571.337	3.674.724	6.023.116	12.222.833	12.476.181	2,07
France	2.074.001	4.642.348	6.352.524	7.710.001	78.74.984	2,14
Italy	714.649	878.959	146.3315	1.769.421	1.511.998	-14,55
Belgium	466.696	587.884	1.204.212	1.266.720	1.497.160	18,19
Great Britain	1.325.219	1.875.059	1.271.842	1.422.349	1.410.746	-0,82
Sweden	213.373	522.300	1.044.264	1.340.530	1.224.328	-8,67
Spain	410.606	1.156.488	664.496	1.149.688	1.202.800	4,62
Austria	217.240	255.208	329.449	773.460	64.5387	-16,56
Netherlands	224.749	278.084	553.580	767.465	579.759	-24,46
Czech Republic	13.638	33.646	171.170	96.119	295.297	207,22
Ireland	24.560	152.200	178.439	153.779	206.549	34,32
Denmark	51.714	213.764	412.897	330.918	178.389	-46,09
Slovakia	317	39.175	401.11	104.772	116.574	11,26
Finland	2.318	22.469	86.461	85.941	94.747	10,25

Country	2000	2005	2010	2014	2015	The growth rate of road cabotage in 2015 (%)
Poland	32.978	35.504	180.685	87.408	78.058	-10,70
Romania	21.808	53.254	30.962	56.782	73.685	29,77
Hungary	22.785	27.767	21.229	60.892	55.024	-9,64
Greece	64.373	72.410	211.901	221.298	51.264	-76,83
Portugal	42.082	56.123	55.734	38.889	47.496	22,13
Bulgaria	241	440	1.660	9.404	22.905	143,57
Lithuania	246	6.078	8.519	27.596	21.386	-22,50
Latvia	0	1.319	19.977	17.341	13.539	-21,92
Estonia	130	959	3.483	2.810	12.695	351,78
Luxemburg	9.322	27.184	15.351	9.730	11.055	13,62
Slovenia	2.733	9.234	1.764	10.583	9.652	-8,80
Croatia	270	4.651	1.771	1.138	1.157	1,67
Total	8.507.385	14.627.231	20.348.912	29.737.867	29.712.815	-0,08

Source: Production of the authors according to https://ec.europa.eu/transport/facts-fundings/statistics/pocketbook-2016_en, 20.1.2017).

According to the Table 4, the highest value of road cabotage in 2015 was realized by Germany with 12.47 million ton-kilometers which includes about 42% of the total road cabotage of selected countries with a slight increase of 2.07% over the previous year. At the level of the selected countries overall road cabotage in the comparison to 2014 has decreased by 0.08% but increased compared to the beginning of the 2000s to about 249%; and compared to 2010 by about 46%. The highest growth rates of road cabotage in 2015 compared to the previous recorded Estonia, Czech Republic and Bulgaria while the largest decrease was recorded by Greece and Denmark. Compared to 2014, Croatia recorded a slight increase of road cabotage of 1.67%.

5. CONCLUSION

Although there is no theoretical unity in definitions of the supply chain, it can be regarded as a link between several companies that are directly related by flow of one or more products, services, information from baseline to end point or from the producer to the consumer. Supply chain management actually involves managing relationships and activities among these companies, or members of the chain.

There are many individual transactions in the supply chain that are carried out. For effective management of complete supply chain the most important is the responsibility, reliability, relationships and resilience. The key is to minimize the length of time between receipt of order and delivery of goods and well established communication between customers and suppliers.

In the modern economy for each delivery of goods road transport plays a major role. It connects the production, distribution and consumption, and due to its flexibility can provide the service "door to door". As such it is able to connect all stakeholders at the local, national, regional and global level, and is the dominant mode of transport in many countries. Road transport plays the role of delivery to end users, but also to transport between factory and various logistics or distribution centers. After World War II in developed countries are increasingly starting to combine with other modes of transport in order to meet all the conditions of the supply chain. So they have developed many transport chains which today allow a speedy method of delivery from around the world (DHL, DSV and the like) by combining different forms of transport. Road transport is the first and last step of delivery of certain types of goods.

The countries of Central Europe achieve the highest value of road transport in the European Union. Germany, as the most developed industrial country in Europe, has been a leader with the largest volume of goods transported on the European market. France in turn holds the highest value of road transport of goods in Europe. However, smaller countries in Central Europe have the highest value per employee in the road transport of goods and the maximum value of the company engaged in road transport services. Transition countries achieved the highest growth rates in road transport, but, still do not have a significant share of the European market.

The biggest advantage of road transport in the initial Member States in relation to the European periphery is much more developed road infrastructure and other transport forms of transportation of goods. Although Croatia has improved road infrastructure in the last 15 years significantly, there are still missing another transport channels. Maritime transport is imposed as a means of global and mass transportation. The huge amounts of goods over long distances at a very inexpensive way have been transported. Dutch road transport certainly would not be so developed that there is no largest seaport in Europe

(Rotterdam). Croatia has a very good position and can be a leader in transport of goods in the region.

The development of maritime port of Rijeka and investment in rail infrastructure would significantly increase the volume of domestic and international road transport of goods as well as the scope of foreign trade, which would indirectly affect the affect the development of the economy through additional employment, generating new trade flows and by creating new markets. Road transport of goods to these modes can certainly be a generator and an agent for the growth and development of the economy.

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Financial Economics

MARKTMISSBRAUCHSRECHT IN DER EUROPÄISCHEN UNION (EU) - WESENTLICHE NEUERUNGEN DURCH DIE MARKTMISSBRAUCHS-VERORDNUNG (MMVO), DIE AB 03.JULI 2016 IN KRAFT IST

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Abstract

Die Reform des Marktmissbrauchsrechts ist eine der Antworten der Europäischen Union (EU) auf die Finanzkrise 2008. Die Marktmissbrauchsverordnung („MMVO"; engl. „Market Abuse Regulation" = „MAR") ist Teil eines Maßnahmenpakets, das die Marktintegrität und den Schutz der Investoren stärkt und dem generellen Ziel der EU nach EU-weiter Angleichung des Kapitalmarktrechts Rechnung trägt. Die MMVO ist ab 03. Juli 2016 unmittelbar wirksam. Sie regelt die Ad-hoc-Publizität, verpflichtet die Emittenten von Finanzinstrumenten zur Führung und Publizität von Insiderlisten, regelt das Verbot von Insidergeschäften, regelt die Directors` Dealings und beinhaltet das Verbot der Marktmanipulation. Die MMVO enthält Sanktionen als Mindestvorgaben, welche in jeweils nationales Recht umgesetzt werden müssen. Die Vorschriften der MMVO erweitern den Pflichtenkatalog für deutsche Unternehmen mit Handel von Finanzinstrumenten im Freiverkehr drastisch.

Keywords: *Reform des Marktmissbrauchsrechts in der EU, Marktmissbrauchsverordnung (MMVO) der EU Nr. 596/2014, Emittenten von Finanzinstrumenten*

JEL classification: G1

1 EINLEITUNG

Eine der Antworten der Europäischen Union (EU) auf die Finanzkrise 2008 ist die **Reform des Marktmissbrauchsrechts**. Die Kommission der EU stellt fest, dass die Finanzkrise die Bedeutung der Marktintegrität grell ans Licht gerückt hat. Die Marktmissbrauchsverordnung („MMVO"; engl. „Market Abuse Regulation" = „MAR") ist Teil eines Maßnahmenpakets, das dem durch die Finanzkrise deutlicher gewordenen Bedürfnis nach Schutz des Marktes, nach Schutz der Investoren und dem generellen Ziel der EU nach EU-weiter Angleichung des Kapitalmarktrechts (langfristiges Ziel der MMVO: Schaffung einer Kapitalmarktunion in der EU) Rechnung trägt (vgl. KPMG. 2016. S. 3). Die Marktmissbrauchsverordnung (vollständiger Titel: VERORDNUNG (EU) Nr. 596/2014 DES EUROPÄISCHEN PARLAMENTS UND DES RATES vom 16. April 2014) ist ab 03. Juli 2016 **unmittelbar** wirksam (vgl. GÖRG. 2016. S. 1).

Die Vorschriften ersetzen das vorherige Regelungsregime bestehend aus der Marktmissbrauchsrichtlinie (RL 2003/6/EG) und zahlreichen Regelungen der einzelnen EU-Mitgliedstaaten. Zu dem Maßnahmenpaket der EU zählen über die MMVO hinaus (vgl. KPMG. 2016. S.3) die Richtlinie (RL 2014/65/EU) und die Verordnung der EU (VO 600/2014) über Märkte für Finanzinstrumente („MIDID II" bzw. „MIFIR") und die Richtlinie über strafrechtliche Sanktionen für Insiderhandel und Marktmanipulation 2014/57/EU („CRIM-MAD"). Die Notwendigkeit der EU-Neuregelungen wird damit begründet, dass die rechtlichen und technologischen Entwicklungen - insbesondere die Verlagerung des Handels mit Finanzinstrumenten von den „traditionellen" Börsen hin zu **alternativen Plattformen**, deren rechtliche Erfassung große Schwierigkeiten bereitet – der Regulierung bedurften. Das neue EU-Recht führt teilweise zu erheblichen Verschärfungen: So sind künftig auch Freiverkehrsemittenten, deren Wertpapiere auf ihre Initiative hin zum Handel einbezogen sind, insbesondere zu Ad-hoc-Publizität, zum Führen und Publizieren von Insiderlisten sowie auch zur Beachtung der Regeln über Directors` Dealings verpflichtet. Darüber hinaus wird das Marktmissbrauchsrecht in Sachen Insiderhandel und Marktmanipulation weiter verschärft. Zudem entwickelt die Europäische Wertpapier- und Marktaufsichtsbehörde ESMA (Europpean Securities and Markets Authority) konkretisierende Rechtsakte und technische Standards zur Durchsetzung der MMVO (vgl. GÖRG. 2016. S. 1).

Anzuwenden sind die neuen Regelungen nach Art. (Artikel) 2 I a MMVO auf **Finanzinstrumente**, die zum Handel an einem **geregelten Markt** zugelassen sind oder für die ein Zulassungsantrag gestellt ist. Nach Art. 2 I b, c MMVO ebenso auf Finanzinstrumente, die in einem **multilateralen Handelssystem ("MTF")** gehandelt werden, zum Handel in einem multilateralen Handelssystem zugelassen sind oder für die ein Antrag auf Zulassung zum Handel in einem multilateralen Handelssystem gestellt wurde sowie auf **Finanzinstrumente**, die in einem **organisierten Handelssystem ("OFT")** gehandelt werden (vgl. MAYER BROWN. 2016. S. 1). Art. 2 I d MMVO bezieht Finanzinstrumente ein, deren Kurs oder Wert von einem der vorstehend beschriebenen Instrumente abhängt oder sich darauf auswirkt, z.B. Kreditausfall-Swaps oder Differenzkontrakte (vgl. KPMG. 2016. S. 5). Aus deutscher Sicht sind künftig **Freiverkehrsemittenten** von den erhöhten Anforderungen nach MMVO betroffen (für sie galten bislang nur Verbote von Insidergeschäften und von Marktmanipulation aus § 14, Abs. 20a WpHG (Gesetz über den Wertpapierhandel) bzw. Verpflichtungen aus den Geschäftsbedingungen der jeweiligen Wertpapierbörse, sofern die Freiverkehrsemittenten die Einbeziehung ihrer Finanzinstrumente in den Freiverkehr veranlasst haben (Initiative des Freiverkehrsemittenten). Auch die Emission von Schuldtiteln - insbesondere Anleihen - können erfasst sein (vgl. KPMG. 2016. S. 5).

2 WESENTLICHE NEUERUNGEN DURCH DIE MMVO

Künftig werden in der gesamten EU wesentliche Regelungen des Kapitalmarktrechts nicht mehr durch einzelstaatliche Gesetze (in Deutschland: WpHG (Gesetz über den Wertpapierhandel))geregelt, sondern **unmittelbar** durch die Bestimmungen der MMVO.

2.1 AD-HOC-PUBLIZITÄT

Die Pflicht zur **"Ad-hoc-Publizität"** sieht vor, dass ein Emittent Insiderinformationen, die unmittelbar seinem Tätigkeitsbereich entstammen, allen übrigen Marktteilnehmern unverzüglich zur Verfügung stellt. Art. 17 MMVO schreibt auch allen Freiverkehrsemittenten vor, so genannte Insiderinformationen unverzüglich offen zu legen. Insiderinformationen, die Emittenten unmittelbar betreffen, sind mithin der Öffentlichkeit so bald wie möglich bekannt zu geben. Zu veröffentlichen sind solche Informationen, die im Falle ihres öffentlichen Bekanntwerdens geeignet wären, den Börsenkurs oder Marktpreis der betreffenden Wertpapiere **erheblich** zu beeinflussen (vgl. GÖRG. 2016. S. 1; beispielhaft die Ad-hoc-Mitteilungen der KSB-Group. 2016. Vom 3.11.2016, 1.12.2016 und 15.12.2016 gem. Art. 17 MMVO). Die MMVO geht davon aus, dass bei zeitlich gestreckten Vorgängen bereits Zwischenschritte veröffentlichungspflichtige Insiderinformationen darstellen können (vgl. Art. 17 IV MMVO). Dies besagt, dass bei einem zeitlich gestreckten Vorgang nicht nur das „Endergebnis“ – z.B. das Ausscheiden des Vorstandsvorsitzenden, Abschluss eines Unternehmenskaufvertrags – eine publizitätspflichtige Insiderinformation darstellen kann, sondern bereits die vorgelagerten Zwischenschritte – z.B. Gespräche zwischen Vorstandsvorsitzendem und Aufsichtsratsmitgliedern im Vorfeld des Ausscheidens, Abschluss einer Grundsatzvereinbarung/“Letter of intent“, Durchführung einer Due Diligence – einer Ad-hoc-Publizität bedürfen (vgl. CMS Deutschland. April 2016. S. 2). Die MMVO lässt es offen, in welchem Fall ein Zwischenschritt als solcher Kursrelevanz hat, so dass damit verbundene Anwendungsprobleme in der Praxis auftreten werden.

Die Ad-hoc-Publizität “ist das Kernelement des Insiderrechts. Als Pendant zur Regelpublizität und durch die sofortige Veröffentlichung entstehender Insiderinformationen soll dem verbotenen Insiderhandel präventiv die Grundlage entzogen werden. Zugleich hilft sie den Kapitalmarkt für Anleger transparenter zu gestalten, wodurch das Vertrauen in den Markt gestärkt sowie eine effiziente Preisfindung gewährleistet wird” (KRAMMER JAHN. 2016. S. 4).

Die MMVO erlaubt einen Aufschub einer Ad-hoc-Mitteilung (so genannte „Selbstbefreiung“), wenn der Aufschub im berechtigten Interesse des Emittenten liegt, eine Irreführung der Öffentlichkeit nicht zu befürchten ist und die Geheimhaltung gewährleistet ist (vgl. CMS Deutschland. April 2016. S. 2). Der Emittent trifft die Aufschubentscheidung “in eigener Verantwortung“, d.h. ohne Beteiligung der Aufsichtsbehörde. Die Aufsichtbehörde ist aber zu informieren, unmittelbar nachdem die Veröffentlichung nachgeholt wurde (vgl. MAYER BROWN. 2016. S. 2).

Die Europäische Wertpapier- und Marktaufsichtsbehörde ESMA (European Securities and Markets Authority) hat zur Konkretisierung des Begriffs „berechtigtes Interesse“ und „Irreführung der Öffentlichkeit“ noch Leitlinien mit einer nicht abschließenden Liste von Fallgruppen veröffentlicht, die für die praktische Handhabung des Aufschubs von Bedeutung sein werden (vgl. CMS Deutschland. April 2016. S. 3).

Als „berechtigtes Interesse" an einem Aufschub der Ad-hoc-Mitteilung werden z.B. folgende Fälle genannt (vgl. CMS Deutschland. April 2016. S. 3):

- laufende Vertragsverhandlungen könnten beeinträchtigt werden,
- die erforderliche Zustimmung eines anderen Gesellschafterorgans steht noch aus,
- geplanter Erwerb oder Verkauf einer wesentlichen Beteiligung an einem anderen Unternehmen.

Eine „Irreführung der Öffentlichkeit" könne in folgenden Fällen nahe liegen, so dass ein Aufschub ausscheiden kann (vgl. CMS Deutschland. April 2016. S. 3):

- erhebliche Abweichung von einer früheren Veröffentlichung durch den Emittenten,
- wahrscheinliches Verfehlen von zuvor veröffentlichten Finanzprognosen,
- Abweichen der Information von der vom Emittenten verursachten Markterwartung.

Die Europäische Wertpapier- und Marktaufsichtsbehörde ESMA (European Securities and Markets Authority) hat zur Konkretisierung der Bedingungen für einen Aufschub dem Emittenten umfangreiche Dokumentationspflichten auferlegt (vgl. CMS Deutschland. April 2016. S. 3):

- Datum und Uhrzeit des erstmaligen Entstehens der Insiderinformation,
- Datum und Uhrzeit der Aufschubentscheidung,
- Datum und Uhrzeit der voraussichtlichen Ad-hoc-Mitteilung,
- zuständige Personen, die über Beginn und voraussichtliches Ende des Aufschubs und über die Veröffentlichung entscheiden und sicherstellen, dass das fortlaufende Vorliegen der Aufschubvoraussetzungen überprüft wird,
- ergriffene Maßnahmen zur Sicherstellung der Vertraulichkeit sowie
- Vorkehrungen für den Fall, dass die Vertraulichkeit nicht mehr länger gewährleistet werden kann.

Emittenten müssen über ein elektronisches System verfügen, in dem alle für einen Aufschub relevanten Informationen verzeichnet werden (vgl. MAYER BROWN. 2016. S. 2f.).

Im Rahmen der Gewährleistung der Vertraulichkeit während des Aufschubs einer Ad-hoc-Mitteilung gelten nach MMVO Neuerungen im Fall des Auftretens von **Gerüchten**. Danach ist kein weiterer Aufschub der Ad-hoc-Mitteilung bei Gerüchten möglich, die den Tatsachenkern treffen, und zwar unabhängig davon, ob das Gerücht aus der Sphäre des Emittenten stammt oder nicht (vgl. Art. 17 VII MMVO). „Damit können willkürlich lancierte Behauptungen von Marktteilnehmern den Emittenten unter Umständen zur unverzüglichen Veröffentlichung einer bislang aufgeschobenen Ad-hoc-Mitteilung verpflichten" (CMS Deutschland. April 2016. S. 4).

Mindestens fünf Jahre lang müssen die Ad-hoc-Mitteilungen auf der Internetseite des Emittenten zugänglich sein und in das Unternehmensregister eingestellt werden (vgl. Art. 17 I MMVO).

2.2 INSIDERLISTEN (INSIDERVERZEICHNISSE)

Insiderlisten sind Verzeichnisse sämtlicher Personen mit bestimmungsgemäßem Zugang zu Insiderinformationen (z.B. Mitarbeiter, Berater, Anwälte, Buchhalter, Ratingagenturen).

Emittenten von Finanzinstrumenten, die der Ad-hoc-Mitteilungs-Pflicht unterliegen, haben Insiderlisten zu führen (Art. 18 MMVO). Diese Verpflichtung gilt auch für **Freiverkehrsemittenten**. Sie betrifft auch alle Personen, die im Auftrag oder auf Rechnung eines Freiverkehrsemittenten handeln (bei Einschaltung von „Dienstleistern" - Anwälte, Berater - unter Benennung eines Ansprechpartners). Die Insiderliste ist stets anlassbezogen (nicht projektbezogen) zu führen (vgl. CMS Deutschland. 2016. S. 4). Emittenten müssen über ein elektronisches System verfügen, in dem alle für einen Aufschub relevanten Informationen verzeichnet werden (vgl. MAYER BROWN. 2016. S. 2f.).

In die stets zu aktualisierenden Insiderverzeichnisse sind sämtliche Personen aufzunehmen, die Zugang zu Insiderinformationen eines Emittenten haben. Darüber hinaus sind alle zu erfassende Personen über ihre insiderrechtlichen Pflichten und die Folgen bei Verstößen aufzuklären. Dabei ist eine schriftliche Bestätigung der zu erfassenden Personen erforderlich, dass sie die Pflichten anerkennen (Art. 18 II MMVO). Dieses „schriftliche Anerkenntnis" der insiderrechtlichen Pflichten durch die in die Insiderliste aufgenommenen Personen kann auch in elektronischer Form erfolgen. Damit ist eine Übersendung der Bestätigung per E-Mail/Fax ausreichend (vgl. CMS Deutschland. April 2016. S. 2).

2.3 VERBOT VON INSIDERGESCHÄFTEN

Ein **verbotenes Insidergeschäft** liegt vor, wenn eine Person über Insiderinformationen verfügt und unter Nutzung derselben für eigene oder fremde Rechnung **direkt oder indirekt** Finanzinstrumente, auf die sich die Informationen beziehen, erwirbt oder veräußert. Insiderinformationen sind u.a. solche, die, wenn sie öffentlich bekannt würden, geeignet wären, den Kurs dieser Finanzinstrumente oder den Kurs damit verbundener derivativer Finanzinstrumente erheblich zu beeinflussen (vgl. KPMG. 2016. S. 6).

Unter den Tatbestand eines verbotenen Insidergeschäfts kann künftig auch die Stornierung oder Änderung eines noch nicht durchgeführten Auftrages fallen (Art. 8 I 2 MMVO). Auch das Handeln aufgrund einer Empfehlung ist ein solcher Tatbestand. Somit stellt ein Erwerb aufgrund einer Empfehlung einer Person, die wissen sollte, dass die Empfehlung auf einer Insiderinformation beruht, ein verbotenes Insidergeschäft dar (Art. 8 III MMVO).

Ausführlich widmet sich die MMVO dem Thema "Marktsondierung", damit soll erreicht werden, dass die entsprechende "Marktpraxis" nicht unterbleiben muss (vgl. Zwissler, T., 2016, S. 19). Art. 9 MMVO schließt explizit einzelne Handlungsweisen als „Legitime Handlungen" von der Anwendung des Insiderhandelsverbots aus. Dazu gehört z.B. die Erfüllung einer Verpflichtung, die auf der Erteilung eines Auftrages oder dem Abschluss einer Vereinbarung aus der Zeit vor dem Erhalt der Insiderinformationen beruht (Art. 9 III lit. a MMVO).

Art. 11 MMVO regelt die befugte Weitergabe von Insiderinformationen im Rahmen einer Marktankündigung eines Geschäfts durch den Emittenten, einen Zweitanbieter oder einen Dritten, der im Auftrag des Emittenten oder des Zweitanbieters tätig wird, an einen oder mehrere potentielle Anleger, um das Interesse von potenziellen Anlegern an einem möglichen Geschäft und dessen Bedingungen abzuschätzen (Art. 11 I MMVO).

Dabei ist zu beachten, dass diese Vorschrift keine „safe harbours" festlegt. Sie bestimmt für die Marktsondierung umfangreiche Prüf-, Verhaltens- und Dokumentationspflichten (Art. 11 V – VII MMVO). „Insbesondere hat der offenlegende Marktteilnehmer sicherzustellen, dass der Empfänger der Insiderinformation die Wahrung der insiderrechtlichen Pflichten aus Art. V MMVO erklärt" (GÖRG. 2016. S. 2).

2.4 MANAGERS` TRANSACTIONS (DIRECTORS` DEALINGS)

Directors` Dealings sind (in Bezug auf Emittenten) **meldepflichtige Eigengeschäfte** von Führungskräften mit Anteilen oder Schuldtiteln des Emittenten oder damit verbundenen Derivaten oder anderen damit verbundenen Finanzinstrumenten (vgl. KPMG. 2016. S.7; beispielhaft die Mitteilung der aidas-GROUP (2016) gem. Art. 19 MMVO unter DGAP-DD: aidas AG vom 15.11.2016). Die Führungskräfte von Emittenten und mit solchen in enger Beziehung stehenden Personen müssen dem Emittenten und der zuständigen Behörde jedes Eigengeschäft in Anteilen oder Schuldtiteln – d.h. insbesondere auch in Anleihen – unverzüglich melden, und zwar innerhalb von drei Geschäftstagen nach Geschäftsabschluss (Art. 19 I MMVO).

Die in Art. 19 MMVO verankerten Regelungen zu sog. „Eigengeschäften von Führungskräften (Directors` Dealings)" sehen **Ausnahmen** von der Mitteilungspflicht vor (vgl. ALLEN & OVERY. 2016. S. 2):

- Keine Mitteilungspflicht besteht bei Geschäften, wenn etwa bei einem Fonds die Risikoposition gegenüber den Aktien oder Schuldtiteln des Emittenten 20% der von dem Fonds gehaltenen Vermögenswerte nicht übersteigt oder
- die Führungsperson oder die mit ihr eng verbundene Person etwa die Zusammensetzung des Fonds nicht kennt und nicht kennen konnte und ein Grund für eine Annahme besteht, dass die Aktien oder Schuldtitel die Schwelle von 20% nicht überschreiten.

Die Meldepflichtigen sind verpflichtet, alle zumutbaren Anstrengungen zu unternehmen, um ggf. verfügbare Informationen über die Zusammensetzung etwa des Fonds zu erhalten.

Eine weitere Ausnahme von der Meldepflicht wird im Zusammenhang mit Geschäften, die von Personen getätigt werden, die geschäftsmäßig Geschäfte vermitteln oder ausführen, wenn diese vollen Ermessensspielraum bei den Transaktionen haben. Vorausgesetzt ist, dass der geschäftsmäßig Handelnde von der Führungskraft bzw. der eng mit dieser verbundenen Person keine Anweisungen oder Empfehlungen zur Zusammensetzung des Portfolios erhält.

Offen und nicht berührt ist die Frage, wie der Kreis der mit Führungspersonen eng verbundenen Personen zu bestimmen ist. „Während die BaFin (Bundesanstalt für Finanzdienstleistungsaufsicht in Deutschland) offenbar wie bisher eine einschränkende Auslegung favorisiert, plädieren deren Vernehmen nach Aufsichtbehörden anderer Mitgliedstaaten für eine wortlautgetreue Anwendung“ (ALLEN & OVERY. 2016. S. 2).

Es besteht eine **Bagatellgrenze** für die Mitteilungspflicht von EURO 5.000 innerhalb eines Kalenderjahres. Diese kann durch nationale Behörden auf bis zu EURO 20.000 erhöht werden.“Bei der Berechnung der Bagatellgrenze sind die Eigengeschäfte der Führungskräfte und der nahestehenden Personen zusammenzurechnen” (CMS Deutschland. April 2016. S. 5).

Es besteht außerdem ein grundsätzliches **Handelsverbot** für Führungskräfte für einen Zeitraum von **30 Tagen** vor Veröffentlichung eines Zwischen- oder Jahresabschlussberichts (“Closed Periods”). Dies betrifft durch Gesetz oder Börsenordnung vorgeschriebene Berichte. Schließlich gelten die Closed Periods nach der MMVO nur für Führungskräfte, nicht aber für diesen nahestehende Personen (vgl. CMS Deutschland April 2016. S. 6).

2.5 VERBOT DER MARKTMANIPULATION

Was unter “**Marktmanipulation”** zu verstehen ist, ergibt sich im Einzelnen aus Art. 12 MMVO. Der Begriff „Marktmanipulation“ umfasst folgende Handlungen (Art. 12 I MMVO):

- Abschluss von Geschäften, Erteilung von Kauf- oder Verkaufsaufträgen oder sonstigen Handlungen, die falsche oder irreführende Signale über das Angebot, die Nachfrage oder den Börsen- oder Marktpreis von Finanzinstrumenten geben, ein anormales oder künstliches Preisniveau herbeiführen oder bei denen es wahrscheinlich ist, es sei denn, dass die handelnde Person legitime Gründe hat und im Einklang mit der zulässigen Marktpraxis handelt,

- Abschluss von Geschäften, Erteilung von Kauf- oder Verkaufsaufträgen oder sonstigen Handlungen, die unter Vorspielung falscher Tatsachen oder sonstiger Formen der Täuschung den Kurs eines Finanzinstruments beeinflussen oder hierzu geeignet sind,
- Verbreitung von Informationen, die falsche oder irreführende Signale über Angebot, Nachfrage oder den Kurs eines Finanzinstruments geben oder bei denen dies wahrscheinlich ist oder die ein anormales oder künstliches Preisniveau herbeiführen oder bei denen dies wahrscheinlich ist, einschließlich der Verbreitung von Gerüchten, wenn die verbreitende Person wusste oder hätte wissen müssen, dass sie falsch oder irreführend sind,
- Übermittlung falscher oder irreführender Angaben oder Bereitstellung falscher oder irreführender Ausgangsdaten bezüglich eines Referenzwerts, wenn die Person, die die Informationen übermittelt oder die Ausgangsdaten bereitgestellt hat, wusste oder hätte wissen müssen, dass sie falsch oder irreführend waren, oder sonstige Handlungen, durch die die Berechnung eines Referenzwerts manipuliert wird.

Diese Definition gemäß Art. 12 MMVO wird durch weitere Regelbeispiele (Art. 12 II MMVO) und eine nicht abschließende Aufzählung von Indikatoren im Anhang der MMVO weiter konkretisiert. Die EU-Kommission ist zum Erlass von delegierten Rechtsakten ermächtigt, um die vorgenannten Indikatoren zu präzisieren und um den technischen Entwicklungen auf den Finanzmärkten Rechnung zu tragen (Art. 12 V MMVO).

Zukünftig ist mithin nicht nur die vollendete Marktmanipulation verboten, sondern auch bereits deren Versuch.

Umgekehrt werden Handlungen vom Verbot der Marktmanipulation ausgenommen, die legitime Gründe haben und im Einklang mit zulässigen Marktpraktiken eines Mitgliedsstaates erfolgen (Art. 13 I MMVO). Welche Marktpraktiken zulässig sind, haben die Aufsichtsbehörden der einzelnen Mitgliedstaaten festzulegen. Die Kommission ist ermächtigt, von der ESMA (European Securities and Markets Authority) ausgearbeitete technische Regulierungsstandards zu erlassen (Art. 13 VII MMVO). Auf ihrer Webseite gibt die ESMA eine Liste über zulässige Marktpraktiken an, in welchen Mitgliedstaaten sie anwendbar sind (Art. 13 IX MMVO).

2.6 SANKTIONEN

Sanktionen der MMVO sind an Mitgliedstaaten gerichtete Mindestvorgaben, welche in nationales Recht umgesetzt werden müssen (Art. 30 MMVO). Sanktionsvorschriften enthält die MMVO vor dem Hintergrund der Zuständigkeit der nationalen Gesetzgeber nicht; diese sind in Deutschland auch künftig in den §§ 38 f. WpHG n.F. (neue Fassung) zu finden (vgl. Szesny. 2016. S. 1420 ff.). Die den nationalen Gesetzgebern vorbehaltenen Sanktionsvorschriften werden in weiten Teilen ebenfalls auf Basis europäischer Rechtsakte zu gestalten sein (vgl. Zwissler. 2016. S.18). Künftig kann bei Verstößen gegen das Verbot von Insidergeschäften nach Art. 14 MMVO oder gegen das Verbot der Marktmanipulation nach Art. 15 MMVO die Geldbuße für Unternehmen bis zu 15 Mio. Euro oder 15% des Umsatzes (Konzernumsatzes), für Führungspersonen bis zu 5 Mio. Euro betragen. Bei Verstößen gegen die Pflichten nach Art. 16 MMVO (Vorbeugung und Aufdeckung von Marktmissbrauch) und Art. 17 MMVO (Veröffentlichung von Insiderinformationen) kann die Geldbuße bis zu 2,5 Mio Euro oder 2 % des Konzernumsatzes betragen, für Führungskräfte bis zu 1 Mio. Euro. Bei den genannten Verstößen kann es jeweils zu einer Gewinnabschöpfung kommen (vgl. GÖRG. 2016. S. 2).

Mit der Intention der Abschreckung hat die „Bundesanstalt für Finanzaufsicht in Deutschland (BaFin)" in Zukunft ergangene Bußgeldentscheidungen unter Offenlegung von Art und Charakter des Verstoßes und der Identität der betroffenen Person für fünf Jahre auf ihrer Webseite zu veröffentlichen (Art. 34 I MMVO), **„naming and shaming"**.

Flankiert wird die MMVO durch die EU-Richtlinie über **strafrechtliche Sanktionen** bei Marktmanipulation (Richtlinie 2014/57/EU des Europäischen Parlaments und des Rates), welche bis zum 3. Juli 2016 in nationales Recht umzusetzen war (in Deutschland umgesetzt im „1. Finanzmarktnovellierungsgesetz - 1. FiMaNoG - vom 30.Juni 2016).

In diesem Zusammenhang ist insbesondere erstmals geregelt, dass auch juristische Personen (Unternehmen) zur Verantwortung gezogen werden können (vgl. GÖRG. 2016. S. 3).

3 WESENTLICHE BEDEUTUNG FÜR FREIVERKEHRSEMITTENTEN

Die einschneidenden Änderungen für deutsche **Freiverkehrsemittenten** vermindern deren Vorteile einer Freiverkehrsnotiz bemerkenswert gegenüber einer Zulassung zum Handel im organisierten Markt.

Verbleibende Erleichterungen:

- für die Einbeziehung zum Handel im Freiverkehr ist – wie bisher – kein Börsenzulassungsprospekt erforderlich, der zwingend auch von der die Transaktion begleitenden Bank zu unterzeichnen wäre,
- im Bereich der Folgepflichten der Einbeziehung in den Handel im Freiverkehr bleibt es dabei, dass die Bilanzierung – wie bisher – nach dem Handelsgesetzbuch (HGB) erfolgen kann,
- aus Sicht maßgeblich beteiligter Anteilseigner ist wesentlich, dass weder die Vorschriften zu Stimmrechtsmitteilungen nach §§ 21 ff. WpHG (Gesetz über den Wertpapierhandel) noch die zur Abgabe eines Pflichtangebotes nach §§ 35 ff. WpÜG (Wertpapiererwerbs- und Übernahmegesetz) Anwendung finden (vgl. GÖRG. 2016. S. 3).

Folgende Handlungsoptionen sollten die Freiverkehrsemittenten **in Deutschland** prüfen:

- die MMVO erweitert bemerkenswert die kapitalmarktrechtlichen Folgepflichten und erhöht damit auch die Haftungsrisiken durch eine allgemein drastische Verschärfung der Sanktionen. Vor diesem Hintergrund sollten vornehmlich die Freiverkehrsemittenten ihre internen Organisationsstrukturen und ihre kapitalmarktrechtliche Compliance an die neue EU-Rechtslage anpassen. Dabei ist zu klären, welche Maßnahmen erforderlich sind, um die fortlaufende praktische Einhaltung der Vorschriften der MMVO zu gewährleisten und welcher Aufwand hierfür entsteht (in der Regel wird eine umfassende Schulung der Mitarbeiter und Führungskräfte dazu gehören),
- individuell werden einige Freiverkehrsemittenten zu erwägen haben, ob angesichts der erweiterten Erfordernisse gemäß MMVO die Vorteile einer Freiverkehrsnotiz deren Nachteile noch hinreichend überwiegen,

- oder ob nicht die Zulassung zum organisierten Markt vorteilhafter ist und mithin angestrebt werden sollte,
- diejenigen Emittenten, die die neuen kapitalmarktrechtlichen Folgepflichten vermeiden wollen, werden dagegen über ein **vollständiges Delisting** als Alternative zu entscheiden haben (vgl. GÖRG. 2016. S. 3).

"Möchte man den Verschärfungen des Insiderrechts aus Unternehmenssicht etwas Positives abgewinnen, dann könnte eine erweiterte Transparenz zumindest eine positive Signalwirkung gegenüber den Anlegern und dem sonstigen Unternehmensumfeld haben und damit das Segment des Freiverkehrs insgesamt aufwerten" (Grobecker. 2015. S. B 22). Jedenfalls kann festgestellt werden, dass durch das neue Marktmissbrauchsrecht der EU (MMVO) die Grenzen zwischen reguliertem Markt und Freiverkehr fließender werden, und dies nicht zum Vorteil der Klein- und Mittelunternehmen (KMU).

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AUSWIRKUNGEN DER NEUEN UMSATZERLÖSDEFINITION GEMÄSS § 277 ABS. 1 HGB

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Abstract

The latest reform in the German commercial law is also known as "Bilanzrichtlinieumsetzungsgesetz". The new regulations include a variety of "point-changes" of the applicable commercial law. At the same time, the practical impact can be significant. With the introduction of BilRUG, the concept of "sales revenues" in the German commercial law was redefined and significantly expanded compared to the old regulation. Section 277 (1) HGB n.F. no longer refers solely to income from "ordinary business" and "typical products or services", but also includes income that was attributable to other operating income or extraordinary income under the current legal situation. These changes also have implications for some balance sheet ratios.

Keywords: *commercial law, income, regulation*

JEL Classification: G00, G02

1 EINLEITUNG

Die aktuelle Situation in der deutschen Rechnungslegung ist von einer starken Dynamik geprägt.[1] So folgte auf das Bilanzrechtsmodernisierungsgesetz (BilMoG) aus dem Jahr 2009 und die Integration der Micro-Richtlinie

[1] Müller, Kreipl, Lange, S. 11.

2012[2] zuletzt das Bilanzrichtlinie-Umsetzungsgesetz (BilRUG), worin der deutsche Gesetzgeber die EU-Bilanzrichtlinie 2013/34/EU vom 26.06.2013 in national geltendes Recht umgesetzt hat.[3]

Im direkten Vergleich zur Bilanzrechtsreform durch das BilMoG scheint es, als ob den Änderungen des BilRUG weniger Gewicht zugeschrieben wird.[4] In der Praxis können sich durch diese Regelungen, welche prima facie unbedeutend wirken, relevante Auswirkungen ergeben, welche in ihrer Gesamtheit mitnichten unterschätzt werden dürfen.[5] Für Unternehmen sind diese Änderungen teilweise zusätzlich mit erheblichen Umstellungsaufwendungen verbunden.[6]

Im Wesentlichen ergeben sich folgende Änderungen:

- Die Neudefinition der Umsatzerlöse,
- Die Anhebung der monetären Schwellenwerte zur Bestimmung der Größenklassen,
- Konkretisierung und Erweiterung diverser Ausweis- und Angabepflichten,
- Wegfall des gesonderten Ausweises von außerordentlichen Posten in der Gewinn- und Verlustrechnung,
- Änderungen bzw. Anpassungen im Rahmen der Konzernrechnungslegung,
- weitere größenabhängige Erleichterungen.[7]

Durch das BilRUG wurde mit der Neudefinition der Umsatzerlöse eine Position geändert, welche sowohl für interne Steuerungszwecke als auch für die Jahresabschlussanalyse von großer Bedeutung ist.[8]

2 HINTERGRUND UND ÜBERGANGSREGELUNG

Die Neuregelungen sind nach Artikel 2 Abs. 1 der Richtlinie 2013/34/EU und Artikel 75 Abs. 1 EGHGB im Wesentlichen erstmals für das nach dem

[2] Müller Kreipl, Lange, S. 19.

[3] Oser, Orth, S. 197.

[4] Russ, Janssen, Götze S. VII.

[5] Oser, S. 3 i.V.m. Russ Janssen Götze, S. VII.

[6] Müller, Kreipl, Lange, S. 19.

[7] Russ, Janssen, Götze, S. VII.

[8] Richter, S. 385.

31. Dezember 2015 beginnende Geschäftsjahr anzuwenden[9], somit erstmalig auf das kalendergleiche Wirtschaftsjahr 2016, oder, bei einem abweichenden Wirtschaftsjahr, welches nach dem 31. Dezember 2015 beginnt. Eine Anwendung vor dem genannten Zeitpunkt auf freiwilliger Basis der Unternehmen wurde durch den Bundesrat abgelehnt, jedoch sieht Artikel 75 Abs. 2 EGHGB für die geänderten Größenklassen in §§ 267, 267a Abs. 1 und § 277 Abs. 1 HGB die Möglichkeit zur früheren Anwendung für Geschäftsjahre, welche nach dem 31. Dezember 2013 begonnen haben, vor.[10]

Zu beachten ist, dass die vorzeitige Anwendung der Änderung ausschließlich kollektiv anwendbar ist, was bedeutet, dass die neuen finanziellen Schwellenwerte und die Neudefinition der Umsatzerlöse nur zeitgleich anzuwenden sind.[11] Dieses Junktim soll das sogenannte „cherry-picking" vermeiden.[12]

Der Gesetzesentwurf der Bundesregierung[13] enthält keinerlei Vorgaben für den Übergang auf die neue Definition der Umsatzerlöse durch das BilRUG und somit sind die Angaben des Vorjahrs im Jahr der Erstanwendung im Allgemeinen dem festgestellten Jahresabschluss des Vorjahrs zu entnehmen.[14] Die Auswirkung der Neudefinition ist unternehmensabhängig und kann deshalb von minimalen Auswirkungen bis hin zu wesentlichen Änderungen für das Unternehmen und einem damit zusammenhängenden wesentlichen Mehraufwand führen. Wenn sich für ein Unternehmen durch die Neudefinition wesentliche Änderungen ergeben, ist die Vergleichbarkeit der aktuellen Werte mit der Vorperiode nicht mehr gegeben. Das jeweilige Unternehmen hat deshalb nach § 265 Abs. 2 S.2 und 3 HGB entweder eine quantitative Erläuterung im Anhang oder eine Anpassung der Werte des Vorjahrs in Verbindung mit einer quantitativen Erläuterung im Anhang zu erstellen, um somit eine Vergleichbarkeit der Perioden widerherzustellen.[15]

[9] Gesetzgebungsentwurf BGBl. I S. 1245.

[10] Hendricks, S.3

[11] Art. 75 II EGHGB.

[12] Oser, Orth, S. 198.

[13] Gesetzgebungsentwurf BGBl. I S. 1245.

[14] IDW RS HFA 39.3.

[15] Richter, S. 389 i.V.m. IDW RS HFA 39.9f.

3 GEGENÜBERSTELLUNG DER ABGRENZUNG NACH ALTEM UND NEUEM RECHT

Leistungsangebot		Bisherige Definition (HGB a.F.)		Neue Definition (BilRUG)	
		typisch	atypisch	typisch	atypisch
Geschäftstätigkeit	gewöhnlich	UE	sonstige betriebliche Erträge	UE	UE
	außergewöhnlich	a.o. Erträge	a.o. Erträge	UE*	UE*
* ggf. Anhangangabe erforderlich					

Abbildung 1: Änderung der Umsatzdefinition, in Anlehnung an Theile, S. 113.

Als Umsatzerlöse galten nach § 277 Abs. 1 HGB a.F. die Erlöse aus dem Verkauf und der Vermietung oder Verpachtung von für die gewöhnliche Geschäftstätigkeit der Kapitalgesellschaft typischen Erzeugnissen und Waren sowie aus von für die gewöhnliche Geschäftstätigkeit der Kapitalgesellschaft typischen Dienstleistungen nach Abzug von Erlösschmälerungen und der Umsatzsteuer.[16] Wie nach altem Recht verbleibt hier ein Ermessensspielraum, welcher nun jedoch unter Umständen größer ausfallen kann, als bisher.[17]

Für die bisherige Abgrenzung der Umsatzerlöse gemäß § 277 Abs. 1 HGB a.F. von außerordentlichen Erträgen (Leistungen, welche außerhalb der gewöhnlichen Geschäftstätigkeit erbracht wurden) und sonstigen betrieblichen Erträgen (atypische Leistungen) wurde dadurch den Tatbestandsmerkmalen „Verkauf und Vermietung oder Verpachtung von Erzeugnissen und Waren sowie Dienstleistungen", „gewöhnliche Geschäftstätigkeit", sowie „typisches Leistungsangebot" besondere Bedeutung zugeschrieben.[18] Ob ein Sachverhalt tatsächlich zu den Umsatzerlösen zählt, oder nicht, ist demnach sowohl branchenabhängig als auch unternehmensabhängig und kann sich, je nachdem mit welchen Leistungen ein Unternehmen für gewöhnlich am Markt agiert, in Einzelfällen zwischen verschiedenen Perioden ändern.[19] Die Umsatzerlöse wurden in § 277 Abs. 1 HGB n. F. wie nachfolgend neu definiert: „Als Umsatzerlöse sind die Erlöse aus dem Verkauf und der Vermietung oder Pachtung von Produkten sowie aus der Erbringung von Dienstleistungen der Kapitalgesellschaft

[16] § 277 Abs. 1 HGB a.F.

[17] Zwirner (2017), S.187.

[18] Theile, S. 111.

[19] Richter, S. 385.

nach Abzug von Erlösschmälerungen und der Umsatzsteuer sowie sonstiger direkt mit dem Umsatz verbundener Steuern auszuweisen.

Die Neudefinition weist gegenüber der bisherigen Definition vier signifikante Änderungen auf:

- Wegfall der „gewöhnlichen Geschäftstätigkeit“,
- Wegfall der Bezugnahme auf das typische Leistungsspektrum,
- Einführung des Begriffs „Produkte“ anstelle von „Waren und Erzeugnisse“, sowie
- Abzug sonstiger direkt dem Umsatz verbundenen Steuern.[20]

Diese Neudefinition wird als bedeutendste Änderung des BilRUG angesehen und resultiert aus Art. 2 Nr. 5 der Richtlinie 2013/34/EU.[21] Die Umsatzerlöse sind demnach nicht mehr auf die aus der gewöhnlichen Geschäftstätigkeit entstammenden typischen Erzeugnisse und Waren sowie Dienstleistungen beschränkt, wie es nach bisherigem Recht der Fall war.[22] Eine Trennung zwischen gewöhnlicher und außergewöhnlicher Geschäftstätigkeit, wie es bisher notwendig war, entfällt nun ebenfalls. Da die Beschränkung auf die für die Kapitalgesellschaft gewöhnliche Geschäftstätigkeit typischen Leistungen (auch: Vermietung und Verpachtung) nicht mehr in der Legaldefinition enthalten ist, wurde der Inhalt der Umsatzerlöse demnach erheblich ausgeweitet. Jedoch ist zu beachten, dass bisherige Erlöse außerhalb der gewöhnlichen Geschäftstätigkeit selten im Zusammenhang mit der Vermietung oder Verpachtung von Erzeugnissen, Waren oder Dienstleistungen standen. Demnach sind Sachverhalte, welche nach der alten Fassung außerordentliche Erträge waren auch in Zukunft selten als Umsatzerlöse auszuweisen, sondern hauptsächlich als sonstige betriebliche Erträge. Der Wegfall des „typischen“ Leistungsspektrums bedeutet für die Praxis, dass eine bisher schwierige Abgrenzung zwischen typisch und untypisch entfällt und grundsätzlich zu einer Ausdehnung der Umsatzerlöse führt. [23]

Hintergrund dieser Anpassung soll eine vereinfachende Wirkung und eine Ermessensreduktion darstellen, da hierdurch die sich mit der Zeit ändernde

[20] Theile, S. 112. i.V.m. IDW, S. 8.

[21] Art. 2 Nr. 5 der Richtlinie 2013/34/EU

[22] Richter S. 386.

[23] Theile, S. 113.

Abgrenzung von Umsatzerlösen und den sonstigen betrieblichen Erträgen entfällt.[24] Demzufolge können künftig Umsatzerlöse auch aus dem Verkauf von Waren und Erzeugnissen, oder der Erbringung von Dienstleistungen außerhalb der gewöhnlichen Geschäftstätigkeit resultieren, welche bisher den sonstigen betrieblichen Erträgen zugeordnet wurden.[25] Eine Umsatzschmälerung gegenüber der alten Definition bringen die sonstigen direkt mit dem Umsatz verbundenen Steuern mit sich, welche nun neben den Erlösschmälerungen und der Umsatzsteuer in § 277 Abs. 1 HGB n.F. aufgeführt sind.[26]

Da die bisher geltenden Tatbestandsmerkmale wie erwähnt ihre Funktion durch die Neudefinition der Umsatzerlöse verloren haben, müssen Umsatzerlöse nach der Neudefinition negativ gegenüber durchlaufenden Posten, sonstigen betrieblichen Erträgen sowie gegenüber dem Finanzierungsbereich abgegrenzt werden. Durchlaufende Posten werden im Allgemeinen weder als Aufwendungen noch als Erträge erfasst und sind deshalb klar von den Umsatzerlösen abzugrenzen. Für die in § 277 Abs. 1 HGB n. F. enthaltenen Begriffe „Produkt" und „Dienstleistung" gilt ebenfalls die strikte Trennung von Umsatzerlösen zu den sonstigen betrieblichen Erträgen. Als dritte Voraussetzung gilt die Abgrenzung zwischen dem Betriebs- und Finanzbereich. [27]

4 AUSWEITUNG DER DEFINITION

Durch die Neueinführung des Oberbegriffs „Produkte" soll sich nach der Begründung des RegE des BilRUG trotz ungenauer Formulierung keine materielle Änderung ergeben.[28] Der Begriff „Produkte" soll äquivalent zu den bisherigen „Erzeugnisse und Waren" verwendet werden können. In der französischen und spanischen Fassung der Richtlinien werden die Begriffe „produits" und „productos" zwar gerade nicht mit „Waren", sondern nur mit „Produkten" übersetzt. Der englischen Fassung wird jedoch große Bedeutung zugeschrieben, in welcher „products" neben Produkten sowohl Erzeugnisse als auch Waren beinhaltet sind.[29]

[24] Richter, S. 386.

[25] Theile, S. 109.

[26] Russ, Janssen, Götze, S. 119; Schmidt, Peun, § 275 HGB, Rn. 66; vgl. auch bzgl. des Ausweises IDW RH HFA 1.017, Tz. 2.

[27] Oser, S. 16.

[28] RegE BT-Drs. 18/4050

[29] Russ, Janssen, Götze, S. 122 Rz. 80f.

Es wurde angenommen, dass die Formulierung der Vermietung und Verpachtung für Produkte verunglückt ist, da Erzeugnisse und Waren für gewöhnlich nicht dazu bestimmt sind dauernd dem Geschäftsbetrieb zu dienen, wie es vergleichbar bei Anlagegegenständen zutreffen würde.[30] Eine Vermietung wäre demnach nicht vereinbar, da Waren zur Weiterveräußerung bestimmt sind. Aufgrund dessen wurde angenommen, dass hierbei eine schlichte Ergänzung der Dienstleistungserbringung um die Vermietung oder Verpachtung angedacht war[31], was ebenfalls mit der EU-Bilanzrichtlinie übereinstimmt, welche lediglich den Verkauf von Produkten und die Erbringung von Dienstleistungen vorsieht.[32] Dem Sitzungsergebnis der 241. HFA Sitzung ist hingegen zu entnehmen, dass es sich auch um Umsatzerlöse bei Erlösen aus der Vermietung oder Verpachtung von Vermögensgegenständen des Anlagevermögens handelt, auch wenn diese regelmäßig nicht zu den „Produkten" zählen – entgegen bisherigen Annahmen.[33]

Den Abzug sonstiger direkt dem Umsatz verbundener Steuern sah bereits Art. 28 der. 4. EG-Richtlinie vor und wurde von Art. 2 Nr. 5 der Bilanzrichtlinie übernommen. Die Diskussion, welche weiteren Verbrauchs- bzw. Verkehrssteuern abgezogen werden dürfen, scheint nun geklärt, denn neben der Energiesteuer dürfen nun auch weitere Verbrauch- bzw. Verkehrssteuern abgezogen werden (z. B. Branntweinsteuer, Stromsteuer, Schaumweinsteuer). Als Abgrenzungskriterium gilt der Umsatz als Steuergegenstand.[34] Nach der Neudefinition muss es sich bei Umsatzerlösen somit im weitesten Sinne um Einnahmen aus der Erbringung von Leistungen an Dritte durch das Unternehmen handeln und somit sind in dieser Definition selbsterstellte Anlagegüter und Zuschreibungen ausgeschlossen. Der Gesetzeswortlaut sieht ein Verursachungszusammenhang in Form eines Finalnexus[35] zwischen der Erbringung der Leistung und den Erlösen vor, da in § 277 Abs. 1 HGB die Erlöse *aus* der Erbringung von Leistungen resultieren.[36]

30 Richter, S. 387.

31 Russ, Janssen, Götze, S. 122. Rz. 82.

32 Richtlinie 2013/34/EU i.V.m. Richter, S. 387.

33 IDW, S. 10.

34 Theile, S. 114.

35 Finalnexus: notwendige Zweckverbindung.

36 Russ, Janssen, Götze, S. 121.

5 AUSWIRKUNGEN DER ÄNDERUNG

Nach der Neudefinition dürfen nachfolgende sonstige betriebliche Erträge nun als Umsatzerlöse ausgewiesen werden:

- Erlöse aus Konzernumlagen, sofern diesen ein Leistungsaustausch zugrunde liegt (z. B. für die Übernahme von Managementleistungen wie unter fremden Dritten).[37]

Allgemein ist die Behandlung und die Abgrenzung von Konzernumlagen in diesem Zusammenhang streitig, weshalb sich der HFA in der 241. Sitzung auch mit dieser Thematik durch die Neudefinition der Umsatzerlöse beschäftigt hat. Maßgeblich für die aus der Umlage resultierenden Erlöse ist der konkrete Anlass für den Anspruch.[38] Entgelte, die ein Mutterunternehmen für die Haftungsvergütung der Übernahme der persönlichen Haftung zahlt, steht kein konkreter Leistungsaustausch gegenüber. Somit sind die Erträge auch nach der Neuregelung nicht in den Umsatzerlösen auszuweisen. Dies ist auch für Umlagen anzuwenden, denen kein klassischer Leistungsaustausch gegenübersteht (reine Umverteilung von Aufwendungen), beispielweise bei allgemeinen Managementumlagen für Konzernführungsaufgaben.[39] Jedoch gibt es gerade hier Fälle, welche hinsichtlich des Leistungsaustausches einen Graubereich darstellen. Sie sind nicht eindeutig zuordenbar, wie beispielsweise Umlagen für vom Mutterunternehmen bei den Tochterunternehmen eingesetzten Geschäftsführern. Es ist hierbei zu differenzieren, ob es sich um eine komplette Geschäftsführervergütung handelt, oder nur um eine Zusatzvergütung. Überwiegend erfolgt die Bezahlung im Interesse des Mutterunternehmens, was für eine Zuordnung der Erlöse in den sonstigen betrieblichen Erträgen sprechen würde.[40]

- Erlöse aus nicht betriebstypischen Dienstleistungen, wie beispielsweise Erlöse aus der Vermietung von Werkswohnungen oder Kantinenerlöse.[41]

Ebenso auch:

- Verkauf nicht mehr benötigter Roh-, Hilfs- und Betriebsstoffe,

[37] Theile, S. 114.

[38] IDW, S. 9.

[39] Schmidt, Peun, Rn. 55.

[40] Richter, S. 387.

[41] Thiele, S. 114 i.V.m. Oser, Orth, S. 203.

- Schrotterlöse[42] und
- Entgelte für die Verleihung von Arbeitskräften.[43]

Erträge aus Beteiligungen, anderen Wertpapieren und Ausleihungen des Finanzanlagevermögens sowie sonstige Zinsen und ähnliche Erträge sind weiterhin als sonstige betriebliche Erträge auszuweisen und nicht als Umsatzerlöse.[44] Nach dem Willen des Gesetzgebers sind die Erlöse aus Anlagenverkäufen keine Umsatzerlöse, da die „gewisse“ Nähe zum Umlaufvermögen fehlt.[45] Die Differenzierung des HFA in produktnahe und produktferne Vermögensgegenstände vermag nicht zu überzeugen.[46]

6 AUSWIRKUNGEN AUF DIE JAHRESABSCHLUSS-ANALYSE

Durch die Einführung des BilRUG ergeben sich für Unternehmen nicht nur Änderungen hinsichtlich des externen Rechnungswesens, sondern ebenfalls hinsichtlich diverser Unternehmenskennzahlen.[47] Durch die Neudefinition der Umsatzerlöse kann es in Einzelfällen zu erheblichen Verzerrungen von GuV-basierten Kennzahlen kommen.[48] Demzufolge müssen durch die Einführung nicht nur Aspekte der Rechnungslegung betrachtet werden, sondern es stehen ebenso umsatzbedingte Verträge oder auch Financial Covenants im Fokus. Auf letztere hat die Neudefinition der Umsatzerlöse eine spürbare Auswirkung, da diese vereinbarten Kennzahlen, bspw. das EBIT, meist in engem Zusammenhang mit den Umsatzerlösen oder der Umsatzrendite stehen.[49] Zusätzlich sollten Unternehmen frühzeitig Auswirkungsanalysen erstellen, falls Verträge von der Neudefinition tangiert werden.[50]

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[42] Thiele, S. 114.

[43] Oser, Orth, S. 203.

[44] Richter, S. 387.

[45] BT-Drucksache 18/5256, S. 82; Oser, Orth, S. 203; differenzierend IDW, S. 7-11.

[46] so auch Lüngen, Resing, S. 438 f.

[47] Zwirner, S.27

[48] Müller, Kreipl, Lange, S.82f.

[49] Zwirner, S. 27.

[50] Müller, Kreipl, Lange, S. 83.

7 BEISPIEL[51]

Die A GmbH wendet die Neudefinition der Umsatzerlöse des § 277 Abs. 1 HGB ab dem Jahr 2016 an. Außerdem wird ab dem Jahr 2016 der BilMoG-Anpassungsbetrag unter den sonstigen betrieblichen Aufwendungen ausgewiesen, welcher bisher im außerordentlichen Ergebnis ausgewiesen wurde.

Nachfolgend die Auswirkungen der geänderten Ergebnis-darstellung (Auszug):

Vor BilRuG		Nach BilRuG	
Umsatzerlöse	600 TEUR	Umsatzerlöse	900 TEUR
Sonstige betr. Erträge (...)	300 TEUR	Sonstige betr. Erträge (...)	0
Sonstige betr. Aufwendungen	-100 TEUR	Sonstige betr. Aufwendungen	-125 TEUR
EBIT	**150 TEUR**	**EBIT**	**125 TEUR**
Zinsaufwand	-50 TEUR	Zinsaufwand	-50 TEUR
a.o. Ergebnis	-25 TEUR		
Jahresüberschuss	75 TEUR	Jahresüberschuss	75 TEUR

Abbildung 2: Gegenüberstellung der Auswirkung in Anlehnung an Zwirner, S. 27.

Die aus der Übergangsregelung des Art. 67 Abs. 7 EGHGB zum BilMoG sich ergebenden Beträge werden nun als zusätzlicher Posten „Aufwendungen bzw. Erträge nach Art. 67 Abs. 1 und 2 EGHGB unter den sonstigen betrieblichen Aufwendungen bzw. Erträgen ausgewiesen und nicht, wie zuvor, unter dem außerordentlichen Ergebnis.[52] Das EBIT verringert sich dadurch um T€ 25.

Zusätzlich verringert sich die Umsatzrendite wie nachfolgend:

Umsatzrendite vor BilRUG:

$$\frac{\textit{Jahresüberschuss vor BilRUG}}{\textit{Umsatz vor BilRUG}} = \frac{75}{600} = \mathbf{12{,}5\ \%}$$

Umsatzrendite nach BilRUG:

$$\frac{\textit{Jahresüberschuss nach BilRUG}}{\textit{Umsatz nach BilRUG}} = \frac{75}{900} = \mathbf{8{,}33\ \%}$$

[51] In Anlehnung an Zwirner, S. 27.

[52] Oser, Orth, S. 203.

8 SCHLUSSBEMERKUNG

Mit dem BilRUG erfolgte auch die Ausweitung der Umsatzerlösdefinition. Welche Auswirkungen dies für die jeweiligen Unternehmen hat, ist einzelfallbezogen und deshalb zu prüfen, ob sich durch die Neudefinition wesentliche Änderungen ergeben. Die Auswirkungen sind größtenteils in Verbindung mit der Abgrenzung der Umsatzerlöse von den sonstigen betrieblichen Erträgen anhand verlässlicher Beurteilungskriterien zu sehen.

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EXPLORATORY ANALYSIS ON INTERNAL RISKS IN SMES AND FINANCIAL INSTITUTIONS IN SERBIA

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Abstract

The subject of the research is the exploratory analysis of different types of internal risks which SMEs and banks in Republic of Serbia have identified to monitor in their operations. The methods used are questionnaires and interviews in the field research, descriptive statistical analysis, models of multiple regression analysis and logistic regression. In case of the whole sample of 113 examinees, the largest number of examinees monitors liquidity risk management, while the monitoring of operational and credit risks are identified to have a positive influence on the performance. On the other hand, the positive influence of risk management on performance is significantly more prominent in the sample of financial institutions, being mostly present in case of capital and financing risk management. The results of the research contribute to the economic theory in the field of risk management in Republic of Serbia.

Keywords: *risk protection, risk management, small and medium enterprises, banks, Republic of Serbia*

JEL Classification: G21,32.

1. INTRODUCTION

In the environment of increased competition, integration of financial systems, the financial crisis which destabilized the international economic environment, there are multiple risk factors with which small and medium enterprises encounter in their businesses. Inadequate, incompetent and hazardous behavior of a part of the banking sector management had led to the mortgage crisis in the USA, which further reflected on the grave financial crisis throughout the world, and especially in the USA and Europe. The evolution of risk management art is evident in papers of many authors (Bernstein, 1998; Vaughan, 1997; Lam, 2003; Fone & Young, 2000; Drennan & McConnell, 2007). By risk we understand the two-dimensional combination of events/consequences and the associated uncertainties (Aven, 2007). Risk is a situation or event where something of human value is at stake and where the outcome is uncertain (Rosa, 1998). In finance, risk options include monetary outcomes with explicit probability, and they are evaluated in terms of their expected value and risk potential (Olson & Desheng, 2008). Apart from that, the notion of risk in finance supports systematic (non-diversifiable) and unsystematic (diversifiable) risk (Gehr, 1979). Default risk is another dimension of risk as it is frequently claimed that performances of a firm are related to the risk of failing to deliver while a total risk approach shall be applied to risk management. Total risk, being the sum of systematic and unsystematic risks, should be considered by the firm. (Shapiro & Titman, 1986). The risk in economy, on the other hand, occurs in two different categories: endogenous (controlled) and background (uncontrolled) category (Olson & Desheng, 2008). These bases are recognized in scientific circles for cases of making economic decisions in an uncertain environment and in the presence of multiple risks. Neoclassical economists maintain that people feel repulsion towards risk when the perspective is integrated and when it is largely applied in the public sector (Friedman, & Savage, 1948). Because of this, the concept of risky affinities for independent risk may be described by the notion of standard aversion towards risk.

Numerous factors influenced the modern risk management procedures, which also needs to be balanced with the principles of necessity of creation of new, more secure and efficient banking organizations as well, with incorporation of Basel I, Basel II, and now Basel III principles as well, which are intended to protect the banking sector from risks and determine capital adequacy by increasing bank liquidity (Basel Committee on Banking Supervision, 2004, Basel Committee on Banking Supervision, 2003, Basel Committee on Banking Supervision, 2001). According to the Gorćić (2006) the risk management of banks in the process of transition should help the banks to become more secure and more efficient financial institutions. "All risk assessment approaches should include: an effort to clearly identify and characterize the assets, threats, controls, and impact/loss elements at play within the risk scenario being assessed; an understanding of the organizational context for the analysis; i.e., what is at stake from an organizational perspective, particularly with regard to the organization's leadership perspective; measurement and/or estimation of the various risk factors; calculation of risk; communication of the risk results to decision-makers in a form that is meaningful and useful" (Open Group, 2009; 9). Kungwani (2014; 88) concludes that "any system of regulation that is designed to protect against financial risk in needs to provide a high level of confidence that the firms which are supervised are able to survive any reasonable combination of stress shocks to their earnings with their capital sufficiently intact to ensure that they can continue in business long enough to allow appropriate remedial action to be taken either by the firm itself or by the regulator".

In their operations, banks can be particularly exposed or could be exposed to the following risks: liquidity risk; credit risk, including risk of residual, dilution risk, settlement / delivery, as well as the risk of the counterparty; interest rate risk; currency risk and other market risks; risk concentration, which in particular includes the risks of exposure to a single entity or a group of clients; investment risk; risks relating to the country of origin of the entity to which the bank is exposed (country risk); operational risk, which in particular includes legal risk; compliance risk; strategic risk; and other risks ("RS Official Gazette", num. 45/2011, 94/2011, 119/2012, 123/2012, 23/2013, 43/2013, 92/2013, 33/2015 and 61 / 2015). According to the data of the National Bank of Serbia for 2015, the banking sector in Serbia operated through the organizational network of 1,765 business units, with 24,753 employees.

The National Bank of Serbia has identified the following key internal risks in the Annual Financial Stability Report: a high degree of financial system an euro denominated loans increases exposure to the foreign currency credit risk; a high share of high-risk loans; a low lending activity and slower economic growth; a negative effects of the shift in EU banks' business models on inflows of capital into the banking sector due to the needs of the domestic market, low profitability of domestic market and inadequate market conditions for selling of government shares in the sound banks; and an inadequate quality of corporate governance in some financial institutions (Narodna banka Srbije, 2015). „In order to overcome the risk banks to establish a comprehensive and reliable system of risk management. Risk management is the process by which managers identify, assess, monitor and is controlled by the risks associated with the business activities of the bank or financial institution where they work" (Ivanović, 2009; 29).

2. EMPIRICAL RESEARCH

2.1. Methodology of the empirical research

This section of the paper describes empirical research carried out on the territory of Serbia during the second half of the year 2015 and the findings were processed in the year 2016. The objectives of the research were to study the views of legal entities on monitoring risk management, primarily those of the banking sector, as well as to identify the potential influences of various internal risks on its performance. The questionnaires had been sent to 250 legal entities from the territory of the whole Republic of Serbia, while 113 complete questionnaires and interviews were obtained from examinees, 34 of which were from financial institutions (banks, insurance companies and brokerage-dealer institutions) with the response rate of 45%. The chosen legal entities were medium-sized (from 50 to 250 employees) production companies, since those companies are in a greater need of evaluating risks than micro and small companies, and they are one of the most dynamic in the Serbian market. Over 80% of the banks which operate in the market of the Republic of Serbia were investigated (69 percent of the total number of banks in Serbia). The chosen IT companies were mostly small ones since 90% of the registered IT companies have less than 50 employees in Serbia. Insurance companies were also chosen according to their growth potential and relevance. About 80% of the most prominent insurance companies from Serbia were studied principally because they are faced with the increasing rising regulatory risks. The questionnaire was comprised of 33 questions, 30 of which were multiple choice questions, while 3 were open-ended survey questions (Kovačević, 2016) in which the respondents assessed the following internal risks with which business entities and institutions encounter in their operations: credit risk, liquidity risk, strategic risk, management risk, reputational or image risk, market risk, operational risk, financial reporting risk, capital and financing and human resources risk.

Two main hypotheses were proposed - A1 and A2:

A1: The SMEs and financial institutions in the Republic of Serbia regularly monitor internal risks.

A2: The risk management has a positive influence on performance.

Pearson's chi-square test was applied first in statistical analysis of the sample, and after that in establishing of (in) dependence of the remaining answers within the observed sample. As the basic measuring unit in the applied statistical analysis is every single company/bank studied, the test of independence was performed based on the affirmative answers of the examinees to the appropriate questions from the questionnaire, i.e. the total number of positive values of the observed variables. The above mentioned hypotheses were also tested by a model of multiple regression analysis. In this way an appropriate multidimensional regression model was constructed, adapted to the given data. Regression analysis defined the model of (functional) dependency between two (or more) variables. Logistic regression was also used to describe the connections between dependent and independent variables. The basis for software procedures which evaluate parameters of logistic regression is co-called glm-function in the stats-package, which enables finding established values of the regression coefficients in case of complex, general regression models, among which is binomial logistic regression. The quality of the obtained regression connection, i.e. the degree of concordance of logistic function with empirically obtained, observed data, was determined and quantitatively expressed on the basis of the established values of the regression coefficients. Three of the most frequently used quantitative denominators of the quality of theoretical model were used for this purpose, by which empirical group of data fits into adequate regression model: standard error estimates, coefficient of determination and Akaike information criterion. Numerous tests based on so-called Pearson's statistics are among the oldest methods of statistical calculations (Preacher, 2001).

3. RESULTS AND DISCUSSION

3.1 Analysis of the basic characteristics of the observed legal entities

This part of the paper describes basic statistical indicators which refer to the structure of the observed sample. Quantitative values of all indicators were obtained by observation of the features from the first group of questions. These features disclose basic characteristics of the observed companies/banks and their statistical indicators are presented in Table 1. The first column of the Table 1 shows attributive modalities of features, i.e. observations from the first group of the questions. After that, in the next two columns we can see the appropriate values of absolute and relative frequencies. The next feature describes the primary activity of the company and is the basis for stratification (segmentation) of the sample into four separate units (strata). The largest number of surveyed companies is engaged in production, a total of 43, which represents almost half of the total number of respondents. Furthermore, a significant portion of the sample consists of institutions from the banking sector. Their total number is 34. Finally, companies engaged in providing insurance and information services are 36. The next feature describes the level of income of the surveyed companies/institutions in 2015. The forth feature describes the sources of income of the surveyed companies/banks in relation to the domestic or foreign markets. Here, the number of dominant sales revenues is made within a state (a total of 94, i.e., more than 80% of the sample). Only a small portion, less than 17% of companies/institutions are the ones that have generated the income mostly from foreign market, or an income from foreign markets forms a significant percentage of total revenue (mainly IT companies).

Table 1: Analysis of the basic features of observed legal entities

Features	No. of the examinees	Percentage	χ^2-statistics (p-value)
Position of the examinee			
Owner	35	30.97%	2.65 (0.4495)
Manager	23	20.35%	
Director	27	23.89%	
Consultant	28	24.78%	
Predominant activity			
Production	43	38.05%	16.38** (9.47E-04)
Banking /financial services	34	30.09%	
Insurance	17	15.04%	
ICT (information) services	19	16.81%	
Income in 2015 (EUR)			
Less than 100,000 €	30	26.55%	0.805 (0.8483)
100,000-500,000 €	31	27.43%	
500,000-2,000,000 €	27	23.89%	
More than 2,000,000 €	25	22.12%	
Source of income			
Country of residence (domestic market)	94	83.19%	49.78**
Foreign market (export)	19	16.81%	(1.72E-12)

Source: Author's calculations

The values for all eleven dichotomous variables which refer to the types of risk all the observed companies and institutions are exposed to in their business operations are shown in Table 2. The values of the last variable (X11) are negligible, so that statistical analysis of the first ten variables describes participation in management of the specific types of risk in the observed companies and institutions. The variable X8 has the highest value, i.e. the greatest number of the examinees emphasizes **importance of the liquidity risk in their operations**, especially in legal entities whose operations are based on production. The variable X1 immediately follows which points to conclusion that almost the same number of the interviewed companies and institutions has identified the monitoring of market risk. Next significant risks that all legal entities identified to monitor: credit risk, operational risk, risks of the new information technologies and the risk of human resources. As for the remaining types of internal risks, the number of affirmative answers is somewhat smaller, although we may observe they are rather evenly distributed within the sample. The independent variables which refer to capital and financing risks management, i.e. management, show the minimum value of all the obtained answers, while the value of the affirmative answers of the observed companies and institutions which monitor the risk of financial reporting is just slightly higher.

Table 2: Descriptive statistics for monitoring of the internal risks (the whole sample)

Variables	Types of risk	Number of affirmative answers	Proportion (p)	Stand. deviation
X_1	**Market risk**	53	0.4690	0.2490
X_2	Strategic risk	31	0.2743	0.1991
X_3	Financial reporting risk	27	0.2389	0.1818
X_4	Management risk	26	0.2301	0.1771
X_5	Reputational risk (image)	38	0.3363	0.2232
X_6	Human resources risk	41	0.3628	0.2312
X_7	Operational risk, IT	41	0.3628	0.2312
X_8	**Liquidity risk**	54	0.4779	0.2495
X_9	Credit risk	43	0.3805	0.2357
X_{10}	Capital and financing risk	26	0.2301	0.1771
X_{11}	Other	2	0.0177	0.0174

Source: Author's calculations

The second part of the statistical has analyzed the types of internal risks that have an impact on to the level of their income in the year 2015. The results of the binomial logistic regression analysis together with the appropriate values of proportional relationship (PR), established values of regression coefficients (β0 ,β1, ..., β10) and the appropriate so-called standard evaluation errors are presented in Table 3. The obtained values of proportional relationship coefficient (PR coefficient) are less than one, which points to conclusion that none of the risk types is present in a significant manner and particularly noticeable in the observed sample.

Table 3: Values of proportional relationship (PR), logit function and values of coefficients of logistic regression (the whole sample) relative to the income as a dependent variable

Variables	Types of risk	PR	Regression coefficients	Standard error
Regression constant			0.51031	6.76E-02
X_1	Market risk	0.8833	0.01703	5.37E-02
X_2	Strategic risk	0.3780	-0.18871	5.85E-02
X_3	Financial reporting risk	0.3140	-0.08785	6.86E-02
X_4	Management risk	0.2989	-0.01819	6.25E-02
X_5	Reputational risk (image)	0.5067	-0.07320	5.81E-02
X_6	Human resources risk	0.5694	0.03253	5.66E-02
X_7	Operational risk and IT	0.5694	0.09968	5.51E-02
X_8	Liquidity risk	0.9153	0.03959	5.50E-02
X_9	Credit risk	0.6143	0.08902	5.48E-02
X_{10}	Capital and financing risk	0.2989	-0.02584	7.07E-02
Total evaluation error (Q):	***0.2761***			
Determination coefficient (R^2):	***0.8260***			
AIC:	*42.281*			

Source: Author's calculations

The positive values of these coefficients correspond with the types of risk that are monitored by the observed companies and institutions to have a positive influence on their performance. Those are, primarily, operational and credit risks, which correspond with the highest established values of the regression coefficients. On the other hand, precisely one half of the variables which describe influence of types of risk have negative values of regression coefficient. They indicate existence of some negative tendencies which are particularly prominent in, for example, strategic risk, but also in the risk of financial reporting. Total survey error (Q=0.2761) is relatively small, while value of coefficient of determination is a high R2=82.60%. This fact is additionally confirmed by relatively small value of AIC coefficient AIC=42.281.

The highest number of positive responses of the surveyed SMEs and financial institutions within the variable liquidity risk has emphasized: the risk of deterioration in asset quality, amount of cash, difficulties in obtaining new capital and withdrawal of bank deposits (Table 4).

Table 4: Descriptive statistics for monitoring of the liquidity risk (the whole sample)

Types of Liquidity risk	Number of affirmative answers	Proportion (p)	Stand. deviation
Deterioration in asset quality	46	0,4701	0,2414
The withdrawal of bank deposits	25	0,2212	0,1723
Difficulties in acquiring new capital	29	0,2566	0,1908
Plan for Emergency Situations	16	0,1416	0,1215
Amount of cash	29	0,2566	0,1908
Amounts of total deposits	14	0,1239	0,1085
Amount of reserves	17	0,1504	0,1278
Other	*4*	*0,0354*	*0,0341*

Source: Author's calculations

Further analysis of the process of risk management the sample of financial institutions consisted of regression analysis of influence of different types of risk relative to total performance of the observed institutions in the year 2015 (Table 5).

Table 5: Values of proportional relationship (PR), logit function and values of coefficients of the logistic regression (banking institutions) relative to the performance as a dependent variable

Variables	Risk types	PR	Regression coefficients	Standard error
Regression constant			0.3642	0.2917
X_2	Strategic risk	0.3077	-0.1623	0.2084
X_3	Financial reporting risk	1.1250	0.1512	0.1940
X_4	Management risk	1.0000	0.0109	0.1945
X_5	Reputational risk (image)	1.1250	0.0620	0.1766
X_6	**Human resources risk**	1.2667	0.3205	0.1881
X_7	**Operational risk**	0.8889	0.3278	0.1753
X_8	Liquidity risk	1.2667	0.2440	0.1935
X_9	Credit risk	0.4167	-0.0745	0.2117
X_{10}	**Capital and financing risk**	1.1250	0.4280	0.1948
X_{11}	Other	0.4167	-0.0262	0.2764
Total evaluation error (Q):	**0.2671**			
Coefficient of determination (R^2):	**0.8751**			
AIC:	**35.431**			

Source: Author's calculations

The negative values of regression coefficients appear for the variable of unnamed types of risk, strategic and credit risk. On the other hand, the largest number of established values of coefficients of logistic regression obtained is positive. They indicate positive correlation of these variables with the dependent as such, i.e. with the performance. The observation of large number of evaluated positive regression coefficients reveals a particularly high value of the capital and financing risk is followed by the coefficients of operational risk and the human resources risk. As for the banks, it should be pointed out that these institutions display particularly noticeable positive influence of almost all risk types on operations. The most significant influence is influence of the capital and financing risk, whose value of the regression coefficient indicates that increased monitoring of this type of risk increases the total performance in the observed banking institutions, and the importance of the operational risk and risk of human resources follow right afterwards.

6. CONCLUSION

The global economic crisis has certainly influenced the demand contraction and tightened financing so the SMEs have had, in many countries, the financing problems. The anti-crisis measures for SMEs put in place by countries can be classified in three different groups:

- "measures supporting sales and preventing depletion of SMEs' working capital such as tax reductions and deferrals, export credit and insurance, and better payment discipline by governments;
- measures to enhance SME's access to liquidity, mainly to credit through bank recapitalization and expansion of existing loan and credit guarantee schemes; and
- measures aimed at helping SMEs to maintain their investment level and more generally their capacity to respond in the near future to a possible surge in demand through investment grants and credits, accelerated depreciation, and R&D financing" (OECD, 2009; 9).

On the other hand, in February 2008 the Basel Committee on Banking Supervision in the paper „Liquidity Risk Management and Supervisory Challenges" has outlined that many banks had failed to take account of a number of basic principles of liquidity risk management when liquidity was plentiful and that many of the most exposed banks did not have an adequate framework that satisfactorily accounted for the liquidity risks posed by individual products and business lines. After the crisis the Basel Committee on Banking Supervision has effected a substantial revision of the Committee's Sound Practices for Managing Liquidity in Banking Organizations that were published in 2000. The new principles are aimed at the importance of establishing a robust liquidity risk management framework and raise standards in the following areas:

- Governance and the articulation of a firm-wide liquidity risk tolerance;
- Liquidity risk measurement, including the capture of off-balance sheet exposures, securitization activities, and other contingent liquidity risks that were not well managed during the financial market turmoil;
- Aligning the risk-taking incentives of individual business units with the liquidity risk exposures their activities create for the bank;
- Stress tests that cover a variety of institution-specific and market-wide scenarios, with a link to the development of effective contingency funding plans;

- Strong management of intraday liquidity risks and collateral positions;
- Maintenance of a robust cushion of unencumbered, high quality liquid assets to be in a position to survive protracted periods of liquidity stress; and
- Regular public disclosures, both quantitative and qualitative, of a bank's liquidity risk profile and management (Basel Committee on Banking Supervision, 2008).

Also in the Republic in Serbia during the crisis the banks were expected to supply the SME sector with credit but they were faced with pressures to decrease lending to risky SMEs borrowers and liquidity in SMEs appeared problematic. In conclusion, the research has shown that SMEs and banks in the Republic of Serbia monitor internal risk in their everyday activities therefore the hypothesis 1 has been confirmed. This means that the observed legal entities which monitor internal risks will potentially increase their performance and improve overall business. In case of the whole sample, the highest effect has the liquidity risk management as the majority of examinees monitor it regularly. This formally confirms the fact that risk management has positive influence on performance of observed companies and institutions of the whole sample (production, insurance, IT organizations and banks) and therefore the hypothesis 2 has been confirmed. The positive influence of risk management on performance is significantly more prominent in case of banking institutions. As expected, it is most present in case of capital and financing risk management.

We note that risk management as a major discipline within finance is playing an important role which shall be even more important in the years to come. The future of risk management in Republic of Serbia is heading towards a more proactive approach in order to develop a long term competitive advantage and maintain profitability and growth. According to research, risk management will increasingly be important for the realization of strategic goals in all industries, due to increased volatility and complexity of the global financial environment. New research will particularly be encouraged in respect to current risk spectrum expansion which is reflected in chains of supply, industry operations, financial frauds and constant tightening of regulations regarding financial services. The challenges of risk management, especially in SMEs in Republic of Serbia, point out to the need for further research in this field with the aim to enhance the process of risk management.

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THE PENSION SYSTEM OF THE REPUBLIC OF CROATIA - THE IMPACT OF CERTAIN FACTORS ON ITS SUSTAINABILITY

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Abstract

The pension system is an essential element of the social security of every individual, and society. The pension system depends significantly on the economic and demographic trends in each country. Maintaining the stability of this system is one of the fundamental problems for Republic of Croatia. The authors analyzed the impact of individual factors (especially economic and demographic) on the development and sustainability of the pension system in the Republic of Croatia. Through the survey authors also explored the impact of non-economic factors on the pension system, and the attitudes of users of the current pension system. Moreover, authors explore awareness and confidence of users in the system, and the willingness to participate in certain forms of pension insurance (in particular those voluntary).

Keywords: *pension system, sustainability, sustainability factors, the impact of non-economic factors*

JEL Classification: H5, H55

1. INTRODUCTION

The pension system is „a collection of legal norms, financial and institutional arrangements governing the insurance risk of old age and disability" (Puljiz, 2005, 171).

Its financing is one of the main factors that determines the standard of living for every pensioner and their financial and social security. Therefore, the level of rights that can be achieved in the pension insurance system is directly depending on the capabilities of its funding, ie. about its sources of funding.

Since the pension system provides for the most significant social risks that can happen to everyone (eg. the risk of age, disability, etc.) the importance of its stability is of great importance for the population of a country, and this system is necessary for the balanced functioning of the whole society and maintainance of its social cohesion, thus connecting individuals and groups within society as a whole (Vretenar Cobović; Cobović, 2016, 841).

2. PENSION SYSTEM OF THE REPUBLIC OF CROATIA AND ITS STRUCTURE

The pension system of the Republic of Croatia has a long tradition. The crisis of this system, which was present at the end of the period of socialism, was deepened even after independence of the Croatia and during the Homeland war. This is why at the end of the nineties began the reform of the Croatian pension insurance system, which was completed in 2002.

Reforms of today's pension system of the Republic of Croatian are based on mixed financing model, in which instead of one there is a system with more pillars. The first pension pillar is a mandatory pension insurance based on intergenerational solidarity, and is financed by contributions from the insured, that employers pay at a rate of 20% employees' gross salaries (Matić; Vretenar Cobović, 2017).

Pension insurance under the second pillar is obligatory for insured persons who are insured under the Pension Insurance Law, and holders of this insurance are mandatory pension funds. The contribution rate which is paid to the mandatory pension funds is 5% of the gross salary of the insured.

Accordingly, insured persons who in 2002 were younger than 40 years of age, and are secured in both pillars, allocate 15% of the contribution to the first pillar and 5% of contributions to the second pillar (Matić; Vretenar Cobović, 2017).

The third pillar in the Republic of Croatia is a voluntary pension insurance based on individual capitalized savings, which are carried out by voluntary pension funds. The third pillar of insurance participate the beneficiaries who wish to further ensure against the risk of old age, disability and death.

But despite the reforms, today's pension insurance system in the Republic of Croatia has significant problems that hamper its effective functioning. This is why in the sequel it will analyze the impact of economic, but also non-economic factors in the sustainability of this system.

3. THE IMPACT OF CERTAIN FACTORS IN THE SUSTAINABILITY OF THE PENSION SYSTEM IN THE REPUBLIC OF CROATIA - RESEARCH RESULTS

In order to collect relevant information about the attitudes of users of the current pension system a primary research was conducted via survey method and an instrument that was used was a questionnaire. The goal of the survey was to investigate the influence of certain factors in the pension insurance system in the Republic of Croatia received by the attitudes of the insured.

The survey was conducted in February 2017, on a sample of 209 respondents, a sample of the target group included the persons employed in small, medium and large companies on the Croatian territory. The survey was conducted by sending a questionnaire electronically.

The questionnaire was structured in three parts. The first part of the questionnaire was related to the study of basic data about the sample (gender, age and completed degree).

The second part of the questionnaire was related to informed of the insured about the functioning of the pension system and confidence in the system. In addition, explored the willingness to participate in certain forms of pension insurance.

The third part of the questionnaire was related to the issues related to the personal attitudes towards the pension system in the Republic of Croatia.

The age and gender structure of the respondents is shown in Table 1.

Table 1: The age and gender structure

Age requirements		17-24	25-35	36-55	56-65	Total
Male	Number	3	33	74	1	111
	% gender	2,70	29,73	66,67	0,90	100%
	% age	37,50	56,90	55,64	10,00	53,11
Female	Number	5	25	59	9	98
	% gender	5,10	25,51	60,20	9,18	100%
	% age	62,50	43,10	44,36	90,00	46,89
Total	Number	8	58	133	10	209
	% gender	3,83	27,75	63,64	4,78	100%
	% age	100%	100%	100%	100%	100%

Source: made by authors

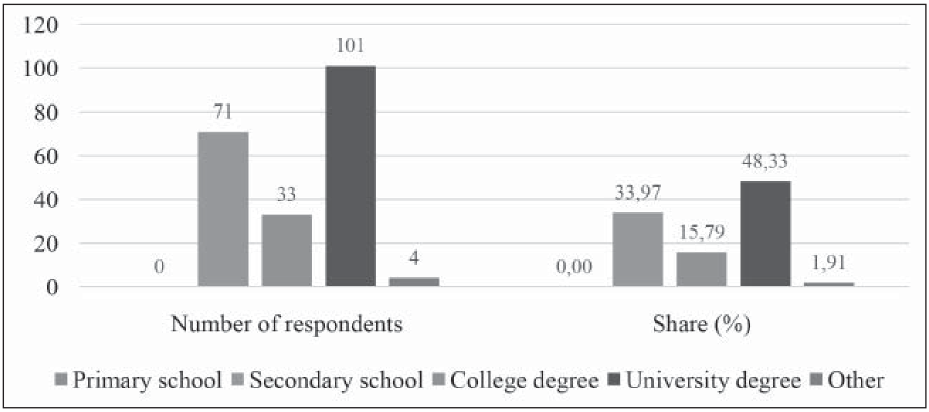
Analyzing the data in the table can be seen that the largest group of respondents are persons aged 36 to 55 years of age, accounting for 63,64% of the total surveyed.

The next largest group consists of respondents aged 25-35 years, accounting for 27,75% of the total study population, followed by those aged 56-65 years (share of 4,78% of the total surveyed). In the total sample of at least numerous are those aged 17 to 24 years of age. This population makes 8,83% of total participants.

In total sample were surveyed 111 men and 98 women. In the aged 17-24 years and aged 56-65 years of life were interviewed more women than men. In other aged expressed a higher percentage of surveyed men than women.

Sample structure by educational qualifications is shown in Chart 1.

Chart 1: Completed professional qualification of respondents



Source: made by authors

Of the total surveyed, the most common response related to the qualifications is that on completion of higher education qualification. This population covers 48,33% of the sample.

In the total sample, most respondents come from the Brod-Posavina County (31,75%), Vukovar-Srijem County (17,31%), Sisak County (7,11%), and Osijek-Baranja County (6,39%).

The total sample of the population in other surrounding parts is in the range of 1% to 5%, depending on the county.

The second group of questions explored the respondents awareness about the functioning of the pension system in the Republic of Croatia (Table 2).

Table 2: Familiarity with the structure of the pension insurance

Description	Familiarity with the structure of the pension insurance			Level of satisfaction		
	Completely known	Mostly known	Unknown	Completely adequate structure	Mostly adequate structure	Inadequate structure
Number	84	101	13	21	99	65
%	42,42	51,01	6,57	11,35	53,51	35,14
Rank	2	1	3	3	1	2

Source: made by authors

On the question regarding familiarity with the structure of the pension insurance 11 respondents would not answer.

In the total sample of 51,01% of the employed population is only partially familiar with the current structure of the pension system, which indicates the necessity of additional educational and informative programs for certain categories of the population. This would help policyholders in facilitating decisions in participation in the system, especially in the context of its voluntary part

In addition, 53,51% of respondents identified themselves as partly satisfied regarding the functioning of the current structures, while 35,14% is extremely dissatisfied with the current functioning of the pension system.

The most common reason for dissatisfaction surveyed the inefficiency of the current system and its long-term viability. In addition, a part of respondents believe that government incentives in the third pillar is too small, and that pension funds do not generate large enough yield.

The confidence of the insured in the current pension system is shown in Table 3.

Table 3: The confidence of the insured

Description	Completely confidence	Partly confidence	No confidence
Number	19	105	85
%	9,09	50,24	40,67
Rank	3	1	2

Source: made by authors

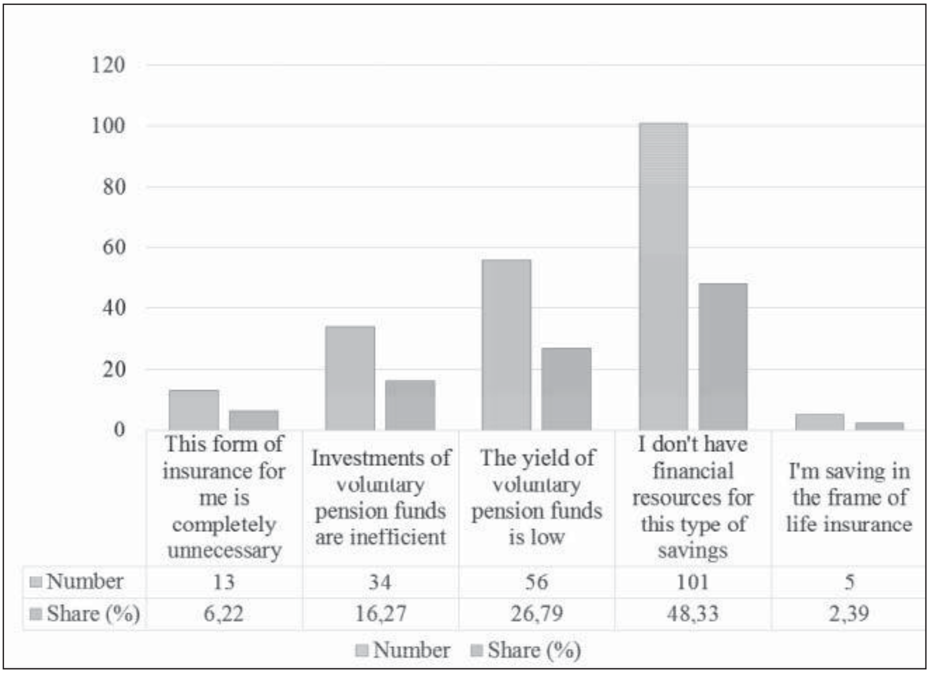
The largest percentage of respondents have partially confidence in the current pension system, while fully trust has only 19 respondents (9,09%). Based on the results can be observed inefficiency of the current system and the importance of changes in some of its variables.

In the second group of questions explored the participation of the insured in certain forms of voluntary pension insurance.

On the question of participation in the context of the third pillar pleaded all respondents in the sample. From the total sample, as many as 80,05% of respondents said that they do not participate in the framework of the voluntary pension insurance. Other insured members participate in compulsory pension funds (11,11%) and closed-end voluntary pension funds (8,84%). As basically for the reason of membership in the fund, 96% of respondents stated that their pension from the first and second pillar will not be sufficient and that they want to further provide for their old age.

The reasons of other respondents who do not participate in the framework of the third pillar are presented in Chart 2.

Chart 2: The reasons for non-participation in the framework of the voluntary pension insurance



Source: made by authors

The most common reason for not participating of respondents in the context of the third pillar is a shortage of money and the idea that yields of voluntary pension funds is low.

Accordingly, it is possible to observe that the future development of the pension system significantly depend on economic factors (particularly employment and wage growth and GDP), because even further awareness and education of the insured on the importance of participation in the context of the third pillar will not be enough if the population will not have enough money to save.

Of the total surveyed, only 2,39% pay premiums for life insurance, which is too small percentage if one wants to ensure the long-term effectiveness of the pension system, but also other forms of voluntary insurance, too.

The third group of questions obtained answers to questions related to the personal attitudes from the respondents to the Croatian pension system.

Preference importance of certain variables on which respondents take care in the second pillar of insurance are shown in the Table 4.

Table 4: The priorities of the insured

Priorities of the insured	Least important		Relatively important		Important		Very important		Most important	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
The amount of the fund's assets	3,75	5	18,01	3	9,00	4	25,43	2	43,81	1
Yield of fund	2,11	5	6,58	4	8,01	3	35,74	2	47,56	1
Number of participants in fund	7,77	5	37,80	1	25,58	2	18,58	3	10,27	4
The amount of paid annual contributions	10,41	4	3,33	5	30,59	2	40,44	1	15,23	3
The percentage deviation of contributions paid per year	8,86	5	10,29	4	30,05	1	28,65	2	22,15	3
The structure of investment fund assets	1,11	5	5,50	4	17,57	3	33,22	2	42,60	1

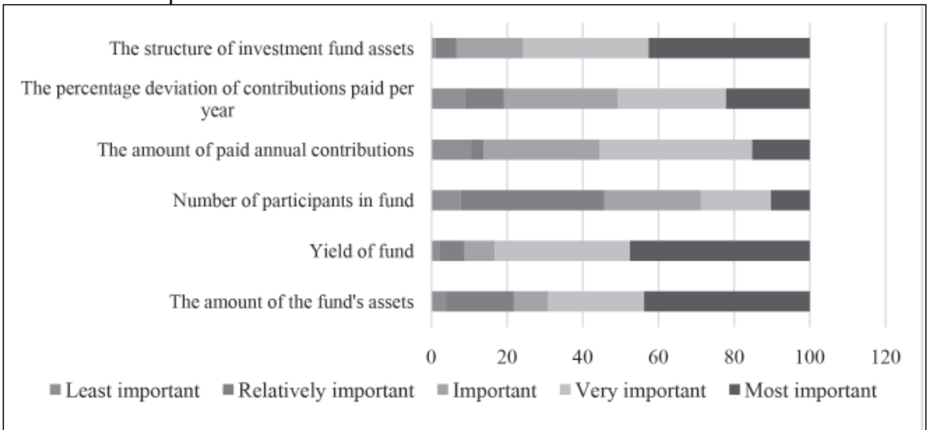
Source: made by authors

About ranking priorities in analyzing the business of their mandatory pension fund stated 164 respondents. Analyzed attitudes of respondents according to the importance of certain variables relevant to the operation of pension funds show that to the insured the most important is amount of the fund assets, yield of fund and the structure of investment fund assets, while it is very important to them the amount of annual contributions payment.

As an important element they cited percentage deviation of contributions paid per year, while it is relatively important to them number of participants in fund. In the category of least important not one variable does not take the first rank.

Based on the data it can be concluded that there is considerable interest from those part of the insured, which exclusively or at least partially take care of their future retirement, the business of their pension funds based on the assigned priority rankings for each variable, as shown in the Chart 3.

Chart 3: The priorities of the insured



Source: made by authors

4. CONCLUSION

The pension system is an essential element of the social security of every individual, and society. At its sustainability significantly affect the economic, but even more non-economic factors. Results of research on the impact of these factors on the sustainability of the pension system in the Republic of Croatia indicate the following:

- in the context of primary research was observed partial familiarity of the respondents with the structure of the pension insurance in the Republic of Croatia, which indicates the necessity of additional educational and informative programs for certain categories of the population,

- in addition, respondents identified themselves as partly satisfied in relation to the functioning of the current structure of the pension insurance system, and for the main reasons for dissatisfaction state the inefficiency of the current system and its long-term unsustainability,
- due to the partial thrust of the respondents the entire current system of pension insurance, it is necessary to change certain variables within the system and additional measures and actions need to be done to improve the economic and social effects of this insurance,
- since most of the respondents do not participate in the framework of the voluntary pension insurance, in the coming period of great importance will be the concern of economic development of the country, which significantly affects the efficiency of the pension system as a whole.

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FINANCIAL PLANNING INDICATORS FOR PREMIUM AND BUSINESS EXPENSE MANAGEMENT IN HEALTH INSURANCE

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Abstract

For their business performance, insurance companies need information from the market. Insurance market monitoring is important for prediction of trends and for a timely adjustment to market changes and conditions. The area of the conducted research encompasses gross premium and business expenses in the health insurance market. Information about trends in the health insurance market is combined with financial indicators and statistical and mathematical methods of modelling for generation of new planning information for decision making.

Using this model, planning information is created for the segment of health insurance sales and management of business expenses. Health insurance sales are divided into sales channels and, using the model, trends are analysed and predicted. In this way, the sales channel analysis and trend prediction are facilitated for the coming annual period in the health insurance market. Business expenses in insurance consist of acquisition costs and administrative costs. By the model, planning information is formed for the management of business *expenses by the mutual relationship between business expenses and health insurance sales. The model is used for management of the acquisition and administrative costs. As an important category for sales management, commission costs are included in acquisition costs within the model.*

The aim of the conducted research was to illustrate the model which, using financial planning indicators, generates information about estimation and prediction of the sales channel trends and the amount of business expenses in the national health insurance market, as well as to expand the information basis for consideration of market trends and for planning of business of insurance companies which operate in the said market, with the purpose of realisation of the planned financial performance.

***Keywords**: financial indicators, health insurance, sales channels, acquisition costs, commission costs, administrative costs, insurance companies, insurance market.*

JEL Classification: I13, I18

1. INTRODUCTION

Management of expenses and planning of the annual amount of gross premium represents an important factor of insurance company performance in the segment of health insurance. In reports about the national insurance markets, aggregate values which insurance companies realise in the market are shown. Information about realised dimensions in the national market facilitate the comparison of their own business and the national market.

Business expenses in insurance companies consist of acquisition costs and administrative costs.The value of calculated gross premium, shown by such reports, include the premium amounts which are agreed in the current accounting period for a period of one year.

Information which is applied for planning of business goals is obtained by analysis of the total gross premium through sales channels and of realised business expenses at the annual level. Using historical data, it is possible to plan the dimensions of annual premiums and expenses in the coming annual period.

The aim of this research is to, by using historical information from the national health insurance market, with application of scientific methods, illustrate financial planning indicators through the business model for business planning and setting of business goals. The model encompasses gross premiums through sales channels and business expenses and is applied to health insurance. The technique of modelling, applicability and implementation is shown by application of information from reports on trends of the national health insurance market in the Republic of Croatia.

2. THEORETICAL HYPOTHESES

The insurance sales channels represent the method of organisation and realisation of the insurance offer and service sales in the life and non-life insurances market (Andrijanić & Klasnić; 2002, 133). Insurance companies sell insurance policies using their own networks and sales channels outside their own sales networks. Using external sales channels, they expand their sales networks with the aim to include as large as possible a number of potential clients, contracting an increased number of covers (Ferreira; 2017, 140). The price of insurance or gross premium is the amount a policyholder pays to the insurer for a contracted insurance cover (Andrijašević & Petranović; 1999, 214). An agreed annual gross premium is analysed through each selling channel. Insurance company management estimates the annual potential of each sales channel and prepares a sales plan in order to realise a planned gross premium annual value.

In insurance company own sales channels, the sales network consists of insurance suppliers, to whom insurance companies pay a commission for each contracted insurance policy and suppliers who are not linked to sales commission. Insurance companies pay external sales channels commissions for sold, i.e. contracted insurance policies. According to the statistical data of the Croatian Financial Services Supervisory Agency, in the Republic of Croatia, sales channels include: sales channels without commission, internal sales channels, agencies, insurance brokers, bankassurance and other sales channels.

In the competitive insurance market environment, a profitable and financially stable insurance company is built on cost effectiveness (Sriram et al.; 2016, 178). In their business, insurance companies create expenses, of which the most important are business expenses which are divided into acquisition costs and administrative costs. Acquisition costs include all directs costs which are created upon insurance contract conclusion, such as agent costs, sales personnel salary costs, commission and costs of promotion and they are divided into commission costs and other acquisition costs (Žager , K. et al..; 2008, 322). Commission costs are approved as they arise, in accordance with the principle of the accounting period. Administrative costs contain costs created in relation in portfolio management, personnel expenses and other material and non-material costs (Žager , K. et al..; 2008, 322). For efficient insurance company business, business expenses have to be optimised, i.e. expenses have to be managed so that, with an adequate cost level, a company can operate without jeopardising the quality of the insurance services provided.

Reports about insurance companies' realised business results in the national insurance market represent a point of comparison which is used to compare business indicators and insurance company realised dimensions with the national insurance market. Historical information facilitates comparison with previous periods and the aim of this research is to, by application of this information and using financial indicators, plan the annual dimension of gross premium shares per sales channels and business expenses, so that they are applicable to all the participants in the insurance market.

The business prior to and following the emerged world crisis hinders the comparison of business results (Jurcevic & Zaja, M; 2013, 204). Starting from the fact that, after the year 2008, growth rates of all the markets have been considerably different, thus also of the health insurance markets, health insurance market trends between the years 2009 and 2015 have been included in the formation of the model. Application of these periods for prediction of future values of gross premium annual shares per sales channels and business expenses excludes previous growth rates which marked the period prior to emergence of the economic crisis.

3. RESEARCH METHODOLOGY

The starting point of this research is the development of a model for insurance company management decision making which will improve performance in the field of health insurance. The area of coverage consists of gross premium and business expenses, provided future movements in the market are carried out in line with the movement trends of the analysed years, where trend is defined as a statistical hypothesis of the analysed phenomenon movement (Žužul, J. ata lt.; 2008, 139).

Two segments to which the research is focused are gross premium and business expenses. Insurance company management prepares a gross premium annual plan for health insurance. In order to achieve business efficiency in the market, the plan should include all dimensions (Jaraya & Bouri; 2014, 70). The said plan covers sales channels through which health insurance policies will be contracted. In this process, it is necessary to predict sales channels' sales ability and to advance and expand sales channels in relation to the situation in the market.

Information about realised dimensions is obtained using annual reports on sales channels in the insurance market. From those reports, the trend and the share of realised gross premium per sales channel in total health insurance gross premium in the national market is monitored.

$$Sales\ channel\ share\ in\ gross\ premium = \frac{\text{gross premium per sales channel}}{\text{total gross premium}} \quad (1)$$

The illustrated dimensions of the realised annual gross premium per sales channel in the health insurance market are reduced to a percentage share in the total premium. Such an illustration facilitates consideration of the power of the sales channels and, with the annual comparison, the movement trend is perceived with the aim to plan absorption powers in the coming annual period.

Using the regression model, annual periods and shares of realised gross premium per sales channel are linked. In testing of the regression models, the second-degree polynomials showed the highest representativeness. In the applied regression model, the independent variable is time, i.e. year, while the annual gross premium share per sales channel is the dependent variable. This is how, by analysing of two phenomena, the interrelationships were determined and, on the basis of those interrelationships, future values are planned and predicted (Dumičić, K. et alt. ; 2011, 322) The regression models which are formed per sales channels serve to obtain the expected values of the gross premium share per sales channel in the coming year.

The regression model used is expressed as follows (Šošić; 2008, 604):

$$y_t = \mathrm{a} + b_1 x_t + b_2 x_t^2 \quad (2)$$

y_t – dependent variable – gross premium share per sales channel
x – independent variable year
α – constant member
b – regression coefficient
r^2- coefficient of determination

$$r^2 = \frac{\sum_{i=1}^{n} (\bar{y}_i - \bar{y})^2}{\sum_{i=1}^{n} (y_i - \bar{y})^2} = \frac{a\sum_{i=1}^{n} y_i + b\sum_{i=1}^{n} x_i y_i - n\bar{y}^2}{\sum_{i=1}^{n} y_i^2 - n\bar{y}^2}, \quad 0 \le r^2 \le 1. \tag{3}$$

The annual business expenses from the national health insurance market are put into interrelationship with the annual gross premium in order to be adapted for implementation in insurance companies. By this process, the relationships between gross premium and business expenses are obtained, i.e. the share of expenses in the gross premium in the insurance market. Given that business expenses in insurance are divided into acquisition costs and administrative costs, for the purposes of a more detailed information basis for decision making, it is necessary to calculate the indicators for each listed business expense segment. Commission costs are a part of the acquisition costs and refer to the commission for contracted health insurance policies. The indicators of the shares of business expenses in the gross premium show what share the unit expense cost has in the unit gross premium value, i.e. converted into relative amounts, they show the share of costs in the gross premium. The indicators used in the research are:

$$Supply\ cost\ and\ gross\ premium\ ratio\ index = \frac{\text{acquisition costs}}{\text{gross premium}} \tag{4}$$

$$Commission\ cost\ and\ gross\ premium\ ratio\ index = \frac{\text{commission costs}}{\text{gross premium}} \tag{5}$$

$$Administrative\ cost\ and\ gross\ premium\ ratio\ index = \frac{\text{administrative costs}}{\text{gross premium}} \tag{6}$$

Annual values of the relationship indicators were linked with annual periods using the trend model, thus obtaining the predicted values of indicators for the coming year. The highest representativeness was shown by the second-degree polynomial trend. The regression model provides expected values of the shares of acquisition costs, commission costs and administrative costs in the health insurance gross premium in the national market. The characteristic of the model is that, when applied, predicted market potentials per sales channels are obtained in health insurance. By model application, the insurance company planned annual premium is distributed across sales channels and, in that way, planning values for the insurance company are matched to market expectations.

Cost-wise, the aforesaid facilitates the management of acquisition, commission and administrative costs. Prediction of cost shares in gross premium provides a point of comparison for cost management in insurance companies. Providing information in the segment of planning of gross premium and business costs, the model affects insurance company business performance. The form of the obtained information is applicable to all insurance companies which offer health insurance, regardless of the insurance company size. The model is also applicable to new insurance companies which are starting to introduce health insurance, providing them with reference dimensions for business.

4. RESEARCH IMPLEMENTATION

The model testing was conducted in the Republic of Croatia's health insurance market for the period between the years 2009 and 2015. The basic data is gross premium per sales channel, acquisition costs, commission costs and administrative costs. The data needed for the creation of the model is illustrated in the tables below.

Table 1. Calculated gross premium per sales channel in the health insurance market in the Republic of Croatia in the period between the years 2009 and 2015.

Year	Sales without commission	Internal suppliers	Agencies	Brokers	Bank assurance	Others	Total
2009	177.340.903	60.479.458	18.380.786	9.476.988	476.064	5.015.192	***271.169.392***
2010	165.050.302	60.914.343	15.784.638	7.750.015	2.751.604	6.451.783	***258.702.687***
2011	160.477.817	62.971.740	12.536.560	9.852.286	4.776.248	4.532.325	***255.146.977***
2012	135.019.316	65.905.272	11.246.865	14.784.844	7.370.269	4.341.063	***238.667.629***
2013	122.377.132	66.637.146	19.890.027	14.671.957	18.173.269	7.688.939	***249.438.469***
2014	106.923.076	65.379.756	17.518.431	34.398.161	41.311.696	12.806.880	***278.338.000***
2015	85.352.576	77.040.454	20.632.691	44.803.822	77.341.790	24.106.398	***329.277.731***

Source: HANFA http://www.hanfa.hr/HR/nav/106/statistika.html (visited on 08.03.2017)

Table 2. Business expenses and calculated gross premium in the health insurance market in the Republic of Croatia in the period between the years 2009 and 2015.

Year	Commission costs	Other acquisition costs	Total acquisition costs (1+2)	Administrative costs	Calculated annual gross premium
	1	2	3	4	5
2009	6.650.972	18.469.916	25.120.888	65.709.612	271.169.392
2010	6.901.012	18.249.882	25.150.894	64.984.200	258.702.687
2011	5.830.741	14.434.211	20.264.953	61.503.378	255.146.977
2012	7.085.788	13.099.817	20.185.605	52.834.954	238.667.629
2013	7.573.099	29.111.279	36.684.378	52.747.108	249.438.469
2014	12.689.248	23.160.718	35.849.966	57.098.187	278.338.000
2015	35.322.780	25.285.993	60.608.773	44.484.868	329.277.731

Source: HANFA http://www.hanfa.hr/HR/nav/106/statistika.html (visited on 08.03.2017)

Based on the data from table 1., gross premium shares are calculated per sales channel in the observed years. This is how the realised gross premium annual values are reduced to unit values, i.e. to percentage shares which show the sales channel trends and importance.

Table 3. Total annual gross premium shares per sales channel in the health insurance market in the Republic of Croatia in the period between the years 2009 and 2015.

Year	xt	Without commission	Internal suppliers	Agencies	Brokers	Bankassurance	Others	Total
2009	1	65,3986%	22,3032%	6,7783%	3,4949%	0,1756%	1,8495%	*100%*
2010	2	63,7992%	23,5461%	6,1015%	2,9957%	1,0636%	2,4939%	*100%*
2011	3	62,8962%	24,6806%	4,9135%	3,8614%	1,8720%	1,7764%	*100%*
2012	4	56,5721%	27,6138%	4,7124%	6,1947%	3,0881%	1,8189%	*100%*
2013	5	49,0610%	26,7149%	7,9739%	5,8820%	7,2857%	3,0825%	*100%*
2014	6	38,4148%	23,4893%	6,2939%	12,3584%	14,8423%	4,6012%	*100%*
2015	7	25,9212%	23,3968%	6,2660%	13,6067%	23,4883%	7,3210%	*100%*

Source: Authors' calculation as per table 1.

Regression models are formed by application of the data from table 3. In the regression model, time is the independent variable and gross premium share per sales channel, the dependent variable. Regression models, illustrated in table 4., are obtained by the conducted process of regression modelling and, on their basis, the expected gross premium shares per sales channel in 2016 are calculated.

Table 4. Regression models and predicted shares in the sales of health insurance gross premium per sales channel in the Republic of Croatia in the year 2016.

Sales channel	Regression model	r^2	Predicted annual gross premium shares in sales channels
Without commission	$y = -0{,}01257xt^2+0{,}03516xt+0{,}62791$	0,99	10,4710%
Internal suppliers	$y = -0{,}00430xt^2+0{,}03628xt+0{,}18629$	0,73	20,1330%
Brokers	$y = 0{,}00375xt^2-0{,}01176xt+0{,}04116$	0,93	18,7080%
Bankassurance	$y = 0{,}00934xt^2-0{,}03800xt+0{,}03914$	0,99	33,2900%
Others	$y = 0{,}00286xt^2-0{,}01502xt+0{,}03573$	0,95	9,8610%
Agencies[1]			7,5370 %

Source: Authors' calculation as per table 3.

Business expenses in the health insurance market are put into relationship with the calculated annual gross premium. The obtained values are reduced to relative shares, which are shown in table 5. The regression models were developed using regression modelling, which facilitated the calculation of the predicted values of cost share in the total gross premium for the years 2016 and 2017.

[1] Due to an uneven annual gross premium trend in the agency sales channels, the regression modelling could not be applied to this sales channel. With regression models for the year 2016, 92.463% premium share was encompassed in sales channels; it can be presumed that agencies account for the remaining share equalling 7.537%.

Table 5. Acquisition, commission and administrative cost shares in the gross premium in the Republic of Croatia health insurance market in the period between the years 2009 and 2015.

Year	xt	Acquisition cost share in gross premium	Commission cost share in gross premium	Administrative cost share in gross premium
2009	1	9,2639%	2,4527%	24,2319%
2010	2	9,7219%	2,6675%	25,1193%
2011	3	7,9425%	2,2852%	24,1051%
2012	4	8,4576%	2,9689%	22,1375%
2013	5	14,7068%	3,0361%	21,1463%
2014	6	12,8800%	4,5589%	20,5140%
2015	7	18,4066%	10,7274%	13,5098%

Source: Authors' calculation as per table 2.

Table 6. Regression models and predicted cost shares in the health insurance gross premium in Republic of Croatia in the years 2016 and 2017.

Description	Regression model	r^2	Cost share in gross premium	
			Year 2016	Year 2017
Acquisition costs	$y = 0{,}00435xt^2-0{,}02037xt+0{,}11064$	0,829	22,6080%	27,9660%
Commission costs	$y = 0{,}00453xt^2-0{,}02567xt+0{,}05343$	0,879	13,7270%	18,8520%
Administrative costs	$y = -0{,}0042xt^2+0{,}0181xt+0{,}22786$	0,920	10,1060%	4,7050%

Source: Authors' calculation as per table 5.

Observing the period since the year 2009, a considerable growth can be noticed in the share of health insurance sales through bankassurance. The predicted share is 33.29%, which shows that a third of the total gross premium will be agreed upon through this channel. The sales of health insurance without the commission payment records a considerable fall in the observed years and the planned share, in the year 2016, is 10.47%.

It is predicted that 53.42% of the total annual health insurance premium in the national market will be agreed through the internal sales channels and the external bankassurance sales channel. Sales through insurance brokers, which fall into the category of external insurance company sales channels, is on the increase. The predicted growth in relation to the year 2015 equals 5.10%. By analysing predictions for the health insurance national market, the most important sales channels are perceived and these are the internal channels of acquisition through own insurance company sales network, external bankassurance channels and brokers, who, altogether will have a share of 72.13% in the total gross premium agreed. Given the dynamics of the sales channel trends in the period between the years 2009 and 2015, a one-year period is predicted.

The use of the model in planning of sales value per sales channel in the insurance company will be illustrated with a planned value of 500,000 HRK in annual gross premium. According to the information obtained by the model, predicted gross premium values per sales channel are calculated.

Table 7. Predicted sales value per sales channels for the planned gross premium of 500,000 HRK in the Republic of Croatia health insurance market in the year 2016.

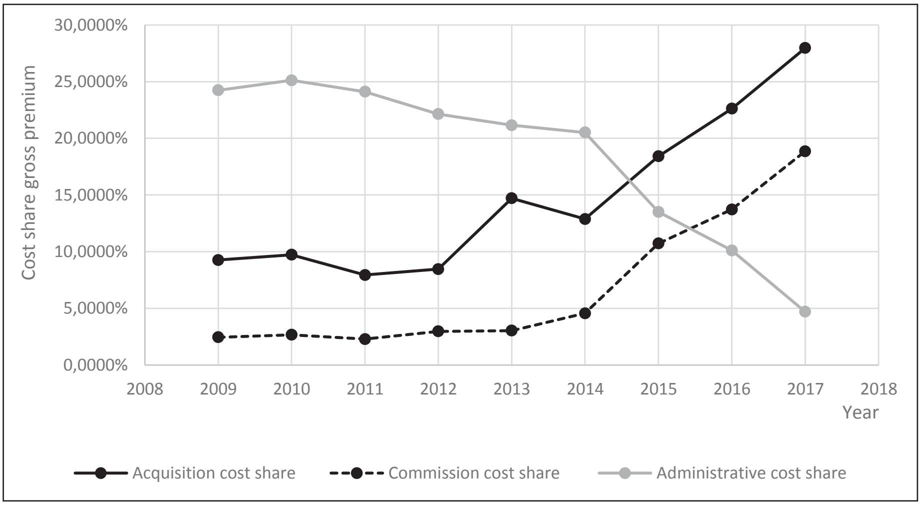
Sales channel	Sales channel share in annual gross premium in 2016	Gross premium predicted value per sales channel (in HRK)
Without commission	10,4710%	52.355
Internal suppliers	20,1330%	100.665
Brokers	18,7080%	93.540
Bankassurance	33,2900%	166.450
Others	9,8610%	49.305
Agencies	7,5370%	37.685
TOTAL	100%	500.000

Source: Authors' calculation

By applying this information, market possibilities and improvement and expansion of insurance company sales channels are determined in order to achieve the planned goals.

The model provides the prediction of acquisition and commission cost share in the gross premium. Apart from these costs which are subject to the agreed gross premium, the administrative costs, as a part of insurance company business expenses, are also included.

Figure 1. Illustration of trends of cost share in the gross premium in the Republic of Croatia health insurance market for the period between the years 2009 and 2015 and for the predicted period of the years 2016 and 2017.



Source: Tables 5. and 6.

In the observed years, the acquisition cost shares in gross premium has increased from 9.26% in 2009 to 18.04% in 2015. A considerable increase is visible in commission costs. Commission cost shares in gross premium have risen to 10.72% in 2015, which represents an increase by 8.27%, compared to the initial 2.45% in 2009. The administrative cost shares record annual declines of 24.23% in 2009, to 13.50% in 2015. The decline in administrative cost shares in health insurance gross premium is also expected in the two-year predicted period, namely to 10.10% in 2016 and 4.07% in 2017. Acquisition and commission cost shares in gross premium will continue to grow in both 2016 and 2017. The expected acquisition cost share will equal 22.60% in 2016 and 27.96% in 2017. Commission cost share in gross premium will grow to 13.72% in 2016 and to 18.85% in 2017 respectively.

Model application facilitates planning of the annual costs in insurance companies on the basis of the planned annual gross premium. By application of previously used planned annual gross premium in insurance companies in the amount of 500,000 HRK for the year 2016 and the same amount of planned gross premium for the year 2017, the said application will be illustrated as per table below.

Table 8. Predicted value of acquisition, commission and administrative costs for the planned gross premium of 500,000 HRK in the Republic of Croatia health insurance market in the years 2016 and 2017.

Description	Cost share in gross premium in Republic of Croatia market		Predicted cost value (in HRK)	
	Year 2016	Year 2017	Year 2016	Year 2017
Acquisition costs	22,6080%	27,9660%	113.040	139.830
Commission costs	13,7270%	18,8520%	68.635	94.260
Administrative costs	10,1060%	4,7050%	50.530	23.525

Source: Authors' calculation

The values of the predicted acquisition, commission and administrative annual costs in insurance companies which are obtained for the years 2016 and 2017 show market cost dimensions which will be incurred upon realisation of the planned gross premium. Application of the illustrated model improves the process of planning of annual gross premium per sales channel, facilitating analysis of sales channel trends and analysis and planning of business expenses in the health insurance market.

4. CONCLUSION

Information from the insurance market represents summary data about all market participants' realised business dimensions. By using the said information, further market trends are predicted. Recognition of market possibilities becomes a key to success in business. Monitoring of market trends and adjustment to new circumstances creates insurance company competitive advantage. Finding new methods for business planning improvement is an essential requirement in insurance companies. By insurance policy sales, business income is realised, which, with adequate cost management, affect the business result. Insurance policy sales are carried out through sales channels. The planned annual gross premium is realised by planning of sales per sales channel. Sales channel market potentials change from period to period, so recognition of sales possibilities in the insurance market represents an important factor of insurance company business performance.

Cost management has an important role in insurance companies. Maintenance of acceptable business level costs facilitates good performance and competitive position in the market. Information from the insurance market enables consideration of the costs incurred by all participants in the insurance market. Contracting of insurance policies through development of external and internal sales channels, coupled with insurance company cost efficiency for insurance companies represents a constant business challenge.

The model developed by this research has been created due to the aforesaid needs in insurance company business management. The information generated by the model enables consideration of trends of important business elements in health insurance. Providing information about gross premium shares in sales channels and business expenses in the national market facilitates comparative dimensions for all insurance companies, regardless of their size or their market power. The share of the annual gross premium per sales channel provides information about sales channel financial possibilities. By predicted acquisition and administrative cost shares in gross premium, relative relationships are obtained for application in insurance companies. The form of the obtained information is applicable to all insurance companies which have health insurance in their offer. The model is applicable also to new insurance companies which are starting to introduce health insurance, providing them with reference values for the business, as well as to insurance market analysts.

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THE EMPIRICAL STUDY OF THE IMPACT OF CREDIT RATING AGENCIES ANNOUNCEMENTS ON THE BEHAVIOR OF STOCK MARKETS IN EUROPEAN COUNTRIES

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Abstract

The literature shows that the influence of credit rating changes on stock markets is ambiguous. It depends on such factors as: the length of the research period, which country is analyzed, which market is analyzed, which companies are researched, the fact if the decrease or the increase is in question. Considering the research period from January 2004 to June 2016, the author checks if the decrease of the rating category by Standard & Poor's can influence the volatility of rates of return on most important stock indexes for chosen European countries during just one observation day.

Keywords: *credit rating agencies, , ratings, stock markets*

JEL classification code: G2, C2

1. THE LITERATURE OVERVIEW

The literature shows that the influence of credit rating changes on stock markets is ambiguous. It depends on such factors as: the length of the research period, which country is analyzed, which market is analyzed, which companies are researched, the fact if the decrease or the increase is in question.[1] Accord-

[1] See f.ex. M.M. Abdeldayem, R. Nekhili, Credit Rating Changes and Stock Market Reaction in the Kingdom of Bahrajn, International Journal of Economics and Finance, Nr 8, vol. 8, 2016, p. 23 – 32; R. Brooks, D. Hillier, R. W. Faff, The National Market Impact of Sovereign Rating Changes, Journal

ing to the literature, these are both countries ratings[2] and companies ratings[3] that impact stock markets quotations. The influence of credit rating changes on treasury bonds markets has been well checked, however at the same time their influence on stock markets is not as obvious as the latter. Generally, the influence of the rating decrease is stronger than the one of the increase, which is why the author's research concentrates on the former.

2. THE RANGE OF THE RESEARCH

The author checks if the decrease of rating category by Standard & Poor's can influence the volatility of rates of return on most important stock indexes for chosen European countries. The choice resulted from the number of credit rating changes in the researched period. The author assumed that countries which had less than 5 rating decreases would not be taken into consideration, because the results achieved may not be representative enough. Usually authors construct the window for observations. This study is different because the author checks if it is possible to find some countries in which the influence of rat-

of Banking and Finance, Vol. 28, No. 1, 2004, p. 233 – 250; M.A. Ferreira, P.M. Gama, Does sovereign debt ratings news spill over to international markets?, Journal of Banking and Finance, No. 31, 2007, p. 3162 – 3182; K. Pukthuanthong-Le, F.A. Elayan, L.C. Rose, Equity and debt market responses to sovereign credit rating announcement, Global Finance Journal, vol. 18, No. 1, 2007, p. 47 – 83.

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[3] P. Abad, M.D. Robles, Credit rating agencies and unsystematic risk: Is there a linkage?, International Review of Economics and Finance, No. 33, p. 152 – 171, 2014; Ch.E. Bannier, M. Tyrell, Credit rating agencies, financial market stability, and efficiency, 2011, p. 1 – 22, the paper available at: www.papers.ssrn.com; Y. Wang, X. Chen, An Empirical Study of the Relationship between the Listed Company Stock Returns and the Credit Rating, SHS Web of Conferences , 17, 01021, 2015, p. 1 – 4; P. Jorion, G. Zhang, Information Effects of Bond Rating Changes: The Role of the Rating Prior to the Announcement, Journal of Fixed Income, No. 16, vol. 4, 2007, p. 45 – 59. The paper available at: http//ssrn.com/abstract=1497536.

ing decreases on the volatility of stock markets can be seen during just one day. The research period was January 2004 – June 2016.

3. THE RESEARCH RESULTS

Greece

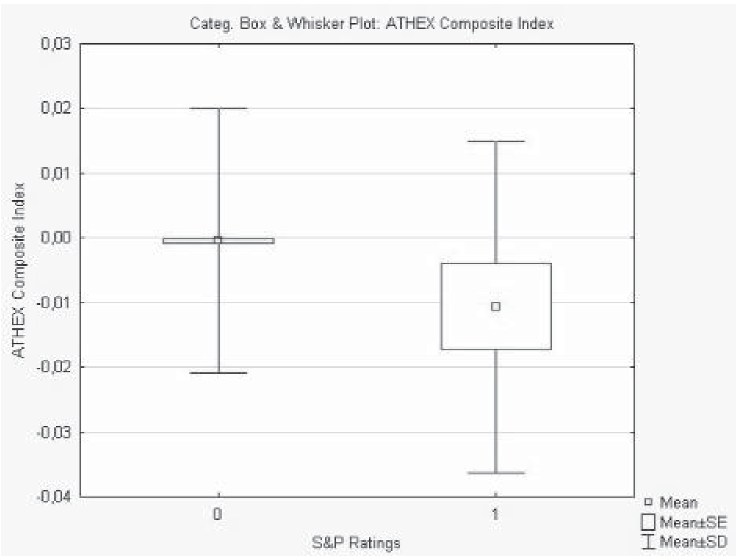
As the zero hypothesis, it was assumed that there is no dependency between the decrease of the rating category for Greece by Standard & Poor's and the volatility of rates of return on ATHEX Composite Index.

Table 1. Breakdown table of descriptive statistics.

Standard & Poor's[4] Ratings	ATHEX Composite Averages	ATHEX Composite N valid	ATHEX Composite Standard deviations
0	-0,000420	3074	0,020429
1	-0,010619	15	0,025630
Total	-0,000470	3089	0,020464

Source: author's own calculations.

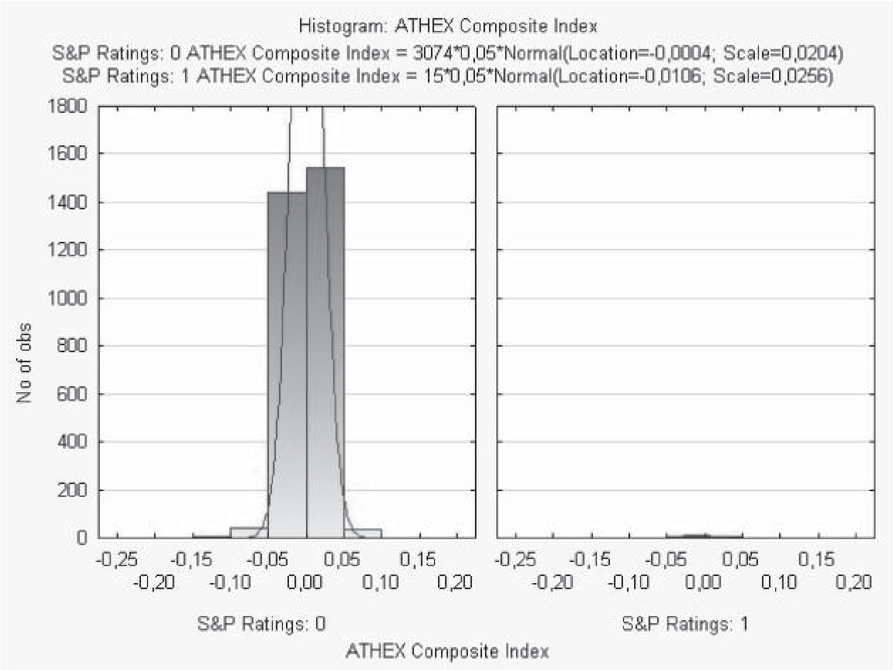
Chart 1. Categorized Box & Whisker Plot for the ATHEX Composite index.



Source: author's own research in Statistica.

[4] 0 means that there was no decision of the rating agency on the decrease of the rating category, 1 means the opposite situation, that is the rating decrease.

Chart 2. Categorized histogram of rates of return on the ATHEX Composite index.



Source: author's own research in Statistica.

Table 2. Results of the variance analysis.

Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
ATHEX Composite	0,001553	1	0,001553	1,291661	3087	0,000418	3,710587	0,054160

Source: author's own calculations.

Table 2 depicts the results of the variance analysis of rates of return on ATHEX Composite index. F-Snedecor distribution tables show that for the declared significance level α= 0,05, the following is achieved:

$F_{0,05;1;3087} = 3,8$, which lets choose the following critical interval: $< 3,8; +\infty >$. The value 3,71 is placed beyond the assessed interval. On the grounds of that, the hypothesis on the lack of dependency between the negative decision of the rating agency and the volatility of rates of return on ATHEX Composite Index should not be rejected. The critical significance level is not much higher than the one assumed in the research.

Results of the variance homogeneity test by Lavene (table 3) show that at the assumed significance level $\alpha = 0{,}05$ there are no fundamentals to reject the hypothesis on the variance homogeneity. Identical conclusions can be drawn from the variance homogeneity test by Browna'a-Forsythe.

Table 3. Results of the variance homogeneity test by Lavene.

Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
ATHEX Composite	0,000471	1	0,000471	0,664334	3087	0,000215	2,189114	0,139091

Source: author's own research in Statistica.

Spain

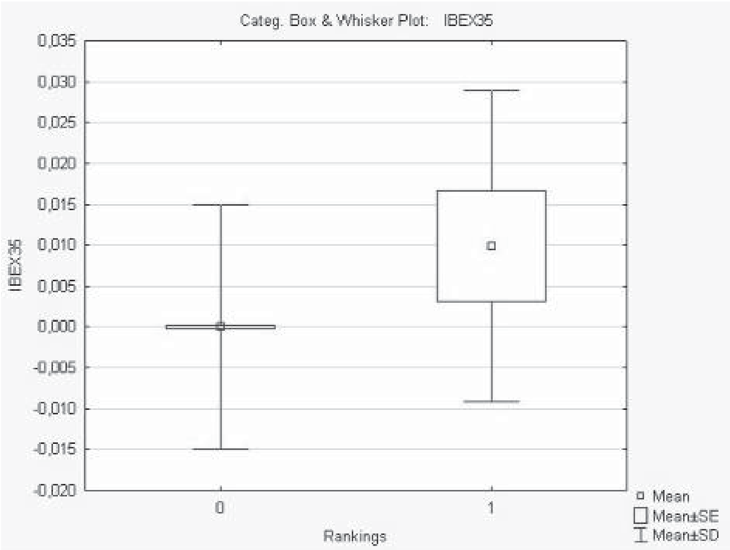
As a zero hypothesis the following assumption was taken: there is no dependency between the decrease of rating by Standard & Poor's for Spain and the volatility of rates of return on IBEX35 index.

Table 4. Breakdown table of descriptive statistics.

Standar & Poor's Ratings	IBEX35 Averages	IBEX35 N valid	IBEX35 Standard deviations
0	-0,000014	3175	0,014992
1	0,009888	8	0,019009
Total	0,000011	3183	0,015008

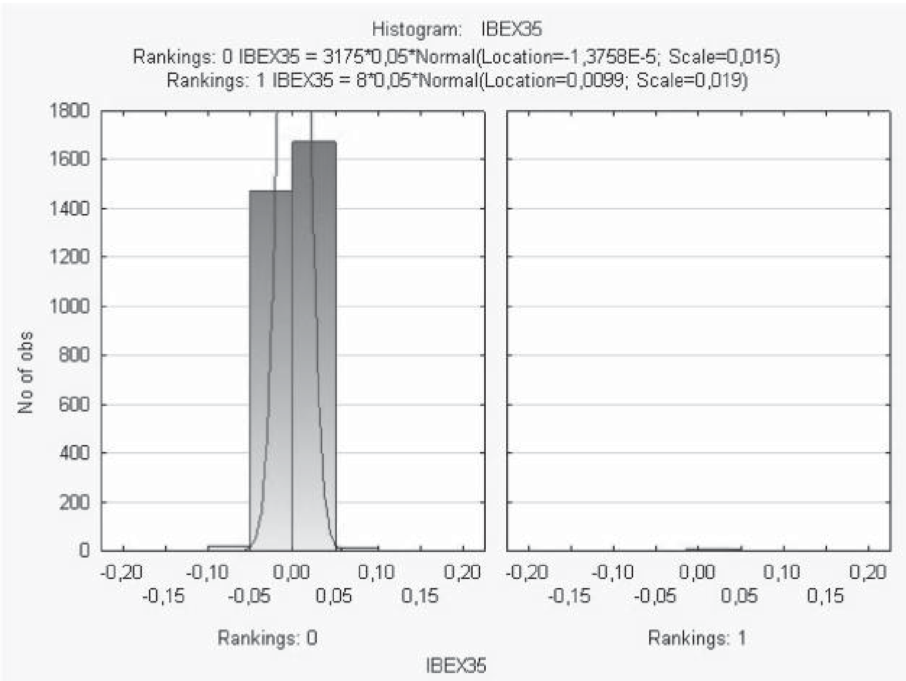
Source: author's own calculations.

Chart 3. Categorized Box & Whisker Plot for the IBEX35 index.



Source: author's own research in Statistica.

Chart 4. Categorized histogram of rates of return on the IBEX35 index.



Source: author's own research in Statistica.

Table 5. Results of the variance analysis.

Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
IBEX35	0,000782	1	0,000782	0,715910	3181	0,000225	3,476258	0,062347

Source: author's own research in Statistica.

Table 5 shows results of the variance analysis for rates of return on IBEX35 index. According to F-Snedecor distribution tables, for the declared significance level $\alpha = 0{,}05$ the following value is displayed:

$F_{0,05;1;3181} = 3{,}8$,

which lets set the critical interval of $< 3{,}8; +\infty >$. The value 3,48 is beyond the assessed interval, which means that there are fundamentals not to reject the hypothesis on the lack of dependency between the negative decision of the credit rating agency and the volatility of rates of return on the IBEX35 index. The critical significance level is a little higher than the assumed one.

Results of the variance homogeneity test by Lavene (table 6) show that at the assumed significance level of $\alpha = 0{,}05$ there are no fundamentals to reject the variance homogeneity hypothesis. At such a high critical significance level (0,43) the decision is not fully statistically explicit. Identical conclusions can be drawn from the variance homogeneity test by Brown-Forsythe.

Table 6. Results of the variance homogeneity test by Lavene.

Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
IBEX35	0,000072	1	0,000072	0,373660	3181	0,000117	0,614282	0,433238

Source: author's own research in Statistica.

Portugal

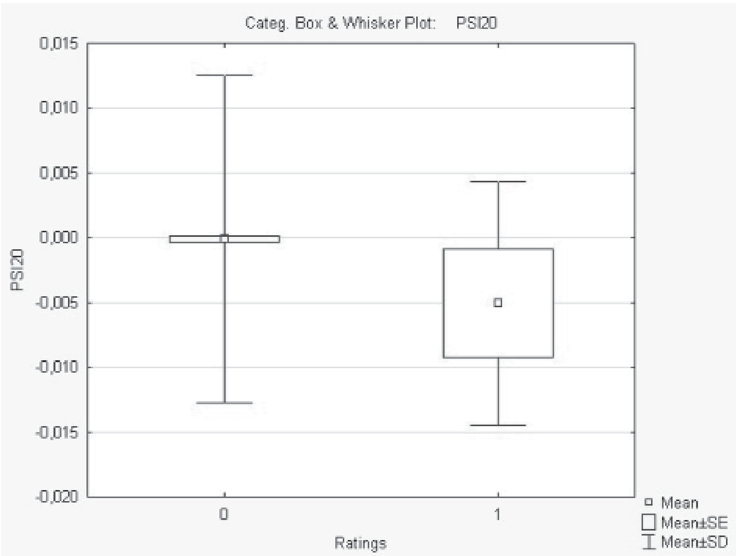
As a zero hypothesis the following assumption was taken: there is no dependency between the decrease of rating by Standard & Poor's for Portugal and the volatility of rates of return on the PSI20 index.

Table 7. Breakdown table of descriptive statistics.

Standard & Poor's Ratings	PSI20 Averages	PSI20 N valid	PSI20 Standard deviations
0	-0,000127	3196	0,012641
1	-0,005077	5	0,009412
Ogółem	-0,000135	3201	0,012637

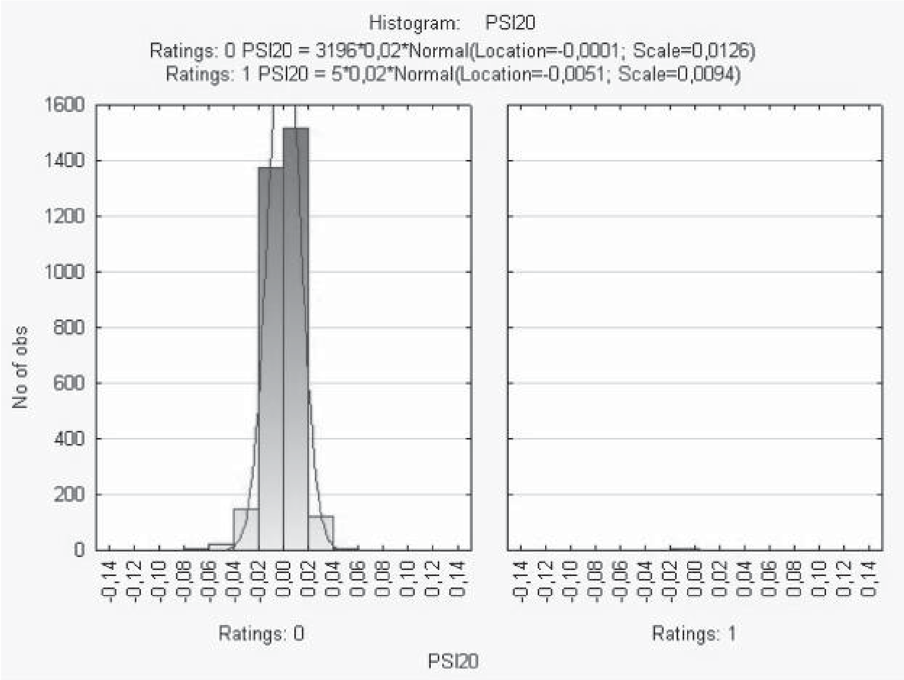
Source: author's own calculations.

Chart 5. Categorized Box & Whisker Plot for the PSI20 index.



Source: author's own research in Statistica.

Chart 6. Categorized histogram of rates of return on the PSI20 index.



Source: author's own research in Statistica.

Table 8. Results of the variance analysis.

Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
PSI20	0,000122	1	0,000122	0,510908	3199	0,000160	0,765719	0,381610

Source: author's own research in Statistica.

Table 8 depicts results of the variance analysis for rates of return on the PSI20 index. F-Snedecor distribution tables show that for the declared significance level of $\alpha = 0{,}05$, the following is true:

$F_{0,05;1;3199} = 3{,}8$,

which lets set the critical interval of $< 3{,}8; +\infty >$. The value 0,76 is beyond the assessed interval, which means that there are fundamentals not to reject the hypothesis on the lack of dependency between the negative decision of the rating agency and the volatility of rates of return on the PSI20 index. The critical significance level is much higher than the assumed one. The decision is not fully statistically explicit.

Results of the variance homogeneity test by Lavene (table 9) show that at the assumed significance level of $\alpha = 0{,}05$ there are no fundamentals to reject the variance homogeneity hypothesis. At such a high critical significance level (0,71) the decision is not fully statistically explicit. Identical conclusions can be drawn from the variance homogeneity test by Brown-Forsythe.

Table 9. Results of the variance homogeneity test by Lavene.

Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
PSI20	0,000011	1	0,000011	0,263880	3199	0,000082	0,135557	0,712763

Source: author's own research in Statistica.

Latvia

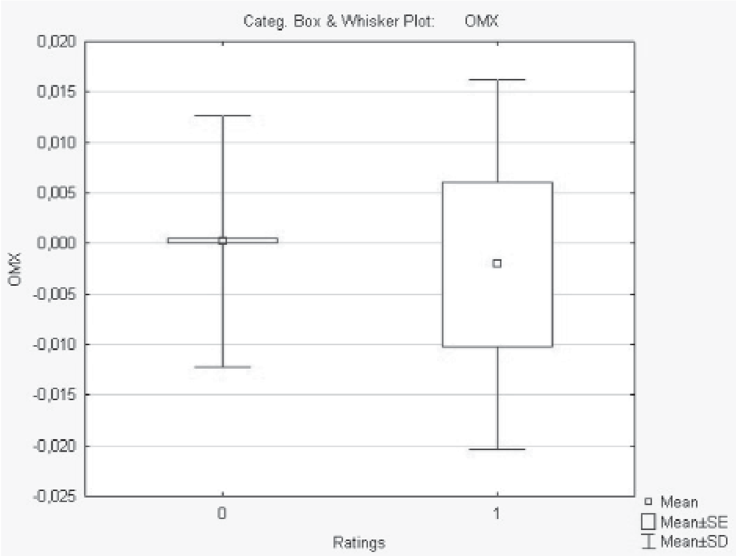
As the zero hypothesis, it was assumed that there is no dependency between the decrease of the rating category given by Standard & Poor's to Latvia and the volatility of rates of return on the OMX index.

Table 10. Breakdown table of descriptive statistics.

Standard & Poor's Ratings	OMX Averages	OMX N valid	OMX Standard deviations
0	0,000250	3112	0,012483
1	-0,002057	5	0,018283
Ogółem	0,000246	3117	0,012491

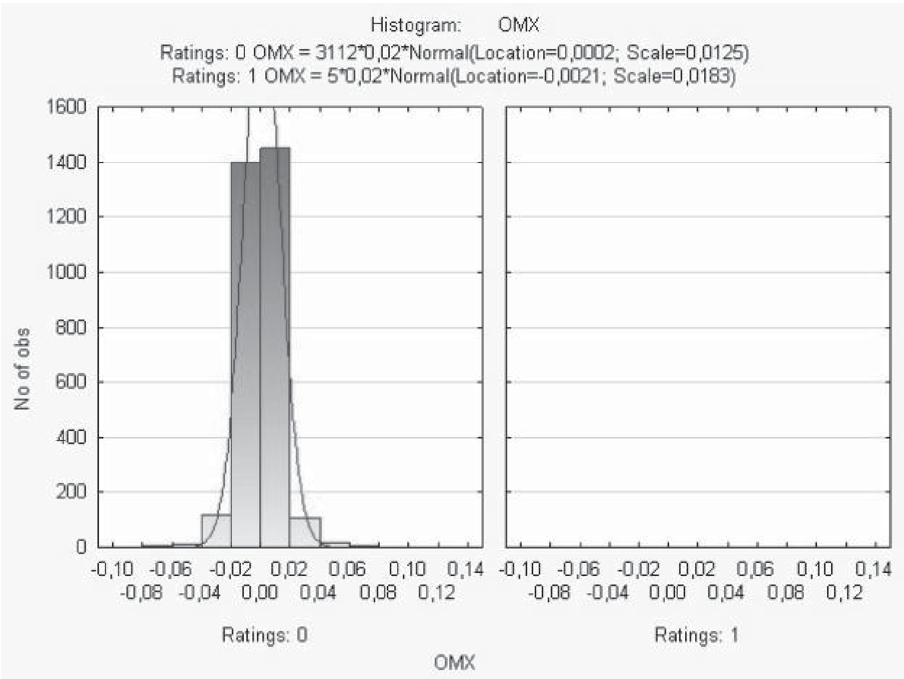
Source: author's own calculations.

Chart 7. Categorized Box & Whisker Plot for the OMX index.



Source: author's own research in Statistica.

Chart 8. Categorized histogram of rates of return on the OMX index.



Source: author's own research in Statistica.

Table 11. Results of the variance analysis.

Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
OMX	0,000027	1	0,000027	0,486114	3115	0,000156	0,170260	0,679909

Source: author's own research in Statistica.

Table 11 depicts results of the variance analysis for rates of return on the OMX index. F-Snedecor distribution tables show that for the declared significance level of $\alpha = 0,05$, the following is true:

F0,05;1;3115 = 3,8,

which lets set the critical interval of < 3,8; +∞ >. The value 0,17 is definitely beyond the assessed interval, which means that there are fundamentals not to reject the hypothesis on the lack of dependency between the negative decision of the rating agency and the volatility of rates of return on the OMX index. The critical significance level is much higher than the assumed one (0,68). The decision is not fully statistically explicit.

Results of the variance homogeneity test by Lavene (table 12) show that at the assumed significance level of $\alpha = 0,05$ there are no fundamentals to reject the variance homogeneity hypothesis. At such a high critical significance level (0,17) the decision is not fully statistically explicit. Identical conclusions can be drawn from the variance homogeneity test by Brown-Forsythe.

Table 12. Results of the variance homogeneity test by Lavene.

Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
OMX	0,000168	1	0,000168	0,273948	3115	0,000088	1,915088	0,166498

Source: author's own research in Statistica.

Hungary

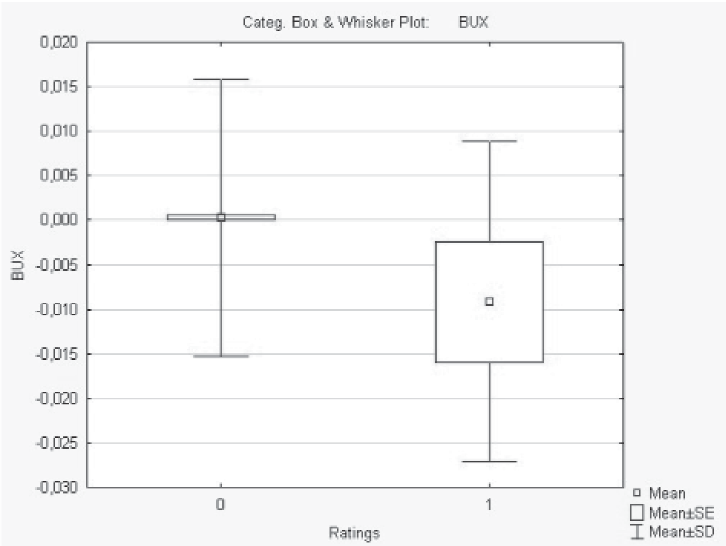
As the zero hypothesis, it was assumed that there is no dependency between the decrease of the rating category given by Standard & Poor's to Hungary and the volatility of rates of return on the BUX index.

Table 13. Breakdown table of descriptive statistics.

Standard & Poor's Ratings	BUX Averages	BUX N valid	BUX Standard deviations
0	0,000285	4112	0,015576
1	-0,009169	7	0,017980
Ogółem	0,000269	4119	0,015583

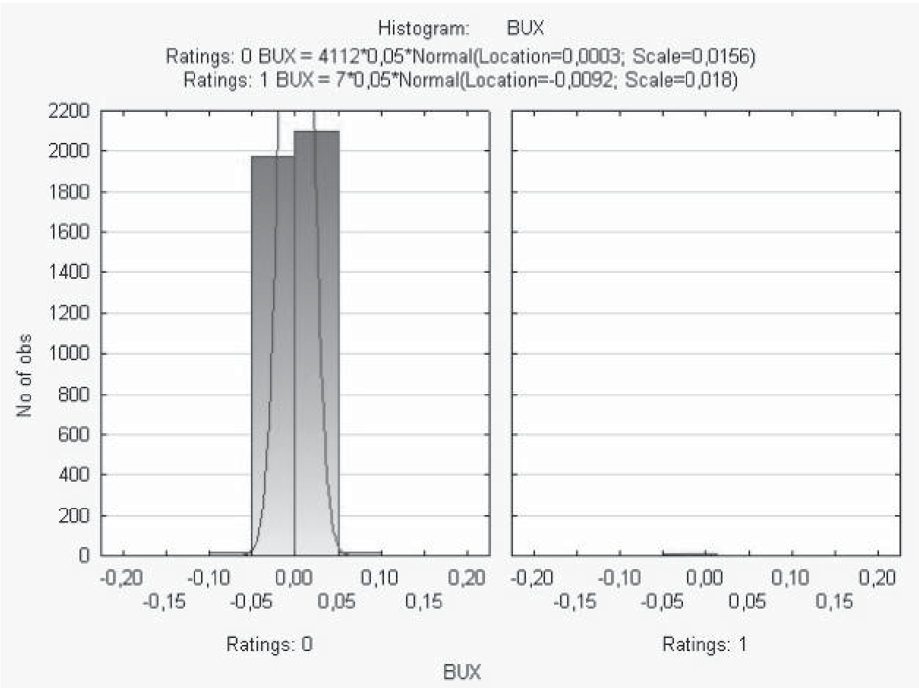
Source: author's own calculations.

Chart 9. Categorized Box & Whisker Plot for the BUX index.



Source: author's own research in Statistica.

Chart 10. Categorized histogram of rates of return on the BUX index.



Source: author's own research in Statistica.

Table 14. Results of the variance analysis.

Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
BUX	0,000625	1	0,000625	0,999343	4117	0,000243	2,573061	0,108774

Source: author's own research in Statistica.

Table 14 depicts results of the variance analysis for rates of return on the BUX index. F-Snedecor distribution tables show that for the declared significance level of α = 0,05, the following is true:

F0,05;1;4117 = 3,8,

which lets set the critical interval of < 3,8; +∞ >. The value 2,57 is definitely beyond the assessed interval, which means that there are fundamentals not to reject the hypothesis on the lack of dependency between the negative decision of the rating agency and the volatility of rates of return on the BUX index. The critical significance level (0,11) is much higher than the assumed one. The decision is not fully statistically explicit.

Results of the variance homogeneity test by Lavene (table 15) show that at the assumed significance level of α = 0,05 there are no fundamentals to reject the variance homogeneity hypothesis. At such a high critical significance level (0,84) the decision is not fully statistically explicit. Identical conclusions can be drawn from the variance homogeneity test by Brown-Forsythe.

Table 15. Results of the variance homogeneity test by Lavene.

Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
BUX	0,000005	1	0,000005	0,483901	4117	0,000118	0,040711	0,840107

Source: author's own research in Statistica.

Russia

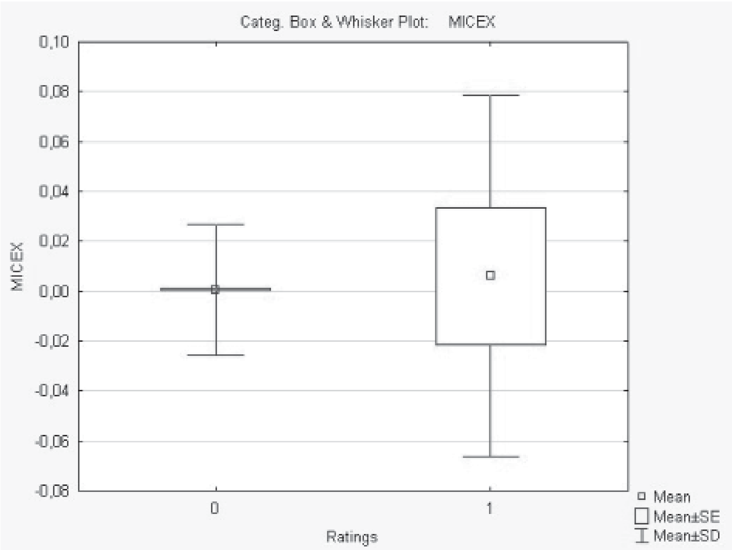
As the zero hypothesis, the author assumed that there is no dependency between the decrease of the rating category given by Standard & Poor's to Russia and the volatility of rates of return on the MICEX index.

Table 16. Breakdown table of descriptive statistics.

Standard & Poor's Ratings	MICEX Averages	MICEX N valid	MICEX Standard deviations
0	0,000660	4568	0,026213
1	0,006184	7	0,072482
Ogółem	0,000668	4575	0,026325

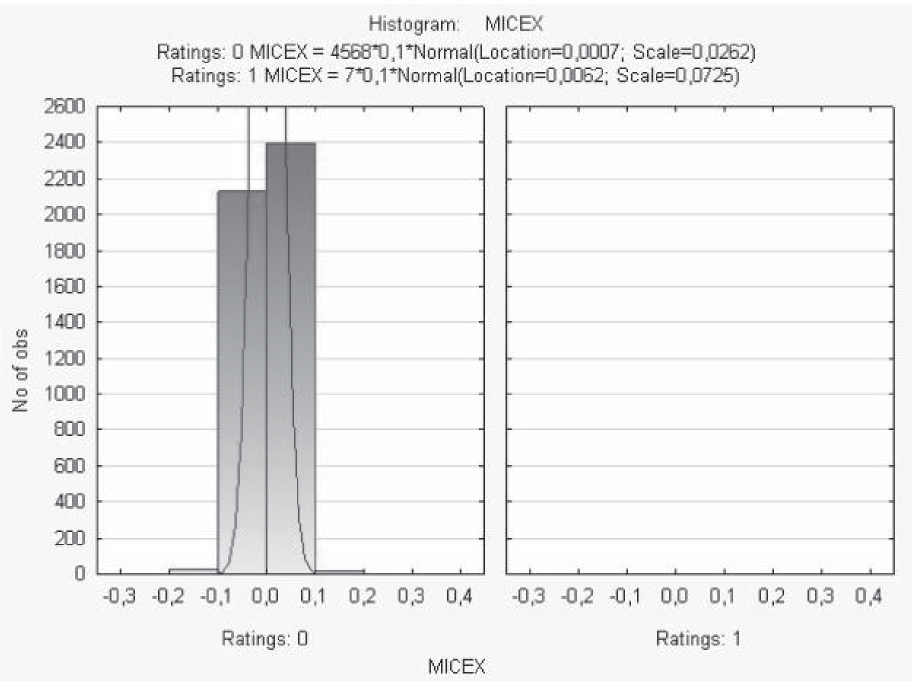
Source: author's own calculations.

Chart 11. Categorized Box & Whisker Plot for the MICEX index.



Source: author's own research in Statistica.

Chart 12. Categorized histogram of rates of return on the MICEX index.



Source: author's own research in Statistica.

Table 17. Results of the variance analysis.

Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
MICEX	0,000213	1	0,000213	3,169567	4573	0,000693	0,307716	0,579113

Source: author's own research in Statistica.

Table 17 depicts results of the variance analysis for rates of return on the MICEX index. F-Snedecor distribution tables show that for the declared significance level of α = 0,05, the following is true:

F0,05;1;4573 = 3,8,

which lets set the critical interval of < 3,8; +∞ >. The value 0,31 is definitely beyond the assessed interval, which means that there are fundamentals not to reject the hypothesis on the lack of dependency between the negative decision of the rating agency and the volatility of rates of return on the MICEX index. The critical significance level (0,58) is much higher than the assumed one. The decision is not fully statistically explicit.

Results of the variance homogeneity test by Lavene (table 18) show that at the assumed significance level of α = 0,05, as well as at every important significance level, the variance homogeneity hypothesis must be definitely rejected. The decision is fully statistically explicit. Identical conclusions can be drawn from the variance homogeneity test by Brown-Forsythe.

Table 18. Results of the variance homogeneity test by Lavene.

Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
MICEX	0,006874	1	0,006874	1,885854	4573	0,000412	16,66937	0,000045

Source: author's own research in Statistica.

Iceland

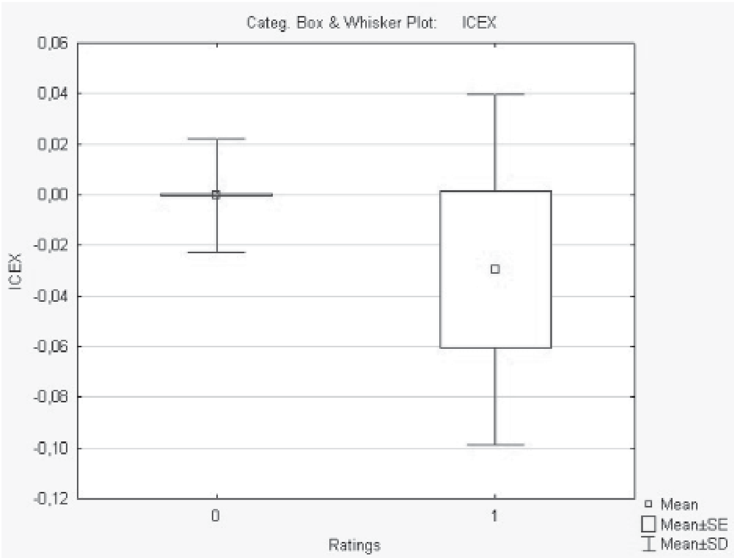
As the zero hypothesis, the author assumed that there is no dependency between the decrease of the rating category given by Standard & Poor's to Iceland and the volatility of rates of return on the ICEX index.

Table 19. Breakdown table of descriptive statistics.

Standard & Poor's Ratings	ICEX Averages	ICEX N valid	ICEX Standard deviations
0	-0,000116	3101	0,022498
1	-0,029571	5	0,069198
Ogółem	-0,000163	3106	0,022648

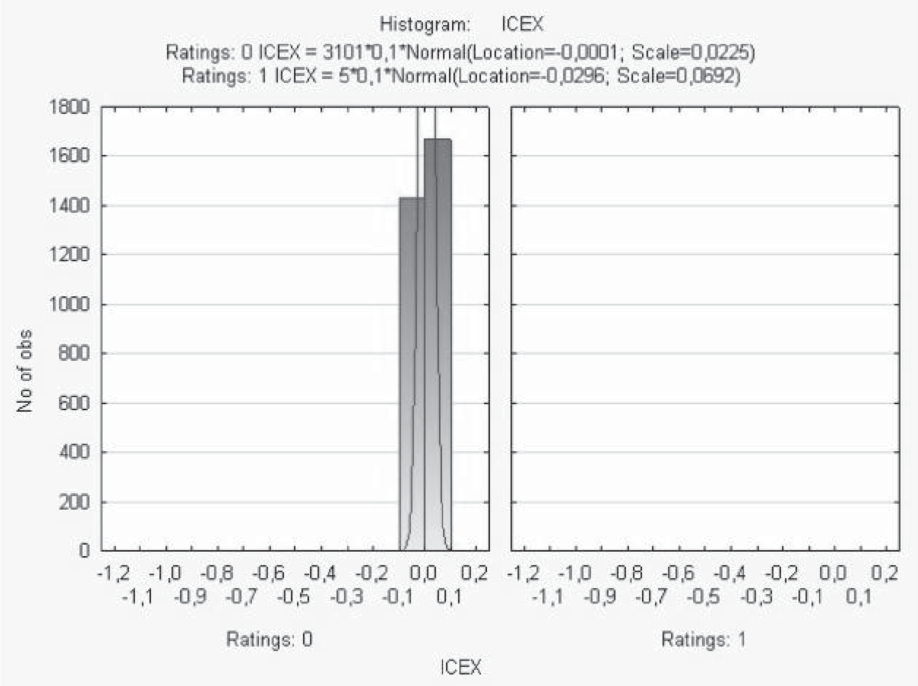
Source: author's own calculations.

Chart 13. Categorized Box & Whisker Plot for the ICEX index.



Source: author's own research in Statistica.

Chart 14. Categorized histogram of rates of return on the ICEX index.



Source: author's own research in Statistica.

Table 20. Results of the variance analysis.

Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
ICEX	0,004331	1	0,004331	1,588297	3104	0,000512	8,464234	0,003648

Source: author's own research in Statistica.

Table 20 depicts results of the variance analysis for rates of return on the ICEX index. F-Snedecor distribution tables show that for the declared significance level of $\alpha = 0,05$, the following is true:

F0,05;1;3104 = 3,8,

which lets set the critical interval of $< 3,8; +\infty >$. The value 8,46 is definitely in the assessed interval, which means that the hypothesis on the lack of dependency between the negative decision of the rating agency and the volatility of rates of return on the ICEX index must be definitely rejected at every important significance level. The decision is fully statistically explicit.

Results of the variance homogeneity test by Lavene (table 21) show that at the assumed significance level of $\alpha = 0{,}05$ the variance homogeneity hypothesis must be rejected. The decision is fully statistically explicit. Identical conclusions can be drawn from the variance homogeneity test by Brown-Forsythe.

Table 21. Results of the variance homogeneity test by Lavene.

Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
ICEX	0,008635	1	0,008635	1,411408	3104	0,000455	18,99126	0,000014

Source: author's own research in Statistica.

Italy

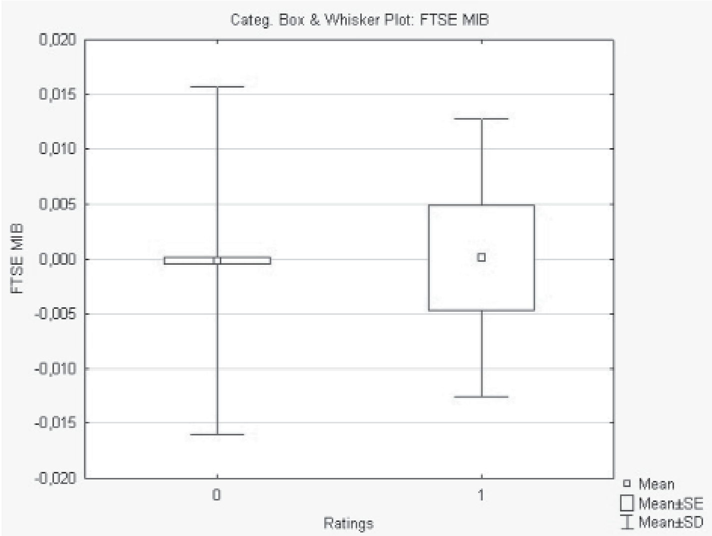
As the zero hypothesis, the author assumed that there is no dependency between the decrease of the rating category given by Standard & Poor's to Italy and the volatility of rates of return on the FTSE MIB index.

Table 22. Breakdown table of descriptive statistics.

Standard & Poor's Ratings	FTSE MIB Averages	FTSE MIB N valid	FTSE MIB Standard deviations
0	-0,000166	3168	0,015871
1	0,000098	7	0,012610
Ogółem	-0,000165	3175	0,015863

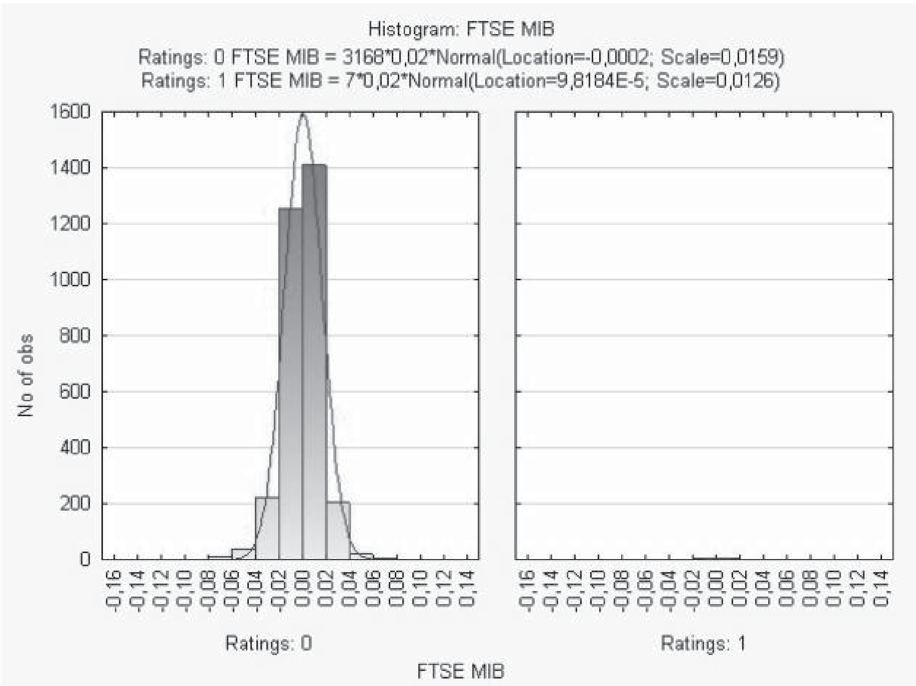
Source: author's own calculations.

Chart 15. Categorized Box & Whisker Plot for the FTSE MIB index.



Source: author's own research in Statistica.

Chart 16. Categorized histogram of rates of return on the FTSE MIB index.



Source: author's own research in Statistica.

Table 23. Results of the variance analysis.

Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
FTSE MIB	0,000000	1	0,000000	0,798706	3173	0,000252	0,001936	0,964907

Source: author's own research in Statistica.

Table 23 depicts results of the variance analysis for rates of return on the FTSE MIB index. F-Snedecor distribution tables show that for the declared significance level of α = 0,05, the following is true:

F0,05;1;3173 = 3,8,

which lets set the critical interval of < 3,8; +∞ >. The value 0,002 is definitely beyond the assessed interval, which means that there are fundamentals not to reject the hypothesis on the lack of dependency between the negative decision of the rating agency and the volatility of rates of return on the FTSE MIB index. The critical significance level (0,96) is very high in this case, so the decision is not fully statistically explicit.

Results of the variance homogeneity test by Lavene (table 24) show that at the assumed significance level of α = 0,05 there are no fundamentals to reject the variance homogeneity hypothesis. However, the decision is not fully statistically explicit. Identical conclusions can be drawn from the variance homogeneity test by Brown-Forsythe.

Table 24. Results of the variance homogeneity test by Lavene.

Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
FTSE MIB	0,000004	1	0,000004	0,415526	3173	0,000131	0,028859	0,865116

Source: author's own research in Statistica.

4. FINAL CONCLUSIONS

As it was shown, for the majority of countries the decrease of the credit rating category did not influence the volatility of stock markets during the change day. It was only for Iceland where the change of the credit rating category influenced the stock market during the day of the change. There arises the question why the Iceland financial market is so special in comparison with other European countries. There are no doubts that the matter deserves further studies on the impact of the credit rating category change in longer periods of time.

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Public Economics

INDEPENDENCE AND ACCOUNTABILITY BOARD IN DECISION-MAKING PROCESS RELATING TO THE AREA OF INCOME AND EXPENDITURE

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Abstract

This paper focuses on the issue of principles of organization and functioning of public administration in the decision-making system, concerning revenues and expenditures, and in particular, the responsibilities of public office holders for the decisions involved in the distribution and redistribution of public revenues. The functions of the budget from the perspective of the social role, financing of public administration, social functions and development features cannot be treated equally. While for the sector of public administration funding, decisions must be made in order to reduce consumption and recession, and so far to the function of the development strategy is related to the increase of consumption and capacity. Such a differentiated approach involves special knowledge and skills, as well as the psychological profile of public officials to make their decisions and management processes that are adequate principles *of rational decision-making. The paper accepts the need to harmonize the basic legal and administrative principles and decision-making processes for holders of public authority and the point of view of their responsibility for the management of public revenue. The authors explain the principles and standards of the European Administrative Space and obligations of public administration in the system of determining the parameters of the budget and the role that the revision has in the process.*

Keywords: *public sector, the principles of decision-making process, audit, interests of the citizens*

JEL Classification: P24, D33

1. INTRODUCTION

In the last thirty years, the European administrative space, goes through a series of transitional process, which is characterized by an overall objective which has to create a more efficient public sector, while reducing public spending. (Perko Šeparović; 2006, 138). The basic principle of "good governance" is the existence of a system of individual responsibility of public functions for the management in public resources and economic development, all in the context of strengthening the rule of law and legality. It suggests strengthening the role of the manager of public affairs and their responsibility for decisions that use the public revenue. The question is: how and how much, and whether at all, their decisions are based on certain principles of decision-making, especially as far as they are subject to political and especially legal control mechanisms and sanctions in cases where they are detrimental to the community.

The Public Administration is set upon a complex task to organize itself as a democratic system that is also a function of the implementation of certain political decisions on the one hand and a better level of service for all its customers. Administrative systems in transition countries are too large, expensive, inefficient, and often corrupt and, according to many and dependent on political factors. With such a legacy, the Public Administration was given the task of using capital in the system of competitive market mechanisms, strengthening financial market mechanisms and the introduction of entrepreneurial behavior in all activities and public administrations, companies, and individuals. Due to the rapid development of the free market, liberalization and reducing the role of the state in economic and other processes, there is the need to transform the outdated state apparatus. Because of the rapid development of the specified process instead of establishing a modern model of "good governance" are being introduced administrative and civil service systems on traditional grounds. (Marčetić; 2005, 104) Such a system largely puts in headquarters management skills and leadership of public officials and imposes the need for harmonization of important decisions with real circumstances, and it is possible only with the principles of regulation and decision-making process.

2. LEGAL PRINCIPLES AS THE PRINCIPLES OF DECISION-MAKING

The character and the essence of political decision-making, ways of decision-making, are of great importance for the functioning of the democracy system of a society on the one hand, and to a large extent determine the flow and opportunities of the global economic and social development. Political decision-making is essentially determined by the political system and its legal essence is determined by the constitutional system. The legal essence of political decision-making is to formalize that it does not exclude the sociological context of which depends on the actual content of the decision-making. Of course, it is the right of the crucial facts about legal procedural rules, as essential conditions and assumptions based on which they can make binding decisions.

The question of putting the public authorities in the context of the rule of law and the rule of law is particularly relevant. The political authorities should be given powers to be able to operate efficiently and to implement certain measures of economic and social policy. However, the question is to what extent should that authority, or when and which of these powers should be limited to public authorities to prevent expressed voluntarism and misuse the powers in favor of certain groups or individuals, or adopt decisions that are to the detriment of the public interest.

There is no doubt that the decision-making process as a process of adoption of legal acts by the political authority is essential to define and identify the determinants that determine it. There is no doubt that in addition to the powers that have been established for public political bodies there are no legal acts that determine the other elements of the decision-making process of public authorities. In this sense, there is a certain voluntarism which ultimately can be socially destructive. It is of crucial importance for the constitutional and administrative law. They are defined by the authorities who decide their competence and position in the hierarchy as well as the situation in the field of separation of powers, administrative proceedings, acts of administration and their decision. Significantly appears both in a political system established an institutional framework for decision making.

The Constitution, as a legal act of the highest order, does not define normative-legal aspects of the decision-making process, which in the structure of the political system is a real empirical explication content making. In most constitutions in the modern world, there are provisions on the principles and procedures of decision-making and in rare constitutions one can find procedural norms on the manner of decision-making. Since the mid-19th century, the procedures were established by special Legal Acts Rules. Henry Robert in 1876, "Robert's Rules" which define the principles by which water meetings in a democratic society. This manual had original title: "The pocket guide to the rules of the Assembly, which discussed". (Sturgis; 2000, 16) Since then, there were numerous attempts to define certain general rules and principles in terms of concretization of the decision-making process.

It should be noted that a legal act establishes the terms and procedures of decision-making can be a barrier against arbitrariness and agent of order and security decision-makers. However, strictly defined rules and procedures can, with the definition of a qualified majority of the work and decision-making to a large extent be the legalization of abuse or nuisance to take decisions that are necessary for certain social processes. Thus, legal doctrine has the task to determine the legal principles and rules that are in the process of political decision-making and usage and that would be optimal for the functioning of the democratic system. Taking into account the principle of Summum ius summa iniuria, as well as the principle that the administrative authorities are allowed to do only what is by legal standards defined as legal and administrative sciences must define the basic principles, rules, and settings for the adoption of legal acts regulating the decision-making process. Of course, we must respect the basic democratic principle of equality of citizens and equality of social groups. Do not be under that implication of egalitarianism nor appeal for uniformity of views and creating the need for consensus or ideal proportions opting for some variant of the decision-making. Differences of opinion and the existence of those individuals who are against certain decisions always were and will be.

We hold that the public-administrative treatment is based firstly on the general principles of law, the other, on the principles of administrative law and then to the general principles of administrative procedures. In such a system, the principles should be set aside those principles that are essential in making decisions about the management of public revenues and which should follow public officials in decision-making and their immediate implementation.

Undoubtedly appears to be extremely important and useful that in strategic decision-making public authorities take into account all legal, administrative and procedural principles. It is certain that it can perform their neither categorization nor rank, but when it comes to decision-making process especially recommend the following four principles:

- The principle of efficiency and economy,
- The principle of not impinging on acquired rights,
- The principle of fairness and
- The principle of good faith.

2.1. The principle of efficiency and economy

The first is the principle of efficiency and economy. According to it, the administrative authorities and political bodies must ensure, in addition to the legality of decisions made, in particular, to take into account when making decisions on the use of public revenue budget funds should be used in the most efficient manner and to thereby ensure the economy of the fiscal system. To respect this principle, it is necessary to establish the existence of mechanisms of control of decisions taken by the executive bodies of political and administrative bodies. Transparency of political authority is not by itself sufficient to ensure the correction mechanism draft decisions or to make executive political body or draft decisions by the executive to propose legislative and political authorities. The public work of political and administrative bodies is a prerequisite for transparency and a requirement for better decision-making on the use of public revenues. However, if the public had been informed that the decision of the executive body politic would have been contrary to the principle of efficiency and economy it apart from demonstrations or public announcement could not significantly influence the decisions inning. There are no legal mechanisms of influence on the executive to its decision agrees with the principles of efficiency and economy. Central European countries have practices that the state secretaries for certain authorities exercise control of political decisions and administrative bodies at the national level and they are to a lesser or the current scope or authorized to temporarily suspend the process making at some decisions that would jeopardize the principles of efficiency and economy.

2.2. The principle of not interfering in other people's rights

The second principle on which the public authority makes decisions should take into account the principle of iura quesito salvo ese debent (no interference with acquired rights). The decisions of political and administrative bodies should not have retroactive effect. In addition, they should not interfere with legally acquired rights that may be granted only greater rights than those at the time of redistribution rights belong to the subjects of law, and they can do so only in the event that they protect the common good. In applying this principle is a special responsibility of the political bodies that do not confer more rights than those given to the economic constellation, the state of public revenues may not be realized. This is especially true of social benefits. In such cases, the law becomes merely declarative or causes higher consumption of realistically possible. This raises the question of legal mechanisms audit rights are assigned. Each legally conducted legal action and proceedings cannot be subject to review from the aspect of the constitutionality and legality. Alone condemnation of public opinion is not sufficient to satisfy the social injustice that unfair decision is caused by some governments.

2.3. The principle of fairness

Fairness is a true utopian-philosophical nature. The right must strive to turn into a just law. This is right that the system of legal values and the content of legal norms respect the equality operators and guarantee equality before the law, legal certainty and the other values that do not go to the detriment of individuals and collectives. Fairness law is contained in most documents on human freedoms and rights and is part of the legal theory of natural rights. A special segment of justice law makes justice of the administrative law. It is guaranteed by the principles of administrative law and the principles of the administrative procedure. Due to the cogency of administrative norms, the hierarchical and subordination position of administrative authority in respect of individuals citizens, there is a need for a system of administrative law incorporated as a number of legal principles. So, they created the principles of administrative law and in particular, the significant principles of administrative procedure. In more than ten principles of administrative proceedings, legislator gives the character of administrative procedures that later is in the normative part of the law follows. This idea (in principle) basis on Acts and gives the dimension of justice. But the problem is that the principles of administrative procedures are defined with administrative procedures rather than separately to the adoption of appropriate decisions, concerning the determination of the public interest. For example, deciding on the use of public funds from the budget is not limited by the principles on which it is based. So, there is complete freedom for function holders to freely decide on the premises, which will be based on decisions and consequences that will have various social relations. As for the public interest in the current constellation legal system, it takes care mainly of administrative bodies that are distant in a separate body, such as the Ombudsman.

2.4. The principle of good faith

According to the principle of good faith, intentions, taken over to the Roman civil law, namely private law, are committing subject's rights subsumed under good intentions, honesty, and integrity in the field of rights, obligations, and responsibilities. In the last century, this principle of civil law slowly and gradually "retracts" and in the domain of public law, primarily in tax law as part of public law. This principle implies the good conduct of civil servants towards the citizens, therefore, represents the administrative and procedural principle. However, a special dimension to this principle is that, if it gets in the context of ways and content makers are responsible for the use of public funds and budgetary funds. In many legal systems, such as German, the principle of bona fides is present in many areas of law, either in concrete or abstract subject's relations law. Legislative, executive and judicial authority is bound by the principle of good faith, but the decision-making used by public authorities for the use of public revenues. The amount of authority and position holders of public office shall be expressed in a one-sided relationship in which its powers are normatively established and enumerated. What if the basic principles that underpin the consumption of authority are not defined? Holders of public office, in which there is a public authority, make decisions that manage public revenues that would have to have a particular responsibility for the soundness of the decisions. They would have had an obligation to refrain from such legal changes that would have changed the existing system of social relations in a way that would be unpredictable and harmful to the citizens and legal persons. The responsibility of management must be the norm and in fact justified.

In the context, the particularly outstanding concept of the rule of law, according to which expresses the principle of equality, is implemented in law. In the case of deciding on the use of public revenues is true in particular context of public interest on which the people make certain decisions on the use of public income should be taken into account. In particular, one should apply the principles of subsidiary and solidarity. However, the specific role of the audit activity are in its primary meaning of which we would detail later in this paper.

3. THE ROLE OF AUDIT IN DECISION-MAKING PROCESS ON THE USE OF PUBLIC REVENUE

In the conditions of insufficient budgetary resources and increasing, demands for efficiency in the public administration, before the managers of budgetary organizations placed new challenges for rational management of available resources. Human resources are not to violate their rights, plans are based on the programs that must be achieved with scarce financial resources, which the managers of public administration raise difficult incompatible principles, efficiency, and rationality in the use of public funds. Steady growth requirements of service users, the inability of the new employment restrictions budgetary resources needed for investment in information and communication technology, make it difficult to time the efficiency of service delivery. To make services more accessible to the public service, there is a need for networking of public service at the local and national level, acquiring and exchanging new knowledge, information, and experience. Adoption of new solutions and positive attitudes of policy makers and decision makers to the management of public funds, are becoming crucial for the efficiency of work and finding new solutions on the way to a modern public administration. Rating attitude towards compliance with the set of policies, laws, and regulations during the execution of the budget for the purpose of achieving the objectives confirmed by the statements of fiscal responsibility, the findings of internal, external and state audit.

Despite the unquestionable managers' responsibility of budget, users, in planning and budgeting, often scratch encounter an insufficient awareness of the need for responsible behaviour, and responsibility is often determined for the purpose of political revenge before building a stable and adequate system of accountability. There are several levels of review of fiscal responsibility, by which the first statement is regarding fiscal responsibility with the questionnaire on fiscal responsibility. (Bilić et al.; 2014, 185) Actually, this is only one aspect of the evaluation of compliance with fiscal rules. The establishment of internal controls, as the previous control uses of budgetary funds, is the first step in the cycle of acquiring information for the purpose of transparency and quality of operations. Unlike control as a preventive control, internal audit is ex-post control. For managers of budget users that internal audit experience, as an advisor, can be assumed to be more effective in planning and execution of the budget, implementation of public procurement procedures, to dispose of capital goods but also in the field of accounting and reporting. Internal audits is based on gathering information and presenting findings suggests managers of budget users on the corrective measures ensure the activities that will improve the operation and optimize process management, and internal audit recommendations which should be understood as a guide to the operative business and lawful action.

The next step in order to ensure credible, truthful and objective of financial statements is finding external audit. In order for the information contained in the financial statements to be usable and useful for making appropriate decisions, it is to understand their quality. As an independent external audit, examination of the financial statements with the intention of expressing an opinion on their quality, and to check their validity and objectivity and compliance with accounting standards and regulations, it can be said that the opinion of the auditor provides a high, but not the absolute level of assurance. (Ristić & Ristić; 2014, 738) The external audit examines financial statements for the purpose of testing the accuracy and fairness, ensuring their reliability and contributes to their quality. Increasingly, with the aim of making important decisions, there is a requirement for the credibility of non-financial information, especially in the definition of public accountability. The public almost, without a doubt, for the quality of the audit has higher expectations from the executive, legislative and judicial authorities as the purpose of taking appropriate actions to cure and sanction irregularities observed findings, in order to improve the functioning of public administration to the satisfaction of all its customers.

4. CONCLUSION

The public needs and the citizens interests is a fundamental objective of the disposal in the public revenues. There needs to be a relatively permanent and complete more certain way of ensuring proper application of legal principles in making decisions about the use of public revenues. Legal science has yet to define the basic parameters of the decision-making process, therefore it appeared as an act of complete voluntarism. For this system, complete freedom of decision-making can occur astwo phenomena. One which shows a tendency toward independence in governing body and people who make decisions and its indigenous forms of behavior and the other that lack independence and creativity in delaying the adoption of vital decisions and thus inadequate and untimely taking the necessary actions and procedures. Arbitrariness in the decision-making process on the use of public revenue must take shape in the legal standard, otherwise conditions would not be fair. Unfortunately, minimum of justice is the area where we can be found in the sphere of law and legal regulation of relationships.

Through the work, we could not find the final solution of the problem, because legal and other social sciences have just started to examine the problem and are trying to solve it, the most appropriately. Management skills and decision-making can be the sole criterion for authorization that can be granted to holders of public office.

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Health, Education and Welfare

CLINICAL AND FINANCIAL ASSESSMENT OF TREATMENT USING PROXIMAL FEMORAL NAIL ANTIROTATION (PFNA) METHOD IN ELDERLY

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Abstract

Introduction *This paper tries to answer whether surgically repaired fracture of the femur in the elderly using Proximal Femoral Nail Antirotation (PFNA) method can be financially viable in the hospital system and effective for patients and medical institution.*

Patients and Methods *This retrospective study analysed the newly-arrived and operated patients from 1st of January 2015 to 31st of December 2015, using Proximal Femoral Nail Antirotation (PFNA) method and invoiced realization by the patient in the County General Hospital in Vukovar at the De-*

partment of Chirurgic and outcomes involving payment according to Diagnostic Related Groups (DRGs) and set prices according to the Croatian Institute for Health Insurance (CIHI).

Results *In this study 37 patients (M-8, F-29) has been treated using PFNA with a mean age of 79.9 years. All patients had been operated during 24 hours after admission to the hospital. The surgical procedure lasted between 35 to 60 minutes. The postoperative course has resulted with no infection, no implant breaks and no migration of the implant. The day after surgery, the patient gets up with the help of equipment and assistance of physiotherapists, on the 7th day the patients were released from the institution and continued the rehabilitation at the spa. Fracture healed six months later.*

According to DRG, the CIHI reallocates HRK 18,525.00 for a single case of PFNA insertion, and ultimately it amounted to HRK 685,425.00 for 2015. The overall average saving amounts to HRK 198,872.47, minimum invoice (bill) is HRK 9,721.51 with the highest amounting to HRK 18,716.07.This way of thinking is called cost and decisions management! Which method to use and which decision to make? Any good or bad judgment is a decision, and a decision in health care is money.

Conclusion *This study shows that the use of PFNA for treating intertrochanteric fracture in elderly patients is the method of choice because of simplicity of the operation, few complications, clinical treatment is brief and ultimately it has proven as a good financial efficiency of the institution.*

Keywords: *clinical assessment, PFNA, financial feasibility, DRG*

JEL Classification: B26, I11

1. INTRODUCTION

The aim of this paper is primarily to show clinical assessment of implementation of Proximal Femoral Nail Antirotation (PFNA) in the elderly, and the secondary objective is to assess the financial viability of implementing PFNA for a health institution.

According to the World Health Organization (WHO) older persons are people aged 60 - 75 years, old are in the age of 76 - 90 years, and very old persons are those aged over 90 years (Duraković, 1990).

"A high proportion of the elderly population is important for health spending because the distribution of health expenditure is asymmetric by age. In the *United States* of America (USA), for which the most complete data are available, about 36 percent of the cost of health care is induced by people older than 65 years, although their share in the total population is only 12 percent" (Hsiao, 2000).

As there are no comparable data, but as an approximate value, we can take Croatian Institute for Health Insurance (CIHI) spending on health care of retirees and their families. And that costs since 2008 accounted for 45 percent of total health care costs (CIHI, 2009), although the proportion of people over 65 accounted for only 16 percent of the total population (European Commission 2012).

Health spending is largely a function of age, and spending on health care in the last year of life exceeds the average expenditure. Undoubtedly, it was confirmed that the elderly consume more health care goods and services per capita than any other age group, except maybe infants. According to CIHI most of the expenditure on health care in Croatia is incurred due to hospitalization - over 8 billion in 2011, or approximately 45% of health expenditures. Persons older than 60 years participated with about 44% of the total number of hospitalizations in 2010 while total costs of hospital treatment amounted to HRK 3.2 billion (39.5% of the total costs of hospital treatment). There is a trend of rapid growth in the share of cases of hospital treatment of the elderly, 60+ as well as 65+ (Ministry of Health, 2012:16).

The Republic of Croatia is among the countries with the oldest populations. The progressive aging trend is being recorded since 1971 when it amounted to 10%, while in 1991 it amounted to 13.1% and 15.6% in 2001. Recent data according to the census of 2011 recorded a 17.7% people age 65 years and over (753,633) (CIPH, 2014: 295).

2. LITERATURE OVERVIEW ON PROXIMAL FEMORAL NAIL ANTIROTATION (PFNA)

Browsing databases we have found a lot of papers titled *Proximal Femoral Nail Antirotation* (PFNA) in the world, but in Croatia there is only a few such papers.

The authors note that it is desirable to treat intratrochanteric fractures in elderly patients for the stabilization of these fractures. In the given period from March 2010 to March 2013, 163 elderly patients with fractures of the femur had been followed, 69 men and 94 women with an average age 74.7 plus - minus 13 years. With average operation duration was 45.7 minutes, and the average blood loss of 115.2 ml, PFNA has the advantages of simple process, however, to assess its long-term effectiveness and risk of other complications requires multicentric observation of the studies (Minghui, 2014).

The purpose of this study was to evaluate the mechanical performance of PFNA and carry out mechanical test. The condition includes walking and climbing stairs. Climbing stairs creates more pressure and should be avoided during the healing process (Wang et al., 2012).

In this study, the authors prospectively analysed the laboratory data of 20 patients who were treated with PFNA. They state that the device is excellent for osteoporosis, because it can be easily inserted with mini incision and provides stable fixation and early full mobilization. Serum tumour necrosis of alpha factor (TNF-alpha), interleukin-6 (IL-6), C-reactive protein (CRP) and plasma creatine kinase (CK) were assessed 1 hour after surgery and 24 hours after surgery. PFNA shows a low biomechanical - inflammatory profile which is the advantage over other techniques (Marino et al, 2015).

The authors investigated treatment outcomes of middle to longer segments of femur PFNA - long (320-380mm) on 139 cases (35 women, 104 men) with an average age of 48.8, with a range of 18-86 years. Clinical efficacy was assessed by *Harris hip* function results and postoperative pain with a visual analogue scale. Operations lasted between 35-90 minutes and the average intraoperative blood loss amounted to 78.6 ml. Most of the patients were walking with help in 4 to 10 days after the surgery. Clinical results were excellent with 108 patients, and the rest are good. Pain was experienced by 23 patients, 33 experienced mild pain, 13 experienced moderate pain and 25 experienced periodical pain. The conclusion of this study is that PFNA is an effective treatment with good strength in the fixation, early functional recovery and low complication rate (Lin et al, 2015).

The comparison has been investigated using two operating techniques PFNA and dynamic screw (DHS). PFNA long technique was performed in 10 patients and DHS technique was used on 13 patients. There were no significant differences between the two groups in functional outcomes or major complications. Both methods of treatment has achieved good functional outcomes, but PFNA long is a better choice for treating complex fractures (Wang at al., 2012, Grag et al., 2011, Weiguang et al., 2016).

The authors note that the PFNA is an excellent device for osteosynthesis, it is easily inserted, allows angular and rotational stability, and allows for placing early load on injured flanks. They operated on 76 patients, of which 15 were men and 61 women. Average age was 73.4 years with a range of 22 to 91 years of age. Mobility has been restored in 60% of cases, while 25% of patients were satisfied with the level of mobility. All patients received spinal anaesthesia (Kristek, D., et al., 2010).

3. PROXIMAL FEMORAL NAIL ANTI-ROTATION (PFNA)

The stability of a femoral fracture (Figure 2) can be achieved with only one element and by placing the PFNA (Figure 3) in the bone tissue.

Figure 1. Fractured femur

Source: Authors

Figure 2. Embedded PFNA in Hospital in Vukovar

Source: Authors

Quick and reliable insertion through a small incision in the medullary cavity ensures alignment of the fragments. Insertion is monitored using X-ray apparatus. PFNA provides stability that leads to healing through callus formation (Synthes, 2005). Blood supply is preserved during the procedure and the trauma is minimized. The healing of the bone is faster and patients can quickly restore original mobility and all functions that they had prior to surgery are restored.

The method of choice for treating femoral fracture PFNA as the best choice for a quick recovery and the way to optimal stability.

4. PAYMENT ACCORDING TO DIAGNOSIS RELATED GROUPS (DRGS)

Diagnosis Related Groups (DRGs) is a system applicable to hospitals that treat acute patients. It is in the full application in the Republic of Croatia from January 1st 2009 with the purpose of monitoring costs through invoices (accounts) issued by health care institution to CIHI for the service in hospital health care.

DRG classification has been developed and improved by the group of experts with Yale University called Diagnosis Related Groups (DRG). In Croatia, the system is called DTS. DTS method of classification of acute hospital patients sorts patients in groups that require similar consumption of resources and have similar clinical characteristics. In this way, when comparing hospitals we also take into account the complexity of the cases that these hospitals treat. Classifications vary according to the criteria of similarity which are used for determining the group.

By measuring the cost we get more opportunities for improving efficiency and this is one of the reasons for making *the DTS classification* (Hindle, 2007:4).

"Payments according to the DTS system meet all the characteristics of a good system of payments for hospital work, and those are:

- Encouraging and rewarding the efficient operation of health care providers
- Ensuring equality for all hospitals and patients
- It is easy for managing and training
- Use of clinically acceptable classification procedures
- Payment is based on the best data available
- Ensuring transparency in contracting health care"(Hindle, 2007:4).

"The world's most widely used method is the division of acute hospital patients in groups that require similar clinical personality classification called Diagnosis Related Groups which, as we have already mentioned, are called DTS in Croatia. There are different versions of DTSs:

NorDRG (Denmark, Finland, Iceland, Norway, Sweden)

- IDRG, APDRG, APRDRG (3M)

- AR-DRG (Australia)

- DPC (Japan)

- CMG (Canada)

- HCFA / CMS (USA)

- HBCS (Hungary)

- DBC (Netherlands)

- HRG (GB)

- GHM (France)

- LDF (Austria and)" (Hindle, 2007:5).

The goal of implementing DTS is to reduce the length of hospitalization, increase quality and reduce costs.

5. RESEARCH METHODOLOGY

5.1. Research

Research in this retrospective study was conducted in the period from January 1st – 31st 2015 in Hospital in Vukovar at the Department of Surgery. The primary objective is to demonstrate the clinical evaluation and outcomes of PFNA implementation, a secondary objective is to demonstrate the financial feasibility of the implementation of PFNA in Hospital in Vukovar. We analysed all patients, a total of 37, of which 8 were men and 29 women. The average age was 79.8 with a range of 52 to 93 years of age. The cause of hip fracture in all cases was a fall. Fractures were classified as intertrochanteric and subtrochanteric. For the study we used secondary sources of information and knowledge; Hospital Information System (BIS) database (medical history and invoices – payments - for each patient).

5.2. Research results and discussion

5.2.1. Clinical evaluation

By analysing the data of 37 patients (8 men, 29 women) in Hospital in Vukovar at the Department of Surgery we can see significance in the fact that in each study there is significantly more women. The average age was 79.8 with a range from 52 to 93 years of age. Women in middle and old age are more prone to fractures due to osteoporotic changes in bones. Men are also not sparred from osteoporosis, but it inflicts them less often.

The economic costs of osteoporotic fractures include hospital care due to fractures, loss of working days, chronic care due to complications and rehabilitation, and the cost of medicines. United States estimated that the cost of osteoporosis-related fractures, which are not simple calculate amount to USD 7-10 billion a year. In Germany that costs are estimated at EUR 600 million a year for hip fractures. Ultimately fractures are a great burden for the patient and family because they make patients unfit for normal everyday life and reduces their quality of life (Croatian Society for Osteoporosis).

The author states unequivocally that osteoporosis is omnipresent in women of middle or old age, that it does not happen to "someone else", and that it is needed to invest in prevention! The benefit to patients and society are numerous. The calculation is based on a *Prospective payment system* (PPTP), one surgical treated hip is sufficient for 6.3 years of osteoporosis prevention, and this paper presents a calculation of twenty patients and that amounts to 56.9 years for osteoporosis prevention, i.e. osteoporosis could have been prevented in almost 57 patients (Aleksijević, 2008).

From the abovementioned data we can conclude that it is significant to use the best method in order to return patients to their normal every-day life and to return the quality of their lives at a level prior to that unpleasant event. PFNA method is the method of choice as we show and numerous studies.

"Fifty-two surgeons participated: 18 were inexperienced and 34 were experienced. The method of operative fixation for the pertrochanteric fracture was gamma-nailing for 95% of the surgeons in the inexperienced group; in the experienced group, 56% opted for gamma-nailing and 38% for dynamic hip screw (DHS). For the displaced subcapital fracture in a 35-year-old, screw fixation was the dominant treatment option for both groups. For the displaced subcapital fracture in an 85-year-old, most of the surgeons in both groups preferred hemiarthroplasty: 59% in the inexperienced group chose cemented bipolar hemiarthroplasty and 12% uncemented, whereas 56% of the experienced group suggested cemented bipolar hemiarthroplasty and 25% uncemented" (Sciacca, et. al., 2015).

In Hospital in Vukovar at the Department of Surgery the attitude is that fractures are to be operated immediately after admission to the hospital and emergency treatment. Emergency surgery reduces hospital stays, reduces consumption, and at the same time is very important to ensure that both injury and operation represent a single stress in order to spare the elderly patients of new trauma as much as possible. Our patients in this study were all operated with in 24 hours with preoperative treatment, which includes a laboratory, X-ray, internist and anaesthetic examination. The cause of fractures in all cases was low energy trauma.

"The ratio between the genders female-male was 1.6:1. There was statistically significant difference in prevalence of female compared to male patients (p=0.012). Low energy trauma was the cause of fractures in 57(90.5%) patients. Averaged waiting time for hospitalization was 3.2±7.5 days (range, 0 to 32 days). 44 patients were admitted the same day upon injuring" (Sadic, et al., 2014).

All patients received prophylactic antibiotic therapy, i.e. dose on the day of surgery: 2 grams of Cefazolin. Low molecular weight heparin is also administered at a dose of 0.6 mL during 24 hours over four days after which patients are given 3mg Varfarinnatrij pills and that treatment is continued until full mobilization is achieved, i.e. until the patient returns from the spa.

"In the present study, all patients received prophylactic antibiotic therapy as follows: 2grams of Cefazolin or Ceftriaxon were given before and 72h after treatments. Also low-molecular-weight heparin was administered once every day for six weeks" (Sadic, et.al. 2014).

All patients were operated using spinal anaesthesia, a break is repaired in the operating room at the extension table under the control of X-ray amplifier and PFNA is inserted. The duration of surgery is between 35 and 60 minutes. Surgically treated patients remain in the hospital for 7 days, on the 14th sutures are removed and the following step is rehabilitation in spa for three weeks. Hospitalization ranges from 4 to 12 days, with an average of 7.7 days.

The mean operation time was 37.8 min (range 22 to 118 min). The mean hospital stay was 13.5 days (range 4 to 25 days) (Sahin, 2010).

The day after surgery, the patient gets up using medical aid and the assistance of a physiotherapist with full load. Surgically treated patients remain in the hospital for 7 days, on the 14th sutures are removed and the following step is rehabilitation in spa for three weeks. On average fracture she al in 4 to 6 months.

Due to advantages of high union rate, early postoperative mobilization, and short operation time, PFNA osteosynthesis is the method of choice for surgical treatment of unstable intertrochanteric femoral fractures (Sahin, 2010).

Serious complications can be reduced by the correct assessment of fracture type, the use of an appropriate operative technique and early treatment of potential complications. A prerequisite for successful surgical outcome is urgently and correctly performed osteosynthesis allowing for early rehabilitation and mobilisation of the patient (Douša, 2013).

5.2.2. Financial evaluation

Treatment episode is calculated according to the payment by *Diagnosis-related groups (DRGs)*. DRG is a method of classification of acute hospital patients in groups that require similar hospital resource consumption and which have similar clinical characteristics, thus ensuring equality for all hospitals and patients (Hindle, 2007:4).

According to DTS, the CIHI reallocates HRK 18,525.00 for a single case of PFNA insertion, and ultimately it amounted to HRK 685,425.00 for 2015. That price includes implant price, HRK 4,974.49. Of 37 cases, the lowest bi amounted to HRK 9,721.51, while the largest bill amounted to HRK 18,716.00. The sum of all invoices (bills) amounts to HRK 486,552.53 with a difference of HRK 198,872.47. Total savings for health care institution amounts to HRK 198,872.47.

"The main conclusion of this paper is that the growth of health care spending in the long run cannot be stopped, but heath care financing can and must be made more efficient. Health care spending in the long run increases because the economic development causes the growing demand of the population for health services - health maintenance is one of the most valuable and most productive forms of personal consumption. This thesis is supported by the fact that since 1960 life expectancy in the developed countries has extended by an average of 11 years, to almost 80 years. By 2008, when the current economic crisis began, almost all developed economies have expanded access to basic health services to nearly entire population" (Miholjek, 2014:29).

This way of thinking is called cost and decision management. Which method to use and what kind of decision to make? Every decision in health care is money.

6. LIMITATIONS AND FURTHER RESEARCH

Hospital limit is the maximum amount for which a hospital can be paid in a given period. The aim and purpose of each health institution is to improve the efficiency of any payment methods and continuously seek improvement. The focus is always on reducing costs and improving quality of care, and DTS offers a solution through "the use of clinical protocols, reduction of duplication of diagnostic procedures and by avoiding to prescribe drugs where they are unnecessary and even dangerous" (Hindle, 2007:7). We can manage quality in hospitals through specific methods of health care - clinical guidelines, which are the basis for the development of clinical protocols.

Users expect from public health institutions in the Republic of Croatia a high level of health protection. While health spending is growing due to an aging population and technological development of the healthcare industry, health sector cries for economic research which are relatively scarce.

"For economists, the health sector is the most closed of all sectors, excluding the defence industry. Economists do not know how to build boats or produce food, but that does not prevent them anywhere in the word to evaluate effects of vertical state grants or sectorial competiveness of food industry. Similarly, economists do not need to know anything about diseases and medical procedures, but can assess are public expenditure on health care sustainable, are operations of health institutions effective and how to financially monitor and evaluate the financial costs of health care activities. Health care economics deals with the microeconomic evaluation of health technologies, the market balance in the production of health services, assessment of health systems, planning and financing, organizing health insurance and inequities in the health system. The economics of health care in many countries is at an early stage of development " (Vehovec, 2014:15-6).

7. CONCLUSION

PFNA is a method that ensures a stable fixation for osteosynthesis and early patient mobilization. It is very effective and safe in the treatment of various pertrochanteric femur fractures and is absolutely cost-effective for the health institution.

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THE NEW CULTURE OF LEARNING - LINK BETWEEN EDUCATION AND THE ECONOMY

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Abstract

This research on the interdisciplinary, multidisciplinary, and transdisciplinary level integrates, develops and evaluates a new culture of learning in educational institutions (kindergarten, school, faculty). It focuses on three types of learning: "learning to know", "learning to do" and "learning to be". Namely, the current social and scientific-technological moment demands innovative educational institutions striving for a breakthrough from "the teaching society" to "the learning society" and establishment of an active relationship with the "real-time reality" and the living environment for bridging the gap between formal (school) knowledge and everyday life and professional challenges. The importance of this research is obvious from its primary purpose: it aspires to explore and strengthen the new culture of learning with its main features of individual, extra-curricular, lifelong, anticipatory, social and global learning. Basically, the research deals with restructuring, redefining and transforming the knowledge, i.e. integrative learning and curriculum focused on pupil/student that are important for both an individual and the community as well as for the economy. Focal work area will give an answer to the question of how the new culture of learning contributes to the development of knowledge, skills and abilities (competencies) that are necessary to individuals for their personal *development, participation in a society and employment, and lifelong learning as the most important link between education and the economy.*

Keywords: *new culture of learning, integrative and lifelong learning, education and economy, competencies.*

JEL Classification: A2, H52

1. INTRODUCTION

According to UNESCO's assessment "Education for the 21st Century", the content of the whole educational system should focus on four main areas: "learning to be", "learning to know", "learning to act" and "learning to live together" (Delors, 1998). Learning for "knowing, acting, being and living together" fosters the development of key competencies during education among both the students and the teachers. A curriculum based on students' competencies is the best approach in the development of a school curricula (Jurić, 1999, 2007; Glasser, 1994; Marsh, 1992, 1994; Greene, 1996; Jensen 2003; Previšić, 2007), where the student and his learning and development are the nucleus of the curriculum (Buljubašić-Kuzmanović, 2014, 2016).

Research investigating the learning revolution (Dryden and Vos, 2001) and didactics as a theory of curriculum strongly advocates the need for a four-part school curriculum: curriculum of a personal growth and development, life-skills curriculum, curriculum of learning how to learn and learning how to think, and a content curriculum. The purpose is to emphasize that in a complex contemporary world, characterized by larger and faster changes on one hand and discontinuity on the other, *innovative and anticipatory learning*, i.e. integrative learning, based on restructuring, redefining and transforming the knowledge must be of a growing importance. Contemporary, international developments in the area of curriculum as well as the culture of teaching and learning put special emphasis on education for the world of changes but also on personal, social and economic growth. Thus, it is required to thoroughly review, modernize and revive curricula, and to radically change the form and appearance of schools to fit the times we live in.

The new culture of learning focuses on three concepts: "learning to know", "learning to do" and "learning to be". The results of the concept "to be" (to be tolerant, caring and responsible) are at the top of that new pyramid of the culture of learning. Secondly, in the middle of the pyramid, at the level of "doing", are cross-disciplinary or interdisciplinary results (critical thinking, problem solving, using technology, effective communication) and, finally, at the bottom are the aspects of learning related to "knowledge" that are found in subject disciplines. When it comes to the measurement of learning outcomes, the easiest to measure is the base, the level of "knowledge", a bit harder to measure is the level of "doing", and extremely difficult is the level of "being". The aim of the concept "learning to be" is to achieve the development and a personal fulfillment in the full splendor of people's personality, the complexity in their forms of expression, and their various roles in life - as an individual, a family and a community member, a citizen and a producer, an inventor and a creative dreamer (Faure, 1972). Thereby, this research deals with restructuring, redefining and transforming the knowledge, or, more specifically, integrative learning and curriculum focused on pupil/student that are important for the individual, the community, and the economy. It aims to provide an answer to the question of how the new culture of learning contributes to the development of knowledge, skills and abilities (competencies) that are necessary to individuals for their personal development, participation in a society and employment, and lifelong learning as the most important link between education and the economy (Buljubašić-Kuzmanović, 2012; 2014a).

2. A KNOWLEDGE-BASED SOCIETY AND LIFELONG LEARNING

Education is vital for the economy. To put it differently, without an alignment of education and the economy it is impossible to achieve economic progress, the overall growth, and the development of society. To link education more to the economy, it is important to change the culture of learning from kindergarten to university, and to strive to the learning and knowledge-based society as well as lifelong learning.

Pastuović (2006) discusses the concepts of "learning society" and "knowledge-based society" through the educational objectives and their links with social progress and the quality of life, where science and technology have become fundamental variables of development. Husen (1974) the concept of the learning society explains through a lifelong learning, inclusive formal education (education for all without exclusion from education and stigmatization) and, lastly, a non-formal and informal learning, i.e. a self-education. Life opportunities of most residents depend on that intellectual capital or, in other words, on the indicator of educational objectives redirected to skills and competencies (Šundalić, 2012).

The European Commission for Education in Lisbon in 2003 adopted a new strategy for the European Union to become the most competitive and as far as the knowledge is concerned the most dynamic economy in the world, capable of continuous development. To achieve that, the European systems of education must adapt to the requirements of the knowledge-based society. One of the main components of that approach is the promotion of new, "key competencies" required for lifelong learning. Key competencies are a set of skills, knowledge, abilities, and attitudes that are imperative for an individual personal development, the participation in society, and employment, but also include the disposition to learn and resourcefulness. They are applicable to different situations and contexts, and their multifunction enables the achievement of goals, solution of various problems, and performance of different kinds of tasks. A framework of key competencies in the knowledge-based society is related to the eight main areas of competencies (Halász and Michel, 2011, Table 1).

Table 1: Key competencies

Competencies	Description
Communication in the mother tongue / Communication in a foreign language	Communication in a foreign language usually includes the basic features of skills in the mother tongue. It is based on the ability to verbally or in writing adequately understand, express and interpret thoughts, feelings and facts in a wide range of social and cultural contexts.
Mathematical literacy and basic competencies in science and technology	Mathematical literacy is the ability to identify and use basic mathematical functions to solve a range of problems in everyday situations. The emphasis is on the process and activity rather than on the result and the knowledge. Competencies in science and technology are the main driving force behind the development and modification of the environment as a response to the human desires and needs.
Digital, information and communication competencies	Digital competence enables a confident and critical use of electronic media for learning, work, leisure and communication. These competences are related to logical and critical thinking, the high level of information management, and the well-developed communication skills.
Learning to learn	Learning to learn implies learning how to learn, dispositions and abilities to organize and manage one's own learning. It includes the ability to manage the time and way of learning, solve tasks, evaluate, and integrate, but also to apply the new knowledge and skills in different contexts of life. The competence strongly contributes to the management of one's own professional development and career.

Interpersonal, intercultural and social competencies	They cover all forms of behavior that enable individuals to participate in a social life in an effective and constructive way, and to solve problems and conflicts when necessary. Interpersonal skills are necessary for effective interaction with individuals or groups.
Civic competencies	Civic competencies are a broader concept of interpersonal competencies by nature of their existence on the social level. They have been described as the sum of competencies that enable individuals to participate in social life.
General and cultural competencies and expressions	Cultural competence or expression implies the importance of creativity and the creative expression of ideas, experiences and emotions in a wide range of different media, such as music, drama, literature and art.

(Halász and Michel, 2011)

The new culture of learning is developing towards the "knowledge-based society" and the "learning society". The development of the concepts, that link education to the economy, is associated with the following issue - to what extent will society develop in the direction of the society that is learning (Antikainen, 2005), or, in brief, how to get to the "learning society" (Pastuović, 2006).

To sum up, knowledge is directly linked to education which plays a crucial role in supporting the economy. Economic growth, technological development and contemporary education are strongly correlated and interdependent (Ćosić and Fabac, 2001). To enhance the economic growth, it is required to develop systematic and functional (usable) knowledge along with the skills and abilities that will enable young people to look for employment and succeed in the labor market. Therefore, the education system needs to encourage the development of generic (general) and specific (professional) competencies, critical thinking, media literacy and intercultural dialogue (Buljubašić-Kuzmanović and Gazibara, 2014). The development of relevant and high-quality skills throughout lifelong learning can be best achieved by integrative learning using the digital environment in order to maintain the quality, effectiveness and transparency of skills and qualifications, and their mobility at local and global levels.

3. THE NEW CULTURE OF LEARNING

The new culture of learning and its multifunction allows children and young people to achieve goals, solve various problems and perform different types of tasks. With regard to that, there are different models of the learning culture presented in a professional literature. For example, constructivist model (Mušanović, 1998), model of learning focused on actions or integrative learning

(Buljubašić-Kuzmanović, 2007), student-centered learning model (Matijević and Radovanović, 2011), model focused on learning outcomes and competencies development (Purser, Council of Europe, 2003). The most important ideas related to the learning/teaching are embodied in the following definition of learning: learning as an active process that grows out of the confrontation between an individual and his environment. The concept of confronting entails activity, performance, and work, essential elements for development and acquisition of key competencies. Furthermore, the process of active confrontation is embedded in social relations and interaction which requires repedagogisation of schools and deintelectualisation of teaching where an interactive school form and a micro-pedagogical approach try to establish a relationship with the "real-time reality", external life (to learn anew about life from life, from life situations). Therefore, the curriculum focused on the students' life environment, interconnection of things around them, not just the individual aspects of science or subject, is a starting point for the new culture of learning to develop. Since learning is a process based on values, without them quality learning and culture of learning cannot be achieved. There is a variety of learning cultures, and the criteria for distinguishing them are the following: types of knowledge, learning opportunities and learning styles. According to them, Faure (1972) identifies seven cultures of learning (Table 2.).

Table 2. Seven cultures of learning

A type of the learning culture	Characteristics
The culture of writing	which passed its peak, and today is experiencing growing erosion
The culture of storytelling	which experienced its shining moments in pre-industrial times, and today is experiencing its revival
The culture of images	which is in particular acceleration after the invention of camera and television
Experiential culture	which is directed to hedonistic needs for "complete" learning
Culture of multicultural learning and experience	which may represent the culture of future
Ecological culture of learning	which rediscovers learning in the nature and on nature
Work-integrated culture of learning	where learning throughout the working process gains more and more in its importance for the economy, personal and professional growth, and employment

(Faure, 1972)

Education in this complexity provides various possibilities, but also gives the opportunity of detection, manifestation and affirmation of diverse interests, aptitudes, and talents (Pivac, 2000). The new school is being established on the student's performance allowing him spontaneous and free expression that has a direct impact on the organization of life as a whole. The culture of learning is determined by the distances that make the following contrasts embedded into the personal, social and economic development at the individual, local, national and global level:

- strictly guided learning - self-study
- school learning - extra-curricular learning
- early learning - lifelong learning
- adaptive learning - anticipatory learning
- individual learning - social learning
- national learning - global learning.

Within a holistic and humanistic theoretical approach, it is attempted, with the planned project activities designed in partnership with the community, to make a breakthrough from traditional learning to innovative one, i.e. from the "teaching society" to the "learning society", and to establish a relationship with the "real-time reality" and life environment of children, pupils and students.

"An important feature of the innovative teaching is anticipation; this concept can be best described if we oppose the concept of adaptation to it. Whereas adaptation means reactive adjustment to some external stimulus, anticipation implies orientation that prepares us for future events and even contains alternatives for the future. Anticipatory learning uses techniques such as forecasting, simulation models, scenarios and models in general. It considers trends, plans and estimates future consequences and a possible negative result of the decisions made and is aware of the global implications of local, national and regional actions. It tries to protect society from trauma and shock. It emphasizes the future, not the past. It uses imagination, but it is based on hard facts" (Botkin et al., 1979: 12-13).

Questions related to the future development in education should be direct: What to remove? What to keep? What new to design? In other words, how to construct a curriculum that emphasizes what is important for students, how to set the educational outcomes inside the learning pyramid, and explain the focus of action "from the bottom up" (Why do I teach this?) and design "from top to bottom" (What type of people we want our students to become?), (Drake, 1995, Stoll and Fink, 2000). Even more relevant question is concerned with the new culture of learning as a link between education and the economy. On one hand, knowledge of the future is networked, decentralized and interdisciplinary, and on the other hand, the education system is complex and somewhat uncertain due to constant changes as an ongoing and permanent process, and not as a result of onetime reforms. Therefore, the future society reflects in the different cultures of learning that promote level of education, ability, resourcefulness, innovation, and cooperation. In other words, it reflects in an integrative learning as the link between education and the economy.

4. INTEGRATIVE LEARNING

The recent study that brought together researchers of the curriculum for the 21st century (Jacobs, 2010) has improved and linked the development of the curriculum to the notions of "zooming and mapping" *where every element* is observed both individually and as a part of the whole. From different perspectives, in that way teachers can get the insight into how different parts inside the classroom and the learning culture connect with each other and how they are placed into the context of schools and community at the national and global level. The ultimate "zooming" is focused on a child, pupil, student and their overall development. An atomistic approach (parts before the whole) is dominant in the traditional culture of learning, while a holistic approach (the whole before the parts) prevails in the new paradigm. *Correspondingly,* the curriculum of traditional teaching is based on a variety of independent study disciplines (courses, subjects), while the new paradigm strives to an interdisciplinarity and integration of school subjects and thus, integrative learning. According to the old paradigm learning is a linear and cumulative process as opposed to the new where learning is an interactive process aiming at creating "mental networks" that enable fast and efficient structuring and incorporating the knowledge into a complex system. Furthermore, in the old paradigm evaluation comes at the end, while in the new paradigm before, during and after a certain educational cycle based on self-reports and reports of others. Finally, the traditional paradigm of teaching involves competition, the individuals who learn by competing with each other, whereas the new one requires collaboration, smaller groups of pupils/students who learn together, share thoughts, cooperate, discuss and confront different views, and help each other.

Fogarty (1991) distinguishes three basic forms of curriculum integration (within a single discipline, cross-disciplinary and integrative) and ten ways to connect different syllabi, i.e. disciplines within these perspectives. It is important to emphasize that proposed models, described below, are not recipes for success as there are no restrictions or set forms of integration. They only provide a good framework or a possible starting point for the systematic development of the new culture of learning within an integrated curriculum, from fragmented to networked connection:

1. *The Fragmented* (or *Divided*) *Model* refers to the separate or detached disciplines, that are specific for the traditional program design that does not take into account connections among disciplines.
2. *The Connected Model* refers to a linking of content within a single discipline. The focus is on creating the relationships (one topic builds on another, one concept on another) that make a simple form of integration that leads to a better review and assimilation of ideas within a particular discipline.
3. *The Nested Model* refers to the content widening and deepening within a certain discipline that leads to enriched and enhanced learning.
4. *The Sequenced Model* refers to the points of reference of the two separate disciplines. It facilitates the transfer of learning across different subject areas and requires continuous cooperation and flexibility in the sequencing of the curriculum.
5. *The Shared* (*Partner*) *Model* refers to the team planning and integration where two different disciplines stand together in a single focus. They are characterized by joint planning and possible construction of teaching on partnership grounds that involve cooperation, flexibility, and compromise.
6. *The Webbed (Thematic) Model* refers to an integrated lecture topic as the basis for multi-disciplinary teaching and learning. This thematic approach involves joint planning, implementation and evaluation of teaching and is best known transitional form between integrated and traditional instruction.

7. *The Threaded* (or *Connected*) *Model* refers to the connection from one discipline to another although they may be separated (e.g. multiple intelligences, learning skills, social skills, etc.). Students learn how to learn, how to make decisions, solve problems, work in a team.
8. *The Integrated* (or *Holistic*) *Model* allows longer and more thorough engagement with some problem, content or concept. By combining various disciplines (subjects), a complete understanding of a particular problem or phenomenon is achieved (holistic approach).
9. *The Immersed Model* refers to the integration of different disciplines from the perspective of an area of interest. It allows students to self-manage their own learning based on their experiences, challenges, interests, desires.
10. *The Networked Model* refers to the multiple connection and permeation. The Networked Methodology creates multiple dimensions of learning and development. Student is able to independently direct the integration process through a variety of different network systems that support each other (e.g. project activities and classes).

5. TOWARDS THE SHIFT IN THE LEARNING PARADIGM

Integrative learning is characterized by a multidisciplinary, interdisciplinary and transdisciplinary approach to education, i.e. curriculum (Males, 1987; Drake and Burns, 2004; Buljubašić-Kuzmanović, 2014, 2016):

- A multidisciplinary approach or multiperspectivity groups together all the relevant science of a certain area; it also refers to the relationship between different disciplines in the real world
- An interdisciplinary approach refers to the interaction of different disciplines, i.e. permeating the knowledge of one science into another in order to address specific problems
- Transdisciplinary approach can be defined as "something that simultaneously affects scientific disciplines, links scientific disciplines, and transcends scientific disciplines". Transdisciplinarity is a combination of disci-

plinary and non-disciplinary, and allows interaction between science and society, education and the economy.

To sum up, from disciplines' point of view, and the intensity of integration, there are three possible curriculum integrations (multidisciplinary, interdisciplinary and transdisciplinary). Newly emerging paradigm of learning within these meta-processes and perspectives changing the culture of learning also changes the existing structure that divides students by age, professional orientation, subjects and time schedule. Furthermore, it contributes to the systematic development of pedagogical competencies that are differently defined and interpreted (Magin, 1998; Stoll and Fink, 2000).

However, despite the mentioned differences, it is possible to identify at the same time common elements and values of pedagogical competencies through an emerging paradigm of learning, which is seen as a vision of the final state or the model that changes the culture of learning, structures, roles, and relationships. The paradigm entails learning processes related to the development and sustainability: research - data collection and analysis of the subject, participation - application of personal experience and action - participation in relevant activities related to the subject matter (Godwin, 1993; Stoll and Fink, 2000).

Being competent implies the ability to acquire, use, develop, and share knowledge, skills and experience. When it comes to the measurement of learning outcomes, as already pointed out, the easiest element to measure is the base, the level of "to know" (dominant in a traditional education), a bit harder to measure is the level of "to do", and extremely difficult is the level of "to be". Therefore, it is easy to succumb to the temptation of neglecting the levels "to do" and "to be" or to take them as a side outcome of education. Contemporary education strives to integrate all the levels of learning, connect them by "the feeling of the whole" (Beane, 1995; Stoll and Fink, 2000), and to continuously (self) evaluate them (Buljubašić-Kuzmanović and Kretić-Meyer, 2008).

The shift in the learning paradigm, depending on the center of an organization, the concept of learning, integration and learning outcomes (Males, 1987, Stoll and Fink, 2000; Drake and Burns, 2004; Buljubašić-Kuzmanović, 2014, 2016), is shown in Table 3.

Table 3. The emerging paradigm of learning

Approaches/ features	Multidisciplinary	Interdisciplinary	Transdisciplinary
The center of an organization	Through the structure of individual disciplines	Through social interaction, interdisciplinary correlation, and construction	Through interdependent and interrelated knowledges within real life
The concept of learning	Fosters contact among disciplines	Fosters dialogue and cooperation among disciplines	Affects disciplines, connects them, and goes beyond them
Integration	Mild/moderate	Average/intensive	SHIFT IN THE PARADIGM
Learning outcomes	"TO KNOW": to foster the integration of a general education with the possibility of professional specialization in the selected number of subjects	"TO DO": to ensure the development of competencies that enable people to deal with a variety of situations, often unpredictable, but also to work in teams	"TO BE": to develop autonomy in decision-making and a greater sense of responsibility in achieving common goals; to introduce yourself and take advantage of all the personal talents

(adapted by Drake and Burns, 2004)

The process of learning and the development of entrepreneurial competencies, as the new paradigm in education, are important for the growth of individuals and society as a whole. Investing in the school entrepreneurial culture and applying the methodology of entrepreneurship, especially in vocational schools, indicate a new ways in research of different levels of education and curriculum. Therefore, it is necessary to encourage the entrepreneurial experience among children and young people (from an idea to realization within the school to the cooperation with the local community and entrepreneurs) (Buljubašić-Kuzmanović, 2012).

6. NEW ROLES

In order to find a link between education and the economy and make it visible in all aspects of life, work and learning, it is necessary to approach the issue of pedagogical competencies of teachers multidisciplinary. Professional development programs should be designed based on the science-based indicators because knowledge grows very fast, but even faster expires. Therefore, there is a necessity for lifelong learning, the development of competencies that the individual needs for personal development, participation in society, and employment. They include the disposition to learn, adaptability and resourcefulness in order to easily bridge the gap between the formal (school) knowledge and everyday life and professional challenges. Through a variety of methodologies and models that participate in the creation of curriculum (Miljak, 2005) it is striven to implement the continuity of development and developmentally appropriate learning methods, the environment and atmosphere of learning based on mutual respect, and the development of educational, cultural, artistic, ethical, practical, and entrepreneurial skills among all individuals in order to successfully participate in a democratic society and contribute to a stronger link between education and the economy.

The new culture of learning focuses on a pupil/student rather than a teacher, emphasizes the importance of participation instead of adaptation (Steele et al., 1988), and adds non-formal and informal sources of learning to the formal ones. The responsibility is transferred from the institutions onto the subject who is learning and instead of an external learning management, at the forefront is a self-organization in learning and evaluation what tends to be achieved by establishing interdisciplinary project teams in the kindergartens, schools and universities. The process of learning is cooperative and it is achieved in a free and creative way during the educational process so that fully activates the learners (Previšić, 2007). Cooperation, partnership and integration or, in other words, integrative learning (complete, connected, active, experiential) supports socially, emotionally and culturally sensitive school education in which all participants feel accepted, safe, secure, relaxed and motivated for research and creativity.

Consequently, the contemporary society puts the role of educators/teachers on a new foundation bearing in mind two qualifications of the society today: "knowledge-based society" and the "learning society", but also the concept of lifelong learning with a high degree of autonomy and the code of ethics (Sučević et al., 2011):

- *Teacher Professional:* expands knowledge about teaching and learning, which emerges from scientific research findings; has a wide repertoire of practical procedures in the classroom oriented towards the students; the teacher is a partner and has a responsibility for the community as a pillar of development and its code of ethics.

- *Creator of the circumstances for the development and self-realization of student's personality:* provides the conditions for maximum activity of students with a wider range of possible approaches to teaching and learning.
- *Associate in organizing activities that are initiated by students:* creates open and stimulating learning environment in which students can apply different learning styles.
- *Researcher in the field of education:* the trend to make the research and development an important area of teacher education has resulted in the idea of the need to shape a teacher as a pedagogue, but also a researcher. In this case the research approach includes: active and critical attitude towards education and teaching, competent engagement in research, openness for innovative ideas and approaches, willingness to improve teaching and interest and capacity for theoretical reflection and communication.
- *From an individual to an associate, a team member:* team work is one of the solutions to draw the teacher's work from isolation. For example, in most EU countries they opened the recruitment process of different profile assistants in elementary schools.
- *Expert in single or multi-subject areas*: the development of science, the need to raise the quality of education and the need to rationalize the teaching process emphasize the issue of number of teaching areas teacher is prepared for. Many European countries tend to organize teachers specialized in certain subject areas.
- *Expert with a high degree of autonomy:* the process of teacher development as autonomous professionals will provide them with an opportunity for a research and critical approach to their own professional activities.
- *Ethical profession:* Teaching is not just an organizational or technical, but primarily ethical and social activity. Code of ethics of the teaching profession replaces professional standards and competencies. The teacher's task is to put education to function for the society.

The new, active, roles of teachers, pupils and students foster the correlation between education and the economy. Furthermore, they enable children and young people to develop entrepreneurial spirit providing them with the opportunity to be involved and to affect the changes, to be engaged in the things they like and to accomplish, affirm and confirm themselves in the development of new ideas. The new culture of learning in a society with a high degree of professionalism is based on lifelong learning as the most important link between education and the economy, success, life optimism and the culture of creativity. On the one hand, it changes rashness, superficiality and improvisation, and on the other hand, it contributes to the development of work habits, environmental awareness and education of free, complete, humane and responsible personality (Buljubašić-Kuzmanović, 2012).

7. CONCLUSION

This paper on interdisciplinary, multidisciplinary and transdisciplinary level integrates different types of learning and links curriculum/discipline. Through co-constructional, collaborative and partnership approach, it focuses on three types of learning: "learning to know", "learning to do" and "learning to be". To put it differently, the paper deals with the integrative learning focused on pupil/student that is important for the individual and the community as well as for the economy. It also examines the new culture of learning as a link between education and the economy, i.e. lifelong learning in a knowledge-based society. Furthermore, it describes ten ways of integration of the syllabi, the way towards the co-construction of curriculum, the shift in the learning paradigm, and, in line with that, the new roles of the subjects of education.

Knowledge of the future is networked, decentralized and interdisciplinary, and the education system is complex and uncertain due to constant change as an ongoing and permanent process, and not as a result of onetime reforms. Therefore, the future society reflects in the different cultures of learning that promote level of education, ability, resourcefulness, innovation, and cooperation. The economic growth and success depend on the quality of education. Education and the economy share very similar goals aiming at increasing the goods and benefits. Therefore, the knowledge must be conquered, not acquired. In the contemporary education and the economy what is important are the knowledge networks. Economic growth, technological development and contemporary education are integrated, and such approach requires integrative learning as well.

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EMPLOYABILITY OF UNIVERSITY OF APPLIED SCIENCES GRADUATES

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Abstract

Employability as set of skills, knowledge, personal attributes and understandings that allow one find job position, obtain it or change it, is in crucial outcome of modern education. Both students and high education institutions are liable for acquiring mentioned set of skills and knowledge, but it is up to employers to determine which employees are desirable in certain moment at labour market. Therefore cooperation between education institutions, students and employers is essential for every country to create employable graduates. Introducing universities of applied sciences in Croatian high education system, lawmaker intended to offer to labour market more professionally skilled graduates in order to answer market need for more educated workers. However, implementation of new type of institution did not follow this intention, or positive European models such as Austrian or German Fachhochschulen. Based on present knowledge and experience the basic hypothesis is defined: Croatian labour *market does not recognize professional high education as the labour market in Austria where some jobs require a degree from this type of study.*

This paper reviews employability of university of applied science graduates and their position in labour market. Review includes several database (OECD, Eurostat, Croatian Employment Office etc), and also empirical research on sample of 434 students and 49 members of high education institution management, conducted at 10 high education institutions. Since, 77% of graduates from Austrian Fachhochschulen find first job in 18 months, this paper compare Croatian and Austrian model of professional high education institutions in order to provide positive models that could be implemented in Croatia.

Keywords: *labour market, employability, university of applied sciences, skills, Croatia, Austria*

JEL Classification: H52, I23

1. INTRODUCTION

Facing growing competition from USA and Far East countries, while still struggling to create jobs lost in economy crisis, European Union highlighted tertiary education as a key policy area where reforms can directly contribute to jobs and economic growth (European Commission, 2013, 7). Thus, member states have set as one of their primal targets increasing the share of the population aged 30-34 having completed tertiary education from 31% to at least 40% in 2020 (European Commission, 2010, 9). Such target follows newest labour market outcomes research from OECD which point that across OECD countries average unemployment rate is 12.45% for adults with below upper secondary education, while it is 4.9% for tertiary-educated (OECD, 2016, 30). Link between employability and tertiary education in European Union was established through Sorbonne Joint Declaration where minister of participating European countries agreed on the concerted pursuit of the goal to use the "European area of higher education as a key way to promote citizens' mobility and employability and the Continent's overall development (Haack, 2013, 6473).

Sorbonne Declaration was followed by Bologna Declaration. Republic of Croatia signed Bologna treaty in 2001, and from 2005 all study programs uses ECTS credits. Meanwhile, in 2003 Croatian lawmaker brought The Scientific Activity and Higher Education Act (hereinafter: The Act; Official Gazette

123/03), which introduced three types of high education institutions: university, university of applied sciences (hereinafter: UAS) and higher schools (Stanic, et.al. 2016, 398). Same year, OECD in publication emphasises problems faced by education system in Croatia: lack of emphasis on developing analytical and problem-solving abilities, very weak link between education and the professional world, and the non-development of lifelong learning (Bejakovic, 2014, 18). Such link between education and professional world lawmaker intended to create introducing university of applied sciences, following example of such high education institutions in other EU countries, e.g. Fachhochschulen in Austria and Germany. This paper questions university of applied sciences success in achieving such goal. It introduces basic elements that affect graduates success on labour market, and all of that with positive examples and experiences from Republic of Austria.

1.1. Literature review

In last 25 years use of term *employability* was soaring in very fast pace, due to globalization and deindustrialization. Poreter (1990, 628) advocates that Innovation is seen to be central in creating a competitive advantage by perceiving or discovering new and better ways to compete in an industry and bringing them to market (Bejakovic, 2014, 19)..Therefore it is a state responsibility to invest in education and training in order to boost innovation. Even earlier, in 1970s Psacharopoulos (1994), writes about rate of return estimates to investment in education. Ghoshal and Bartlett (1997) focus on moral contract by employers and employees where employer attempts to provide each employee the opportunity for continuous skill enhancement so as to ensure employability within the company as also outside. Scherer and Hue (1992) on data of 221 companies in period of 1970 to 1985 prove that companies with management that have high level of technical education, spend more money on research and development that lead to innovations. Kenny, English and Kilmartin (2007) show that continuing training and lifelong learning helps to keep people employable. Psacharopoulos (1994).

In Croatia, Bejakovic, (2014) writes about link between employability and competitiveness, stating that labour force competitiveness and employability are preconditions for the realisation of the total economic and social development. Kőnig, Mazulic Juric and Koprivnjak (2016), through comprehensive survey analyze importance of employability skills. Maslic Sersic and Tomas (2015) question whether employability can be perceived as contemporary alternative to job security.

2. EMPLOYABILITY

There are several definitions of term employability. Cambridge dictionary simply defines it as skills and abilities that allow you to be employed. Hillage and Pollards (1998, 12) define employability as one's capability to gain initial employment, maintain employment and obtain new employment if required. Mcquaid and Lindsay (2005, 208-2010) illustrate their own re-ordered 'holistic framework of employability: it has three main interrelated components: individual factors, personal circumstances, and external factors. Among those three, education is sorted with individual factors. It was already mentioned in introduction that unemployment rates are lower for tertiary-educated. Therefore, to define those individual factors we focus on knowledge and skills gained by every student and graduate through his education. Linking skills with employability means linking skills of employee to skills required at labour market. Thus, employability from employer point of view means having labour market of workers that are ready and able to work at specific position. Sersic and Tomas (2015, 215) present two dominant, empirically grounded models which serve as conceptual frameworks of key characteristics of employable individuals: (1) the competence-based model and (2) the dispositional model of employability. Letter focuses on career success in uncertain and unpredictable circumstances of modern labour market, while first look up to optimal use of one's competences in finding, designing and execution of work tasks.

2.1. Skills for 21st century

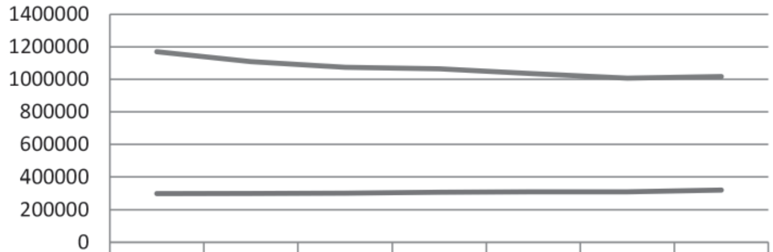
By 2025 almost half of all job openings in the EU will require higher qualifications, usually awarded through academic and professional programmes at tertiary level (European commission, 2016, 16). As high education institution, oriented towards professional programs, it is UAS task to provide programs that will offer education necessary for country productivity and education.

One of OECD publications: Skills Outlook 2015 makes clear that where education and the labour market co-exist as two separate worlds, it is very difficult for young people to manage the transition from one to the other (OECD, 2015, 3). In 2006 European Parliament and Council of European union (2006, 13) recommended key competences: communication in mother tongue and foreign languages, mathematical competences, digital competences, learning to learn, social and civic competences, sense of initiative and entrepreneurship. It is hard to define set of skills that young graduates need for successful entrance into labour market. However, lately it can be heard frequently heard that teaching students how to learn is far more important than teaching them facts. Therefore, first set of skills of 21st century are learning skills: critical thinking, creative thinking, collaborating, communicating. Second set are Literacy skills: information literacy, media literacy, technology literacy. Finally, third set are Life skills: flexibility, initiative, social skills, productivity, leadership (Partnership for 21st century skills, 2008). Such skills would enhance employability of graduates. Kőnig, Mazulic Juric and Koprivnjak comprehensive survey allow us to find which skills students, teachers and employers in Croatia perceive as crucial for employability. Results show that employers value problem solving skills, learning skills, willingness to learn, as well as enthusiasm and intelligence as the most important. According to students those are skills that are underrepresented during education (Kőnig, et.al. 2016, 536). Their research, as well as research that will be shown later in paper, shows that in most cases both educational institutions and students are aware of what labour market at moment need. However, universities in Croatia are still hard to change, or their changes are too slow to follow labour market. That represents direct implication in Croatian innovation potential.

2.2. Statistic data background

Croatian GDP declined for 12 % from 2008 to 2015. First glimpse of growth was in 2015, and since then it is slowly rising. However, Croatian economy still has not reached pre-recession numbers. When talking employability, we see in Chart 1 that number of employed persons have declined from 2009 to 2015 for 152,173 persons. However, at same time, number of employees with high education is growing. In 2009 there were 300199 employed persons with at least tertiary education, and in 2015 this number rose to 321555 persons. Considering that in late 2015, whole 2016 and at beginning of 2017 GDP in Croatia is growing since 2015, it is easy to conclude that this number of high educated employees is still rising. This growth of highly educated worker is still not high enough, and therefore Croatia will have to make many more changes in its labour market and educational system to meet Europa 2020 goals.

Chart 1: Persons in paid employment in legal entities and by educational attainment from 2009 to 2015.

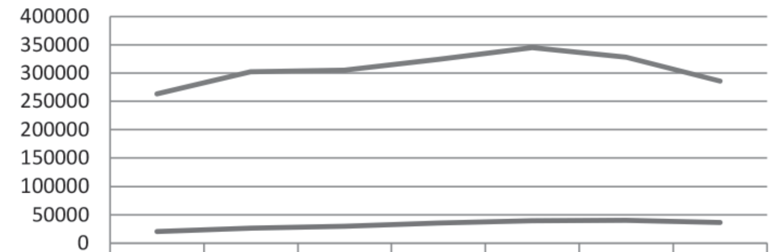


	2009	2010	2011	2012	2013	2014	2015
Total	1169970	1109016	1074369	1064753	1035356	1007456	1017797
Highly educated	300199	301325	302424	308736	310542	310873	321555

Source: Statistic Yearbook (2010-2016), Croatian Bureau of Statistics, created by author

The growth of high educated employed persons is very slow and short. However, when considering that in period total number of employed persons fell for 15 %, growth of 7 % is certain indicator that labour market requires more highly educated people. Thus, some of conclusions mentioned before, regarding idea that high educated works easier find job, are proved with this char. However, other, more negative, conclusions can be driven from Chart 2.

Chart 2: Average number of unemployed persons, by level of professional attainment from 2009 to 2015.



	2009	2010	2011	2012	2013	2014	2015
Total	263174	302425	305333	324324	345112	328187	285906
Highly educated	20700	26630	29997	35727	39663	40493	36571

Source: Statistic Yearbook (2010-2016), Croatian Bureau of Statistics, created by author

It is more precise to read from employment charts, rather than unemployment, but in order to compare both data Chart 2 is presented. Unemployment rate is always questionable since unemployment of a person depends on several factors such as willingness to work, migration of workers, pensions etc. When comparing unemployment rates with employment rates we find that they are in disproportion, since more people are off unemployment list, than are being employed. However, interesting fact is that, even thou that number of employed high educated persons had not declined in this period; number of unemployed persons was rising till mid 2014. That said, number of unemployed high educated persons in 2009 was total 20,700, while in 2015 it was 36,571. In order to understand this data we should take a look at Table 1. In last seven years number of students jumped for more than 20,000, while number of graduates jumped for more than 10,000. Since this paper is concentrated towards UAS (ISCED 5B), Table 1 splits graduated students. UAS were introduced in Croatian high education in 2003. Therefore, numbers from 2008 to 2015 are no more connected with early stage of these institutions. It could be said then that in selected period UAS as professional study did not promote them self as valid alternative to classical universities. Number of professional study graduates grow around 11%, while number of classical university students grow for 35%, or if we look period 2009-2015 for 15%. It could be concluded that UAS have to work on their competitiveness and have to attract better students to produce more graduates.

Table 1: Total students and number of graduated students from institutions of higher education from 2008 to 2015.

Year	Total students	Graduated students		
		ISCED 5B	ISCED 5A	Total
2008	134,188	10,247	15,326	25,573
2009	145,263	9,905	20,251	30,156
2010	148,616	9,670	22,708	32,378
2011	152,857	11,153	25,335	36,488
2012	159,589	11,557	25,407	36,964
2013	161,911	11,329	23,923	35,252
2014	157,827	10,664	23,077	33,741
2015	157,666	11,381	23,364	34,745

Source: Statistic Yearbook (2008-2016), Croatian Bureau of Statistics, created by author

3. EMPLOYABILITY ROLE OF UNIVERSITY OF APPLIED SCIENCES

It should be stressed that The Act obliges UAS to act in accordance with needs of community. In most cases, UAS are settled in smaller urban areas. In such areas UAS have greater responsibility than in areas where classical universities are, since UAS are in such areas pioneers of higher education. In its New skills agenda (European Commission, 2016, 3), Commission emphasizes that success of teaching new skills depends on the commitment and expertise of many players: national governments, regions, local authorities, business and employers, workers and civil society, and people themselves taking up opportunities to make the best of their talents. Commission also points several reasons for setting such Agenda: 70 million Europeans lack adequate reading and writing skills, and even more have poor numeracy and digital skills, putting them at risk of unemployment, poverty and social exclusion. More than half of the 12 million long-term unemployed are considered as low-skilled. Higher education institutions need to ensure that they equip graduates with relevant and up-to-date skills (European commission, 2016, 2). However, as shown in Graph 2 and Table 1 growing number of high education graduates does not mean that number of highly educated employees is also growing. For such impact several indicators must be change. We can group those indicators and point that all of following must participate in such change: high education institutions, state or local government, students and employers. In order to conclude which changes should be done, we seek for positive (or negative) examples of Austria, as county which education system Croatia used to share in Austria-Hungary Monarchy, and which system had implemented professional high education in Fachhochschulen much better than Croatia did.

3.1. Croatia and Austria comparison

As mentioned in introduction, this paper addresses employability in Croatia and Austria. When considering Europe 2020 target of 40% of population aging 30-34 with at least tertiary education, Eurostat shows that in 2016 Croatia reached 30.5 %, while 2020 goal is 35%. Austria at the same time has 39.7% and is close to Europe 2020 target. Therefore, high education institutions in Croatia have a lot of space for expansion of their reach. It was already mentioned that investment in education and innovation foster competitiveness of each country.

Nowadays, the most popular method to evaluate the changes in country competitiveness is the analysis of the shifts in country ranking, based on the Global Competitiveness Index (Daskiewicz & Olczyk, 2014, 48). In Global Competitiveness Report 2015-2016 (Schwab, 2015, 15) Austria is on 23rd place, while Croatia is at low 77th place. Global Competitiveness Report is one index constructed from 12 pillars, from which every pillar have its own index. For this paper there are two important pillars: 5th pillar *Higher education* and 12th pillar *Innovation*. On index of higher education Austria is listed as 16th and Croatia is listed as 51st. There are 6 EU countries better then Austria: Finland which is second on list, Netherlands, Belgium, Denmark and Ireland. On index of innovation, Austria is 17th on the list, while Croatia is at very low 92nd place. Even without direct link of those two pillars to total competitiveness index, it can be seen that education and innovation are crucial factors in countries competitiveness index. Education has been recognised as a cornerstone of economic and social development. More recently, however, it has become even more important to the development process as accelerated technological change and new organizations of production transform the world economy (Bejakovic, 2014, 14). Therefore, this is an ideal position for UAS in Croatia to find their position on high education market, since it is easy to conclude that classical universities failed to provide background for innovation growth in Croatia. Austria has several positive examples of their Fachhochschule effect on innovation Growth. Best one is Fachhochschule Upper Austria in Hagenberg, established in 1993 in Software park Hagenberg where UAS is closely connected to technical park that rose from UAS. (Stanic, et.al. 2016, 400).

Table 2: Number of high education institutions by type in Croatia and Austria

Type	Croatia	Austria
University	10	22
University of applied sciences	15	21
Other (private higher schools)	24	12
Total	**49**	**55**
Number of students	422,800	164,600
Population	8,474,000	4,253,000

Source: Agency of science and higher education (AZVO), European Commission, Eurostat

Table 3 shows that Austria as country with population almost twice as Croatian population and country that have 2.5 more students than Croatia. However, total number of higher education institutions is close to Croatian. Austria has more universities and universities of applied sciences, however Croatia have more private business schools, higher schools etc.

Besides those general indicators, logical question when comparing Croatia to Austria is why are all crucial indicators better in Austria. Partial answer to this question can be found in yearly reports by European commission that provides the background information to a number of structural indicators examined in Education and Training Monitor (European Commission/EACEA/Eurydice, 2016, 6). Background report covers five key areas: early childhood education and care, achievement in basic skills, early leaving from education and training, higher education, graduate employability. Latter two shall be discussed in this part of paper. Headline target for higher education in EU is by 2020 at least 40% of 30-34 year-olds should have a tertiary or equivalent level qualification. As mentioned, Croatia had sat goal of 35% of tertiary attainment by 2020. In 2015 it was close to 31%, still not close to EU average, bit is significant rise considering 23.1% in 2012. Same indicator in Austria is 38.7% in 2015, and what fresh results show 39.7% in 2016. Therefore, Austria has reached Europe 2020 goal, and is already above average. All other targets and goals are created in order to reach headline target. Firstly, each country must attract more people to participate in tertiary education. Only way to have more highly educated people is to have more students at high education institutions. However, after people enter high education it is important that they do not dropout of it. Commission stresses that in academic year 2014/2015, there were around 40 000 students enrolled in the first year of university studies, 35 000 in the second year and just above 20 000 in the third year (National Statistics Office 2015). By contrast, the number of students enrolled in professional studies is more constant across the years (European Commission, (Croatia), 2016, 6). This numbers show that UAS have students that tend to graduate once they start and such data is important for promotion of competitiveness of UAS in Croatia.

However, European commission stress that Croatian students, more than students from other EU countries, mainly choose to study social sciences and humanities. This is especially the case for economics, business and law degrees, which are studied by 41% in Croatia compared to 34% in the EU (European commission Croatia, 2016, 6). This is also one of the reasons why UAS should promote themselves into STEM area, showing that they can be constant alternative to classical universities.

Table 3: Eurydice Key indicators for Croatia, Austria and EU average in 2012 and 2015

	Croatia		Austria		EU average	
	2012	2015	2012	2015	2012	2015
Tertiary education attainment (age 30-34)	23.1%	30.9%	26,1%	38,7%	36%	38.7%
Employment rate of recent graduates by educational attainment ISCED 5-8	65.9%	76.2%	93,8%	90,3%	81.5%	81,9%
Adult participation in lifelong learning	3.3 %	3.1%	14,2%	14,4%	9.2%	10.7%
Public expenditure on education as % of GDP	4.9%	4.7%	5%	5%	5.0%	4.9%
Learning mobility (Master)	0.5%	0.5%	16.2%	18.5%	5.5%	5.9%

Source: European commission, Eurostat, OECD

From Table 3 it can be seen that employment rate of recent graduates in Croatia is relatively high. Employment rate of 76.2% is probably result of Government measure – professional training without permanent employment introduced in 2013. Professional training without permanent employment is connected to European guarantee fund. Whether is this measure useful for young graduates and who benefits from it should be discussed in further research on that subject. Here, can be concluded that Austria, as one of the best country for youth employment have rate of recent graduates employment of 90.3% or almost 10% above average.

4. COMPETITIVENESS OF UAS SURVEY

Curricula at high education institutions are often slow to respond to changing need in the wider economy, and fail to recognize future work positions and skills needed by labour market. Therefore European Commission (2011, 6), stresses that employers and labour market institutions must be involved in design and delivery of high institutions programs, supporting staff exchanges and including practical experience in courses. Survey conducted in 2016 (Stanic, 2016) among 434 students and 49 members of UAS management (Deans, Vice Deans, Head of departments; hereinafter: Management) showed that UAS in Croatia are still far from labour market. When Management was asked whether UAS should provide programmes tailored for employers, close to 61.22 % of agreed completely and 28.57 % agreed. However, when asked should companies and employers be more involved in managing positions at UAS far less, 46.94 % of them answered agree completely and 42.86 % agrees. We can conclude that vast majority of Management completely agrees that programs should be suited for employers, but less than half completely agrees that employers should be in managing positions at UAS.

When asked whether UAS diploma will help graduates to find job, more than 80% of management agrees that UAS diploma will help students to find job, while less than 60% students feels the same way. It is impression that students would have better knowledge whether their older colleagues have found job after graduation. Another claim shows that more than 80% of students agree completely or agree that UAS diploma gives them better chances on labour market than high school diploma. Therefore, students do know that tertiary education will allow them to find jobs easier. However, students do not agree in such high percentage that UAS diploma would give them better labour market position. There is a disproportion of idea how study programs should look like. More than 82 % of students think that UAS programs should involve general knowledge like team work, public speaking etc. However 63 % of students agree completely or agree that UAS programs should focus only on specific professional topics. Asked the same question, more than 90 % Management agrees completely or agrees that general knowledge should involved, while more than 80% thinks that UAS should focus on specific professional topics. This claim shows that both students and Management understands that UAS are invented in order to teach about specific professional topic. However and also regarding skills mentioned before, both students and Management understands that today in order to find job graduates need to have general skills such as learning how to learn. But when we compare results of Kőnig, et.al. (2016) with these results, we find that those general skills are not represented at UAS. Therefore, such improvement must be done in order to provide skills and knowledge necessary for modern economy.

There are interesting results when comparing claims *does your UAS program comply with labour market* and *whether UAS diploma will help graduates to find job*. While 80 % of Management agrees that UAS diploma helps students to find job, only 40.81% agrees that UAS programs comply with labour market needs. Also only 50.92 % students agree with same claim. This is a clear sign that UAS programs and courses did not meet their expectations, and when

UAS were promoted as universities closer to labour market, promoters did not succeed with that intention. However, when asked if UAS graduates are more competitive than high school graduates, more than 80 % of students agree with claim.

Table 4: Survey among students and UAS Management (Dean, Vice Dean, Head of department) conducted in 2016, with answers where: 1 – disagree completely, 2 – disagree, 3 – do not agree or disagree, 4 – agrees, 5 – agrees completely.

Survey Claim	Students (%)					Management (%)				
	1	2	3	4	5	1	2	3	4	5
UAS diploma is valued at labour market	2,76	9,91	27,19	39,17	20,28	0	4,8	14,29	20,41	61,22
UAS programs are tailored for labour market	3,23	10,37	35,25	37,33	13,59	4,08	12,24	40,82	12,24	28,57
UAS should focus on entrepreneurship and innovations	0,46	2,76	14,06	39,86	41,94					
It is important that lecturer have professional experience	3,23	3,46	15,67	30,18	46,77					
Lecturer academic title is important	3,46	5,77	20,32	34,18	36,26					
Programs involves practical cases	4,61	13,13	31,11	32,26	16,13					
Your UAS justify title professional study	1,15	4,61	27,42	44,24	21,89					
UAS graduates have easier labour market access than high school graduates	0	4,8	14,29	20,41	61,22					
UAS graduates are more competent at labour market	2,3	6,22	17,97	34,33	38,97	0	4,8	14,29	20,41	61,22
UAS should tailor its programs for employer's needs	0,46	1,84	16,82	47,7	32,95	0	2,4	8,16	28,57	61,22
UAS programs should involve general knowledge (e.g. public speaking, team work)	2,53	1,84	12,44	32,72	50,23	2,04	4,08	2,04	30,61	61,22
UAS programs should focus on specific professional topics	2,76	4,84	27,65	35,48	28,8	0	0	18,37	32,65	48,98

Source: Stanic, 2016, Created by authors

What alarm us the most is student respond to claims about UAS programs. When asked does your UAS justify title professional study, only 21.89 % of students agrees completely. 44.24% of students agree, while 27.42% do not agree or disagree. When asked do programs on your UAS involve practical cases, only 16.13% % agrees completely, and 32.26% agrees. 31.11 % do not agree or disagree, while 17.74% disagree or disagree completely. Last two claims are important indicators about main faults of UAS in Croatia. As mentioned before, UAS are professional studies and they should be oriented on professional skills. However, as survey shows, many students are disappointed of fact that programs lack of practical cases. This fact also means that insufficient number of students perceive UAS as professional study.

As expected students value professional experience of their lecturers more than their academic title. When suggested is it important that lecturer have professional experience 46.77% agree completely and 30.18 % agree. 15.67 % do not agree or disagree, and only 6.69% disagrees. On the other hand, 9.21 % of students disagree completely or disagree that lecturer academic title is important, 20.32 % do not agree or disagree. 34.18 % agrees and 36.26 % completely agrees. Results show that students have high values both on professional experience and academic title. But results signal that it is more important for students that their lecturers have professional experience. Thus we find that student did not lose from sight fact that they attend professional study, and that those programs should both involve practical cases and lecturer that have experience with those practical situations.

5. CONCLUSION

Employability of graduates has been promoted to one of crucial functions of government, education institutions, and graduates themselves. However, measuring it is difficult task. Before Croatian government introduced measure called professional training without permanent employment it was possible to keep track of employability of graduates. However, there are no statistics on that value before this measure. Recent data includes graduates on professional training, and since we cannot find how many graduates stay employed after training such data cannot be used in this paper purpose. Therefore, it is necessary in such research to base conclusions on other methods like surveys. Survey conducted by Kőnig, et.al., shows that there are significant differences in skills expectations from students, employers and universities. However, all agree that skills that students and graduates have today are insufficient for successful labour market participation.

Survey conducted on UAS students and UAS management signals that UAS did not reach it purpose and is not perceived as professional high education institution. Students value more close professional programs than ones that teach basic skills. UAS management agrees in high percentage that business sector and employers should be more involved in UAS, but do not agree in such percentage that employers should be evolved in management positions. Students value more practical experience of their lecturers than lecturer academic title. More than 80% of management agrees that UAS diploma will help students to find job, while less than 60% of students feels the same way. However almost 80% of students agree that UAS diploma offer them better chances to find job than secondary school diploma. Therefore we can conclude that Croatia is slowly, moving towards goal of 40% of people 30-34 years with at least tertiary education diploma. UAS diploma gives better chances of finding job position; however employability of UAS students is still not high enough. Biggest improvement of employability would be creating enough training positions in private companies during their studying. Practical studying is still biggest challenge for UAS in Croatia, and they will have to work much harder to retrieve perception of professional high education institutions.

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ENVIRONMENTAL EDUCATION - PRECONDITION TO A "HEALTHIER SOCIETY"

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Abstract

The educational task of high school is to develop higher levels of moral consciousness, i.e., adopt the values that increase the contribution to the general welfare of society. In high schools, especially grammar schools oriented towards academic achievement and cognitive development of personality, the educational element is neglected, and high school students (as future intellectuals), can be seen as bearers of the progress of society. For this reason, ecological education (if we look at the ecology in a broader sense), would provide an opportunity for a systematic development of knowledge, but also social skills, and it would mean a return to basic human values that are essential for the progress of society.

Viewed from a pedagogical, but also a broader view, research on the environmental education in our scientific literature is limited. There is a question that justifiably arises, concerning the amount of attention that Croatia, in comparison with more developed countries, gives to these dimensions of development. The aim of this study was to examine the attitudes and opinions of students and teachers on the implementation of environmental education at schools, and in the classroom. The study included a total of 591 student and 190 teachers from all high schools of Osijek - Baranja County.

Research results showed that neither teachers nor students are satisfied with the implementation of environmental education at school. Estimates showed that teachers did not encourage students sufficiently towards behaving ecologically, that schools did not organize enough environmental activities, that those activities were not connected with the activities in the local community, that the majority of subjects poorly covered the environmental issues, which is also poorly represented in the school curriculum. Curricular approach to environmental education in Croatia mainly comes to it being implemented in isolated descriptions of teaching areas, subjects and educational achievement, based solely on the educational impact of the class (and only in science classes), leaving its didactic-socializing structure systematically neglected.

Keywords: *ecology, sustainable development, environmental education, curriculum*

JEL Classification: N3, P36

1. INTRODUCTION

The growing global economy has brought many benefits: the mobility of capital, labor, goods and services, open markets, exchange of information, but also some new risks: the inequality between rich and poor, both among countries and the population of said countries, environmental degradation and ecological problems (Korošec, Jurdana, 2013). Despite criticism from different conceptions of growth, global actors in economy and politics continue to "preach" the ideology of exponential growth and increased spending for which the sole measure of development and the well-being is the gross domestic product (Weinzierl, 2005, according to Cifrić, 2006). The educational system does not have systematized mechanisms of education of future generations that will critically view the situation and act in accordance with the developed moral, ethical and environmental attitudes, values and behavior. The present is, for adults, but also children, the only moment that should be contemplated, without developing awareness of the future, selfless care and creation of the world that we will leave to generations to come.

The development of economy and technology, as well as social relations came to a point where the developmental goals of society started to collide and intertwine. During that process, probably the most prominent clash is the one of economic and environmental objectives. However, on the other hand, "the unstoppable process of globalization and the accompanying greening of consciousness, but also of business, can be a good opportunity, not only a threat, to those who can think wide and far, have a long-term vision of their business, as well as knowledge of the possible trends in science, technology and culture "(Pokrajac, 2009, 29). Economics as science and practice links the resources and the aspiration towards the production of goods and services to meet the specific needs of society. The environment as a resource, and ecology as a science that deals with it, became more and more incorporated in the economic debate. In the end, the root of both words - economy and ecology, contains the Greek word *oikos - house, household, home*. The concept of *sustainability (sustainable development)* can be seen as a bridge that links economic and environmental goals of a society.

2. FROM SUSTAINABLE DEVELOPMENT TO ENVIRONMENTAL EDUCATION

Sustainable development is a developmental concept based on four systems: natural - environmental sustainability, social - socio-cultural sustainability, economic - economic viability, and the system of politics and power (Figure 1). It can be defined in different ways, but in practice, it is a kind of development, that balances economic, social and environmental objectives for the benefit of present and future generations. The main interest for the sustainability is the interest for a successful reproduction of contemporary societies in a way of constant improvement of quality of life to the level of load-bearing capacity of "ecosystems" (Lay, Pu]đak, 2008).

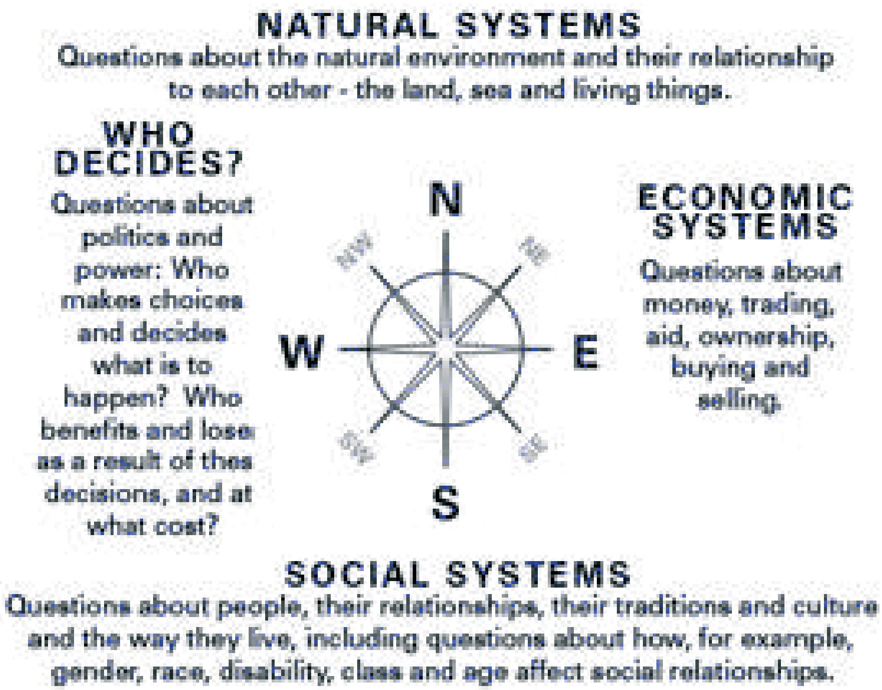

Figure 1. The concept of sustainable development (UNESCO, 1997)

The modern world, driven by neoliberal capitalism, consumerism as a way of life, marked by globalization changes, digital technologies (Martin, 2016), "the crisis of values, morals and destruction of life" (Novalić, 2003) ... becomes, in long-term, an ecologically-socio-economically unsustainable process. Globalization represents an opportunity for global growth and well-being of people, but its benefits should be fairly distributed.

Many contemporary authors and documents of today's society reflect the mentioned problem and recognize the importance of education for sustainable development (Sterling, 2005 Artur et al., 2008, Reid et al., 2008; UNESCO, 2002 ...), and the European Economic Commission and the Committee for environmental policy accepted, in 2005 , in Vilnius a document entitled Strategy for education for sustainable development, which ensured a high educational priority for the education for sustainable development. According to Lay and Puđak (2008), education for sustainable development has a two-tier character, which on the one hand encourages nurturing and learning social values that strive towards maintaining (or increasing) the sustainability, that is the sustainable developmental horizons, ad on the other hand learning new, fundamental, general and applied knowledge on sustainability, that could help develop human capacity, institutional and other capacity in order to lad a more sustainable life in the future.

Sustainable development - as a strategy for economic development that respects the natural environment - is not possible without a lifelong environmental education (Pastuović, 1999, 42). Although environmental education and education for sustainable development are not synonymous, they appear in one version in all European countries and exist at different levels of development and implementation.

Ecological education is not a specialized discipline in the field of educational sciences. On the contrary, it is a lifelong practice of social learning and knowledge transfer that takes place in all spheres of life. In other words, Community Education (in French, education populaire, and in Spanish, educación popular), must have the prefix 'eco', which locates these teachings in the area of our lives, in the current ideological context of globalization and the dramatic perceptions of the future (Hautecoeur, 2002). The goal of environmental education is the integration of environmental knowledge, values, and finally - action, because even when there is an awareness of the environmental problems, the desire of people for active involvement is negligibly small. A desire for insuring a financial status, and for spending still prevails, which indicates a lack of sensitivity for environmental issues. Anthropocentrism is still the dominant guiding principle of Western civilization (Cifrić, 1989).

Throughout history, ecology as a science developed from narrowly conceived research and conservation of the environment according towards the functional variants that have system as a keyword, because it implies the impossibility of isolation and self-preservation of certain parts of the wider environmental issues outside the ecological spectrum. Nowadays, ecology combines different scientific (and social) fields, and, as a science, needs to be distinguished from the environmental protection (environmental science/environmental management) and from nature protection (nature protection/nature conservation), as applied parts of this science for which it provides a scientific basis, and with which we identify it most often and wrongly (Đikić et al., 2001), which often creates misconceptions in the understanding of environmental education in schools, that is, its identification with the protection of nature and environment. The broader vision of ecology approaches the concept of sustainable development and ecological education is definitely an important part of education for sustainability.

Ecological education is inextricably linked with the economy, and one of the goals of environmental education simply has to be "acquiring the understanding of the social milieu and environmental problems through encouraging the development of a closer relationship between education and economic system, through the establishment of relations between schools and businesses , through the support for the research of the influence of economic factors on the behavior of young people, and by encouraging teachers and students to adapt to economic and cultural changes." (Gurova, 2002, 97). From all of the mentioned above comes a conclusion that ecological education should not be a separate school subject within the educational system, nor carried out exclusively within the scientific group of subjects, but should be considered holistically, interdisciplinary, it should be set as a principle of all classes and its contents, integrate it cross-curricular through all subjects, and through extracurricular activities. The educational experts around the world consider the importance of such a wide concept of ecological education (Hautecoeur, 2002, Judson, 2010; Kuprina et al., 2015 ...)

3. METHODOLOGY

3.1 Research aim and hypotheses

The aim of this research was to examine the attitudes and opinions of students and teachers on the implementation of environmental education in schools and teaching (scales below are part of extensive research on the state of environmental education in the Croatian curriculum).

In doing so, we started from the hypothesis that environmental education is not fully coexisted in grammar schools (even in different subjects, or other extracurricular activities), that teachers poorly encourage their students to behave environmental-friendly, that environmental activities at school are not related to environmental activities in the local community, that dealing with the environmental questions is left mostly to science teachers , and that subject curricula teachers do not recognize the determinants of environmental education.

3.2. Respondents

The research included a total of 591 students from all grammar schools of Osijek - Baranja County and 190 teachers from the same schools. Secondary education has, for decades, been a part of the system that causes the most social criticism, and we witness the relentless pursuits, and even attempts of complete reforms of secondary education. The educational task of secondary school is to develop higher levels of moral consciousness, i.e., adopting values that increase the contribution for the common good. Therefore, the selection of participants in the research went accordingly.

3.3 Instrument

Data collection was conducted via a questionnaire for students and teachers constructed for the purpose of this research, and it contained closed questions and Likert scale estimate of 5 degrees of quality (with "anchors": 1 - completely disagree, 2 - mostly disagree; 3 - neither agree nor disagree; 4 - mostly agree, 5 - strongly agree) and frequency (with "anchors": 1 - never, 2 - rarely, 3 - sometimes, 4 - often, 5 - very often).

The analysis and data interpretation followed the survey completion. Descriptive statistics, t test for independent samples, analysis of variance, correlation and inter-correlation comparisons, factor analysis and post-hoc analysis Bonferonni were used. The data were processed with the use of statistical software for computer data processing (SPSS).

4. RESEARCH RESULTS AND INTERPRETATION

4.1 The results of students in the assessment measures of implementing the environmental education in schools and teaching

By operationalizing the variable of the implementation of environmental education in schools and teaching, we classified its indicators in the form of 5 claims for students:

Table 1. "implementation of environmental education in schools and teaching" scale particles

a) Most teachers encourage students to behave ecologically.
b) In high school I attended an activity related to ecological education (project. extracurricular activities ...).
c) I notice that the environmental activities that take place at school are related to activities in the local community (local board, city, county ...).
d) We cover environmental topics in most subjects in school.
e) Environmental issues are respected through all activities and content in school.

Table 2. Results of students' assessment of the measures of implementation of the environmental education in school and teaching (author's calculation)

	a	b	c	d	e
N	588	585	588	588	585
M	2,7007	1,9812	2,3554	1,9915	2,0239
SD	1,13735	1,29593	1,14882	,97407	,97894

Table 2 shows that the mean values obtained for all of the five particles are quite low, therefore we can conclude that the ecological education, seen through the categories listed above, is quite neglected in high schools. Ecological education appears in all European countries and exists at different levels of development and implementation, and the situation in Croatia is similar to that of Southeast European countries which show an insufficient approach despite the existence of positive change or the better (Marinković, 2008). The obtained data clearly indicate the need for changing the situation in grammar schools.

We cannot expect spontaneous changes in ecological thinking and behavior of individuals and society as a whole, they can only be the result of targeted training - educational activities, that is the school system must have a defined ecological education (at the national, school and in subject curricula).

In order to determine the latent structure of the researched variables, a factor analysis (KMO, a measure of inter-correlations among the particles being 0.818) was conducted, on the results of the scale of assessment of the implementation of environmental education in schools and teaching, which showed that the scale can be used as one factor, that is, that all particles measure the same structure. Factor F1 (conducting environmental education in schools and teaching) explained 74, 365% of the variance. The resulting factor showed an acceptable reliability of the type of internal consistency with respect to the corresponding number of particles. The coefficient of reliability (Cronbach Alpha) was 0.899.

The implementation of environmental education in schools is the most determined by the representation of environmental topics in education and the connection of environmental activities that take place in schools with the activities in the local community (which is an especially neglected area). Particles that estimate the respectability of ecological problems in all activities and contents at school, as well as the participation of schools in the activities related to ecological education also indicated high saturations. Although this factor saturated all five particles, the last saturated one refers to the particle of the teachers encouraging students towards behaving ecologically, which indicated that that was a relatively stable category.

4.2 The results of teachers in the assessment measures of implementing the environmental education in schools and teaching

By operationalizing the variable of the implementation of the environmental education in schools and teaching, we classified its indicators in the form of five claims for Teachers <(table 3, particles a-e), which generally corresponded to the same claims in the student questionnaire, and through the following 7 statements (particles f - l), teachers assessed the quality and coverage of environmental issues in the curriculum of the subject that they taught.

Table 3. The particles of the teachers' scale for assessment of the implementation of environmental education and the state of the current curriculum

a) Most of my co-workers encourage students to behave ecologically.
b) We organize multiple ecological activities in school.
c) Ecological activities that take place in the school are connected with the activities in the local community.
d) My subject includes ecological topics.
e) The school curriculum takes into account the environmental issues.
THE SUBJECT CURRICULUM
f) Clearly states objectives, tasks and outcomes of environmental education.
g) Environmental education content is sufficiently represented.
h) Environmental education content is appropriate for the subject.
i) Environmental education content is appropriate.
j) Environmental education content is sufficiently correlated with the ecological content of other subjects.
k) Didactic principles, strategies, methods, procedures for conducting environmental education are recognizable.
l) Contemplative activities, criticality, creativity is encouraged.

Table 4. Results of teachers' assessment of the measures of implementation of the environmental education in school and teaching (author's calculation)

	a	b	c	d	e	f	g	h	i	j	k	l
N	190	188	190	190	190	190	190	189	189	190	190	190
M	3,33	2,98	2,65	3,02	3,15	2,79	2,82	3,10	3,04	2,79	2,08	3,50
SD	,932	,904	,888	1,284	1,093	1,245	1,141	1,032	1,098	1,035	1,092	1,083

All mean values (particles a - e) of teachers' assessment of environmental education in schools and teaching were concentrated around the central score on the evaluation scale (neither agree nor disagree). In any case, such estimates did not suggest a satisfaction by the implementation of the environmental education. It was interesting to observe the differences in students 'and teachers' assessments of the implementation of environmental education in schools and teaching (Table 6 and Table 7). All five mean values of students' assessment are significantly lower. For example, while teachers assigned a mean value M=3, 15 to the claim "The school curriculum takes into account the environmental issues", the students assigned a mean value M=2, 02 to the parallel claim "Environmental issues are respected through all activities and facilities in the school." No matter the reason of significantly lower students 'assessments (greater student criticism of the school as an institution, students' failure to recognize the determinants of environmental education, teachers 'beautification' of the school reality ...), the level of low scores that students used to estimate the ecological education in their schools is alarming. This again points to the underdeveloped components of environmental awareness of students (knowledge/interest/behavior) and the fact that the school is not sufficiently involved in the creation of the same.

If we look at the mean values that characterize the determinants of environmental education in the subject curricula (particles f - l), we can find that the teachers' assessments of the same are significantly lower than all other assessment in the questionnaire, which leads to the conclusion that there is no, or that teachers do not recognize, a clear curricular structure of ecological education in individual cases (unclear goals, objectives and outcomes of environmental education, facilities are under-represented, under-correlated with environmental content in other subjects ...).

Table 5. Results of the assessment of the level of agreement with the statement "Environmental education content is sufficiently correlated with the ecological content of other subjects."

„anchors"	frequency	%
1 completely disagree	18	9,5
2 mostly disagree	27	14,2
3 neither agree nor disagree	74	38,9
4 mostly agree	59	31,1
5 completely agree	11	5,8
Total	189	99,5

However, a slightly higher mean value of the estimated claim "Environmental education content is appropriate for the subject" (M=3, 1) indicates that the most teachers (75,8%) are undecided, partly or completely satisfied (Table 5) with the representation of the environmental content in their subjects. The data are alarming because the degree of satisfaction shows that teachers do not feel the need for change, and do not recognize the width and opportunities of integrating the environmental issues in most subject curricula, and that they are not competent to cover the environmental content within their subject curriculum. This leads us to question if the teachers are educated enough to implement, cross-curricular, the ecological education content in their subject curriculum (i.e. to access any cross-curricular topics for which they did not receive direct education). In fact, this is the key question of curricular planning in any area and level (Lee, Ready, 2009). Cross-curricular topics are generally not included in initial teacher education, but there are mechanisms for professional development which can be used to substitute that education (by implementing hem into work and through education while working).

The extremely low mean value of the estimated claim "Didactic principles, strategies, methods, procedures for conducting environmental education are recognizable"(M = 2, 08) indicates a major problem that we point out in this dissertation - the lack of didactic structure of the curriculum for the environmental education. The curricular approach to environmental education in the US is mainly related to its involvement in the isolated descriptions of teaching areas, subjects and educational achievement, based on the educational (!) impact of teaching (and only in science subjects), and its socio-didactic structure is systematically ignored (even in cases science subjects).

The aforementioned actually confirmed the hypothesis according to which (based on the assessment of students, but also teachers), the ecological education does not fully coexist in grammar schools (not in different subjects, or even in other extracurricular activities), teachers do not strongly encourage students towards behaving ecologically, environmental activities at school are not linked with the environmental activities of the local community, teachers do not recognize the determinants of environmental education in the subject curricula.

Table 6. Results of students' assessment of the measures of implementation of the ecological education in school and teaching (author's calculation)

	Most of my teachers encourage students to behave ecologically	In high school I attended an activity related to ecological education (project. extracurricular activities	I notice that the environmental activities that take place at school are related to activities in the local community (local board, city, county	We cover environmental topics in most subjects in school	Environmental issues are respected through all activities and content in school
N	588	585	588	588	585
M	2,7007	1,9812	2,3554	1,9915	2,0239
SD	1,13735	1,29593	1,14882	,97407	,97894

Table 7. Results of students' assessment of the measures of implementation of the ecological education in school and teaching (author's calculation)

	Most of my co-workers encourage students to behave ecologically	We organize multiple ecological activities in school	Ecological activities that take place in the school are connected with the activities in the local community	My subject includes ecological topics	The school curriculum takes into account the environmental issues
N	190	188	190	190	190
M	3,33	2,98	2,65	3,32	3,15
SD	,932	,904	,888	1,284	1,093

As expected, research results showed that neither teachers nor students are satisfied with the implementation of environmental education at school.

If we take 3.50 as the limit value of the class with a higher degree of acceptance and class with a lowest degree of acceptance, we can see that both groups reported lower values on all the claims of the scale, and that estimates show that teachers do not sufficiently encourage students towards behaving ecologically, that schools do not organize enough environmental activities, that the existing activities are not linked with the ones in the local community, that most of the subjects poorly covers environmental issues, and that the environmental issues are poorly presented in the school curriculum

5. CONCLUSION

Economic development and social development of a society are very closely related. Only at first glance, economic and environmental interests are contradictory. Neoliberalism, which strongly affirms the market as the most efficient economic asset of allocation of resources, and the regulator of overall economic activity brings many freedoms, but also dangers for the environment in which we live, and life as we know it. That modern freedom carries with it the responsibility for the world around us, and the future generations that will come after. The development of ecological literacy and environmental awareness is one of the commitments of the whole society, especially the educational system, the only instance that not one individual can bypass any in a contemporary society. In order to succeed in this intention, a structured, systematically implemented ecological education is needed. Ecological awareness is a complex process that links the cognitive, affective and psycho-motor aspects of the personality, where we can clearly see, from the start, that the sole ecological education is also a complex process that must incorporate, cross-curricular, all aspects of the educational institution. The research shows that neither students nor teachers do not recognize the determinants of this activity in the grammar school education (although the current National Curriculum Framework for pre-school education and the general compulsory and secondary education, (MSES, 2010) predicts the content for environmental education within the subject curricula and curricular topics), the research also shows that teachers do not sufficiently encourage students towards behaving ecologically, that schools do not have many organized environmental activities and that those activities are not inked to the ones of the local community. From the above it is clear that the system needs an immediate intervention. The introduction of environmental education is an "eternal" and extremely important topic, because it regards us and our survival on this planet - the only one we have"(Rodić, 2010), and it is necessary to stress the need of curricular thinking of the same. This includes defining the goals, tasks, outcomes of such education, rethinking the content, methods and forms of carrying out the mentioned program, linking schools with the local community, predicting the method of evaluating the implemented, training teachers for the implementation of environmental education. Ecological education implies a system of knowledge, values, and an incentive to act. Competencies that students should acquire can never result from only one subject, a cross-curricular, holistic connection and interaction of content in all subjects and school activities i required.

It is illusory to expect from the education system to fully achieve ecological literacy of young people through the educational process. Seeing that they are influenced by the entire society and the media with its messages, it is necessary to continuously connect the educational system with different stakeholders of the local community, use experiential learning, develop critical thinking and media literacy. However, in any case, it is necessary to work on the structuring and implementation the systematic, deliberate curricular concepts of ecological education, and to implement it in the entire educational system as an educational principle.

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ATTITUDES REGARDING CLINICAL TRIALS AS SUPPORT TOOL FOR WIDENING ACCESS TO PARTICULARLY EXPENSIVE MEDICINES IN CROATIA

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Abstract

Clinical trials are conducted across the globe and today they require special expertise and skills in health care management. Health care institutions, primarily hospitals, particularly in transitional countries benefit from sponsored clinical trials by increasing their research and development capacities and attracting additional investments. Globally, clinical trials are an essential tool in development of new medicines and help in providing access to particularly expensive medicines for underserved patients in transitional countries, including Croatia.

The Croatian public is still insufficiently informed about the importance and methods in conduct of clinical trials. The result is mistrust and prejudice against these studies and the prevailing lack of awareness of their importance in the development and prosperity for mankind.

Due to importance on a global level, the aim of this paper is to present factors crucial for raising public awareness of clinical trials as a support tool for widening access of patients to particularly expensive medicines in Croatia. This study used a structured sample to describe the overall population in the country. Research was performed on one hundred respondents who were asked to complete a paper-based questionnaire when they attended the outpatient clinic at the Division of Clinical Pharmacology of the University Hospital Centre Zagreb and on one hundred healthy volunteers who completed the same questionnaire that was publicly available in electronic format. Our results have shown that the *support for and willingness to participate in clinical trials among the Croatian population is dependent upon knowledge about clinical trials and additional facts that make clinical trials a potential support tool for widening access to particularly expensive medicines for patients in Croatia.*

Keywords: *clinical trials, health care, health care management, expensive medicines, modern medicine*

JEL Classification: E2, E29

1. INTRODUCTION

Medical research studies are today the golden standard for developing new drugs or medical treatments. Clinical trials have a potential benefit for participants as the treatment is equivalent or even better than the standard medical treatment, especially in the field of lethal diseases.

Before new drugs or medical treatments are placed on the market, it is necessary to conduct clinical trials. The purpose and objective of conducting medical research studies is to assess the benefits and risks of the new drug in the general population which means that each clinical trial is trying to answer a specific clinical question. In a time of globalization today, clinical trials can be conducted in several parts of the world at the same time to get reliable results about the effectiveness of certain formulas in different racial and cultural groups.

In Croatia, clinical trials are conducted in five areas: oncology and hematology, endocrinology, pulmonology, neurology and cardiovascular diseases. Most of them are part of multinational clinical trials so these medical research studies are a good support tool for widening access to particularly expensive medicine and popularization of this branch of medicine.

Clinical trials are today one of the most important segments of modern medicine. In this paper factors that influence public awareness and attitudes regarding clinical trials have been explored as a support tool for widening access to particularly expensive medicines in Croatia.

2. CLINICAL TRIALS IN CROATIA

The development of drugs and medical treatments requires a long period of time, substantial financial investment and carries significant risks. One of the most important steps in this development is conducting clinical trials. (Lux et al., 2013.)

Clinical trials are scientific research of a medicine, medical product or other type of treatment with healthy or ill volunteer subjects. With this procedure we test in small groups of people the effects of new or existing drugs or other types of treatments before they are approved for use by the general public or treating of patients (Vitezić, 2009: 2). These trials are complex processes that involve different profiles of experts: scientists, medical doctors, nurses and other healthcare professionals, experts in safety and ethics monitoring, statisticians as well as sponsors and participants.

Clinical studies are conducted according to predefined protocols, international and national regulations and guidelines. The basic principles governing the conduct of clinical trials are protection of the rights and safety of all included subjects as well as confidentiality, accuracy and reliability of the results. These principles are commonly referred to as Good Clinical Practice. In the Republic of Croatia all clinical trials are approved by the Ministry of Health of the Republic of Croatia and Central Ethics committee for Clinical Trials of Medicines and Medicinal Products (CEC) as an independent authority whose members are healthcare and nonmedical professions, doctors, nurses, lawyers or patient representatives.

Clinical trials are conducted in four phases. The first three must be conducted before the registration of the drug or getting the approval to put it on the market. Phase I is usually conducted with a small number of subjects that are usually healthy volunteers. In this phase we test the way the drug is administered, its availability in the human body and unwanted side effects. After the safety of administering the drug is established in the phase I, we move to phase II, in which the drug's efficiency and safety is tested on a greater number of subjects (a few hundreds) that are affected by an illness. Optimal effective dosage is established, and the efficiency of the drug is compared with standard treatment (with a drug that is already used in treating certain diseases) or with placebo. Important information about the administration of the drug and the way in which patients react to the drug is collected. Phase III begins only after phase II shows equal treatment is received with the new, tested drug under the standard treatment conditions. That phase usually includes a greater number of subjects (a few hundreds to several thousands) in numerous centers and countries around the world. Usually, the effectiveness and safety of administering the drug is tested in two or more groups compared with the current standard treatment and/or placebo. If the data collected show a positive result of the trial, and therefore sufficient effectiveness and safety of administration, the drug is approved for administration in regulatory bodies of different countries and at the same time for treating patients' around the world. Phase IV is conducted after the drug has been approved for use and is often conducted for collection of the greater number of data about the safety of the drug's administration as possible (Vitezić, 2009: 4).

The protocol of medical research study depends on the type of tests that are carried out. In clinical trials, medicines or medical products are most commonly tested by the method of comparison with other, already approved medicine or a placebo. To ensure the investigators and subjects' impartiality with respect to the treatment results and outcome of the trial, subjects are often randomized into different treatment groups (randomization). An additional method of ensuring impartiality is called blinding, which means that the subjects and/or the investigators are not aware of the medical product (or dose) a subject receives. In case of an emergency, this information can be made immediately available to the investigator.

Persons who can participate in clinical trials are subjects who voluntarily agree to take part and who sign a document called informed consent in which the investigator explains to potential participants all elements of the clinical trial, its purpose, the properties of the investigational medicinal product, other treatment options, risks, benefits and the subjects' rights. The procedure of providing detailed information to subjects continues throughout the trial. To participate in a trial, subjects must meet certain predefined participation criteria (the inclusion and exclusion criteria).These criteria may contain diagnosis of a certain disease, age, gender, medical condition, certain disease indicators, etc. After establishing that a patient meets all criteria and that the baseline assessments of his/her medical condition are satisfactory, the subject is given the investigational medical product, comparator or placebo and further evaluations of the effects of treatment are made. Most clinical trials generate no expense to a subject. The cost of the medicinal product and protocol procedures are paid by the sponsor and any other procedures that patients may undergo irrespective of their participation in the clinical trial are covered by their health insurance. The duration of a subject's participation in a clinical trial may last from one day to several years. Subjects should be informed of the duration of the trial, the frequency of visits to the institution where the trial is conducted and their other obligations prior to beginning the trial. The decision is then made on the efficiency and safety of the investigational medical product and either further trial procedures are undertaken or the medical product is registered.[1]

People who participate in clinical trials have an opportunity to actively partake in their own health care. Medical Dictionary for the Dental Professions (Farlex 2012) defines health care as services provided to people or communities by agents of the health professions to promote, maintain, and restore health. Health care in Croatia is provided at the primary, secondary and tertiary level and it is carried out on the principles of comprehensiveness, continuity, accessibility and integral approach on the primary level, and specialized approach in specialist-consulting and hospital health care (Zakon o zdravstvenoj zaštiti / Health Protection Act, NN 150/08, 70/16).

Care for patients in clinical study is much more intensive, and more information is provided to the patient about the causes and management of disease; this leads to and additional positive psychology effect (Drennan, 2002). Patients who take part in clinical trials are provided with improved monitoring of their medical condition that is not always available in ordinary practice. Although the s*uc*cess of clinical trials is not guaranteed, patients with lethal diseases often believe that the new medicine will help them to prolong and improve the quality of their life. Risks of participating in clinical trials include lack of efficiency of potential adverse effects or side effects of a new drug or medical product and risks in relation with trial procedures. Information gathered in clinical trials is of very sensitive nature so it is very important to make sure that information cannot be connected with the subjects of any particular clinical trial.

Participants in clinical trials may have direct benefits from having access to the treatment which otherwise wouldn't be available to them. They also may provide benefits to other patients, especially those in terminal disease phases.

[1] See for more details, Croatian Association of innovative drug manufacturers, at www.klinickaispitivanja.hr, accessed 01/03/2017).

A number of studies have already assessed why respondents agree or decline to participate in clinical trials. Earlier studies have shown that among the general population, there is a high level of willingness to participate in and donate samples for biomedical research (Clotworthy et al., 2013) but only 3% of patients participate in cancer clinical trials (Lara et. al., 2005). In clinical trials, care for patients tends to be more intensive and usually more information is provided to the patient about the treatment of their disease. Still, participation rates in clinical trials in Croatia are still very low.

Globally, clinical trials are an essential tool in development of new drugs and help in providing access to particularly expensive medicines. In this study factors were examined that could affect public awareness and attitudes regarding clinical trials as a support tool for widening access to particularly expensive medicines in Croatia.

3. RESEARCH METHODOLOGY

3.1. Study population

Between February and March 2016 a questionnaire-based survey study was undertaken, two hundred respondents were accrued. One hundred respondents were outpatients at the University Hospital Centre Zagreb, Department Of Clinical Pharmacology who were asked to complete a paper-based questionnaire. The other hundred respondents were healthy volunteers who submitted a publicly available online questionnaire in electronic format. In this study a structured sample has been used to describe the overall population. The share of the age and gender on a sample of two hundred respondents was determined according to the data of Population census in the Republic of Croatia in 2011 which is available through the Croatian Central Bureau of Statistics.

3.2. Data collection

A multiple choice questionnaire was designed to explore four areas: investigators in clinical trials, security and trust in clinical trials, willingness to participate and advertising of clinical trials. There were five possible answers to these questions, ranging from strongly disagree to strongly agree on a Likert scale. The questionnaire also included demographic characteristic questions on gender, age, educational level and settlements size. After it was publicly available as well as filled by the patients in the Clinic for two weeks, the questionnaire and its comprehensiveness were checked and validated.

3.3. Statistical analysis

IBM SPSS Statistics for Windows, version 20.0 was used for the statistical analysis. Summary statistics with means were used to describe the respondent's answers. Variance analysis (ANOVA) and multivariate analysis of variance (MANOVA) were used to additionally analyse four groups of questions in this research. All tests were two sided and p values of less than 0.05 were considered statistically significant. There's been obtained significant F-tests with factors that consisted of three means and Scheffe's post test was used as an additional exploration of the differences among means to provide specific information regarding means which were significantly different from each other. When $p > 0.05$ in these post tests it was surmised that there wasn't significant differences between observed variables so they are considered of the same importance.

4. RESULTS

4.1. Baseline Demographics

For this study two hundred questionnaires were collected (50% paper based and 50% electronic). Sixty four respondents (32%) were 20-34 years old, sixty eight respondents (34%) were 35-49 years old and sixty eight respondents (34%) were 50-64 yers old.

According to the data of Population census in the Republic of Croatia in 2011, respondents were matched by age and gender. 50% of respondents were male and 50% female. Among the 100 male respondents, 34% were males between 20 and 34 years, 36% were between 35 and 49 years and 30% were between 50-64 years of age. Of the 100 female respondents 30% were 20 to 34 years old, 32% were 35-49 years old and 38% were 60 to 64 years old.

Analysis of variance (ANOVA) of gender as demographic indicator of attitudes regarding clinical trials in this study showed no significant statistical difference between female and male respondents ($p = 0.111$) as well between different age groups of respondents or difference in attitudes towards clinical trials depending on the settlement size of respondent's residence ($p = 0.004$).

Scheffe's post hoc test of multiple comparisons showed a significant statistical difference among respondents with a higher education degree in comparison to those with a lower educational level (p = 0.044).

4.2. Clinical trials investigators

Mean and multivariate analysis of variance (MANOVA) was used to indicate the most important factors related to clinical trials investigator. Factors with highest mean values were considered most important to respondents in their attitudes toward to and knowledge of investigators of clinical trials: clinical trials are conducted by private healthcare institutions (4.54), clinical trials are conducted by pharmaceutical companies (4.51) and clinical trials are conducted by hospitals (4.36), see table 1.

Table 1. Clinical trials investigator

CLINICAL TRIALS INVESTIGATOR	AVERAGE SCORE INFIRMARY.	AVERAGE SCORE OUTSOURCING	CONSOLIDATED AVG. SCORE
Clinical trials are conducted by pharmaceutical companies.	4.55	4.48	**4.51**
Clinical trials are conducted by academic and research centers.	2.82	3.36	3.09
Clinical trials are conducted by hospitals.	4.56	4.16	**4.36**
Clinical trials are conducted by general practitioners in infirmaries.	2.14	2.05	2.09
Clinical trials are conducted by specifically trained doctors and nurses.	3.87	3.57	3.72
Clinical trials are conducted by private healthcare institutions.	4.60	4.49	**4.54**
Clinical trials are conducted in medical biochemistry laboratories.	2.25	2.76	2.50
Clinical trials are conducted by the government and other state institutions.	2.81	3.21	3.01

Source: author's calculation

Additonally, multivariate analysis of variance (p = 0.000) including pairwise comparisons post hoc test (p > 0.05) demnostrated no significant difference between these three varables so they appear equally important in respondents attitudes toward to and knowledge of administrators of clinical trials.

4.3. Security and trust in clinical trials

Mean and multivariate analysis of variance (MANOVA) was used to indicate the most important factors on safety and trust in clinical trials. Factors with highest mean values were considered most important to respondents about safety and trust in clinical trials: Only by participating in clinical trials can I be treated by new drugs or medical devices (3.21), Only in hospitals that conduct clinical trials are the patients treated with new drugs or medical devices. (3.10), Hospitals that conduct clinical trials have better healthcare services (2.90), see table 2.

Table 2. Security and trust in clinical trials

SECURITY AND TRUST IN CLINICAL TRIALS	AVERAGE SCORE INFIRMARY	AVERAGE SCORE OUTSOURCING	CONSOLIDATED AVG. SCORE
Hospitals that conduct clinical trials have better healthcare services.	2.82	2.99	**2.90**
In hospitals that conduct clinical trials subjects are substitutes for animal models on wich the trial is conducted on.	2.63	2.77	2.70
The data gathered by clinical trials can be fully trusted.	2.88	2.57	2.72
The data about clinical trials gathered by hospitals that conduct them can be fully trusted.	2.94	2.73	2.83
The data about clinical trials gathered by pharmaceutical companies can be fully trusted.	2.65	2.36	2.50
Only if I am a part of a clinical trial will the doctor give me an appropriate healthcare treatment.	2.09	1.97	2.03
Only by participating in clinical trials can I be treated by new drugs or medical devices.	3.45	2.97	**3.21**
Only in hospitals that conduct clinical trials are the patients treated with new drugs or medical devices.	3.19	3.02	**3.10**

Source: author's calculation

Multivariate analysis of variance ($p = 0,000$) including pairwise comparisons post hoc test ($p > 0.05$) demonstrated no significant difference between these three variables so they appear equally important in in respondents attitudes toward safety and trust in clinical trials.

4.4. Participating in clinical trials

Mean and multivariate analysis of variance (MANOVA) demonstrated the most import factors influencing participating in clinical trials. Factors with highest mean values were considered most important to respondents in their decision to participate in clinical trials: to help sick members of their families (4.32), in cases when clinical trials does not have unwanted side-effects or endanger participants' lives (4.00) and in order to help their sick friends (3.71), see table 3.

Table 3. Participating in clinical trials

PARTICIPATING IN CLINICAL TRIALS	AVERAGE SCORE INFIRMARY	AVERAGE SCORE OUTSOURCING	CONSOLIDATED AVG. SCORE
I would participate in clinical trials because of the possibility of being treated with medical substances not yet available to the public.	3.20	3.31	3.25
I would participate in clinical trials because of the opportunity to be treated in leading healthcare institutions.	3.14	3.05	3.09
I would participate in clinical trials to actively care for my health.	2.88	3.08	2.98
I would participate in clinical trials to find help for patients in my family.	4.40	4.24	**4.32**
I would participate in clinical trials to help friends that are ill.	3.72	3.69	**3.70**
I would participate in clinical trials if my health insurance would cover all the costs.	3.26	3.25	3.25
I would participate in clinical trials if the procedure would not have unwanted side effects or endanger my life.	4.04	3,96	**4.00**
I would participate in clinical trials if the journey to the trial site or hospitalization would not require a lot of time.	3.12	3.22	3.17

Source: author's calculation

Multivariate analysis of variance ($p = 0{,}000$) including pairwise comparisons post hoc test ($p > 0.05$) showed no significant difference between these three variables. They appear equally important in respondents decision about their participation in clinical trials.

4.5. Advertising clinical trials

Data analysis demonstrated that the most important factors in advertising of clinical trials are: communication „face to face" with the doctor (4.22), through the web page (3.90) and in TV shows (3.80), see table 4.

Table 4. Advertising clinical trials

ADVERTISING CLINICAL TRIALS	AVERAGE SCORE INFIRMARY	AVERAGE SCORE OUTSOURCING	CONSOLIDATED AVG. SCORE
The best way to advertise clinical trials is via TV shows.	3.79	3.82	**3.80**
The best way to advertise clinical trials is via radio shows.	3.21	3.75	3.48
The best way to advertise clinical trials is in newspapers and magazines.	2.43	3.26	2.84
The best way to advertise clinical trials is through a web page.	3.90	3.90	**3.90**
The best way to advertise clinical trials is through banners on web pages.	2.58	2.95	2.76
The best way to advertise clinical trials is via billboards and posters.	2.18	3.01	2.59
The best way to advertise clinical trials is through leaflets and brochures.	2.96	3.61	3.28
The best way to advertise clinical trials is „face to face“ with a doctor.	4.08	4.36	**4.22**

Source: author's calculation

Multivariate analysis of variance (p = 0.000) including pairwise comparisons post hoc test (p > 0.05) showed that the three advertising variables were equally important in respondents attitudes regarding clinical trials.

5. CONCLUSION

The majority of Croatian respondents in this study showed an average level of knowledge of clinical trials and their importance for the development of modern medicine as well as their benefit for mankind.

Participants in clinical trials, especially patients in terminal phases of lethal diseases may have direct benefits from having access to clinical trials as a tool for widening access to treatment that otherwise wouldn't be available to them. Drug prices are affected by development cost and time required for approval so participation in clinical studies decreases health care costs and gives access to new therapies that could relieve suffering and prolong lives.

Globally, clinical trials are an essential tool in development of new drugs and help in providing access to particularly expensive medicines. This study showed people in Croatia are more willing to participate in clinical trials if they are informed about the clinical trials investigator and protocol, risks and benefits of taking part in clinical trials. Also, Croatian participants are more willing to participate in clinical trials if their participation would benefit them, members of their families or their friends when they're dealing with lethal diseases.

The study also showed communication channels that should serve to increase awareness of the importance of clinical trials as one of the most important factors that could affect public awareness and attitudes regarding clinical trials. To advertise clinical trials in direct "face to face" communication with their family doctors, on the internet and TV shows could increase the knowledge of the importance of conducting clinical trials among the Croatian population.

In Croatia too many people are dying from lack of access to new drugs. Increasing public knowledge, awareness and positive attitudes regarding clinical trials would prove medical research serves as support tool for widening access to particularly expensive medicines in our country.

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PHARMACY STAFF NORM CALCULATION MODEL BASED ON LEGALITY, EXPERTISE AND PROFITABILITY ON THE EXAMPLE OF THE SPLIT-DALMATIA COUNTY PHARMACY

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Abstract

The Split-Dalmatia County Pharmacy consists of thirty-six pharmacy units/depots: one unit for herbal preparations; a department of orthopaedic aids; a galenical and analytical laboratory; and administration departments. Given the dynamics of the business process in the Institution and in order to optimize the staff, it is necessary to provide a more quality solution regarding the staff norm.

Each pharmacy unit, but also the Institution as a whole, has the legal obligation to, first and foremost, satisfy the expertise level in such a way that each shift is covered by at least one Master of Pharmacy. Only after the legal or professional standards have been met, only then the pharmacy unit must be observed in financial terms, utilizing the gross salaries of the pharmaceutical team, in relation to the number of processed receipts of the Master of Pharmacy, per RUC value (margin + service).

Keywords: *efficiency, expertise, legality of healthcare professionals' work, optimal number of staff.*

JEL Classification: C5, C59

1. INTRODUCTION

According to all the criteria above (professional and financial), due to objective reasons, there is a difference in turnover, in the number of processed receipts and in the RUC. Thus, each pharmacy unit is to be observed over a quarterly or annual period. Reasons for differentials may vary, such as geographic (city/dislocated areas, proximity to health centres, tourist resort...), the availability of the pharmacy unit (parking, marking...), cost of medicines defined by the Croatian Health Insurance Fund (HZZO) or other suppliers, but also a difference in the expertise, communication skills, independence, responsibility, teamwork capability and the continuous learning of the very staff.

In addition to the work described by every healthcare professional, the introduction of new technologies in the pharmacy system, computerization, and various legal standards which should be met in business (both in pharmacies and in the production of galenic preparations, also in the economic, legal profession, etc.) all of this necessarily entails quality and timely staff, continuous learning, professional knowledge, and in part IT skills.

Through policy and the goal of the Institution, which must always present its expertise and a sustainable financial growth, it is necessary for the employees to master all the information that is available and to use their knowledge and professionalism in order to improve the professional and financial growth and quality of the Institution as a whole.

A fact that should not be ignored is the frequent variation in the prices of medicines from A and B lists of medicines, the fee paid by the HZZO, and the amount of additional charges that reflect on the financial conditions of the Institution, all of which affects the dynamic system of staff norm.

All the above criteria, along with the dynamics of the market competition itself, affect the needs of the Employer or the Institution in order to optimize and increase quality allocation of the staff within the Institution, and at the same time must respect all ethical, legal, professional, and financial standards.

2. THEORETICAL ELABORATION OF A PROPER STAFF NORM CALCULATION:

For the reasons stated above, the Institution's staff policy implementation process is a fully dynamic process. By respecting the legal, professional and financial standards, the most optimal distribution of healthcare professionals is guaranteed within the Institution.

By applying objective and statistical indicators, with proper human resources norms, the Institution can observe the total staff productivity through three essential elements, starting from the number of healthcare staff in the current observed period, namely:

Needs - A healthcare staff indicator that respects the legal and professional standards

Profitability – A healthcare staff indicator that respects the financial profitability of a healthcare professional

Opportunity – An indicator providing a correlation between legal and professional norm and financial profitability

Through such calculation of staff norm, the aim of the Institution is to apply an element of opportunities, i.e. to correlate, necessarily in this order, the legal, professional and financial norms to meet, for both objective and statistical indicators, as well as the needs and profitability criteria.

Due to all of the above, as well as for numerous other reasons (sick leave, vacation days...), a proper scheduling of educated staff is necessarily a dynamic process during the calendar year and, as mentioned above, one that aligns itself to professional requirements, it is necessary to establish objective criteria for creating appropriate staffing needs.

2.1. Rationale of staff norm in accordance with legal provisions:

In order for the Institution to fulfil the Needs, it must first satisfy the legal norms. Legal norms primarily regulate and oversee the expertise requirements of healthcare professionals/masters of pharmacy.

Pursuant to Article 59 of the Constitution of the Republic of Croatia, everyone is guaranteed the right to healthcare in accordance with the law.

Therefore, the Institution is first and foremost obliged to provide the population with adequate healthcare, which can be best achieved by an adequate professionals and regular staff scheduling within the pharmacy units.

Article 1 of the Law on Pharmacy states that it regulates the functioning of the organization and the implementation of pharmacy activities as a part of healthcare activities of interest to the Republic of Croatia; said activities are performed as a public service and carried out by masters of pharmacy under the conditions and in the manner prescribed by this Act.

Therefore, it is also a legal obligation of pharmacy institutions to provide adequate, timely and professional healthcare.

The provisions of Article 7 of the Health Care Act stipulate that the healthcare plan shall include, among other things, the basics of healthcare professional development according to level requirement, including staff education and professional training and the basics for the overall development of the healthcare system.

The system of the basic development of the healthcare system is thus necessarily continually improved, which requires a sufficient number of professional staff to be provided to the population, and whose knowledge and work should contribute to the positive financial result of the Institution.

Furthermore, Article 18 of the Pharmacy Act stipulates that pharmacists are healthcare professionals who have a pharmacy degree and directly provide pharmacy services, namely:

- Masters of Pharmacy with an independent work permit,
- Specialists Masters of Pharmacy with an independent work permit.

Pharmaceutical technicians who have passed the professional exam are allowed to partake in pharmacy activities.

Pursuant to the aforementioned Act, a pharmaceutical technician may work in a pharmacy only in the presence of a Master of Pharmacy, in accordance with the scope of work for pharmaceutical technicians (they must not issue prescription drugs, medicines containing narcotic drugs or make magistral preparations which contain substances of strong or very strong effect).

Therefore, in the pharmacy unit, only Masters of Pharmacy can issue prescription medicines, make magistral preparations and the like, and thus it is clear that every pharmacy unit must have a minimum of one Master of Pharmacy in the shift, assisted by pharmaceutical technicians.

Therefore, a pharmaceutical team consists of: two Masters of Pharmacy, with one pharmaceutical technician, i.e. one Master of Pharmacy comes with ½ pharmaceutical technician in accordance with Art. 17 of the Decision on the Basis for the Contract on the Healthcare Implementation of Compulsory Health Insurance. These minimum professional criteria are fully implemented by the Institution through the established staff norm.

However, the Decision that is quoted is only partially concerned with the Institution, since its Article 1 states that the manner of implementing healthcare in compulsory health insurance is also to be observed. It is important to note that the Institution is not entirely funded from compulsory health insurance. Therefore, by acting on the market and through free sales of non-prescription drugs (OTCs), medical supplies and so on, it meets legal and professional requirements and achieves additional financial gain.

In relation to the above, it should be noted that the Split-Dalmatia County Pharmacy is not a budgetary beneficiary, nor do its paid funds affect the level of the budget deficit. Namely, by acting in the open market and with the help of its own sources of funds, the institution provides financial profit for itself. Salaries paid out to all 238 employees in the Institution are mainly secured by its own sources of income, margin, service, sales of galenic preparations, etc.

By applying objective and statistical indicators in accordance with legal, professional and financial standards, the employer enables all employees in accordance with Article 92 of the Labour Act to gain their salaries following the completion of their work. This is in full in accordance with Art. 91 of the Labour Act because equal salary is given to both male and female workers for equal work and work of equal value, thus objective criteria are applied. As stipulated by Article 7 par. 1 of the Labour Act, the employer is obliged to give the worker a salary for the work he/she **has done**, and the employee is obliged to personally perform the job **according to the instructions** given by the employer depending on the nature and type of work. Paragraph 2 of the same Article gives the employer the right to determine the workplace and manner of work, while respecting the rights and dignity of the worker.

Regarding staff norm, the provisions of Article 48 of the Collective Agreement on Health Care and Health Insurance should also be applied. Namely, the cited provision allows the Employers who, apart from the resources of HZZO and the budget, also obtain revenues by providing their services in the market, to increase the employees' salaries when positive financial revenue results, based on the basics and the criteria laid down in the general act of the employer. Although the Institution is not obliged to implement the Collective Agreement on Health Care and Health Insurance, it, however, applies some provisions to a certain extent when this is more favourable for a worker in accordance with Art. 9 (3) of the Labour Act.

It is a fact that the Institution operates on the market and gains certain funds outside the HZZO's resources, and in that way, the Collective Agreement for Health and Health Insurance has enabled the Employer to place salaries of employees at both the most favourable and optimal levels.

In addition to statutory and sublegal acts, the possibility of establishing staff norm is also provided by internal acts of the Institution. The Statute of the Institution stipulates that the Governing Board shall adopt a plan based on the need for the employment of workers, while Art. 7, paragraph 1 of the Labour Code stipulates that the decision on the need for employment of workers shall be made by the Director in accordance with the established staff norm. The reason and the manner of determining the staff norm is precisely the subject of this legal opinion.

Financial conditions for the staff norm are provided in Articles 13 and 14 of the internal Ordinance on salaries, additions to the salary, and other material rights stipulating that employees receive salaries on the basis of earnings generated through above-average employee performance, and in proportion to their contribution to such earnings. The above average work amount is clearly reflected in a higher margin and service (RUC), thus it is necessary to regulate employment of new staff according to the stated financial criteria.

Therefore, apart from the minimum professional requirements to be applied, the employees are obliged, and the Institution strives for the same, that in correlation to the financial criteria, the gross salaries of the pharmaceutical team (Master of Pharmacy and ½ pharmaceutical technician) are paid from the difference in price (RUC = Margin + service) between the sales and purchase price. Thus, the pharmacy unit has a minimum staff in accordance with legal and sublegal provisions, while their maximum number depends on financial criteria that the pharmacy unit's pharmaceutical team's gross salaries are covered from the RUC.

This clearly defines the manner of work, which means using professional knowledge and personal qualities to do the work for which the gross salary of the pharmaceutical team will be financed by the RUC.

It should be noted that any pharmacy unit within the Institution cannot, primarily for objective reasons, achieve the required staff norm in accordance with financial criteria. Thus, a certain number of pharmacy units cannot finance their employees from the RUC (margins + services), thus these units are generally unprofitable for the Institution. In spite of this, the Institution meets the legal and professional requirements entirely, i.e. the obligation that only a Master of Pharmacy can issue a prescription medicine, and in so acting, including the aspect of financial growth, the expertise and coverage of the healthcare staff shall come first.

Managers of pharmacy units, along with the management of their regular business, must be able to operate the pharmacy unit in order to meet the set criteria, and to establish a pharmacist-patient relationship by organization according to which each Master of the Pharmacy has five minutes per receipt for each patient (ordering of medicine, issuing, counselling...). In this way, a satisfied patient gets "his own" pharmacy, and with the regular arrival of repeat and new patients and increased RUC growth, the pharmacy managers foster the financial growth of the Institution, while giving their pharmacy unit an option of employing additional staff if the financial requests are met.

This financial growth institution eventually enables the employment of new staff as needed, and all profit is used solely for the performance and development of the Institution's activities in accordance with Art. 57 of the Institutions Act.

3. RATIONALE FOR THE STAFF NORM CALCULATION ON THE EXAMPLE OF THE SPLIT-DALMATIA COUNTY PHARMACY

Applying the above criteria, with the aim of the objectification and optimum allocation of staff, on March 21, 2017, the Administrative Council of the Institution issued a Decision approving the calculation of staff norm.

In accordance with the provisions of Art. 8, Paragraph 2 of the Labour Act, the Employer, in front of the Administrative Council (being a member and employees' representative of which), has enabled the Employees to become familiar with the regulations concerning employment relationships and the organization of work. Masters of Pharmacy are informed on a monthly basis through verbal education or statistical data on the status of all factors relevant to proper staff norms (number of prescriptions, number of invoiced prescriptions, number of remittances, additional pays, RUC, etc.).

The calculation for the adoption of the aforementioned Decision is explained below, implementing all the relevant provisions of the positive legal regulations, in accordance with the employer's wish to objectify the proper staff allocation with the aim of financial growth

In accordance with this Decision, the staff norm was adopted as stated:

I) the staff norm for new employment in the Pharmacy of Split-Dalmatia County shall be adopted in accordance with the calculation from item III of this Decision, from the date of this Decision until further notice.

II) The Framework staff norm for the calculation of new employment in accordance with item I of this Decision is a 5-minute time period per issued prescription for a Master of Pharmacy, i.e. 65,000.00 HRK of purchase value of goods for a pharmaceutical team.

III) General terms and conditions apply:

Gross salaries of a Master of Pharmacy and a pharmaceutical technician are covered by margin and service (RUC)

The aim of proper placement of staff is to increase efficiency, expertise and profitability

3.1. Implementation of the staff calculation method:

1. Number of teams RUC (mar + service) / the team's gross salary

2. Placement of Masters of Pharmacy within teams by the number of receipts (1 receipt = 5 min) pharmaceutical technician (1 pharmaceutical technician = 65,000 HRK for manual sales)

5 minutes per receipt includes the following activities:

- Monitoring the need and market availability
- Proper stocks management (ensuring of legal and business availability of the medicine)
- Preserving and proper storage (temperature, humidity, etc.)
- Verification and entry receipts
- Expiration date validation
- Entries received
- Transfer notes

- Verification of the receipt's correctness includes:
- Validation of the expiration date
- Patient and physician information Check
- Insurance verification (basic and supplementary)
- Code of illness
- Proper name, quantity and dose
- Proper prescription of the magistral preparation
- Issuing a Repeat Receipt
- Checking receipts which contain narcotic drugs, etc.

- Checking the dose and indications
- Checking the form and packaging of the medicine
- Record of opiate substances
- Drug interaction with other medicines as well as nutrition and dietary supplements.
- Duplication
- Side-effects
- Proper taking of medication (before meals, during meals, time intervals, etc.)
- Talking to a patient, a family member, and consulting a physician
- Monitoring the therapy outcome

Professional condition - each shift must be covered with minimally one Master of Pharmacy.

Pharmacies with more receipts – deviation of the Master of Pharmacy by the number of receipts; possible deviation +, - 1

Correction – Master of Pharmacy and pharmaceutical technician ratio 1/0.57

Deviation cor. Pharmaceutical technician is possible; +, - 1

Thus, based on the statistical reports at each pharmacy unit, we arrive at the next calculation, which is the basis for adopting a framework for the staff norm.

1)

The average monthly gross salary of a Master of Pharmacy is 17 267.31 HRK, while the average salary of a pharmaceutical technician is 4 928.41 HRK. The final monthly gross salary of such a team is 22 195.72 HRK, quarterly 66 587.16 HRK, or 266 348.64 HRK per year.

From the statistical reports for 2016, it can be seen that the total RUC of the Institution is 28 491 600.31 HRK during 2016. When correlating the annual salary of the pharmaceutical team with the total annual RUC (**RUC (Mar + Service)/the team's gross salary**), it follows that the maximum possible number of pharmaceutical teams within the Institution is 107.

Calculation No. 1

Yearly RUC

(28 491 600.31 HRK) = 107 pharmaceutical teams

Annual gross salary of the team

(266 348.64 HRK)

2)

Furthermore, within each pharmaceutical team it is necessary to calculate how many Masters of Pharmacy or pharmaceutical technicians are allowed.

Based on the calculations of the formula above, we obtain the following result: the Master of Pharmacy works an average of 176 hours per month, or 2112 hours per year, which amounts to 126 720 minutes per year. Given the established norm according to which a Master of Pharmacy needs while using 5 minutes per receipt, it is clear that one Master of Pharmacy issues an average of 25 344 receipts in one year.

Calculation No. 2

Annual working minutes

(126.720 min.) = Annual average of *receipts 25,344*

5 minutes per receipt for one Master of Pharmacy

3)

Given that pharmaceutical technicians cannot issue prescriptions, the applied staff norm should include a calculation of 65 000 HRK of the monthly purchase value of all manual sales for the pharmaceutical team. At an annual level per pharmacy unit, this amounts to 780 000 HRK, which is to be correlated to the purchase value of the manual sales for each pharmacy unit, using the following formula:

Calculation No. 3

Purchase value

Manual sales per pharmacy unit = *Required number of pharmaceutical technicians*

780 000 HRK

The aforementioned calculation within the pharmaceutical team utilizing the annual average of receipts and the purchase value of goods is to be observed by each individual pharmacy unit.

4)

In accordance with sublegal regulations, the pharmaceutical team consists of one Master of Pharmacy and one ½ pharmaceutical technician. This relationship, through the institution, should also be observed through the financial criterion of the gross salary ratio of Masters of Pharmacy and pharmaceutical technicians.

The gross salary of the Master of Pharmacy in the Institution is 17 267.31 HRK, while the gross salary of the pharmaceutical technician is 9 856.83 HRK. Thus, the gross salary of the pharmaceutical technician compared to the Master of Pharmacy is 0.57, which is taken as a unique corrective within the pharmacy unit.

Calculation No. 4

$$\frac{9\,856.83}{17\,267.31} = 0.57$$

5)

According to calculation No. 2 in relation to the currently observed period of each pharmacy unit, we can determine a surplus or deficit of Masters of Pharmacy.

Calculation No. 5

The real status of Masters of Pharmacy - the optimum number of Masters of Pharmacy = surplus / deficit

6)

If we correlate the surplus/deficit of Masters of Pharmacy, with the corresponding fixed corrective value of 0.57, we get the corrective value for each pharmacy unit between the surplus/deficit of Masters of Pharmacy and pharmaceutical technicians.

Calculation No. 6

Surplus/deficit of Masters of Pharmacy = *Corrective value for each pharmacy unit*

0.57

7)

Therefore, in order to optimally correct the pharmaceutical technicians' value according to this calculation, we must subtract the corrective value for each pharmacy unit from the required number of pharmaceutical technicians.

Calculation No. 7

Number of pharmaceutical technicians needed – corrective value for each pharmacy unit = corrected number of pharmaceutical technicians

A Model Calculation Based on the Data from "Grad" Pharmacy Unit.

According to the statistical data, in 2016 "Grad" Pharmacy achieved the following:

a) RUC – 787 656.15 HRK

b) Processed receipts – 30 244

b) Cost of manual sales – 1 995 018.90 HRK

I. For the calculation of the optimal number of pharmaceutical teams, it is necessary to use the formula for Calculation No. 1.

By using the information on the amount of RUC (hereinafter: a) and according to the formula for Calculation no. 1 (a/yearly gross salary of the team (266 348.64 HRK) we come to the conclusion that in "Grad" Pharmacy there are 2.96 pharmaceutical teams per RUC.

Therefore, while meeting the expert and financial criteria, the optimal number of pharmaceutical teams in "Grad" Pharmacy is 2.96.

II. For the calculation of the optimal number of Masters of Pharmacy, it is necessary to use the formula for Calculation No. 2.

By using the data on the number of processed receipts (hereinafter: b) and according to the formula for Calculation No. 2 (b / annual average of receipts 25 344), we come to the conclusion that in the "Grad" Pharmacy the optimum number of Masters of Pharmacy is 1.19.

Given that in 2016 "Grad" Pharmacy had two employed Masters of Pharmacy, it is evident that the Institution has entirely met the financial criterion, especially the professional criterion because it is necessary to have, according to the legal criteria, one Master of Pharmacy in each shift.

It follows that "Grad" Pharmacy has a surplus of 0.81 Masters of Pharmacy.

III. For the calculation of the optimal number of pharmaceutical technicians, it is necessary to use the formula for Calculation No. 3.

By using the data on the amount of the purchase value of goods (hereinafter: c) and in accordance with the formula for the Calculation No. 3 (c/780 000 HRK) we come to the conclusion that the optimal number of pharmaceutical technicians in "Grad" Pharmacy is 2.6.

IV. For the calculation of the surplus/deficit of Masters of Pharmacy, it is necessary to use the formula for Calculation No. 5.

By using the data that "Grad" Pharmacy at present has two employed Masters of Pharmacy, and in relation to the optimal number of Masters of Pharmacists (1.19), a surplus of the Masters of Pharmacy of 0.81 was established. (2-1.19 = 0.81)

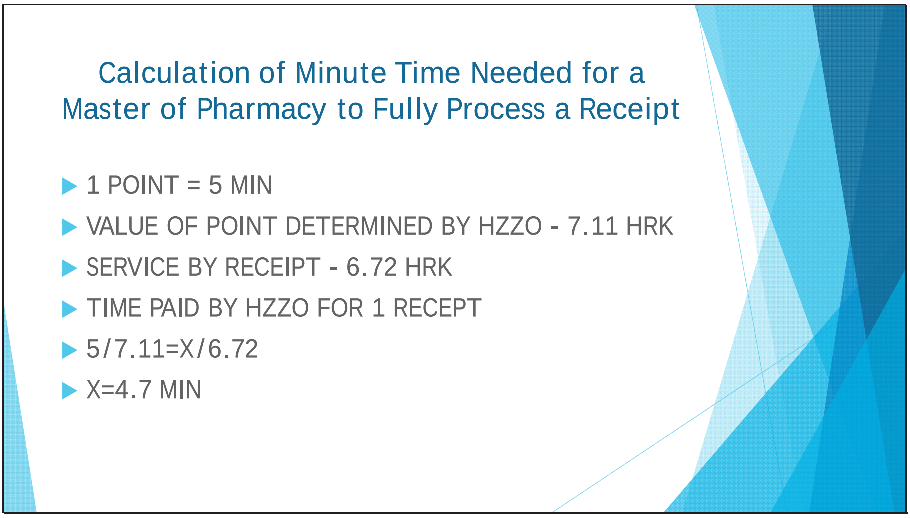
V. For the calculation of the corrective value determination for each pharmacy unit between the surplus/deficit of Masters of Pharmacy of Masters of Pharmacy, it is necessary to use the formula for Calculation No. 6.

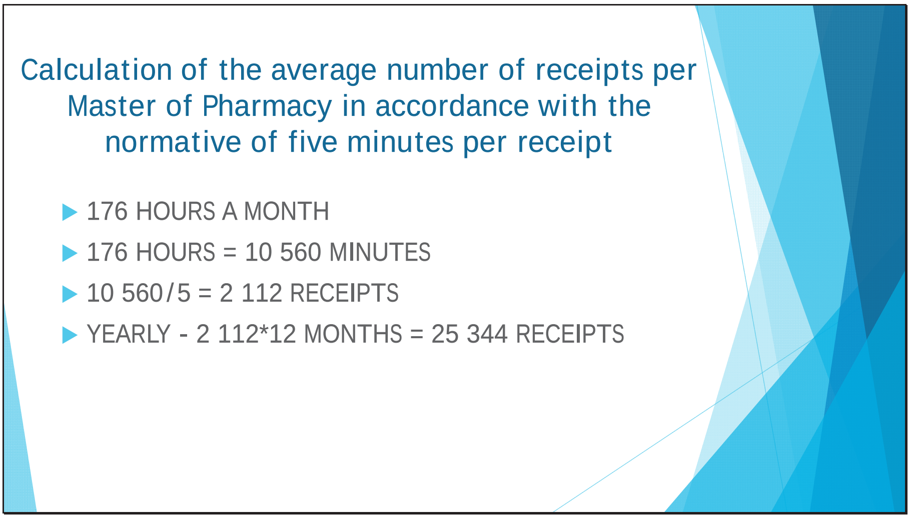
By using the above data, which determined the surplus of 0.81 Masters of Pharmacy, and according to calculation No. 6, it follows that the corrective value for "Grad" Pharmacy is 1.42. (0.81/0.57 = 1.42)

VI. For the calculation of corrected pharmaceutical technicians, it is necessary to use the formula for Calculation No. 7.

By using the data provided by the above calculations and the optimal number of pharmaceutical technicians is 2.6 and corrective value of 1.42, it follows that the corrected number of pharmaceutical technicians is 1.1.

Given that currently two Masters of Pharmacy are employed at "Grad" Pharmacy unit, there is a surplus of 0.9 pharmaceutical technicians.





4. CONCLUSION

Such calculations, based on changing one variable in the number of employees, and according to the processed receipts, RUC, and the purchase value of goods, proved to be the most optimal model that always meets the legal, professional and financial criteria required, and emphasizes that the regular allocation of staff increases efficiency, expertise and profitability.

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DIFFERENCES IN REGIONAL DISTRIBUTION OF FUNDS FOR THE HOSPITAL SYSTEM IN THE REPUBLIC OF CROATIA

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Abstract

The authors will show the total number of health institutions at the secondary and tertiary level. It will also be shown in the geographical distribution of hospitals due to the type of institution and the level at which the institution is located, according to the distribution of health institutions in the Republic of Croatia. The data will be analyzed. The analyzed data reflected the unequal distribution of institutions at the tertiary level of health care. Article 3 of the Croatian Constitution and Article 59 guarantees the equal right to health care for all citizens. Such allocation of funds for the hospital system in the Republic of Croatia resources are unevenly distributed regionally.

Keywords: *Health care system, unequal regional distribution, inequality*

JEL Classification: O1, O18

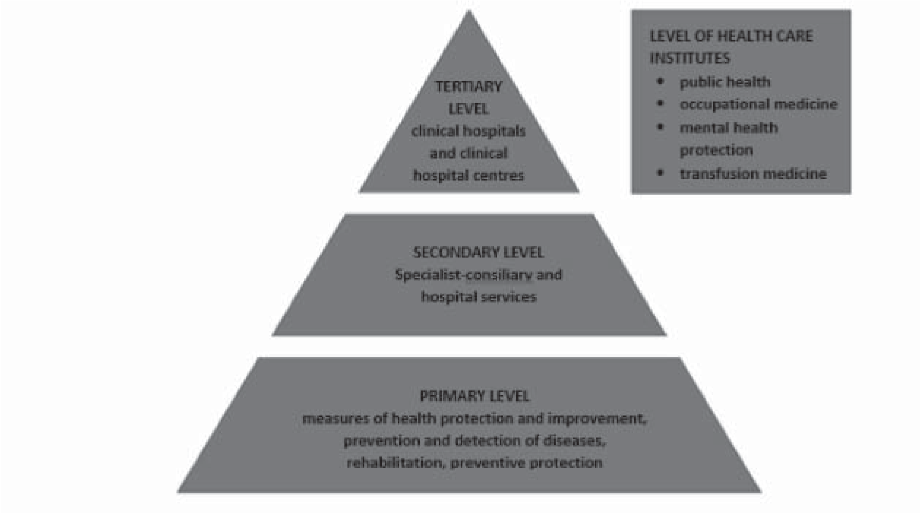
1. INTRODUCTION

In this paper, the authors will attempt to give an overall picture of health care and hospital system in the Republic of Croatia. Because of the fact that the regions populated by approximately the same number of inhabitants, are marked by an unequal distribution of funds coming from the State Budget of the Republic of Croatia, this paper points to the need for correcting this mistake of inequality in distribution of funds by region, which we shall try to redress through this paper, by indicating inequalities in the quality of health care provided to residents of the Republic of Croatia.

2. LEVELS OF HEALTH CARE SERVICES

Health care services are performed at the primary, secondary and tertiary level and at the level of health care institutes. At the primary level, health care services include: monitoring the health condition of patients and proposing population protection measures, prevention and detection of diseases, as well as rehabilitation and treatment of patients, occupational medicine, emergency medicine, palliative care, mental health protection, supply and preparation of medicinal products, medical rehabilitation of children and youth with disabilities, health care of people older than 65 years of age, health care of women, health care of youth, specific preventive health care of children and youth, visiting nurse services, in-home health care, medical transport, prevention and treatment of teeth and mouth diseases with rehabilitation and hygienic-epidemiological protection. (Health Care Act, Official Gazette 150/08, 71/10, 139/10, 22/11, 84/11, 154/11, 12/12, 35/12, 70/12, 144/12, 82/13, 159/13, 22/14, 154/14, 70/16)

Figure 1: Levels of health care services



Source: authors and Health Care Act, Official Gazette 150/08, 71/10, 139/10, 22/11, 84/11, 154/11, 12/12, 35/12, 70/12, 144/12, 82/13, 159/13, 22/14, 154/14, 70/16

3. CLASSIFICATION OF HEALTH CARE INSTITUTIONS ACCORDING TO THE LEVELS OF HEALTH CARE SERVICES

Health care institutions at the primary level of health care services include: community health centres, health care facility, institutions for home health care and institutions for palliative care. Public health care services at the primary level may be performed based on concession. Health care institutions at the secondary level include outpatient centres, hospitals and treatment centres, whereas health care services at the tertiary level are performed in clinics, clinical hospitals and clinical hospital centres. (Health Care Act, Official Gazette 150/08, 71/10, 139/10, 22/11, 84/11, 154/11, 12/12, 35/12, 70/12, 144/12, 82/13, 159/13, 22/14, 154/14, 70/16)

Figure 2: Classification of health care institutions according to the levels of health care services

Source: authors and Health Care Act, Official Gazette 150/08, 71/10, 139/10, 22/11, 84/11, 154/11, 12/12, 35/12, 70/12, 144/12, 82/13, 159/13, 22/14, 154/14, 70/16

4. RIGHT TO HEALTH IN THE REPUBLIC OF CROATIA

In the Republic of Croatia, right to health is a constitutional category valid for all citizens. As a signatory state of the Convention for the Protection of Human Rights and Dignity of the Human Being with Regard to the Application of Biology and Medicine, Croatian Government undertook to organize state legislation in accordance with the provisions of the Convention; and, in 2004, Act on the Protection of Patients' Rights was passed. The Act regulates moral, ethical and civil norms of conduct for users and providers of health care services. It is based on the principles of humaneness and availability.

Every patient is guaranteed general and equal right to high-quality and continuous health care adjusted to his or her health condition, in line with the generally recognized professional standards and ethical principles, in the best interest of the patient and respecting his or her personal beliefs.

Principle of availability of the protection of patients' rights, entails equal possibility for all patients to benefit from right protection, on the territory of the Republic of Croatia. (Act on the Protection of Patients' Rights, Official Gazette

169/04, 37/08; Act on the Ratification of the Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine: Convention on Human Rights and Biomedicine, Additional Protocol to the Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine on the Prohibition of Cloning Human Beings, and Additional Protocol to the Convention on Human Rights and Biomedicine concerning Transplantation of Organs and Tissues of Human Origin, Official Gazette 13/03).

Article 59 of the Constitution of the Republic of Croatia reads as follows: "Everyone shall be guaranteed the right to health care in conformity with law" (Constitution of the Republic of Croatia, Official Gazette 56/90, 135/97, 8/98, 113/00, 124/00, 28/01, 41/01, 55/01, 76/10, 85/10, 05/14).

5. HOSPITAL MASTER PLAN

In 2012, Ministry of Health of the Republic of Croatia drafted the Hospital Master Plan, which is the founding document for hospital system rationalization in the Republic of Croatia.

Hospitals make up the largest part of Croatian health care system, both when it comes to the number of health care workers and non-health care workers employed in hospitals, and funds that are being invested in their operation. Reorganizing the structure and functioning of hospitals represents a particularly big potential for upgrading efficiency, efficacy and availability of health care.

Ministry of Health launched drawing up of Hospital Master Plan, which shall be financed by taking out a loan from the World Bank, while Master Plan implementation is foreseen to be financed from State Budget funds, EU structural funds and, if needed, yet another loan by World Bank. Master Plan shall contain a detailed analysis of the situation in the hospital system and on the basis of established morbidity and mortality movements, as well as demographic projections, it shall propose concrete restructuring and reorganizing measures on the level of individual institutions.

Analysis that was conducted at the level of the entire health care system within the framework of National Health Care Strategy 2012-2020, points to the direction of hospital system development that shall be further elaborated in the Master Plan. Through the process of drafting and implementing the Master

Plan, a great portion of hospital system problems – caused by unplanned expansion of network of hospitals and services that they offer – shall be resolved.

Joining of hospitals into regional hospital networks or associations of institutions, shall enable redistribution and concentration of hospital services, better use of all contracted facilities, opening up of the possibility of contracting new facilities where needed, and avoiding unnecessary accumulation of sophisticated diagnostic and therapeutic procedures at small geographical distances, which is harmful to the quality of health care. At the same time, national and regional centres of excellence shall be defined, which shall enable purposeful and targeted equipping of hospitals with technology and staff, in accordance with their role in the health care system and the needs of the patients under their care.

Hospitals on the secondary and tertiary level, together with the existing and possible new educational units in primary health care and public health, should be integrated into functional educational networks, in order to fully use the scientific and educational capacity that already exists outside clinic institutions, which might be additionally encouraged and strengthened through the educational network.

Considering the decreasing trend of hospitalizations in all categories of mental patients, except in those suffering from various forms of dementia, bed capacities in psychiatric hospitals must be directed towards that group of patients.

The Hospital Master Plan shall pay special attention to rationalization of acute care through strengthening day hospitals and opening up the capacities for long-term treatment of patients and palliative care. Day hospitals represent modern, sparing, efficient and multidisciplinary approach to treatment, which significantly improves the quality of health care. Day hospitals must be connected to community health centres, specialist-consiliary health care in hospitals, mental health services in county institutes for public health, and primary health care offices, in order to build a functional whole where most health-related problems of the population shall be dealt with, including smaller surgical procedures ("one-day surgery"), as well as palliative care (including terminally ill children). Desirable development of day hospitals implies building reconstructions and modifications which would result in health care professionals gathering around the patient, instead of patient going around the hospital searching for the next service or person to provide it.

Structural modifications and reconstructions of hospitals in general must be directed towards an increase of energy efficiency, which will reduce maintenance costs, and, at the same time, contribute to the achievement of one of the key goals in the strategy Europe 2020: a 20% increase in energy efficiency. Furthermore, structural and organizational modifications must be directed towards reduction of working environment pollution and safe waste disposal, in order to improve occupational health and safety of health care professionals. In addition, hospitals, as well as other health care institutions, should accept "green", i.e. ecologically aware and responsible public procurement.

Master Plan must propose a reorganization of pharmaceutical profession in hospitals and its more active inclusion in the provision of health care. Reorganization of structure and functioning of emergency medical service must be directed towards integration of out-of-hospital and hospital service, in order to achieve optimum care for all persons whose lives are in danger due to sudden disease or aggravation, injury or poisoning. Horizontal connection of emergency medical network with conjoint emergency hospital wards shall make the emergency medical service more efficient, at the same time providing excellence in caring for emergency patients. An adequate system of care for injured, especially politraumatised patients, will imply development of trauma centres network, including a classification of hospitals based on their capacity to provide care for the injured.

Joint public procurement for hospitals owned by the Republic of Croatia shall be initiated through framework agreements, as one of the direct measures for improving financial operations of hospitals. Another such measure will be transferring the responsibility for certain non-health care services from hospitals to an independent state-owned company (spin-off) or outsourcing such services to private companies (Government of the Republic of Croatia, Ministry of Health of the Republic of Croatia, National Health Care Strategy 2012-2020, September 2012).

6. ANALYSIS OF THE SITUATION REGARDING REGIONAL DISTRIBUTION OF FUNDS TO HOSPITALS, WITH A SPECIAL FOCUS ON DRAWING A COMPARISON BETWEEN THE SITUATION IN THE CITY OF ZAGREB AND THE EASTERN REGION

6.1. Classification of hospitals according to type

At the tertiary and secondary level, health care institutions may be classified as follows:

At the tertiary level:

Clinical hospital centre

Clinical hospital

Clinic

At the secondary level:

General hospital

Special hospital

Clinical hospital centre is the largest type of hospital institution in the Republic of Croatia which brings together all diagnostic methods, examinations and therapeutic procedures. Table 1 shows that in the Republic of Croatia, there are 5 clinical hospital centres, two in Zagreb and one in Split, Rijeka and Osijek.

All three clinical hospitals are located in the City of Zagreb.

A clinic is a smaller health care institution, specialized for a particular branch of medicine. Out of five clinics, four are located in Zagreb and one in Lovran.

The purpose of a general hospital is to provide general health care services. It is smaller and more poorly equipped than clinical hospital centres and clinical hospitals, but it is bigger and engaged in more medical practices and services, than narrowly specialized clinics and special hospitals. In the Republic of Croatia, there are 20 general hospitals, evenly distributed across all regions.

A special hospital is a health care institution specialized for a specific branch of medicine such as psychiatry. There are 32 special hospitals in the Republic of Croatia.

Table 1: Health care institutions in the Republic of Croatia

HEALTH CARE INSTITUTIONS IN CROATIA (clinics, clinical hospitals, clinical hospital centres, general hospitals, special hospitals)	
HEALTH CARE INSTITUTIONS	NUMBER OF INSTITUTIONS
CLINICAL HOSPITAL CENTRE	5
CLINICAL HOSPITAL	3
CLINIC	5
GENERAL HOSPITAL	20
SPECIAL HOSPITAL	32
TOTAL	65

Source: authors' calculation and Croatian Institute of Public Health, Croatian Health Service Yearbook 2015, December 2016

6.2. Analysis of regional distribution of health institutions at the tertiary level according to the number of beds

Institutions at the tertiary level include clinical hospital centres, clinical hospitals and clinics. Those institutions receive most funds from the State Budget.

By comparing the number of beds per regions, at the tertiary level in the Table 2, it is evident that the institutions at the tertiary level of health care are unequally geographically distributed in the Republic of Croatia. It is clear that the Southern Region, Eastern Region and Northern Adriatic Region, which includes Rijeka and its surroundings, have approximately equally distributed number of beds, while the number of beds in the City of Zagreb is up to five times larger than in the remaining part of the Republic of Croatia.

Table 2: Clinics, clinical hospitals and clinical hospital centres in the Republic of Croatia

CLINICS, CLINICAL HOSPITALS, CLINICAL HOSPITAL CENTRES IN 2015	
Clinics, clinical hospitals, clinical hospital centres	NUMBER OF BEDS
Clinical Hospital Centre Zagreb	1,795
Clinical Hospital Centre Sestre Milosrdnice	1,200
Clinical Hospital Dubrava	619
Clinical Hospital Merkur	366
Clinic for Infectious Diseases	222
Clinical Hospital Sveti Duh	500
Clinic Vrapče	788
Clinic for Children's Diseases	205
Clinic Magdalena	92
Clinical Hospital Centre Rijeka	1,196
Clinic for Orthopaedics Lovran	101
Clinical Hospital Centre Osijek	1,031
Clinical Hospital Centre Split	1,521
TOTAL	9,636

CLINICS, CLINICAL HOSPITALS, CLINICAL HOSPITAL CENTRES IN 2015	
Clinics, clinical hospitals, clinical hospital centres	NUMBER OF BEDS
ZAGREB	
TOTAL	5,695
Clinic Magdalena	92
RIJEKA + LOVRAN	
TOTAL	1,297
OSIJEK	1,031
SPLIT	1,521
TOTAL	9,636

Source: authors' calculation and the Croatian Institute of Public Health, Croatian Health Statistics Yearbook 2015, December 2016

6.3. Analysis of regional distribution of health institutions at the secondary and tertiary level according to the number of beds

Should we include health institutions at the secondary level along with the health institutions at the tertiary level when overviewing the number of beds per region, acquired data are somewhat less disappointing.

Comparison between the Southern and Eastern Region and Zagreb results with the numbers shown in the Table 3, which lead to the conclusion that the number of beds in the Eastern and Southern Region equals approximately half of number of beds in Zagreb.

Table 3: Distribution of hospitals per regions of the Republic of Croatia

GENERAL HOSPITALS IN 2015	
TOWN	NUMBER OF BEDS
Zabok	249
Sisak	467
Karlovac	297
Ogulin	98
Varaždin	972
Koprivnica	356
Bjelovar	279
Gospić	79
Virovitica	228
Požega	300
Slavonski Brod	570
Zadar	479
Našice	132
Knin	178
Šibenik	257
Vinkovci	350
Vukovar	130
Pula	432
Dubrovnik	299
Čakovec	294
TOTAL	6,446

Special hospitals, treatment centres, hospices in 2015	
Special hospitals, treatment centres, hospices	NUMBER OF BEDS
Special Hospital "Srebrnjak"	80
Psychiatric Hospital "Kukuljevićeva"	37
Special Hospital "Goljak"	60
Special Hospital "Rockfellerova"	80
Psychiatric Hospital "Sveti Ivan"	551
Special Hospital Podobnik	13
Children's Hospital for Chronic Diseases Gornja Bistra	110
Special Hospital "Naftalan" Ivanić Grad	137
Special Hospital Krapinske Toplice	554
Special Hospital Stubičke toplice	235
Special Hospital "Akromion" Krapinske Toplice	17
Special Hospital "Sv. Katarina"	24
Treatment Centre Topusko	151
Neuropsychiatric Hospital Popovača	699
Special Hospital Duga Resa	165
Special Hospital Varaždinske Toplice	920
Special Hospital Daruvarske Toplice	287
Special Hospital Crikvenica	120
Special Hospital Opatija	214
Psychiatric Hospital Rab	480
Psychiatric Hospital Lopača	165
Treatment Centre Veli Lošinj	180
Special Hospital "Dr. Nemec"	14
Hospice "M.K.Kozulić"	14
Special Hospital Lipik	260
Psychiatric Hospital Sveti Rafael	140
Special Hospital Biograd	150
Psychiatric Hospital Ugljan	424
Treatment Centre Bizovačke Toplice	75
Special Hospital "Biokovka" Makarska	465
Special Hospital "Salus" Split	
Special Hospital Rovinj	270
Special Hospital "Kalos" Vela Luka	250
TOTAL	7,341

GENERAL HOSPITALS, CLINICS, CLINICAL HOSPITALS, CLINICAL HOSPITAL CENTRES IN 2015	
	NUMBER OF BEDS
ZAGREB	
TOTAL Clinics, clinical hospitals, clinical hospital centres	5,695
OSIJEK + Virovitica + Požega + Slavonski Brod + Našice + Vukovar + Vinkovci TOTAL	1,031 1,710 2,741
SPLIT + Zadar + Šibenik + Knin + Dubrovnik	1,521 1,213 2,734

Source: authors' calculation and the Croatian Institute of Public Health, Croatian Health Statistics Yearbook 2015, December 2016

6.3. Analysis of number and structure of hospital workers, per regions of health care plan

According to the analysis of number and structure of hospital workers, per regions of health care plan, we may conclude that the ratio between health care workers and non-health care workers is approximately the same in all regions, and it amounts to 70% - 75% in favour of health workers in individual regions. One may also notice that the number of workers in the sector is almost equal in all regions, except in the City of Zagreb. It has twice as many workers in the hospitals towards which approximately 1 million people is gravitating, compared to, for example, Eastern Region with the same number of gravitating population and number of workers smaller by a half in comparison with the City of Zagreb.

Table 4: Number and structure of employees in hospitals, per regions of health care plan

City of ZAGREB

Number and structure of employees in hospitals of the City of Zagreb on 1st March 2014				
	Health care workers	Non-health care workers	Total number of employees	Percentage of health care workers (%)
Clinical Hospital Centre Zagreb	**3,993**	**1,089**	**5,082**	**79%**
Clinical Hospital Centre "Sestre milosrdnice"	2,460	925	3,385	73%
Clinical Hospital Dubrava	1,388	472	1,860	75%
Clinical Hospital "Merkur"	783	295	1,078	73%
Clinical Hospital "Sveti Duh"	1,027	376	1,403	73%
Clinic for Infectious Diseases "Dr. Fran Mihaljević"	425	202	627	68%
Clinic for Children's Diseases Zagreb	469	136	605	78%
Total Clinics, clinical hospitals, clinical hospital centres City of ZAGREB	**10,545**	**3,495**	**14,040**	**75%**

EASTERN REGION

Number and structure of employees in hospitals of EASTERN REGION on 1st March 2014				
	Health care workers	Non-health care workers	Total number of employees	Percentage of health care workers (%)
Clinical Hospital Centre Osijek	**2,176**	**908**	**3,084**	**71%**
General Hospital "Dr. Josip Benčević" **Slavonski Brod**	1,114	414	1,528	73%
General County Hospital **Požega**	596	217	813	73%
General Hospital **Virovitica**	457	194	651	70%
General County Hospital **Našice**	288	108	396	73%
General County Hospital **Vukovar**	414	156	570	73%
General County Hospital **Vinkovci**	568	221	789	72%
Total EASTERN REGION	**5,613**	**2,218**	**7,831**	**72%**

SOUTHERN REGION

Number and structure of employees in hospitals of SOTHERN REGION on 1st March 2014				
	Health care workers	Non-health care workers	Total number of employees	Percentage of health care workers (%)
Clinical Hospital Centre Split	**2,358**	**824**	**3,182**	**74%**
General Hospital **Zadar**	920	272	1,192	77%
General Hospital "Hrvatski ponos" **Knin**	158	73	231	68%
General Hospital **Dubrovnik**	625	217	842	74%
General Hospital of **Šibenik-Knin County**	634	207	841	75%
Total SOUTHERN REGION	**4,695**	**1,593**	**6,288**	**75%**

CENTRAL AND NORTHERN REGION

(without City of Zagreb)

Number and structure of employees in hospitals of Central and Northern Region (without City of Zagreb) on 1st March 2014				
	Health care workers	Non-health care workers	Total number of employees	Percentage of health care workers (%)
County Hospital Čakovec	604	187	791	76%
General Hospital Bjelovar	576	211	787	73%
General Hospital Karlovac	624	217	841	74%
General Hospital Varaždin	1,122	470	1,592	70%
General Hospital Zabok	480	144	624	77%
General Hospital "Dr. Ivo Pedišić" Sisak	676	339	1,015	67%
General Hospital "Dr. Tomislav Bardek" Koprivnica	579	233	812	71%
General Hospital Ogulin	218	84	302	72%
Total Central and Northern Region	4,879	1,885	6,764	72%

WESTERN REGION

Number and structure of employees in hospitals of WESTERN REGION on 1st March 2014				
	Health care workers	Non-health care workers	Total number of employees	Percentage of health care workers (%)
Clinical Hospital Centre Rijeka	**2,296**	**1,014**	**3,310**	**69%**
Clinic for Orthopaedics Lovran	**158**	**60**	**218**	**72%**
General Hospital **Pula**	894	372	1,266	71%
General Hospital **Gospić**	162	59	221	73%
Total WESTERN REGION	3,510	1,505	5,015	70%

Source: authors' calculation and the Croatian Institute of Public Health, Croatian Health Statistics Yearbook 2015, December 2016

6.4. Comparison of hospital limits per regions

Hospital limit is the annual amount of funds received by a hospital from the Croatian Health Insurance Fund.

Analysis in Table 5 clearly shows that the Clinical Hospital Centre Zagreb receives almost double hospital limit in comparison to other four clinical hospital centres in the Republic of Croatia.

Table 5: Comparison of hospital limits

No.	HOSPITAL HEALTH CARE INSTITUTIONS	Budgets of hospitals LIMIT I-XII 2014	Budgets of hospitals LIMIT I-XII 2015	Index 2015/ 2014
K	1	2	3	4
1	CLINICAL HOSPITAL CENTRE RIJEKA	500,595,118	588,034,704	117
2	CLINICAL HOSPITAL CENTRE ZAGREB	830,504,818	1,082,684,622	130
3	CLINICAL HOSPITAL CENTRE SPLIT	546,746,758	637,387,511	117
4	CLINICAL HOSPITAL DUBRAVA	301,974,598	345,287,274	114
5	CLINICAL HOSPITAL "MERKUR"	187,414,745	210,674,269	112
6	CLINICAL HOSPITAL "SESTRE MILOSRDNICE"	530,385,669	627,236,036	118
7	CLINICAL HOSPITAL CENTRE OSIJEK	459,542,552	520,470,209	113
8	CLINIC FOR ORTHOPAEDICS LOVRAN	39,154,181	47,317,062	121
9	CLINIC FOR INFECTIOUS DISEASES "DR. FRAN MIHALJEVIĆ"	122,117,853	137,506,708	113
10	CLINIC FOR CHILDREN'S DISEASES ZAGREB, Klaićeva	105,905,218	117,890,024	111
11	CLINICAL HOSPITAL "SVETI DUH"	197,212,930	222,504,979	113
12	CLINIC FOR PSYCHIATRY VRAPČE	92,054,496	109,200,122	119

Source: authors' calculation from public sources

It is evident from Table 6 that the total limit of health institutions at the tertiary level of health care in the City of Zagreb is almost two and a half times larger than the total limit of health institutions at the secondary and tertiary level of health care in the Eastern Region.

Table 6: Comparison of the Eastern Region and the City of Zagreb in terms of hospital limits

	HOSPITAL HEALTH CARE INSTITUTIONS **CITY OF ZAGREB**	Budgets of Hospitals LIMIT I-XII 2014	Budgets of Hospitals LIMIT I-XII 2015	Index 2015/ 2014
	1	2	3	4
	CLINICAL HOSPITAL CENTRE ZAGREB	830,504,818	**1,082,684,622**	130
	CLINICAL HOSPITAL DUBRAVA	301,974,598	345,287,274	114
	CLINICAL HOSPITAL "MERKUR"	187,414,45	210,674,269	112
	CLINICAL HOSPITAL CENTRE "SESTRE MILOSRDNICE"	530,385,669	**627,236,036**	118
	CLINIC FOR INFECTIOUS DISEASES "DR. FRAN MIHALJEVIĆ"	122,117,853	137,506,708	113
	CLINIC FOR CHILDREN'S DISEASES ZAGREB, Klaićeva	105,905,218	117,890,024	111
	CLINICAL HOSPITAL "SVETI DUH"	197,212,930	222,504,979	113
	CLINIC FOR PSYCHIATRY VRAPČE	92,054,496	109,200,122	119
	TOTAL		2,852,984,034	
	EASTERN REGION – TOTAL in 2015		1,245,645,275	

Source: authors' calculation from public sources

The amount of HRK 1,245,645,275.00 is the sum of limits of all hospital institutions in the Eastern Region. Considering that approximately 1 million inhabitants gravitate toward the Eastern Region, it may be compared to the City of Zagreb that has similar number of gravitating population. Total limit of hospital institutions in the City of Zagreb amounts to HRK 2,852,984,034.00, which is more than twice as much as in the Eastern Region. If limits of special hospitals in the City of Zagreb are added to that number, it is evident in the Table 8 that the limit of the City of Zagreb increases to HRK 3,065,599,165.00. Thus, the gap between the limits in the City of Zagreb and Eastern Region is even bigger.

Table 7: Hospital limits in the hospitals of the Eastern Region

	CLINICAL HOSPITAL CENTRE OSIJEK	459,542,552	520,470,209	113
	GENERAL HOSPITAL VIROVITICA	86,327,257	97,582,305	113
	GENERAL COUNTY HOSPITAL POŽEGA	125,800,963	139,381,922	111
	GENERAL HOSPITAL "DR. JOSIP BENČEVIĆ" SLAVONSKI BROD	203,088,795	240,426,156	118
	GENERAL HOSPITAL NAŠICE	44,780,634	60,404,516	135
	GENERAL COUNTY HOSPITAL VINKOVCI	98,052,319	115,874,376	118
	GENERAL COUNTY HOSPITAL VUKOVAR AND CROATIAN VETERANS HOSPITAL	60,912,390	71,505,791	117
	EASTERN REGION - TOTAL in 2015		1,245,645,275	

Source: authors' calculation from public sources

Table 8: Hospital limits of special hospitals in the City of Zagreb

	Clinical hospital centres, clinical hospitals, clinics – CITY OF ZAGREB	Budgets of hospitals LIMIT I-XII 2014	Budgets of hospitals LIMIT I-XII 2015	Index 2015/ 2014
	TOTAL		2,852,984,034	
	PSYCHIATRIC HOSPITAL FOR CHILDREN AND YOUTH Kukuljevićeva	13,149,158	15,047,141	114
	SPECIAL HOSPITAL FOR PROTECTION OF CHILDREN WITH NEURODEVELOPMENTAL AND MOTORIC DIFFICULTIES Goljak	23,220,491	27,308,812	118
	SPECIAL HOSPITAL FOR PULMONARY DISEASES Rockfellerova	22,249,965	21,772,821	98
	PSYCHIATRIC HOSPITAL "SVETI IVAN" Jankomir	52,287,331	70,180,416	134
	CHILDREN'S HOSPITAL SREBRNJAK	28,707,754	39,132,948	136
	TOTAL CITY OF ZAGREB		3,065,559,165	

Source: authors' calculation from public sources

If we compare the number of employees and hospital limits in the City of Zagreb and in the Eastern Region, it is evident that in Eastern Region, a number of employees smaller by a half performs the same amount of work tasks, in accordance with the same number of inhabitants who gravitate towards the hospitals. It is also evident that the Eastern Region fulfils the needs of its inhabitants with the amount of money that is almost two and a half times smaller.

Table 9: Comparison of number of employees with hospital limits of the Eastern Region and the City of Zagreb

NUMBER AND STRUCTURE OF EMPLOYEES in hospitals on 1st March 2014				
	Health care workers	Non-health care workers	Total number of employees	Percentage of health care workers (%)
Total City of ZAGREB	10,545	3,495	14,040	75%
Total EASTERN REGION	5,613	2,218	7,831	72%

*Source *National Development Plan for Clinical Hospital Centres, Clinical Hospitals, Clinics and General Hospitals in the Republic of Croatia 2014-2016*

	HOSPITAL HEALTH CARE INSTITUTIONS		Budgets of hospitals LIMIT I-XII 2015	Index 2015/ 2014
	CLINICAL HOSPITAL CENTRE ZAGREB		1,082,684,622	130
	CLINICAL HOSPITAL CENTRE "SESTRE MILOSRDNICE"		627,236,036	118
	Total (clinical hospital centres, clinical hospitals, clinics, special hospitals, psychiatric hospitals) City of ZAGREB		3,065,559,165	
	EASTERN REGION - Total in 2015		1,245,645,275	

Source: authors' calculation from public sources; Croatian Institute of Public Health, Croatian Health Statistics Yearbook 2015, December 2016; and the National Development Plan for Clinical Hospital Centres, Clinical Hospitals, Clinics and General Hospitals in the Republic of Croatia 2014-2016, September 2014

6.5. Hospital merger plan

Over the last decade, there have been several plans for restructuring of the hospital system in the Republic of Croatia, all of them due to large debts and constant piling of debts. One of recent plans for such restructuring is shown in the Figure 3. Obviously, the plan is to merge the hospitals that are near each other. In the period since the plan shown in Figure 3 was drawn up until today, General County Hospital "Dr. Josip Benčević" in Slavonski Brod was merged with the General Hospital Nova Gradiška. However, this did not result in planned savings, and the hospitals were again separated in April 2017.

As evident from data in Tables 2 and 3, should we add together the number of beds in only two psychiatric hospitals in Zagreb – in the Clinic "Vrapče" that has 788 beds and in Special Psychiatric Hospital "Sv. Ivan" Jankomir that has 531 beds, that amounts to the total of 1,319 beds, without including other hospitals in Zagreb that have beds in psychiatry departments. Thus, we get a number that is larger than the number of beds in the Clinical Hospital Centre Osijek, the only institution at tertiary level located in the Eastern Region, and which amounts to 1,031 beds.

Figure 3: Hospital merger plan

Source: Jutarnji list, Hanza Media, available at: http://www.jutarnji.hr/incoming/infograf.jpg/5493247/alternates/FREE_780/infograf.jpg (accessed on 20 January 2017)

7. CONCLUSION

Having provided a complete analysis of the situation in the hospital system of the Republic of Croatia, with a special focus on comparison of the situation in the Eastern Region and in the City of Zagreb, it is possible to conclude that citizens in the Eastern Region are provided unequal health care as citizens living in the City of Zagreb. Every restructuring of hospital system begins with merging of hospitals located in the rural areas of the Republic of Croatia, which, according to politicians, are situated too close to each other, and as a result of which they are suitable to be merged for the purpose of making additional savings within the system. In conclusion to this paper, it is necessary to stress that this is wrong, since in Eastern Region, health care services are provided by half the number of workers, in comparison to the number of workers employed in the hospital system of the City of Zagreb. The same health care is provided to the people living in the Eastern Region with limits that are almost two and a half times smaller. Therefore, taking into account the entire analysis, it can be concluded that every future restructuring should begin with the City of Zagreb, where twice as many workers, with almost two and a half times larger sum of money perform work which in the Eastern Region is performed by health care workers with small limits. Situation is similar if we compare other regions with the City of Zagreb. Therefore, if equal health care is to be ensured for all citizens of the Republic of Croatia, which is a right guaranteed by the Constitution, additional efforts should be made, in order to ensure that Eastern Region has equal conditions for health care as the City of Zagreb.

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Law and Economics

PRINCIPLE OF GUILT AND PRINCIPLE OF SUBSTANTIVE TRUTH FINDING

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Abstract

The paper concisely presents and analyzes two important principles of criminal substantive and procedure law and their interconnection. The principle of substantive truth finding must be balanced with other important values, especially the interest for fundamental human rights protection. The principle of guilt is basic principle of criminal law which legitimate the punishment in twofold sense: individual guilt is a basis and measure of punishment. It is important that the measure of sentence does not exceed the established degree of the guilt of the offender. On the other hand, principle of substantive truth finding legitimate the criminal procedure and a verdict. Establishing the true facts of the case, which is indispensable for realizing the principle of individual guilt, is the central objective of criminal proceedings. The establishment of the degree of individual guilt contributes to realization of justice through sentencing, and justly sentences can influence the strenghtening of public trust in operation of criminal justice system. Both principles are jeopardized by interests of process economy. Therefore, it is important to ensure that modern criminal procedure of mixed type with strong adversial elements is shaped in such a way that interests of process economy does not dominate over the principle of substantive truth finding. Within this context, it is worth to support efforts which insist upon courts' control of plea bargaining (existance of evidence other than confession of the accused) and clearer and more complete regulation of the principle of substantive truth finding in Criminal procedure code.

Keywords: *principle of guilt, principle of substantive truth finding, criminal substantive and procedure law*

JEL Classification: K14, K3

1. INTRODUCTION

There is no doubt that the principle of guilt and principle of substantive truth finding are important principles of substantive and criminal procedure law. However, while the principle of guilt maintained the status of basic principle even in the modern criminal law, principle of substantive truth finding is no longer considered as a supreme principle of criminal proceedings or even is not mentioned. Its role of criminal procedure key principle is gradually taken by the principle of fair trial (Krapac, 2014, 86). It is said that this process of degradation is in fact "slight of truth", with the reserve that it is perhaps "too strong a term to undervaluation of aspiration for establishing the truth in criminal procedure" (Damaška, 2001, 2). The reasons for this are manifold with the particular interest of respecting fundamental human rights and economy of procedure at the first place.

This paper examines those principles and explains their interconnection. In recent years the link between the principle of guilt and principle of substantive truth finding has been emphasized several times in the work of the German Federal Constitutional Court, particularly its decision of 2013 which problematized the constitutionality of plea bargaining raised the most attention. Opinions about that decision are interesting because of the fact that in plea bargaining both principles of guilt and principle of substantive truth finding are equally jeopardized. In view of development of criminal procedure law in the last several decades, the issue has been raised as to which model of criminal procedure *pro futuro* is most suitable in the context of seeking substantive truth. This issue is important in light of potential amendments of the Croatian Criminal Procedure Act (further in text: CCPA) *de lege ferenda*. When discussing the issue of link between principle of guilt and substantive truth finding principle, we are of the opinion that the nature of relation between substantive and criminal procedure law has to be observed but also the role of the said principles in such legal frames. Our thesis is that finding the substantive truth is not controversial as one of the fundamental principles of criminal procedure but it is necessary to align it carefully with the other values of importance for shaping up a modern criminal procedure.

2. THE PRINCIPLE OF SUBSTANTIVE TRUTH FINDING

2.1. The principle of substantive truth and the need of its establishment in criminal procedure

The principle of substantive truth is linked with the affirmation of free evaluation of proof in criminal procedure. This principle was created in Germany in the period of abandoning inquisitorial mode in the process and rules of legal evaluation of evidence. In such a context, the original notion of substantive truth is contrary to the principle of a formal truth. Thus, a formal truth is considered as the ascertainment of facts in a judicial decision reached by the court through implementing rules on strength of particular evidence while substantive truth is defined as the same ascertainment but which has been reached by the court non-bound by legal forms of proving and which, by its content (matter) corresponds to the judge's perception of reality (Zlatarić & Damaška, 1966, 156). The origin of the notion of substantive truth is linked with the German tradition of a comprehensive and thorough philosophical research (Damaška, 1973, 581, foot note 199). In line with such original notion of substantive truth an original position which also gives weight to abandoning certain forms (regulations) in the process of truth seeking has been developed in the Croatian literature; substantive truth is the result of the establishment of facts by the court in the process from which the legislator excluded all detrimental forms which would otherwise be imposed, no matter the reason (Bayer, 1995, 116). The most important procedural rules in which the principle of finding substantive truth is most visible are the principles of free evaluation of evidence, inquisitorial maxim, obligation to verify confession of the accused, unboundedness of the court to prejudicial issues and the possibility to submit evidence with no defined deadline. In view of the development of the Croatian procedure law in the last 20 years the inquisitorial principle is particularly important as it allows the court to, independently and regardless of the parties' proposal, and in order to satisfy its own needs, gathers evidence and other processing material needed for reaching the decision (Krapac, 2014, 109). On the other hand there exist provisions which diminish the importance of principle of finding substantive truth while in the same time prove that the establishment of truth in criminal procedure is not the goal which is achieved by all costs. The reasons justifying restriction or narrowing the search for the truth are generally in collision with the interest to find the truth; in the literature these reasons are called "collateral values" (Damaška, 1997-1998, 301). These include various contents, from protection of privacy and integrity of certain professional relations, protection of state secrets, efforts aimed at accelerating criminal procedure while preserving its efficiency and reasonable expenses to the exclusion of unlawfully collected evidence, which is primarily motivated by human concerns towards the defendant and witnesses ((Weigend, 2003, p. 168). An important exception to the principle of finding substantive truth is the ban *reformatio in peius* where the appeal lodged only in favor of defendant must not cause for him a less favorable verdict (Bayer, 1995, 122). The limits in finding substantive truth may be considered within the frame of protection of human rights, increase of efficiency (towards more cost-effective criminal procedure) and democratic participation in criminal procedure (Turner, 2016, 58-59).

If we accept that the aim to be reached by the bodies of criminal procedure and other persons participating in the procedure is the establishment of facts on which the indictment is based as well as other legally relevant facts and the application of law on the established facts, the claim that requesting from criminal procedure bodies to bring decisions based only on truly established facts is so "natural that it does not need to be separately justified" (Bayer, 1995, 115) is entirely understandable. With regard to the above mentioned goal it is important to briefly elaborate the notion of establishing the truth in criminal procedure. Here, we need to distinguish among the two theories: according to correspondence theory, a factual establishment is truthful providing it corresponds with the reality, while according to the theory of consensus the truth is what the wise men agree upon after the complete and *fair* discussion. Generally, correspondence theory is deemed to be in compliance with the systems with inquisitorial procedure while accusatorial procedure which prevails in *common law* states reflects the theory of consensus (Weigend, 2013, 394-396). In the latter, the emphasis from cognitive problems is shifted to the concern to adhering to the rules regulating the competition between the two adversarial parties (Damaška, 1973, 581). As regards the principle of seeking substantive truth, it is to be emphasized at the outset that in the Croatian Criminal Procedure Act the provisions existed which accentuate the obligation of criminal procedure bodies to truthfully and fully establish the facts relevant for bringing decision. Thus, relating to the principle of searching for truth the CPA from 1993 contained two crucial provisions: a) according to Art. 14 § 1 the court and state bodies participating in criminal process were obliged to "truthfully and in full establish the facts relevant for bringing legal decision"; and b) according to Art. 282 § 2, president of the council was obliged to care for "comprehensive deliberation about the case, truth-finding and rejection of everything which would extend the process without contributing to the clarification of the case".

2.2. Position of principle of finding substantive truth in Criminal Procedure Act

The last 20 years of development of Croatian criminal procedure law the principle of finding substantive truth was marked by abolishing a "true" from CPA of 1997, significant restriction of inquisitorial power of the court at the trial in CPA of 2008, and partial restoration of such powers in the amendments to CPA in 2013. During this whole process, in the search for more reliable establishment of fact in criminal procedure, the legislator has, among the other, given advantage to strengthening of accusatorial elements in the process while at the same time diminishing inquisitorial powers of the trial court, thus contributing to its passivity. Thus, as of CPA from 2008 inquisitorial principle became major feature of General Attorney activities. This Act was especially radical in relation to the principle of substantive truth finding. Criminal procedure reform which the CPA of 2008 tried to implement was drafted in Principles preceding its adoption. The Principles were aimed at bringing new system of criminal procedure rules which were to guarantee the protection of human rights, reliable establishment of true and fast, simple and cost-effective process which would take into account the nature and gravity of criminal act, the person of accused and the victim as well as the need to protect society from criminal acts. (Pavišić, 2008, 518). With the aim to make the court the third, neutral subject of criminal procedure, in the trial part of the process, initiative of parties in providing evidence and accusatorial mode were emphasized whereas the inquisitorial maxim giving the right to the court to present evidence not offered or renounced by the parties was abandoned. The court has, indeed, kept the right to questioning of the parties but only for clarifying potential vagueness. It ensued from this the logical conclusion that the "material truth is no longer the aim of criminal procedure as is some international sources" (Pavišić, 2008, 578). Changes in the regime of establishing the truth, particularly the introduction of cross-examination and its potential impact to the establishment of truth, were subject to serious criticism (Damaška, 2010, 835-836). In spite of that there were opinions that the principle of substantive truth is unacceptable for the Croatian criminal procedure law due to its "political instrumentalization" (Krapac, 2014, 85-86). However, the principle of seeking substantive truth did not disappear from the Croatian criminal procedure. Legal scholars and professional advocating this principle have rightfully indicated that the reason for this is the fact that there exists the base for appeal in the form of inaccurate and incomplete establishment of factual status as well as Art. 1 of CPA, which clearly requires making distinction between the guilty and the innocent. Due to the state authority to abolish or limit fundamental human rights with the most drastic repression measures, it is utterly impossible and contrary to the essence of criminal procedure that the rules of procedure would allow for such state repression without the process and court guarantee for the truthful establishment of facts on which the sentence is based (Đurđević, 2013, 337, 341). From such perspective the request for explicit prescription of the obligation to establish the truth in criminal procedure is justified as the search for the truth and its establishment is "giving legitimacy to criminal procedure and criminal decisions" (Đurđević, 2013, 341-342).

The problem with (establishing) the truth in criminal procedure may also be observed in the context of criminal procedure functions of which one is definitely the protection of the society from the crime (criminality) and the ensuing need to make distinction between the guilty and the innocent. This function is directly linked to the establishment of truth unlike the other functions such as human rights protection and rationalization of budgetary assets. As truth finding activities in criminal procedure must be carried out by protecting fundamental human rights, particularly important for the *fairness* of the procedure is the problem of relation between principle of substantive truth and the principle of fair trial arises. In connection to this, a useful guideline for the legislator is the standpoint which considers a fair trial as a "procedure which finds acceptable balance between the need for the protection of society from crime on one hand and the need for protection of human rights on the other" (Damaška, 2001, 7-8). Truth finding is only one component of the trial activity and ought to be balanced with other equally valuable needs of legal process such as social peace, human dignity, stability of decisions or expenses (Damaška, 2003, 117). Indeed, it is not the question which of the concurring interests is superior to another but that the discussion on factual accuracy in the trial may be improved only if we follow different aims of legal procedure in an equitable and not prevailing way (Damaška, 1997-1998, 308).

2.3. The principle of substantive truth in comparative law

The arguments in favor of explicit regulation of duty to establish substantive truth in CPA can also be found in the foreign legal systems. We will mention here procedural provisions of the states whose substantive criminal law traditionally impacts the Croatian legislature (Switzerland, Austria, and Germany). Criminal Procedure Act of Switzerland, among the provisions about fundamental procedural principles contains the provision on the substantive truth finding principle (Art. 6) in which it is stressed out in the first place that "criminal authorities clarify *ex officio* all the facts important for the evaluation (assessment) of acts and of the accused" (§ 1); second, it requires that criminal authorities examine, "with equal due care, both accusing and liberating circumstances" (§ 2).

Austrian Criminal Procedure Code in part referring to the criminal procedure fundamental principles contains the provision called "objectivity and truth-finding" (Art. 3) which stipulates that "criminal police, state attorney and the court are obliged to examine and clarify all facts relevant for the evaluation of the act and of the accused" (§ 1). In addition to this "all judges, state attorneys and bodies of criminal police are obliged to impartially perform their duties and reject every probability of prejudice. They are also obliged to examine, with due care, the circumstances bearing the burden of proof to the accused as well as those which serve for his defense" (§ 2). Legal provision referring to the president of the court's council who governs the trial (Art. 232 § 2) provides that his duty is to "enhance the truth finding and to avoid the deliberations that may slow down and extend the main trial without any benefit for the clarification of facts".

Finally, the principle of substantive truth finding derives from the provision of the German Criminal Procedure Code which provides that "for seeking the truth the court must *ex officio* extend the presentation of evidence to all facts and evidence relevant for the decision" (Art 244 § 2).

In German literature on legal procedure the request for finding substantive truth is declared as one of the leading principles (Roxin & Schünemann, 2012, 101) although there is the ongoing discussion about the future of the development of criminal procedure towards the adversarial process, the inquisitorial principle and the requests for introducing elements of accusatorial negotiation between the parties. According to the widespread opinion, the aim of criminal procedure is finding truth related to the offense and pronounce the punishment for the accused. Establishment of such truth serve as a basis for verdict, which distinguishes guilty from innocent, and pronounced punishment. The sentence creates a legal peace not just actual through calming down the public, but also in a normative sense through re-establishing a violated legal norm. At the same time criminal procedure realizes a substantive criminal law (Roxin et al., 2003, 118).

Among the examples of major European continental legal systems which have established the substantive truth principle it is worth mentioning France where this is the primary procedural principle as it requires from the state bodies to "establish the guilt or innocence of the accused" (Đurđević, 2013, 338).

3. THE PRINCIPLE OF GUILT

Guilt is the subjective relation of the perpetrator towards the unlawful act for which he/she can be reproached (Novoselec & Bojanić, 2013, 212). The principle of guilt is usually expressed by the formula "no punishment without the guilt" (*nulla poena sine culpa*), whereby every form of punishment based on an objective responsibility is excluded. The principle of guilt is explicitly prescribed in Art. 4 of Criminal Code (further in the text: CC): "Nobody can be punished if not guilty for the act committed". Guilt is a legitimation (justification) of the state punishment in a double sense: as a presumption of punishment and as a substantial circumstance for its measurement (guilt as the basis and measure of punishment). Guilt has no such function towards the other sanctions, especially towards safety measures which are not based on guilt but on the danger from the perpetrator and which are not imposed according to the degree of the perpetrator's guilt but according to the principle of proportionality which requires the proportionality between safety measure and criminal act committed as well as the perpetrator's act which may be foreseen in the future (Bojanić & Mrčela, 2012, 391). Directly linked with the practical realization of the principle of guilt from Art. 4 of CC are the provision under Art. 47 § 1 of CC, which underscores the guilt as the basis for imposing the sentence as well as provision of Art. 47 § 2 which emphasizes that "the amount of sentence should not exceed the level of guilt". The principle of guilt is considered as one of the basic principles of criminal policy (along with the principle of rule of law and principle of humanity) and this means that the punishment may be based solely on the assessment that a personal reproach may be addressed to the perpetrator for the act committed (Jescheck & Weigend, 1996, 23). Although it is not explicitly prescribed by the German Criminal Code, the principle of guilt is assigned the rank of constitutional principle derived from the rule of law principle and inviolability of human dignity (Roxin, 2006, 52).

In Art. 46 § 1 of German Criminal Code guilt is especially emphasized as the basis for deciding on punishment. The principle of guilt serves for the necessary protection of the perpetrator from every excessive repressive action of the state and limits the punishment to activities deserving socio-ethical reproach. This is the only possible way for solving the problem of legitimation (justification) of criminal punishment (Jescheck & Weigend, 1996, 23). The principle of guilt is explicitly prescribed in the Austrian Criminal Code (§ 4) and its explication in criminal law theory does not differ in essence from the standpoint of German authors. From the perspective of practical application what is important is that guilt is not only the presupposition of the punishment but that the measure of sentence does not exceed the established degree of the guilt of the perpetrator (Kienapfel & Höpfel, 2009, 83). As a conclusion it needs to be pointed out that the principle of guilt is a primary principle for forming the entire criminal law as the punishment presupposes that for the realized commission of an unlawful act the reproach may be addressed to the perpetrator. In that sense guilt is the basis, limit and internal justification of punishment and by means of a guilt as the basis for punishment and guilt as a measure of punishment the principle of guilt has its concrete implementation. (Schönke & Schröder, 2001, § 13, 107). Contemporary teleological conceptions which along with the guilt as a presupposition for punishment require the necessity of preventive punishment acknowledge the principle of guilt in the part referring to the measure of punishment. The link between the amount of punishment and the measure of guilt is deemed to be the most liberal and socially and psychologically sufficient tool for restricting punishing by the state authorities. Restriction on the highest measure of punishment by the degree of the perpetrator's guilt corresponds to general law awareness and is therefore wise from the point of prevention. The sense for justice which is given great importance for the stabilization of general awareness about legality requires that nobody can be punished more than he/she deserves and the only deserved punishment is the one proportional to the guilt (Roxin, 2006, 92-93). Due to the above said, the accurate determination of guilt and its degree in criminal proceedings is of utmost importance. Establishment of degree of perpetrators' guilt is important because of realization of justice, and justly punishment is a significant factor for strengthening the public trust in operation of criminal justice system (so called positive general prevention).

4. LINK BETWEEN THE PRINCIPLE OF GUILT AND PRINCIPLE OF SUBSTANTIVE TRUTH FINDING

As emphasized in the introduction the link between the principle of guilt and the principle of substantive truth has been recently quoted several times in the practice of German Federal Constitutional Court. In one of such decisions (BverfG 2 BvR 2628/10, 2 BvR 2883/10; 2 BvR 2155/10 – decision of 19 March, 2013) the Court deliberated on the constitutionality of the law regulating *plea bargaining* in criminal proceedings. As most of the European countries Germany (and Croatia, too) allows for *plea bargaining* (agreement between the parties on the punishment based on the confession of the defendant) within the limits defined by law. When the agreement has been initiated by any of the parties, the trial stops and the involved parties meet with the judge in order to examine evidence and potential punishment. When the agreement is reached, parties to the process return to the courtroom where the defendant admits his guilt and the judge brings the sentence based on the agreement. Such practice is in line with the general perception that the truth and justice cannot be separated (Grunewald, 2013-2014, 1166). However, German scholars point to the fact that with the introduction of negotiations of the parties in relation to the substantive truth finding as a basis of criminal proceedings "a change of a paradigm" has occurred (Schünemann, 2009, 490) where the negotiation (agreement) practice represents danger to the inquisitorial principle and the principle of proportionality between the level of guilt and punishment. The main problem of such practice is the position of interest of the parties but also the fact that the judge follows his/her selfish interests during the process of negotiation (Murmann, 2011, 1388, 1401). In the above mentioned judgment, central argument of the Court referred specifically to the relation between justice and true in criminal jurisdiction. In connection with the above the following parts from the decision are relevant (Grunewald, 2013-2014, 1167): "The Court made clear that although the legislature intended to strengthen the ability of trial courts to lead an open trial that fosters communication between the parties, it had not planned to introduce a new 'consensual' model of criminal procedure. The goal was to maintain a model of criminal procedure that is rooted in finding factual truth and the just punishment that reflects the guilt of the defendant. In contrast to merely preventive measures, punishment, though not alone, focuses on just retribution. Without determining individual blameworthiness any reaction from the criminal justice would contradict constitutionally protected guaranties of human dignity and due process (Rechtsstaatprinzip). A sentence has to be in just relationship with the severity of the crime and the blameworthiness (Verschulden) of the offender. As an essential requirement for the realization of the principle of guilt, the duty to discover the substantive truth cannot be touched by a legislator. Because of constitutionally anchored principle of guilt, which is linked to the duty to discover the truth, and because of the principles of fairness, due process, the presumption of innocence and the role of the courts as impartial fact finders, the discovery of the truth must not be at the disposal and discretion of the adversaries and the court. Nontransparent, uncontrollable 'deals' are unconstitutional because of the danger they pose to the principle of guilt and, as a part of that, the duty to investigate the truth. Prosecutors must be prohibited from 'dealings with justice" (§§ 67, 68, 78, 80, 117, 118, 128).

The key sentence in which the court emphasizes the link between the principle of guilt and principle of substantive truth is the following: "Main goal of criminal procedure is the search for true facts without which the substantive principle of guilt could not be achieved" (§ 69). Such thesis came in light in one of the earlier decisions of the Federal Constitutional Court (BverfGE, 57, 250) already quoted in our literature (Đurđević, 2013). That decision from 2013 was generally well accepted in theoretical scholar commentaries in spite of some deficiencies in addressing issues relating to the agreement of the parties in criminal procedure (Stuckenberg, 2013, 218-219). The court has emphasized the obligation of criminal court to seek the truth as such obligation is constitutionally defined regardless of whether it is the procedure with the trial hearing or with negotiation (of the parties). The basis of the court's obligation is not in the right to a fair trial but in the principle of guilt: the duty to thoroughly investigate substantive truth is a necessary condition for the realization of the principle of guilt. Although the court did not elaborate the link between the principle of guilt and truth finding it is deemed that probably only a 'real' guilt can legitimate the given sentence. (Weigend & Turner, 2013, 97). On the other hand some are of the opinion that the duty to establish the truth is not the condition for the realization of principle of guilt but that it derives from the demand to implement the law. In this context the principle of finding substantive truth is closer to the rule of law principle and democracy. Regardless of which theory the legislator accepts the choice of most appropriate methods for establishing the truth i.e. forming an adequate factual basis for the sentence (Stuckenberg, 2016, 699) is important. However, such position is not in contravention to the position of the German Constitutional Court as in the practical application of the principle of guilt, i.e. establishment of elements of guilt and its degree it is still the application of law.

In its decision of 15 December 2015 (BverfG 2 BvR 2735/14) the German Constitutional Federal Court elaborated the link between the principle of substantive truth finding and the principle of guilt. It stated in this decision that "the effectiveness of the principle of individual guilt is at risk if one does not ensure that the true facts are established" (§ 56). "Establishing the true facts of the case, which is indispensable for realizing the substantive component of the principle of individual guilt, is the central objective of criminal proceedings" (§ 57). Such the proceedings "have the aim and the function of meting out a criminal sanction that is appropriate with regard to the offender and the offense. In the German legal sphere, a criminal sanction is much more than an interference with rights (Rechtseingriff) or harm (Übel) that bears upon the offender. One of the characteristic features of a criminal sanction, besides such interference or harm, is the blame (Tadel) or reproach that is expressed via the sentence. This is meant as a socio-ethical reproach or a specific moral disapproval" (§ 58).

Finally, it is worth mentioning the position of the German Federal Court of 3 March 2016 (BGH 2 StR 360/15), in which the key thesis from earlier mentioned decisions is that the obligation (duty) of criminal court to investigate ex officio true facts derives from the principle of guilt. Such duty should not be sacrificed for the sake of a simpler and the shortest possible resolving of the procedure. It is not allowed to base a sentence on the facts which do not derive from the conviction that the evidence material has been exhausted in full. The same applies for cases with the accused confession (§ 3).

5. THE PRINCIPLE OF SUBSTANTIVE TRUTH FINDING AND MODELS OF CRIMINAL PROCEDURE

In literature about comparative criminal procedure law of more than 40 years there can be found opinion that the comparison of history, ideological prejudices and procedural structure of Anglo-America accusatorial system and continental non-accusatory system reveals that the latter shows greater adherence to the establishment of truth but that still does not mean it's that factual establishment are more reliable. What is important is that in both criminal procedure systems there are situations in which the accuracy of establishment of facts must give place to the other social values (Damaška, 1973, 587-588). Since then until today in criminal procedure of European continental legal circle major changes have occurred. Many of these changes are the consequence of aligning interest for truth finding with the other legitimate interest of criminal jurisdiction system. The principles of classical criminal procedure were brought into question due to the need for finding new solutions in order to address overburdened criminal justice system. Thus, for example, under the influence of Anglo-American law in majority of systems negotiations (agreements) among parties were introduced as a way of ending criminal process, which satisfy the interest of adversarial parties. The reasoning behind such practice is the economy of process. These and similar changes also required changes of traditional procedural principles: restrictions of the principle of legality and the expansion of principles of purposefulness, narrowing of inquisitorial models and strengthening of autonomy of the parties, especially that of the accused, questioning of principles of public hearing, etc. (Krapac, 2014, 86). The problem of plea bargaining, in spite of a „pragmatic of the procedural economy" (Damaška, 2004, 17), is the best example of the danger for principle of guilt and principle of finding substantive truth, especially in situations when the offer for a substantial discount in sentence attracts even an innocent defendant to confess the offense which he/she has not committed. In view of that, we believe that proposals going into direction of the court controlling negotiations (agreement of the parties), either by means of previous obligatory verification of the reliability of indictment or refusal to accept agreement if the court, after public contradictory trial, declares the existing evidence not sufficient for the convicting verdict (Ivičević Karas & Puljić, 2013, 847). It needs to be mentioned that the court's control is not the same as interference in the negotiations of the parties as this is unacceptable. In view of the problem of transparency of the plea bargaining and insight into their real realization, it is interesting to quote from one German research of plea bargaining which reveals that 59% of judges admitted that over half of bargaining they concluded informally, i.e. without abiding by the legally prescribed requirements (Altenhein et al., 2013, 36-37). The example of agreement between the parties in criminal procedure shows that the economy of process, in spite of the fact that it represents legitimate interest within criminal justice system, should not dominate over the procedural goals which have advantage: seeking the truth, realization of justice and establishment of legal peace (Ostendorf, 2013, 178).

In the last several decades numerous mixed systems with inquisitorial roots but also strong accusatorial characteristics have been developed. Typically, in such "hybrid" systems there is unilateral preliminary procedure, often carried out by the police under the command of state attorney. Parties provide evidence in trial but the court holds the remaining right (and duty) to ensure that in the trial part of procedure all relevant issues for bringing final decision are included. From the perspective of traditional procedure models, a trend of abandoning pure inquisitorial systems and the expansion of accusatory elements is visible and that is due to a significant influence of international human right law (Weigend, 2013, 402-404). When forming a model of criminal procedure which is most appropriate from the point of the realization of principles of substantive truth it is important to take into account the particular legal culture and tradition and to avoid non-critical import of completely unfamiliar legal institutes. Numerous papers dealt with this issue (Langer, 2004; Damaška, 1997) and the Croatian unsuccessful experience with the introduction and then the abandonment of cross-examination is one of such examples. Responsibility for the establishment of the truth in mixed model of criminal procedure is divided between state attorney and the court. Such role of state attorney is especially important in the systems where he is the master of preliminary procedure, and procedural regulations emphasize his objectivity by pointing to his duty to collect evidence with due care both on guilt or innocence of the accused and/or authorize him to appeal in favor of the accused. In connection with his/her role, referral is made to German criminal procedure where state attorney not only assumes the role of the party but also the role of "the second judge", and such vision about the loyalty of state attorney to the truth is expressed in the thesis that the 'German attorneys are the most objective state officials in the world' (Shawn, 2010, 1288-1290). There is no doubt that the role of state attorney within the frame of his activity according to the inquisitorial principle is extremely valuable but in view of his objectivity there is no need to exaggerate since it is rather unrealistic to expect that he/she as the bearer of the function of criminal prosecution will take care with equal intensity about the facts which criminalize the accused and those that are in his favour. Therefore, a part of his/her procedural powers will probably remain just in theory (a declarative one). The duty of the judge to participate at the hearing, in compliance with inquisitorial principle, for the establishment of facts (collection and presentation of evidence) must not be put into question. Potential passive position of the judge will certainly increase his neutrality but on the other hand, such position could negatively impact the truth-finding (Damaška, 2003, 121). Finally, for the establishment of truth the court and not parties to the process is responsible as the parties primarily follow their own interest which may not necessarily be compatible with investigating the real factual status (Małolepszy, 2014, 505-506). As regard defense, it has no obligation to participate in the process of establishing facts and its passivity should not cause any repercussions for the accused, both in evaluation of evidence and in deciding on sentence. However, the defense must have the possibility of active participation in collecting and presenting evidence not only in trial but also in preliminary procedure (Weigend, 2013, 411). Enabling the defense to participate on equal foot in the establishment of facts at the earliest stage of procedure will represent an important contribution to an "equality of arms" between defense and prosecution. Based on the above, from the point of the realization of principles of substantive truth, we consider as acceptable the ideas going into the direction of advocating strong accusatorial elements at the trial, keeping the duty of objectivity of the prosecutor in real frames, strengthening the defense rights particularly in preliminary procedure and clear definition of the duty of the trial court to participate in collecting and presenting evidence. In short, this is the model of accusatorial procedure with the principle of finding substantive truth.

6. CONCLUSION

As the basic function of criminal procedure is to differ between the guilty and the innocent, the principle of finding substantive truth should maintain the status of one of the main principles of criminal procedure. It may not necessarily be the core principle as there are also other values of criminal justice system for which reason the truth cannot be established under all cost, especially interest of the protection of fundamental human rights but in the same time the true cannot be slighted. The principle of finding substantive truth which is closely linked to inquisitorial principle needs to be better regulated in Criminal Procedure Act. What needs to be reintroduced in the provisions on principles of procedure is the formula according to which the duty of the court and other bodies participating in criminal procedure is to truthfully and entirely establish the facts important for bringing legal decisions, and the provision referring to the duty of the chairman of the trial court to care about comprehensive discussion/deliberation about the case and rejecting everything that extends the procedure without adding to clarification of certain issues, and to amend the part that emphasizes truth-finding. In any case, his/her trial authorities linked with the establishment of true facts should not be less than those of the parties. Such idea makes sense, especially if we take into consideration that the principle of finding substantive truth enables practical realization of principle of guilt in criminal procedure. While the principle of guilt is the legitimation of the punishment as the most serious form of encroaching of the state in fundamental human rights, the principle of finding substantive truth provides legitimacy to criminal procedure which serves for the implementation of criminal substantive law. Therefore the court in each particular case is bound to precisely establish not only elements of guilt but also its degree, relevant for bringing sentence. An example of plea bargaining (agreement of the parties in criminal procedure) illustrates the way both principles may be endangered if there is no adequate protection mechanism from issuing sentence to an innocent who decides to plead guilty. Thus it is important to support those views that recommend the court control of all other evidence and its sufficiency for bringing convicting verdict. Finally, articulation of principle of finding substantive truth in criminal procedure will not do harm to its strong accusatory elements characteristic for the modern model of mixed criminal procedure.

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LEGAL AND ECONOMIC ASPECTS OF CHILD MAINTENANCE

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Abstract

Every child has the right to a standard of living appropriate for his development. Parents have an obligation, depending on their abilities and material capabilities, to secure life conditions required for child's development. On the other hand, the state has a commitment to provide parents with adequate help in achieving child's right to a suitable standard of living. Croatian family law requires parents to support underage and, under some circumstances, even legal age children. The aim of this research, from legal and economical point of view, is to analyse the institute of child maintenance within the Croatian law. Special emphasis is on the analysis of newest family law solutions regarding guidelines about level of child maintenance considering child's age, number of children and the pay grade of child sustainer. After detailed analysis of current legal framework and its usage in practice, this work will disclose whether the legislator goal, which is higher level of legal security and simplifying procedures of determining level of child maintenance, its increase and decrease, is achieved with the latest changes in this legal area.

Keywords: *maintenance rights, child rights, legal aspects of maintenance, standard of living, economic aspect of maintenance*

JEL Classification: K, K00

1. INTRODUCTION

Child's right to be supported finds its legal ground in numerous international and domestic legal acts. The Constitution of the Republic of Croatia[1] (in further text: Constitution) in art. 62. proscribes: *"The state shall protect maternity, children and youth, and shall create social, cultural, educational, material and other conditions promoting the achievement of the right to a suitable life."* Also, art. 63. p. 1. and 2. of the Constitution state: *"Parents shall bear responsibility for the upbringing, support and provide education to children and have the right and freedom to make decisions about the upbringing of their children independently. Parents are required to secure child's right to complete and harmonic development of its personality."* Speaking in context of international protection of child's maintenance right, it is important to emphasize that UN Convention on the Rights of Child[2] (in further text: CRC) strictly proscribes that the child is entitled to adequate life standard which their parents and other individuals responsible for the child are obliged to provide[3]. New Croatian Family Act[4] (in further text: FA 2015)[5] gives significant attention to protection of child's maintenance rights, recognizing parents as the ones who are first in line to support their underage child.[6] In accordance with domestic law, those parents capable of working can't be relieved of their duty to support an underage child (art. 228. p. 1. FA 2015). Constitutional Court of the Republic of Croatia[7] and Supreme Court of the Republic of Croatia[8] both pointed out in their decisions that child maintenance is responsibility of both parents. Parents have an obligation to support their underage child but under certain assumptions, their obligation includes supporting their legal age child as well.[9] Last economic crisis resulted in concrete and continuous number of verdicts dealing with various aspects of supporting underage children in both domestic and international courts (Winkler, 2014, pp 597).

The purpose of this research, from legal and economic point of view, is to analyse family law institute of child maintenance within Croatian law. This paper will primarily analyze the institute of maintenance of underage child and then discuss legal solutions concerning parent's obligation of maintenance their legal age child. This work will pay special attention to evaluation of average needs of underage child, all in sense of assessing the efficiency of currently applicable legal solutions and also providing proposals for further changes *de lege ferenda*. Part of the results of research conducted in February 2017 before social welfare centres[10] will be shown in order to examine if parents are having difficulties agreeing upon the amount of child maintenance as obligation of the non-resident parent but also to recognize if new family law legal mechanisms help parents reaching an agreement.

2. CHILD MAINTENANCE OF AN UNDERAGE CHILD

Child maintenance is determined for every child individually according to child's needs in consideration to parent's material well being. If parents are living separately they are still obliged to secure child's development on the level of certain life standard but for now its important to specifically determine obligation of parent who is not living with the child to participate through child maintenance (Brkić & Loje, 2015, pp 67). Child maintenance rate is always determined in monetary amount (art. 310. FA). Parent living with the child fulfil its obligation for maintenance the child by raising the child through everyday care, and parent not living with the child meets his child maintenance obligation by fulfilling child's material needs in monetary amount (art. 310. FA). Therefore, everyday care of the child is considered equal to meeting child's material needs in monetary amount support.

Parents can agree upon the amount of child maintenance by signing the Parental responsibility agreement[11] (in further text: PRA). They can conclude a PRA on their own, during mandatory counselling procedure[12] or in the process of family mediation[13]. Child maintenance is usually agreed upon through PRA which is made in the process of mandatory counselling by the social welfare centre before judicial divorce proceeding. We were interested in how hard it is for parents concluding the PRA during procedures of mandatory counselling to reach an agreement upon child maintenance rate. Along that line, we inquired social welfare centres that participated in our survey[14] to express level of agreement with the claim: "parents can hardly agree on the amount of child maintenance" (see Table 1 and Chart 1).

Table no. 1. *Level of agreement of social welfare centres with the claim that parents can hardy agree upon the amount of child maintenance*

LAIM	I completely dissagree–	I mostly dissagree–	I don't agree but I don't dissagree neither–	I mostly agree –	I agree completely–
Parents can hardy agree upon the amount of child maintenance	0.00%	36.00%	12.00%	44.00%	8.00%

As evident from Table 1 (as well as Chart 1), more than 50% of social welfare centres expressed their agreement with the claim that parents have difficulties agreeing upon the amount of child maintenance. Although it is hard to discuss the reasons why a large number of parents can hardly agree upon the amount of child maintenance without foothold in scientific research, we consider that reasons are most likely disrupted relations between parents preventing them to reach any kind of agreement (especially in cases of divorce or termination of extramarital cohabitation) on one hand, and we can assume that material well-being of parents provides additional difficulties on the other. Namely, if we take into consideration the fact that in 2015 the Republic of Croatia registered 285.906 unemployed citizens[15] and that a high percentage of employed citizens had wages below average (59,5% of employees received net salary up to 5.500,00 HRK, which is somewhat lower in regard to average net salary in the Republic of Croatia in 2015 and which was 5.711,00 HRK[16]) we can assume that for a large number of parents child maintenance represents significant burden in their budget. Therefore, we believe that in large number of cases reasons for having difficulties reaching an agreement lies in material (in)capabilities of parents, the one not living with the child and having to pay for maintenance, as well as the one staying with the child providing him with everyday care. In any case, if parents don't make PRA, the amount of child maintenance that the parent not living with the child has to pay will be determined in court proceedings.

2.1. Child's material needs vs. Parent's material capabilities

According to art. 311. FA 2015, overall material needs of child determined by the court in legal proceeding refer to costs of housing, food, clothing, hygiene, upbringing, education, taking care of child's health and other similar child costs. Child's overall material needs are determined in regard to standard of living of parent who has the obligation to pay child maintenance. In case that the child has increased material needs, in a way that it needs constant increased care related to child's health condition, court has to take those circumstances into consideration while determining the amount of child maintenance in court proceedings (art. 312 FA 2015).

Overall capabilities of the parent with child maintenance obligation which are determined by the court in the legal proceeding relate to incomes and material well-being of the parent obliged with child maintenance in time of determining the amount of maintenance. According to article 313. of the FA 2015, parent who has the obligation to pay for child maintenance is required to present overall net income including all permanent and temporary earnings. Court can, if needed, request from competent authorities[17] to provide them with all the data at their disposal. When determining material capabilities of the parent obliged to pay child maintenance, court must take into consideration all other earning possibilities in regard to parent's age, education and work capability. On the other hand, financial obligations of parent paying the maintenance are taken into account only in exceptional situations when they last for a long time and when they are necessary for meeting basic necessities of life.

FA 2015 states that every child receiving income must contribute for its own rearing (art. 291). It is also emphasized that the every child that is fifteen years of older, is employed and gets his income by working, has obligation to contribute to its own rearing and education (art. 90).

2.2. Minimum financial amount for child maintenance and a table of child's average needs

In accordance to art. 314 of FA 2015, minister of social care has, once a year, until April 1st of the current year[18], obligation to set minimal financial amounts which represent the minimum amount of material needs for monthly maintenance of underage child in the Republic of Croatia, which has to be paid by the parent not living with the child.

Minimal amount is decided in percentage of average monthly net wage per employee in legal entities in the Republic of Croatia for the previous year, as follows:

1. For a child up to 6 years of age, 17% of average salary
2. For a child from 7 to 12 years of age, 20% of average salary and
3. For a child from 13 to 18 years of age, 22% of average salary.[19]

Exceptionally, needs of underage child for maintenance can be determined in the amount lower than the law minimum, but not less than one half of minimum regulated by the law:

1. If the obligator of maintenance is responsible for rearing two or more children, or
2. If the child contributes to his maintenance with his own income

Same article also regulates the obligation of minister in charge of social care to decree, once a year, at the latest by April 1st of the current year, tables with average needs of underage child in accordance with child's age, incomes of parents obligators of maintenance by the pay grades and average costs of life in the Republic of Croatia.

The amount from the table of average needs of underage child in accordance with child's age, pay grade of parents and living costs – unlike the minimal amounts for child maintenance – present orientation criteria, to parents when making the agreement about maintenance, as well as the court in determining maintenance in disputed court proceeding (Aras, 2015, pp 28). If the parent not living with the child has incomes that exceed the income from the highest pay grade in regards to tables of child maintenance, the court can, during the proceeding, set maintenance amount higher than estimated by the tables for specially justified circumstances, taking into consideration that the child maintenance must not increase living standard of other parent (art. 315). We criticize the fact that the obligation of minister in charge of social care to determine the table of average needs of underage child was not fulfilled, not last or the current year. The last decree concerning the average needs of an underage child[20] dates from 2014[21] (further: Table 2014).

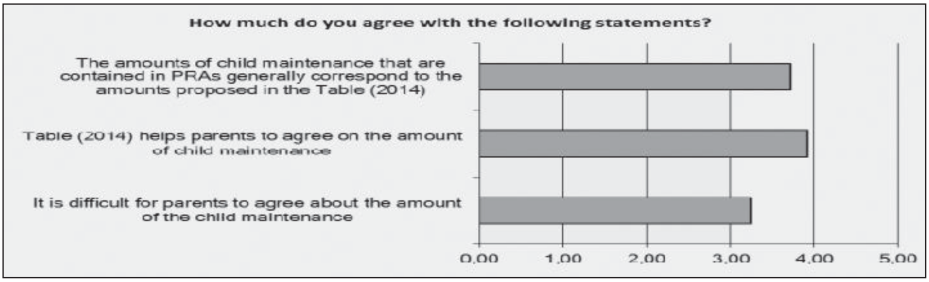
Table 2. *Underage child's average needs according to the Decree of minimum financial amount necessary for monthly child maintenance in 2014.*

Pay grades of child maintenance obligator	Monthly maintenance payments according to child's age			Guaranteed remaining part of income
	0-6 y.	7-12 y.	13-18 y.	
1	2			3
up to 2.500	938	1.104	1.213	800
2.501 – 3.500	950	1.118	1.229	1.000
3.501 – 4.500	1.000	1.177	1.294	1.350
4.501 – 5.500	1.070	1.259	1.385	1.700
5.501 – 6.500	1.190	1.392	1.525	2.050
6.501 – 7.500	1.310	1.524	1.666	2.400
7.501 – 8.500	1.430	1.657	1.806	2.750
8.501 - 9.500	1.550	1.789	1.947	3.100
9.501 - 10.500	1.680	1.933	2.101	3.450
10.501 – 11.500	1.810	2.077	2.254	3.800
11.501 – 13.000	1.960	2.245	2.454	4.200
13.001 – 14.500	2.131	2.436	2.639	4.700
14.501 – 16.000	2.300	2.628	2.844	5.200
16.001 – 18.000	2.525	2.884	3.121	5.800
18.001 – 20.000	2.775	3.169	3.429	6.500

Source: Official Gazette no. 106/14, Decree about the table of average of needs of an underage child

Results of conducted research lead to conclusion that social welfare centres take Table 2014 as the positive legal novelty which helps them in their everyday work when reaching parent's child maintenance agreements (see Chart 1.).

Chart 1.



Source: Author's work according to conducted research

Furthermore, in the absence of this table, social welfare centres use Table 2014 in their everyday work, although it's no longer valid (see Chart 2). That means that the Table 2014 helps social welfare centres in encouraging parents to reach an agreement regarding the amount of child maintenance. As mentioned before, most of the social welfare centres included in the Research agreed with the claim that parents have difficulties coming up an understanding about child maintenance but that the Table (2014) helps them reach an agreement (see Chart 1). We can assume that the parents "give in" more easily and choose the agreement instead of court decision, after the social welfare centres familiarize them with contents of the table about child's average needs and warn them that the court will determine the amounts of maintenance if they can't reach an agreement.

Chart 2.

Source: Author's work according to conducted research

Taking into account all of the above mentioned, we consider it necessary that the competent minister[22] fulfils its obligation as soon as possible and makes a new Decree for the table concerning the average needs of an underage child.

From economic perspective, this justifiably raises three key questions. First, are the Table (2014) average needs of an underage child truly well assessed? Second, if the pay grades and guaranteed remaining income of child maintenance obligator estimated well. Third, the question about protection of child's right to an appropriate standard of living when child maintenance is not possible without endangering existential minimum for both parents[23]. In order to answer these complex questions with precision it is necessary to put into correlation a series of facts of material nature. First of all, it is necessary to precisely determine what exactly is making the existential minimum and express it financially in a sense of underage child's needs at a certain age. Taking into consideration present prices of relevant goods and services it is required to calculate the amounts which satisfy these needs. After that, we must make thorough economic analysis of incomes earned based on working in the Republic of Croatia in a reference time period. In the end, it is also necessary to make economic analysis of financial rights of the socially vulnerable persons. Only after this analysis was to be made, would it be possible to give precise answer to questions of economic justification of the Table (2014). Even though we haven't conducted such detailed economic analysis, generally we still have reasons to doubt justification of assessments contained in the Table (2014).

2.3. Register of maintenance and temporary maintenance

Social welfare centres have a big role in the exercise of child's right to maintenance. Social welfare centre is required to keep a register of all decisions and court settlements regarding maintenance of underage child (art. 318 FA 2015). The way these registers are to be made is decided by the competent minister of social care with an inquest register regarding the way court decisions and court settlements in connection to maintenance of an underage child are monitored. Although the competent ministry fulfilled its obligation in this case, as mandated by the FA 2015, there are some incompatibilities between the FA 2015 and subordinate act brought by the competent ministry. This incompatibility can be seen in the very name of the subordinate act which is Ordinance about the way registries of court orders about maintenance and settlements conducted in the Social Welfare centres are made[24] (further: Ordinance). Namely, FA 2015 does not predict possibility of reaching an agreement in social welfare centres, only in court. Parent's agreement regarding maintenance in the sense of PRA is not the same as the settlement. Despite that, from the name itself, but also from the contents of Ordinance we can wrongly conclude that it is still possible to make the maintenance agreement before social welfare centre that serves as the enforceable document[25].

According to art. 319 of the FA 2015, when social care centre receives final court decision and court settlement concerning child maintenance, they must, based on a court order or court settlement, inform parent living with the child and parent obliged to pay for maintenance, of all their rights and responsibilities. In this notice, social care centre provides the parent with:

- warning about his obligation to inform social care centre in case obligator of child maintenance does not fulfil his responsibilities in time and in whole,

- information about the conditions concerning child's right to temporary maintenance according to special regulation which regulates temporary maintenance[26]
- information that they will file criminal charges if the obligator of child maintenance does not pay maintenance fee within 15 days after being informed that the obligation was not fulfilled in time and in whole, and
- warning that the Republic of Croatia has a right to demand refund for the temporary maintenance amount paid out according to regulation which regulates temporary maintenance.

Special regulation which regulates temporary maintenance is the Temporary Maintenance Law[27] (further: TML). The TML determines that the right to temporary maintenance has a child whose parent, one not living with the child, does not fulfill his maintenance obligation based on an enforceable document, in full or partially, longer than three months in continuity from the day the enforcement proceeding starts, in order to actualize maintenance, and if seems possible that the grandparents from that parent do not contribute to child's maintenance in rate set as the amount of temporary maintenance (art. 7. TML). Child has a right to temporary maintenance lasting total of three years, in the amount of 50% of legal maintenance minimum (art. 8. and 9. TML). By paying temporary maintenance, the Republic of Croatia steps into a legal position of the child and takes over all maintenance claims in the amount of paid temporary maintenance, with all supporting laws (art. 25. TML).

Aras is justifiably pointing out that the efficient and quick exercise of child's right to maintenance is an imperative for every country (Aras, 2013, pp 3). The problem of not fulfilling maintenance commitment[28] is quite often warned about in Croatian law theory. Looking at the problem of not paying child maintenance form the aspect of guaranteed standard of living and child's right to maintenance, the question raised is who is responsible for the fact that a large number of children in Croatia does not receive maintenance (Rešetar, 2005, pp 157). If we take into consideration that child maintenance is mainly obligation of parents, from a legal point of view there is no big dilemma about who the bearers of responsibility for not paying child maintenance are. However, if we look at it from economic aspect, responsibility for not paying maintenance gets somewhat different connotation. Namely, capabilities to fulfil any kind of financial obligation, including maintenance obligation, depends on the material well-being of individual carrying the obligation, and his financial status can depend on a series of economic factors on which the individual has no influence in every moment. If we take into consideration certain indicators of economic status in the Republic of Croatia, like for example GDP, unemployment rate, the extent of industrial production, the amount of construction works and foreign trade[29], it is clear that the picture of chosen macroeconomic indicators can be significantly better. Considering the aforementioned indicators, there is a large number of Croatian citizens who have difficulties with their financial obligations, insofar as we take a large number of unpaid claims based on child maintenance as one of the indicators, and for which we assume that the disrupted relations between the parents are not the cause of the parent not living with the child refusing to pay the maintenance fee. Therefore, one of the assumptions is that the economic image of macroeconomic indicators contributes to creation of this problem.

Consequently, we can conclude from economic perspective that a large number of unpaid child maintenance fees is not only the responsibility of parents. Also, a change of present case can not only be charging maintenance obligators, but the state also has to take care that the individuals can participate with their work on the labor market and that way obtain finance to carry out responsibility of child maintenance obligation for those they are legally obliged to support, mainly children.

3. CHILD MAINTENANCE FOR THE CHILD NOT LIVING WITH PARENTS OR LEGAL AGE CHILD

Supporting legal age children is a family law institute we often exercise in practice, being that most of the children older than eighteen years are still financially dependent on their parents because they opted for further education or are not able to get a job right after finishing education (Winkler, 2014, pp 597).

According to art. 290 of the FA 2015, parents have the responsibility to support legal age child who is going through high school, or attending university or professional study in accordance to special regulations, or even program for basic education or high school education program for adults and fulfilling his duties correctly and in time, up to child's twenty sixth year of age. Parents are obliged to support legal age child that finished education but can't get a job for up to a year after finishing education if the child under twenty six years of age. In this regard, if the child would turn twenty six years of age before the expiration of one year deadline after finishing education, the obligation of supporting legal age child would be terminated. Assumed age limit of twenty six years seems quite legitimate considering the fact that supporting legal age child imposes on parents many sacrifices which must necessarily come to an end (Winkler, 2014, pp 606). Furthermore, art. 290. of the FA states that the parent has the right to demand and receive information about child's education or employment from authorities and legal persons. It is considered that pupil or student regularly and on time fulfills his obligations even if for justified reasons (pregnancy, sickness or similar reasons) was not able to fulfill his obligations in the current academic year. Winkler points out that there is one contradiction in family legislation: "... there are exceptional situations like pregnancy, sickness, or similar, when supported student can flunk a year with justification. If we take for example one of the present six-year university studies, and add circumstances from the article five, we easily get over the age limit of twenty six years. (...) If the maximum age for receiving maintenance is twenty six, does that mean that the students who had one of the problems from article five or they simply chose the longer study, do not have the right to one-year period after graduation to find a job, if they couldn't get one right after education? Age limit could have been introduced, but the consequences of certain directives should have been regulated more detailed" (Winkler, 2014, pp 607).

The question whether the parent of an legal age child still in regular schooling, is obliged to support the child even after they got married, and the spouse is completely in position to support them. We agree with Kaladić (2008) came up with conclusion that the parent of legal age child still going through schooling, can reasonably demand cessation of of his commitment for child maintenance even if the child gets married afterwards, and the spouse if capable of supporting him completely[30].

4. BASIC ECONOMIC GUIDELINES FOR MAKING A NEW TABLE OF CHILD'S AVERAGE NEEDS

In achieving some of the goals of this paper, we questioned the way certain comparative European countries solve the subject matter. In that line, we mostly referred to the legislation of Germany, primarily to Düsseldorf table[31] (in further text: DT).

Therefore, examining the Table 2014 and compare it with the DT, there are a couple of thoughts and suggestions that emerged:

1. Table (2014) does not involve legal age children even though, under legally established assumptions, parents can have an obligation to support legal age children[32]. We consider that there is enough justified space for introduction of another age grade, the one for legal age children, i.e. children of 18 years and older[33].
2. There is a need for Question the ways of deciding upon pay grades of maintenance obligator's income[34].
3. Adoption of the updated table of average needs of a legal age child, within legally determined deadline is necessary.
4. There is a need for standardization of the name of the table in accordance to above given suggestion, e.g. "Child maintenance table"

Although we have been working with limited information, at this point we can give suggestions for certain corrections, based upon available information. Previously mentioned researches should definitely be included before final table suggestion. Legally determined minimum (Table 3) should also be taken into account while making the proposal for the new Table.

Table no. 3. The amount of minimum salary for the period 2013-2017

Year	Minimum salary (gross amount)
1st of June 2012-31st of May 2013[35]	2.814,00 kn
1st of June 2013-31st of December 2013[36]	2.984,78
2014[37]	3.017,61
2015[38]	3.029,55
2016[39]	3.120,00
2017[40]	3.276,00

When making the new Table proposal, it is also necessary to take into consideration both gross and net salary in the Republic of Croatia, and since the year of making this Table is 2014, what follows is the data about average gross and net salary in the Republic of Croatia for the period of 2013 - 2015 (Table 4).

Table no. 4. Average gross and net salary in the Republic of Croatia 2013 - 2015

Year	Gross salary (BoS, Announcement)	Net salary (BoS)
2013	7.939,00 kn	5.515,00 kn
2014	7.953,00 kn	5.533,00 kn
2015	8.055,00 kn	5.711,00 kn

Source: BoS (Bureau of Statistics) 9.1.12. Average monthly net salary paid per employee in legal persons according to National Work Classification 2007.-months; Information on average yearly gross salary of the employees in 2013, 2014, 2015 taken from the Bureau of Statistics, Announcements[41].

Methodology was changed during 2015 (both ways were applied in 2015[42]), so that 2015 could stay comparable for previous and future reference[43].

While making the proposal of new Table, into consideration should be taken minimum salary (expressed in gross amount), which has growth tendency during monitored years, as well as increase of average salary in the Republic of Croatia in the same time period and with insight into data regarding the structure of employees according to the amount of net salary for 160-200 working hours for the last year (March 2015) of monitored time period[44].

Concerning the new Table, some of ideas regarding Table are following:

Suggested pay grades of incomes should be expressed in net amounts for maintenance obligators. With insight into *Structure of employed citizens according to the amount of net salary for 160 –200 paid work hours for March 2015* (%) (further: structure of employees) it is evident that there is a lower percentage of people with net salary in pay grade up to 2.500 HRK(5,4%) so the next two pay grades could be added to this pay grade in regards to information from structure of employees according to the amount of net salary. Therefore, the income of 3.500 HRK could be taken as suggestion for the first pay grade.

Table should include children older than 18 who actualize their maintenance right based on one of the criteria. Furthermore, there should be calculated percentages of increase within every next pay grade, so it is possible to calculate any of the amounts regarding certain pay grade. Amounts in *base pay grade*[45] can be collected using the percentages from Family Law provided for age groups: 17% (0-6), 20% (7-12), 22% (13-18), and subsequently added proposal of percentage for "children" older than 18 for which stands the rate of 25% of net salary in Croatia for certain year.

In the Table (2014), the first pay grade included all of the maintenance obligators that obtain a net salary of 2.500,00 HRK, which is also close to the amount of the minimum salary required by law in the Republic of Croatia according to the available data for the year when the table was made (see table 3). In the DT, the first pay grade is up to 1.500,00 EUR[46] and it also represents the estimated amount of the required minimum salary in Germany. However, the proposal for the changes in the establishing of the base, that is the first pay grade, has an explanation which is twofold:

- Firstly, according to the Bureau of Statistics data, The Results of the survey on the household consumption in 2014[47] (in further text: Survey), the average per a member of the household in 2014 (this is because it is the last available data about the average consumption per a household member[48]), which amounted to 34.591,00 HRK, together with the cost of renting (which comes to 2.882,58 HRK monthly; Table 4.). Therefore, even though the net amount of a required minimum net salary is 2.500,00 HRK, it is clear from the Survey that monthly costs of consumption, per household member average, exceed the estimated amount of a minimum salary (the term estimated amount is used purposefully, since the amount of minimum salary has changed each year; the data for the average consumption per household member for the year 2015 are missing, because the Survey hasn't been done). So, the ability to pay for maintenance as well is questionable.

Table no. 5. Expenditures for consumption, average per household, member of the household and adult person equivalent in 2014.

	Without imputed rent	With imputed rent
Average expenditure per household	81 315	99 817
Average expenditure per household member	28 179	34 591
Average expenditure per adult equivalent	43 775	53 736

Source: Bureau of Statistics. Results of household expenditure poll from 2014, Statistic reports, Table 3, Expenditures for consumption, average per household, household member and the adult equivalent in 2014, ISSN 1331-5146, Zagreb, 2016.

- The other reason is concerned with the recorded trend in the rise of the minimum salary (2013-2017). The minimum salary's net amount, considering only the years mentioned, was around 2.500,00 HRK in the first year (2013). Seeing that, in the recorded period from 2013, and we could say until 2017, the minimum salary in the Republic of Croatia is noticed to grow and is currently above the mentioned amount, there is no reason for keeping that amount on the earlier proposed 2.500,00 HRK. Other than that, consideration founded on satisfying the base needs of the obligator and the child, although subjective, speaks of the insufficient amount for the life of the obligator and the impossibility of paying for the expenses of a child.

5. CONCLUSION

With the goal of creating better legal grounds for effective protection of child's maintenance rights on behalf of their parents, Croatian legislation reformed this legal area three times in a period a little longer than ten years. This paper was firstly dedicated to the analysis of the last reform, considering it from law and economic perspective. That reform was significantly marked by the introduction of a table concerning the average needs of an underage child, analysis of which takes up most of this paper. Although, there is plenty of room for extra work, the introduction of the table concerning the average needs of an underage child is in conclusion deemed a very positive novelty. The research has shown that a great number of experts in social welfare centres deems the table concerning the needs of an underage child as a good legal mechanism which aids in everyday work. In that sense, we express a serious criticism towards the competent ministry because of the fact that the obligation of making a new table concerning the average needs of an underage child was not met, and according to experts in social welfare centres, table often helps parents to reach an agreement on costs of child maintenance. Taking the relevant economic indicators into consideration, we have determined certain guidelines for the creation of the new table concerning the average needs of an underage child with emphasis on the final affirmation of their contextual justifiability it is still necessary to perform a series other economic analyses.

And while the table concerning the average needs of an underage child has proven a good mechanism for reaching an agreement about the amount of maintenance, the problem of billing the claim on the basis of child maintenance still remains a big problem in Croatia. If we take into account that child maintenance is primarily a parental obligation, from the legal perspective in that sense, there is no great dilemma about the holders of responsibility for not paying child maintenance. However, considered from the economic perspective we state that the burden of the responsibility for the change of status quo lies in economic image of Croatia which really does not provide the possibility to many citizens, to attain the earnings needed for their own and the supporting of those they are legally required to support, mainly children.

In the end, we deem important to warn about the need for the correction of the incompatibilities which exist between the FA 2015 and some subordinate regulations which regulate the institute of child maintenance, of which we have pointed out in this paper.

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2 Convention on the Rights of the Child, 1989., United Nations, Treaty Series, Vol. 1577

3 Art. 27. CRC:

States Parties recognize the right of every child to a standard of living adequate for the child's physical, mental, spiritual, moral and social development.

The parent(s) or others responsible for the child have the primary responsibility to secure, within their abilities and financial capacities, the conditions of living necessary for the child's development.

States Parties, in accordance with national conditions and within their means, shall take appropriate measures to assist parents and others responsible for the child to implement this right and shall in case of need provide material assistance and support programes, particularly with regard to nutrition, clothing and housing.

States Parties shall take all appropriate measures to secure the recovery of maintenance for the child from the parents or other persons having financial responsibility for the child, both within the State Party and from abroad. In particular, where the person having financial responsibility for the child lives in a State different from that of the child, States Parties shall promote the accession to international agreements or the conclusion of such agreements, as well as the making of other appropriate arrangements.

4 Family Law (Official Gazette 103/15)

5 This is the third significant change in family legislation in this legal area since 2003 about child maintenance according to Family Law (Official Gazette 116/03) and the amendment of the law from 2007, see in Rešetar, B. & Ledić, S. (2009). See also, Aras, S. (2009A) and Aras, S. (2009B)

6 If a parent does not support their underage child, the grandparents on that parent's side are obliged to support it. (art. 228. p. 1.) Stepmother or stepfather are obliged to support an underage stepchild, if the child does not receive support from another parent. Stepmother and stepfather are obliged to support their underage child, after the death of the child's parent, if at the event of the parents' death they lived with the stepchild. (art. 228. p. 1)

7 In the Decree of the Constitutional Court number U -III- 1425/2004 from May 8 2007 it states: "A parent that supported the child on their own always has the right to seek for a refund of expenses made, because it is required by law for both parents to take care of the child's upbringing." About the practice of the Constitutional Court in this legal area see more in Marković (2008).

8 See Supreme Court Decree number GZZ-65/1999-2 from February 9 2000.

9 Although a child, according to legal requirements, is an underage person, therefore a person under 18 years of age, when we talk about a child in the sense of a blood related parent and child, we use the terms "underage child" and "legal age child".

10 The research was conducted in the form of an on-line questionnaire forwarded to social welfare centres. The questionnaire included 17 questions related to the implementation of the mandatory counselling procedure. The following 23 social welfare centre took part in the research: Zagreb-subsidiary Gornji grad, Zagreb-subsidiary Trnje, Zagreb-subsidiary Novi Zagreb, Split, Osijek, Zadar, Slavonski Brod, Gospić, Križevci, Pazin, Valpovo, Beli Manastir, Đakovo, Dugo Selo, Bjelovar, Pakrac, Ludbreg, Našice, Koprivnica, Zaprešić, Novi Marof, Petrinja and Zabok.

11 As required by law (art. 106 FA 2015) the plan for PRA is a written agreement of the parents concerning the way of managing mutual parental rearing in the case of parents who are permanently

separated. It defines: the address of child's place of residence, the time which the child spends with each of the parents, the means of information exchange regarding giving approval on the making of decisions important for the child, the exchange of information regarding the child, the amount of maintenance as an obligation of the parent not living with the child and the means of solving any future matters.

[12] The mandatory counseling is performed by the social welfare centers. Mandatory counseling is a way of aiding family members to reach a mutual understanding concerning family relations while taking into special account the protection of family relations in which the child is involved and the legal consequences of a failure to reach an agreement and initiation of court proceedings which decide on the child's individual rights (art. 321. FA 2015).

[13] Family mediation is a procedure in which the participants try to reach an agreement concerning family relation with the help of one or more family mediators. The main purpose of family mediation is reaching PRA and other agreements regarding the child. With reaching this purpose, in the process of family mediation the participants can reach an understanding regarding other issues of a financial or non-financial nature (art. 331 FA 2015)

[14] See note number 10.

[15] Croatian employment bureau http://statistika.hzz.hr/Statistika.aspx?tipIzvjestaja=1, 31.03.2017.; data for average values. There is data for 2016 and 2017, but there is no data for the same period concerning the height of the average net salary and activities by the structure of employees, so the data for 2015 is used.

[16] Croatian Bureau of Statistics, for 2015, the announcement from February 29 2016, year LII, number 9.1.2./12.

[17] Tax administrations, Ministries of internal affairs, Ministries of defense, Central registry of Insured citizens, financial agencies and other physical and legal persons.

[18] Considering that the Bureau of Statistics delivers information about average net and average gross information at the end of February, the proposition is to update the table with the newly published data, starting with February 1, e. g. The calendar of statistical data from 2015, gives information about the time of publishing data (February 28 2016.), average monthly net and gross salary in 2016.

[19] According to the currently valid Decree of minimum financial amounts needed for monthly child maintenance (Official Gazette 29/16) and considering that the average monthly net salary per employee in legal persons in the Republic of Croatia in 2015. was 5.711,00 HRK, a financial amount which represents a minimum amount of total material needs for monthly child maintenance in the Republic of Croatia are:

- for a child up to 6 years of age, 17% of average salary 970,87 HRK
- for a child between 7 and 12 years of age, 21% of average salary 1.142,20 HRK
- for a child between 13 and 18 years of age, 22 % of average salary 1.256,42 HRK

[20] Decree about the table of average of needs of an underage child (Official Gazette number 106/14)

[21] Table (2014) was made on the basis of Family Law (Official Gazette number 75/14) (further: FA 2014). Constitutional Court has, because of a large number of Constitutional lawsuits, suspended the FA 2014 with the Resolution (Official Gazette number 05/15) and, up to the final decision about it constitutionality, ordered for the FA 2003 to be reinstated. In the meantime, the FA 2015 was adopted and became valid, and was very similar to FA 2014 in regards to content.

[22] Minister for demography, family, youth and social politics.

[23] Here it is important to emphasize the difference between family and social maintenance.

[24] Ordinance about the way registries of court orders about maintenance and settlements conducted in the Social welfare centers are made (Official Gazette number 32/05, 75/14, 5/15, 103/15)

[25] Such a possibility was provided for in FA 2003.

[26] Temporary maintenance as the means of legal child protection was introduced in Croatian legislature in 2007 by amendments on FA 2003. See more in Župan, 2014.

[27] Temporary Maintenance Law (Official Gazette no: 92/14)

[28] See, for example, Rešetar (2005), Marković (2008).

[29] Croatian Bureau of Statistics, Statistics in series, Economy – basic indicators, The overview of the most important short-term indicators by the Croatian Bureau of Statistics.

[30] In the verdict no: P2-464/09 dated March 18, 2009. Municipal citizen court in Zagreb rejected the claimant's request to nullify the obligation to support his adult daughter which is a regular student and got married. Regarding the claimant's appeal against this verdict, the second instance court reached a sentence no: GŽ-214/10 dated September 14, 2010. which overturned the municipal court's verdict and accepted the request. Not satisfied with this, the defendant appealed for a verdict revision, which was judged to be unfounded in verdict no: Rev-1090/2011-2 dated October 5, 2011. According to Kaladić (2008).

[31] Available at: Düsseldorfer Tabelle 2017, http://www.unterhalt.net/duesseldorfer-tabelle.html, 2.2.2017.

[32] See chapter 3.

[33] Such a solution comes from the DT which was a model for Croatian legislator.

[34] The authors asked the Ministry to explain the manner in which pay grades are determined in Table (2014). However, the authors did not receive a specific answer that could be presented in this paper. The Ministry merely pointed out that the work on the new Family Law is in progress.

[35] Official Gazette 60/12, Minimal wage according to Croatian Bureau for Statistics for the period of 1st June 2012 till 30th of May 2013.

[36] Official Gazette 51/13, Minimal Wage Decree

[37] Official Gazette 156/13, Minimal Wage Decree

[38] Official Gazette 151/14, Minimal Wage Decree

[39] Offical Gazette 140/15, Minimal Wage Decree

[40] Official Gazette 115/16, Minimal Wage Decree

[41] Croatian Bureau of Statistics for the year 2013, First release dated February 28, 2014, year L, no: 9.1.2/12; for 2014, First release dated February 27, 2015, year LI, no: 9.1.2/12, for the year 2015, First release dated February 29, 2016, year LII no: 9.1.2/12

[42] Data from January 2016 is not comparable to earlier monthly and yearly data values due to a change in methodology. The change of the way average net income per employee in legal entities was calculated consists of data collection based on JOPPD form.

[43] Data for 2016 was not available at the time this paper was completed.

[44] Data available on the Croatian Bureau of Statistics, First release 9.2.5., Table 1, Structure of employed persons according to average net salary for March 2015 and according to National Work Classification 2007, Structure of employed persons according to average net salary for March

[45] The first pay grade in the Table.

[46] Eurostat, Minimal wage statistics, Available at: http://ec.europa.eu/eurostat/statistics-explained/index.php/Minimum_wage_statistics, 7.2.2017.

[47] Bureau of Statistics, Results of the poll on spending per household, Statistics reports, Table 3, Spending expenditures, average per household, household member and the legal age household member in 2014., ISSN 1331-5146, Zagreb, 2016.

[48] In 2015 the poll was not completed due to financial limitations, according to information released by the Croatian Bureau of Statistics. For the year 2016 results were not available before this work was completed.

Industrial Organization

THE EFFECT OF LOGISTICS PERFORMANCE INDEX ON GLOBAL COMPETITIVENESS INDEX AT DIFFERENT LEVELS OF ECONOMIC DEVELOPMENT

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Abstract

The work explores and elaborates on the effect of Logistics Performance Index (LPI) on national economy at different levels of development. LPI essentially reflects a composite term used to define a country's logistics ability, and includes six areas. The study seeks to evaluate how a country's competitiveness is influenced by LPI in global terms at different levels of economic development. Global competitiveness is determined by Global Competitiveness Index (GCI). The work explores around the relationship between LPI and GCI, assuming that the connection is strong and positive, and suggesting that an increase in LPI leads to an increase in GCI. For the proof of the hypothesis this study conducted a regression analysis.

Keywords: *logistic, development, competitiveness, LPI, GCI*

JEL Classification: O1, Q01

1. INTRODUCTION

By comparing Croatia's competitiveness to other nations in the global economy it can be concluded that its economy is uncompetitive. According to the Global Competitiveness Index Report for 2015/2016, Croatia is ranked 77th (4.07) out of 140 countries. Croatia is ranked among the lowest-ranking EU countries, with only Greece behind (81st, GCI 4.04). The same observation can be made for Croatia's logistics performance at European and global level. According to the Logistics Performance Index Report for 2014, Croatia is ranked 55th with an LPI value of only 3.05, behind all the Member States of the European Union.

Studies conducted in various countries of the world have confirmed that a country's logistics system depends on its economic development. This work studies differences between countries based on their performance on the GCI/LPI index. Countries are divided into three different stages of economic development: factor-driven economies, efficiency-driven economies and innovation-driven economies (Porter et al., 2002, pp. 16). The theoretical framework allows us to identify the relationship between a country's economic development and its logistics performance.

The hypothesis that a country's logistics performance is dependent on its economic development can offer input and guidance to government in developing national strategy aimed at improving logistics performance and competitiveness. Countries are grouped by level of economic development according to the GEM researches. Other data sources include the World Bank's *Global Competitiveness Report for 2015-2016* and *Trade Logistics in the Global Economy - The Logistics Performance Index and its Indicator*.

The work combines several scientific methods, of which analysis and synthesis, comparison, descriptive statistics, correlation and regression analysis stand out as the most important.

2. GLOBAL COMPETITIVENESS INDEX (GCI)

The World Economic Forum defines competitiveness as a set of institutions, public policies and factors that measure the productivity of a country. In other words, the competitiveness of an economy is a function of institutions, transparency and quality of the policy-making and decision-making processes, and advantages of factors that determine productivity of an economy and society as a whole. Productivity is the key determinant of the competitiveness. Productivity is needed for prosperity which means the citizens have a higher income. Productivity also means a high profitability ratio which measures return on investment that impacts the long-run growth of an economy.

The World Economic Forum annually publishes a comprehensive report on global competitiveness. The ten most competitive economies are Switzerland, Singapore, United States, Germany, Netherlands, Japan, Hong Kong SAR, Finland, Sweden and the United Kingdom. The lowest competitive are Guinea, Chad, Burundi, Nigeria, Pakistan, and Venezuela. The Western Balkan countries are ranked pretty low.

Based on data collected from global competitiveness reports for 131 out of 140 countries, a brief descriptive statistical analysis of global competitiveness has been made (Table 1).

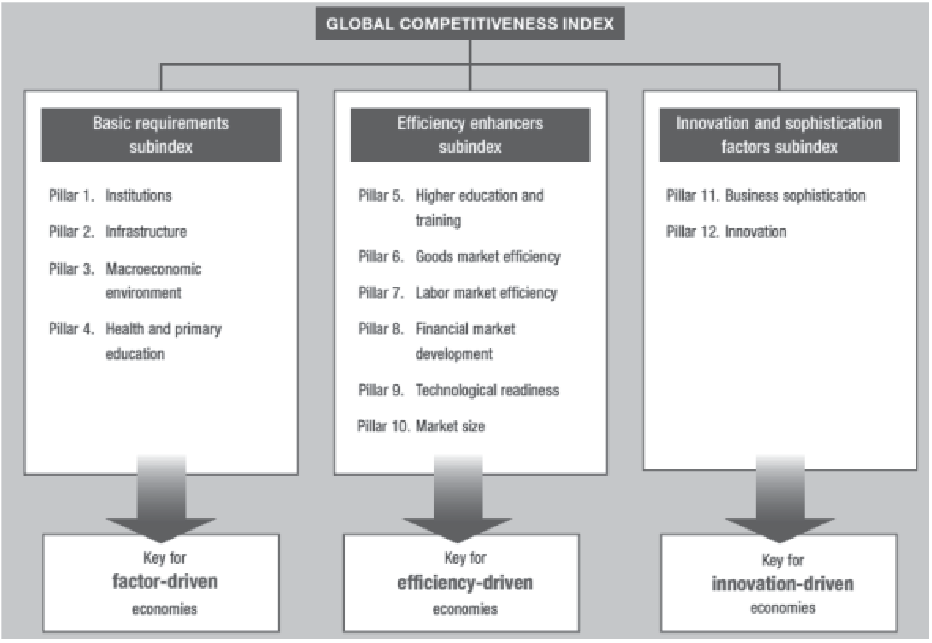
Table 1: Descriptive statistical analysis of global competitiveness

	GCI
MEAN case 1-131	4.26862595
MEDIAN case 1-131	4.22
SD case 1-131	0.673060477
VALID_N case 1-131	131
SUM case 1-131	559.19
MIN case 1-131	2.84
MAX case 1-131	5.76
_25th% case 1-131	3.81
_75th% case 1-131	4.59

The average global competitiveness index is 4.26, which is by 0.19 up compared to Croatia's GCI index. The median value is 4.22, which means that 65 countries have a lower GCI value, while 65 have a higher GCI value compared to the average. Croatia is ranked among countries whose GCI is less than 4.22 and should aim to reach the upper quarters where the GCI value is higher than 4.59.

The global competitiveness index is calculated taking into account 12 key pillars of competitiveness (Scheme 1) on a reference scale from 1 to 7 (upper reference limit is the highest value).

Figure 1: The Global Competitiveness Index framework



Source: The Global Competitiveness Report for 2016–2017 [Acceded on February 11, 2017]

It is here referred to an international survey conducted among executive respondents in leading companies and institutions, consisting of three main sub-indices. The first sub-index involves basic requirements which include 4 pillars (institutions, infrastructure, macroeconomic environment, and health and primary education). The second sub-index implies efficiency enhancers which include 6 pillars (higher education and training, goods market efficiency, labour market efficiency, financial market development, technological readiness and market size). The third sub-index implies innovation and sophistication factors which include 2 pillars (business sophistication and innovation). Politicians and political analysts should pay serious attention to this report having in mind increasing challenges in improving competitiveness. Competitiveness is a permanent challenge in pursuit of productivity, prosperity and improving quality of life. Countries ranking high have taken the challenge seriously, while others are on the way to it. For some countries it takes a lot of work and willingness to compete, with the aim of being pulling out of poverty caused by a series of causes that prevent free and responsible functioning of a system at all levels.

3. LOGISTICS PERFORMANCE INDEX (LPI)

The effect of logistics system is measured by logistics performance. The main reason for measuring logistics performance is the need for managing and improving logistics processes (Zekić, 2000, pp. 129). Globalization of production and commercial trade has led to an increase in the significance of logistics performance. Global supply chains require fast, reliable and cost effective flow of goods and the logistics sector has been recognized as one of the fundamental pillars of a country's economic development. Establishing international logistics standards is one way of determining a country's logistics ability. The World Bank has achieved a commendable progress in this area thanks to its *Trade Logistics in the Global Economy - The Logistics Performance Index and its indicators* report published every two years since 2007. The World Bank's LPI report is used as a global benchmark indicator for measuring logistics performance. LPI report provides input that enable governments and businesses to assess competitive advantage of a developed logistics system.

LPI report is made based on data collected from logistics operators in a country in which they operate. It evaluates in both qualitative and quantitative terms the main logistics areas in order to determine the country's logistics ability. LPI is a measure of a country's logistics performance and implies both international and national aspect. LPI allows us to compare 160 countries worldwide in six areas that form LPI as a composite term: 1) Efficiency of customs clearance process, 2) Quality of trade and transport-related infrastructure, 3) Ease of organizing shipments in terms of deliveries and competitive costs, 4) Competence and quality of logistics services, 5) Frequency with which shipments reach consignee within scheduled or expected time, 6) Ability to track and trace consignments. Evaluation is done using a reference scale from 1 (lowest rating) to 5 (highest).

Countries are divided in five groups based on their performance on the LPI index: 1) countries with a low LPI (less than 2.25); 2) countries that fall within the LPI score range from 2.25 to 2.5; 3) countries that fall within the LPI score range from 2.5 to 3.0; 4) countries that fall within the LPI score range from 3.0 to 3.5; and 5) countries with a high LPI (higher than 3.5). Croatia is ranked among the countries that fall within the LPI score range from 3.0 to 3.5. Top 10 countries by the LPI index have a high GCI (higher than 5), which means that the leading countries by the LPI index are the most competitive countries of the world (Table 2).

Table 2: The leading countries in the world by the LPI index

Country		LPI	GCI
Germany	DEU	4.12	5.53
Netherlands	NLD	4.05	5.50
Belgium	BEL	4.04	5.20
United Kingdom	GBR	4.01	5.43
Singapore	SGP	4.00	5.68
Sweden	SWE	3.96	5.43
Norway	NOR	3.96	5.41
Luxembourg	LUX	3.95	5.20
United States	USA	3.92	5.61
Japan	JPN	3.91	5.47

Source: By authors acc. to 2014 Logistics Performance Index and 2015-2016 GCI Report

4. DIFFERENCES BETWEEN COUNTRIES BASED ON THEIR PERFORMANCE ON THE LPI/GCI INDEX FROM THE VIEWPOINT OF ECONOMIC DEVELOPMENT

Considering the dynamic and long-term process of economic development, the World Economic Forum divides countries in three distinct but interrelated stages: First – Factor-Driven Economies where countries compete primarily on the use of unskilled labour and natural resources and companies compete on the basis of price as they buy and sell products; Second – Efficiency-Driven Economies where a country's growth comes from developing more efficient production processes and increased product quality; Third – Innovation-Driven Economies where a country's advantage comes from producing innovative products and services by using the most advanced methods.

4.1. Differences between countries based on their performance on the LPI/GCI index - Factor-Driven Economies

Factor-driven economies have a GDP per capita of less than 2,000 US Dollars (Table 3).

Table 3: Factor-driven economies

	Country	LPI	GCI
1	Botswana	2.49	4.19
2	Egypt	2.97	3.66
3	Cameroon	2.3	3.69
4	Senegal	2.62	3.73
5	Tunis	2.55	3.93
6	Philippine	3	4.39
7	India	3.08	4.31
8	Iran	2.6	4.09
9	Vietnam	3.15	4.3
10	Burkina Faso	2.64	3.21

Source: By authors acc. to 2014 Logistics Performance Index and 2015-2016 GCI Report

Descriptive statistics show that the LPI average for factor-driven economies is 2.74.

Only two of the observed countries have their LPI higher than 3.0: India (3.08) and Vietnam (3.15). India is the only country from the BRIC group (Brazil, Russia, India and China) which has entered deeply into the first stage. The other three countries have moved into the second stage, noting that China is moving rapidly towards the third stage of economic development.

A Pearson correlation was used to evaluate whether a relationship exists between GCI and the LPI (Table 4).

Table 4: Correlation between the GCI and LPI variables for factor-driven economies

Correlations (GCI_1.sta) Marked correlations are significant at p < ,05000 N=10 (Casewise deletion of missing data)				
	Means	Std. Dev.	GCI	LPI
GCI	3.950000	0.375795	1.000000	0.466561
LPI	2.740000	0.286822	0.466561	1.000000

Table 4 reveals a weak positive relationship between GCI and the LPI ($r = 0.46$; $p < 0.05$) in factor-driven economies. Weak correlations are also evident on Chart 1. This indicates underdevelopment of a country's macro-logistics system. In order to enhance competitiveness in the global market these countries must necessarily invest in transport infrastructure development (Zhao, H., Tang, Q, 2009, pp. 188), and develop a macro-logistics system as a precondition for economic development.

4.2. Differences between countries based on their performance on the LPI/GCI index – Efficiency - Driven Economies

Efficiency-driven economies have a GDP per capita of between 3,000 - 9,000 US Dollars (Table 5).

Table 5: Efficiency-driven economies

	Country	LPI	GCI
1	Bulgaria	3.16	4.32
2	Estonia	3.35	4.74
3	**Croatia**	**3.05**	**4.07**
4	Latvia	3.4	4.45
5	Hungary	3.46	4.25
6	Poland	3.49	4.49
7	Romania	3.26	4.32
8	Macedonia	2.5	4.28
…	…	…	…
25	Peru	2.84	4.21
26	Uruguay	2.68	4.09

Source: By authors acc. to 2014 Logistics Performance Index and 2015-2016 GCI Report

Descriptive statistics show that the LPI average for efficiency-driven economies is 3.1.

As many as 14 countries have their LPI higher than the average. Malaysia records the highest LPI value in the group (3.59) with the GCI of 5.23. The lowest LPI value is associated with Macedonia (LPI 2.5), even below the LPI average for the factor-driven economies (LPI 2.74).

A Pearson correlation was used to evaluate whether a relationship exists between GCI and the LPI (Table 6).

Table 6: Correlation between the GCI and LPI variables for efficiency-driven economies

Correlations (GCI_2.sta) Marked correlations are significant at p < ,05000 N=26 (Casewise deletion of missing data)				
	Means	Std. Dev.	GCI	LPI
GCI	4.350385	0.312531	1.000000	0.633398
LPI	3.109231	0.328255	0.633398	1.000000

Table 6 reveals a moderate to good positive relationship between GCI and the LPI ($r = 0.63$; $p <0.05$). Moderate to good correlations are also evident on Chart 2. This indicates moderate development of macro-logistical systems for efficiency-driven countries. In order to enhance competitiveness in the global market these countries must necessarily invest in development of market infrastructure and micro-logistics system aimed at increasing efficiency of each individual business.

4.3. Differences between countries based on their performance on the LPI/GCI index - Efficiency Innovation-Driven Economies

Innovation-driven economies have a GDP per capita of over 17,000 US Dollars (Table 7).

Table 7: Innovation-driven economies

	Country	LPI	GCI
1	Australia	3.81	5.15
2	Israel	3.26	4.98
3	Republic of Chorea	3.67	4.99
4	Taiwan	3.72	5.28
5	Belgium	4.04	5.2
6	Finland	3.62	5.45
7	Greece	3.2	4.02
…	…	…	…
21	Canada	3.86	5.31
22	USA	3.92	5.61

Source: By authors acc. to 2014 Logistics Performance Index and 2015-2016 GCI Report

Descriptive statistics show that the LPI average for innovation-driven economies is 3.74.

A total of 12 countries have their LPI value higher than the average. Germany leads the group with an LPI value of 4.12 and is the second ranked with the GCI value of 5.53 just behind Switzerland (5.76). Greece is the lowest ranked in logistics performance index (3.2), still above the LPI average for efficiency-driven countries (LPI 3.1).

A Pearson correlation was used to evaluate whether a relationship exists between GCI and the LPI (Table 8).

Table 8: Correlation between the GCI and LPI variables for innovation-driven economies

Correlations (GCI_3.sta) Marked correlations are significant at p < ,05000 N=22 (Casewise deletion of missing data)				
	Means	Std. Dev.	LPI	GCI
LPI	3.748182	0.273263	1.000000	0.784218
GCI	5.065000	0.497372	0.784218	1.000000

Source: Author

Table 8 reveals a very good to excellent positive relationship between GCI and the LPI ($r = 0.78$; $p < 0.05$) for innovation-driven economies. Very good to excellent correlations indicate highly developed macro and micro-logistics systems. In order to maintain competitiveness in the global market these countries must necessarily invest in maintaining existing and developing new infrastructure based on information and communication technologies and creating more favourable circumstances for development of entrepreneurship and innovation.

The following can be concluded from the analysis of differences between countries grouped in three distinct but interrelated stages based on their performance on the LPI index (Table 9):

Table 9: Stages of economic development

Stages of economic development	LPI	Focus of development
First – Factor-Driven Economies	<2.74 >2.74<3.1 transition 1-2	Macro-logistics system
Second – Efficiency-Driven Economies	>3.1 >3.1<3.7 transition 2-3	Micro-logistics system
Third – Innovation-Driven Economies	>3.74	ICT-based infrastructure

Source: Author

5. CONCLUSION

In less-developed countries logistics costs reach approximately twice the size of logistics costs in developed countries. The reasons for this should be sought primarily in poorly developed transport infrastructure, which fails to support flow of goods and information aimed at shortening the delivery time, and increasing reliability and flexibility. In cost structure, transportation cost and inventory cost appear to be the most significant making up to 85% of total logistics costs. This means that improvement of transport infrastructure can contribute significantly to increasing logistics performance. The infrastructure is of much higher quality in countries which record high logistics performance.

It can be concluded from the analysis of differences between countries grouped in three distinct but interrelated stages based on their performance on the LPI index that factor-driven economies should focus on macro-logistics, while the efficiency-driven economies should be oriented towards developing micro-logistics system. The innovation-driven economies should invest in maintaining existing and developing new infrastructure based on information and communication technologies and creating more favourable circumstances for development of entrepreneurship and innovation.

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Business Administration and Business Economics

ANALYSIS AND SYNTHESIS OF BUSINESS DATA FROM INFORMATION SYSTEM OF HIGHER EDUCATION INSTITUTIONS WITH EMPHASIS ON COLLEGE OF SLAVONSKI BROD

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Abstract

Information System of Higher Education Institutions in the Republic of Croatia (abbreviation ISVU) is the business information system, whose creation and maintenance is financed by the Ministry of Science and Education. It allows entry, monitoring and processing of data at university and professional studies in Croatia. ISVU provides free information system, free education for using the system, technical support, reports on the performance of students who have passed the exams, view of business data according to certain criteria (10% of the best students, the average grade at the final exam, etc.) allows creation of various reports, design of schedules and it places less burden on the institution's Student Administration

Office. It also enables students to apply for and to withdraw applications for exams on the Internet, information about exams via e-mail, enrollment without queuing. It provides lecturers with updates of weekly curriculum for classes, review of exam dates, review of student's status as well as data related to the completion of the study. The ultimate goal of ISVU is to raise the quality of higher education as a whole and the quality of individual studies.

College of Slavonski Brod also uses ISVU. Hence, in this paper authors have analyzed relevant business data from ISVU for undergraduate and specialist graduate studies in Management, for 5 previous academic years (from 2012/2013 to 2016/2017). Since students at studies in Management make the half of all enrolled students at College of Slavonski Brod, the emphasis of this paper was put precisely on them. This study included data on the number and status of students, data on the counties that they came from, the achieved average grades in secondary schools and vocational secondary schools.

Analysis of the most relevant business data has shown that e.g. it is evident that students who have enrolled for full-time study have achieved higher average grade in secondary school, while those students who have enrolled for part-time study have achieved lower average grade in secondary school; analysis of educational sectors has shown that full-time students mainly finished secondary schools in educational sector of economy, trade and business administration, while part-time students finished secondary schools for variety of other sectors. Interconnected was business data synthesis, that takes into consideration all academic years that has shown e.g. increases and decreases number of students; increases and decreases of the total number of points achieved at the state graduation exam (with and without admission exam). Authors have also composed closing paragraphs i.e. roundups that were utilized to make recommendations with regard to various instances that require certain actions.

In the last part authors have concluded all parts of this paper whose aim was to contribute to solidifying foundations for the positive future developments and for potentially new study programs at the College of Slavonski Brod. All of those parts have the potential to attract new and larger number of undergraduate and graduate students, for all mentioned departments, including Social department.

Keywords: *Analysis, Synthesis, Business data, Information System of Higher Education Institutions, College of Slavonski Brod, Undergraduate and Graduate Students in Management*

JEL Classification: A11, A12, A22, A23, C60, I20, I21, I23, M20

1. INTRODUCTION

In recent years there was the increasing trend when it comes to number of students and universities in the Republic of Croatia. Increasing number of highly educated population is very important for development and progress of the entire country's economy.

In their recent paper Efficiency analysis of higher education in Croatia, Horvat Novak and Hunjet gave an overview of the number of students in Croatia from 2001 to 2013. In their paper they have shown that the number of students was growing in all these years except in 2005, 2010 and 2013, when a slight drop in the number of enrolled students was recorded. The same authors have investigated the ratio of the number of students enrolled for the first year of undergraduate university and professional studies in the period from 2008 to 2013. Their results have shown that a larger number of students enroll for university studies in comparison to those who enroll for the professional studies. Regarding the first-year graduate students, the situation is the same, because a significantly higher number of students enroll for university graduate studies in comparison to the professional specialist graduate studies.

Hence, the first purpose of this paper is to analyze the number of students who have enrolled for undergraduate and graduate professional studies in Management at the College of Slavonski Brod, in the period of 5 academic years, from 2012/2013 to 2016/2017. In addition, the second purpose of this paper is to analyze and to synthesize relevant business data that is primarily college-related, whereas they also include data that was obtained from Agency for Science and Higher Education of the Republic of Croatia through ISVU.

2. MAIN CHARACTERISTICS OF INFORMATION SYSTEM OF HIGHER EDUCATION INSTITUTIONS (ISVU)

This part of the paper begins with the description of ISVU i.e. Information System of Higher Education Institutions, from where relevant business data were collected for all analyses within this paper. Criteria according to which these business data were analyzed are numerous and various. Furthermore, that also applies to data that was obtained from Agency for Science and Higher Education of the Republic of Croatia.

ISVU is the Information System of Higher Education Institutions in the Republic of Croatia, whose creation and maintenance is financed by the Ministry of Science and Education. It also allows monitoring and processing of business data at university and professional studies in Croatia. Moreover, it provides: free information system, free training to use the system, technical support and constant care of the proper functioning of the system, ad-hoc reports on students' achievements, view of entered data according to certain criteria (10% of the best students, the average score at the final exams, etc.), creation of reports (which are periodically requested by Ministry of Science and Education and by other higher education institutions, etc.), placement of less burden on the student Administration Office and creation of timetables. With ISVU's current capabilities all students can make applications and withdrawal of applications for exams on Internet, get information about exams by e-mail, obtain confirmation documents after working hours of Student Administration Office and enroll without queuing. Lecturers are able to edit their weekly curriculum of lectures and tutorials, to describe data for their courses such as content and references, to review data regarding exams and status of their students, etc.

The ultimate goal of ISVU is to raise the quality of higher education and quality of studying. In that sense, Ministry of Science and Education provides funding for the development and regular functioning of ISVU and supervises its everyday work. In addition to the reduction of number of administrative tasks for students, teaching staff and administrative (non-teaching) staff, ISVU has positive influence on increase of accuracy and availability of business data what consequently helps in making business decisions and developing business strategies. What is more, ISVU allows data to be stored and it actively supports all administrative processes.

Since processes within certain higher education institution physically take place in numerous offices (enrollment of students takes place in student administration office, all data on employees are monitored in human resources department etc.), ISVU has different integrated modules that support the processes in higher education (Studies and Students, Exams, Studomat, Human Resources, etc.). All these integrated modules work as unified business information system with the common goal to improve the whole organization as well as business processes and workflows of higher education institutions in Croatia.

3. KEY INFORMATION ON COLLEGE OF SLAVONSKI BROD

In November 2005 City of Slavonski Brod and Brod-Posavina County have started the initiative to establish the College of Slavonski Brod in the near future. College of Slavonski Brod was established on 28 September 2006 by Croatian Government Decree and the initiative of Brod-Posavina County and City of Slavonski Brod.

Concerning structure, College of Slavonski Brod is composed of the following 3 departments: Social Department, Agricultural Department and Technical Department. Short descriptions of those 3 departments are provided in continuation.

- Members of Social Department teach, research and develop in the field of economics and (primarily) in the branch of management. The aim of professional undergraduate study program in management is education in economics (at bachelor level) for various professional activities in businesses such as, namely, organization, marketing, accounting, commerce, etc. Professional undergraduate study program in management consists of 6 semesters. After passing all exams and successful defense of the undergraduate thesis, student acquires the professional title: professional bachelor of economics. From academic year 2013/2014 onwards the College of Slavonski Brod also organizes professional graduate study program in Management. After professional undergraduate study program in Management (180 ECTS over 6 semesters) students can continue studying at the professional graduate study program in Management (120 ECTS over 4 semesters). After passing all exams and successful defense of the graduate thesis, student acquires the professional title: professional specialist in economics. The emphasis of this professional graduate study program in Management was put on production, logistics, entrepreneurship, global economy and European Union, seeking new opportunities for companies, new growth for companies and start of entrepreneurial activities.
- At Agricultural Department students of Plant Production with specialization in Horticulture and Farming, gain knowledge from almost all branches of agricultural production e.g. they especially gain the skills necessary to work with the horticultural and field crops. The aim of this study is to educate contemporary experts in horticul-

ture and farming for self-management of technological processes in all parts of horticultural and agricultural production. The study of Plant Production is comparable to the programs in European Union by its structure and syllabus. Agriculture Department, by following the examples of professional studies worldwide (Greenmount College from Northern Ireland, Modesto Junior College from California and Harper Adams University from England, etc.), aims to train experts who contribute to increasing vegetable, flower, crop, fruit and grape production. Expected duration of undergraduate study program is 6 semesters (with a total of 180 ECTS points) in which students gain necessary theoretical and practical knowledge. After they pass all their exams and they successfully defend their undergraduate thesis students acquire the professional title: professional bachelor - engineer of plant production.

- At Technical Department there is Professional Undergraduate Study Program in Production Engineering lasts for 6 semesters over 3 years and for its completion students need to achieve 180 ECTS. This study program provides students with knowledge and skills necessary to perform professional tasks and to be directly engaged within the work processes in the fields of mechanical engineering; from design, production preparation, production process, products control, equipment maintenance to environmental protection. Students are taught to create simple structures and tools, to use CAD software, to choose materials and fabrication technology and to support production with logistics. Continuation of this study is possible at universities that perform specialist professional graduate study program in engineering or graduate study in engineering. After they pass all their exams and they successfully defend undergraduate thesis student acquires the title: professional bachelor of mechanical engineering.

Everything previously mentioned about College of Slavonski Brod represent solid foundations for its future developments as well as for potentially new professional undergraduate study programs and professional graduate study programs.

4. RELEVANT BUSINESS DATA REGARDING STUDENTS OF PROFESSIONAL UNDERGRADUATE STUDY PROGRAM IN MANAGEMENT

In this part of paper authors emphasize students of Professional Undergraduate Study Program in Management at College of Slavonski Brod. To obtain more complete overview of enrolled students, the period of 5 academic years from 2012/2013 to 2016/2017 was covered and analyzed. Students of Undergraduate Study Program Management who have enrolled for those academic years were analyzed based on these, primarily college-related, relevant business data: status (full-time / part-time), number of enrolled students, county of origin, average grade achieved during secondary school, the total number of points achieved at the state graduation exam (with and without admission exam) and educational sector of finished secondary school. In these analyses authors have also included the data from Agency for Science and Higher Education of the Republic of Croatia and data that College of Slavonski Brod obtains through ISVU.

Analyses of business data, for students of Professional Undergraduate Study Program in Management who have enrolled for the first year of study in the academic year 2012/2013, have shown that:

- 79 full-time students and 60 part-time students have enrolled for the first year of undergraduate study
- The average grade that full-time students have achieved during secondary school was 3,83, while the average grade of part-time students was 3,42
- The average number of points that full-time students have achieved at the state graduation exam (with and without admission exam) was 584,66 while the average number of points of part-time students was 516,33
- The highest percentage of students was from Brod-Posavina County (49,37% of full-time students and 80,00% of part-time students)
- Prevailing 49,37% of full-time students who have enrolled were from all secondary schools that belong to educational sector Economy, trade and business administration
- Prevailing 43,33% of part-time students who have enrolled were from all secondary schools that belong to educational sector Economy, trade and business administration.

Analyses of business data, for students of Professional Undergraduate Study Program in Management who have enrolled for the first year of study in the academic year 2013/2014, have shown that:

- 76 full-time students and 59 part-time students have enrolled for the first year of undergraduate study
- The average grade that full-time students have achieved during secondary school was 3,78, while the average grade of part-time students was 3,34
- The average number of points that full-time students have achieved at the state graduation exam (with and without admission exam) was 570,69 while the average number of points of part-time students was 537,36
- The highest percentage of students was from Brod-Posavina County (50,00% of full-time students and 76,28% of part-time students)
- Prevailing 50,00% of full-time students who have enrolled were from all secondary schools that belong to educational sector Economy, trade and business administration
- Prevailing 50,85% of part-time students who have enrolled were from all secondary schools that belong to educational sector Economy, trade and business administration.

Analyses of business data, for students of Professional Undergraduate Study Program in Management who have enrolled for the first year of study in the academic year 2014/2015, have shown that:

- 79 full-time students and 64 part-time students have enrolled for the first year of undergraduate study
- The average grade that full-time students have achieved during secondary school was 3,77, while the average grade of part-time students was 3,34
- The average number of points that full-time students have achieved at the state graduation exam (with and without admission exam) was 567,06 while the average number of points of part-time students was 518,95
- The highest percentage of students was from Brod-Posavina County (45,57% of full-time students and 68,75% of part-time students)
- Prevailing 54,43% of full-time students who have enrolled were from all secondary schools that belong to educational sector Economy, trade and business administration

- Prevailing 43,75% of part-time students who have enrolled were from all secondary schools that belong to educational sector Economy, trade and business administration.

Analyses of business data, for students of Professional Undergraduate Study Program in Management who have enrolled for the first year of study in the academic year 2015/2016, have shown that:

- 73 full-time students and 53 part-time students have enrolled for the first year of undergraduate study
- The average grade that full-time students have achieved during secondary school was 3,80, while the average grade of part-time students was 3,41
- The average number of points that full-time students have achieved at the state graduation exam (with and without admission exam) was 585,91 while the average number of points of part-time students was 521,55
- The highest percentage of students was from Brod-Posavina County (53,42% of full-time students and 71,70% of part-time students)
- Prevailing 53,42% of full-time students who have enrolled were from all secondary schools that belong to educational sector Economy, trade and business administration
- Prevailing 50,94% of part-time students who have enrolled were from all secondary schools that belong to educational sector Economy, trade and business administration.

Analyses of business data, for students of Professional Undergraduate Study Program in Management who have enrolled for the first year of study in the academic year 2016/2017, have shown that:

- 76 full-time students and 35 part-time students have enrolled for the first year of undergraduate study
- The average grade that full-time students have achieved during secondary school was 3,65, while the average grade of part-time students was 3,50
- The average number of points that full-time students have achieved at the state graduation exam (with and without admission exam) was 576,83 while the average number of points of part-time students was 566,92
- The highest percentage of students was from Brod-Posavina County (56,58% of full-time students and 71,43% of part-time students)

- Prevailing 61,84% of full-time students who have enrolled were from all secondary schools that belong to educational sector Economy, trade and business administration
- Prevailing 60,00% of part-time students who have enrolled were from all secondary schools that belong to various educational sectors (excluding Economy, trade and business administration).

As conclusions of 4th part, syntheses of business data for all students who have enrolled for Professional Undergraduate Study Program in Management in academic years from 2013/2014 to 2016/2017 have shown that:

- Number of enrolled full-time students was largely stable from 2013/2014 to 2016/2017, since it fluctuated between 73 and 79, what is increase by 8,22% between the worst and the best among 5 academic years
- Number of enrolled part-time students was somewhat stable from 2013/2014 to 2015/2016, since it fluctuated between 53 and 64, what is increase by 20,75% between the worst and the best among 5 academic years, but evident is the decrease from 53 to 35 i.e. the decrease by 33,96% in a single academic year i.e. between 2015/2016 and 2016/2017
- The average grade that full-time students have achieved during secondary school was completely stable from 2013/2014 to 2016/2017, since it fluctuated between 3,65 and 3,83, what is increase by 4,93% between the worst and the best among 5 academic years
- The average grade that part-time students have achieved during secondary school was completely stable from 2013/2014 to 2016/2017, since it fluctuated between 3,34 and 3,50, what is increase by 4,79% between the worst and the best among 5 academic years
- The average number of points that full-time students have achieved at the state graduation exam was completely stable from 2013/2014 to 2016/2017, since it fluctuated between 567,06 and 585,91, what is increase by 3,32% between the worst and the best among 5 academic years
- The average number of points that part-time students have achieved at the state graduation exam was largely stable from 2013/2014 to 2016/2017, since it fluctuated between 516,33 and 566,92, what is increase by 9,80% between the worst and the best among 5 academic years
- The highest percentage of full-time students was from Brod-Posavina County what was somewhat stable from 2013/2014 to 2016/2017 since it

fluctuated between 45,57% and 56,58%, what is increase by 24,16% between the worst and the best among 5 academic years

- The highest percentage of part-time students was from Brod-Posavina County what was largely stable from 2013/2014 to 2016/2017 since it fluctuated between 68,75% and 80,00%, what is increase by 16,36% between the worst and the best among 5 academic years
- Prevailing percentage of full-time students who have enrolled are from all secondary schools that belong to educational sector Economy, trade and business administration what was somewhat stable from 2013/2014 to 2016/2017 since it fluctuated between 49,37% and 61,84%, what is increase by 25,26% between the worst and the best among 5 academic years
- Prevailing percentage of part-time students who have enrolled are from all secondary schools that belong to educational sector Economy, trade and business administration what was somewhat stable from 2013/2014 to 2015/2016 since it fluctuated between 43,33% and 50,94%, what is increase by 17,56% between the worst and the best among 5 academic years, but evident is the increase i.e. a total of 60,00% of part-time students who have enrolled were from all secondary schools that belong to various educational sectors (excluding Economy, trade and business administration).

After analyses and syntheses of business data sets from the whole 4th part, it is evident that it includes a total of 2 instances that are worth considering and analyzing by business decision makers at the College of Slavonski Brod. The first one is the decrease in enrollment of part-time students from 53 to 35 i.e. by 33,96% that happened in a single academic year i.e. between 2015/2016 and 2016/2017 that could be solved by in-depth analysis of business data and by compressive survey among students. The second one the increase i.e. a total of 60,00% of part-time students who have enrolled were from secondary schools from various educational sectors (excluding Economy, trade and business administration), that could be solved by in-depth analysis of business data to verify the structure of enrolled part-time students.

5. RELEVANT BUSINESS DATA REGARDING STUDENTS OF PROFESSIONAL GRADUATE STUDY PROGRAM IN MANAGEMENT

College of Slavonski Brod also organizes professional graduate study program in Management. The first generation of students has enrolled for the academic year 2013/2014. In this part of paper data on students who have enrolled over the course of 4 previous academic years i.e. from 2013/2014 to 2016/2017 are presented. The emphasis was put on the structure of students who have enrolled for these academic years and especially on how many of professional bachelors from College of Slavonski Brod have decided to continue their study at the professional graduate study program in Management.

Analyses of business data, for students of Professional Graduate Study Program in Management who have enrolled for the first year of study in the academic years from 2013/2014 to 2016/2017, have shown that:

- In the academic year 2013/2014 there was a total of 58 enrolled students, 98,31% of which have formerly completed professional undergraduate studies at the College of Slavonski Brod
- In the academic year 2014/2015 there was a total of 42 enrolled students, 95,24% of which have formerly completed professional undergraduate studies at the College of Slavonski Brod
- In the academic year 2015/2016 there was a total of 42 enrolled students, 78,57% of which have formerly completed professional undergraduate studies at the College of Slavonski Brod
- In the academic year 2016/2017 there was a total of 38 enrolled students, 84,21% of which have formerly completed professional undergraduate studies at the College of Slavonski Brod.

As conclusions of 5th part, syntheses of business data for all students who have enrolled for Professional Graduate Study Program in Management in academic years from 2013/2014 to 2016/2017 have shown that:

- Number of enrolled students was continually decreasing from 2013/2014 to 2016/2017, with decrease from 58 to 38 i.e. the decrease by 34,48% in 4 academic years between 2013/2014 and 2016/2017, with 2014/2015 and 2015/2016 having the same number of enrolled students

- Percentage of former students from the College of Slavonski Brod was slightly increasing and it was extremely high in 2013/2014 and 2014/2015, it decreased to a very small extent i.e. by 17,50% in 2015/2016 and, very positively, it increased to an extremely small extent i.e. by 7,18% in 2016/2017.

After analyses and syntheses of business data sets from the whole 5th part, it is indicative that it encompasses total of 2 instances that are worth considering and analyzing by business decision makers at the College of Slavonski Brod. The first one is the decreasing number of all enrolled students that has decreased from 58 to 38 i.e. by 34,48% in 4 academic years form 2013/2014 to 2016/2017 that could be solved by comprehensive survey among students as well as by systematic promotion and by constant emphasis of benefits that graduate study program offers, especially, to working students. The second one are, obviously, positive opinions by the former students of the College of Slavonski Brod who constantly stand for between cca 8 and cca 10 out of 10 enrolled students who definitely embody positive development potential for Graduate Study Program in Management that could be used and increased by motivating the best and the most successful students to become leading representatives of Study.

6. CONCLUSION

Currently, College of Slavonski Brod organizes a total of 3 professional undergraduate studies: Management, Plant Production, and Production Engineering. From academic year 2013/2014 onwards, it also organizes professional graduate study program in Management. Since, students in both Management studies account for half of all enrolled students; the emphasis in this paper was put on them.

Furthermore, Information System of Higher Education Institutions in the Republic of Croatia enables its users to link processes within this whole higher education institution. Since those processes usually physically take place in numerous and various offices, ISVU has immense importance because its different integrated modules that all jointly function as unified business information system represent all-in-one solution from which business data were collected for the purpose of this paper.

More than 11 year ago, in November 2005, City of Slavonski Brod and Brod-Posavina County have started the initiative to establish the College of Slavonski Brod in the near future, what happened on 28 September 2006. In the structure of College of Slavonski Brod, which is composed of 3 departments, Social Department was the most prominent one within this paper since it traditionally organizes both Undergraduate and Graduate Study in Management, whose students were the ones who entered the most relevant business data in ISVU that were also collected for the purpose of this paper.

In brief, authors have composed detailed analysis of relevant of business data that reveals:

- 30 (5×6) key points regarding Professional Undergraduate Study Program in Management
- 4 (1×4) key points regarding Professional Graduate Study Program in Management.

In order to complete the 4th part and the 5th part of this paper, authors have composed detailed synthesis of relevant business data that includes:

- 10 key points regarding Undergraduate Study
- 2 key points regarding Graduate Study
- 2 roundups i.e. 1 for each aforementioned Study, with constructive, applicable and collegial recommendations with regard to instances that require effective and positive actions.

On the topic of students, in this paper, authors have processed, analyzed and synthesized data on the number and status of students, data on the counties they come from, the achieved average grades in secondary school and educational sector of finished high school. All these data should be considered as relevant business data for all employees and decision makers at the College of Slavonski Brod. Based on conjunction of processed, analyzed and data authors have concluded that students who have enrolled for Professional Undergraduate and Graduate Study Programs in Management at College of Slavonski Brod mainly come from The Brod-Posavina County and authors' assumption, based on numerical analysis of data, is that this tendency will continue in the future because it is College's own county. Numerical business data also revealed that the exceptionally large percentage of students at professional graduate study program previously completed professional undergraduate studies at College of Slavonski Brod. However, it is visible that this number has slightly decreased in the previous 2 academic years i.e. 2015/2016 and 2016/2017. Some of the important reasons (that were not elaborated in this paper) are worsening economic situation in Brod-Posavina County and its neighboring counties in comparison to the rest of the Croatia and the continuous process of emigration from Slavonia region (and its 5 counties), especially that of younger people and families.

By taking into consideration everything previously written in this paper, valid conclusion is that College of Slavonski Brod is, primarily regionally, recognized among diverse student population and as such it claims its place among higher education institutions in Eastern Croatia and Slavonia region. Yet, this and related analysis and synthesis are logically necessary in order to establish solid foundations for its positive future developments and for potentially new study programs that would attract new and larger number of undergraduate and graduate students, for all its departments, including Social department.

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ASSOCIATION MODELS OF MICRO AND SMALL ENTERPRISES ON EXAMPLE OF OZAS

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Abstract

The micro and small entrepreneurs and craftsmen often team up in different organization types because they want to compete on market together. Whether it is a temporary association, to produce and perform only a specific task, or that it is a more stable and longer-term association, the key to success lies in their collaboration.

OZAS – Trades, production, service, is cooperative that was founded in 1948, and throughout the history changed a few names. Cooperative in 1970 becomes authorized to perform craft work. Research that was conducted on the data obtained from the manager of the cooperative showed how Cooperative survived until today. Analysis of activities and orientation of Cooperatives, and its financial success are evidence that association helps in survival of economic fluctuations and crises. Cooperative operates in the construction sector, a sector which has recorded a dramatic decline in recent years.

The aim of this paper is to try to describe the Cooperative action on the economy and members of cooperatives through positive example of OZAS's.

Keywords: *cooperatives, joint market approach, OZAS, history of cooperatives*

JEL Classification: L5, L53

1. INTRODUCTION

By studying today's market from the aspect of globalization is of great importance for each company to be competitive, so that it can survive in the market. Given that there is great competition each enterprise must be able to cope and respond to new challenges posed by the market. One of answers on specified is located in mergers such as cooperatives. Through most of the history economics did not exist as a science, even Adam Smith, who is considered to be a founder of economics as a science back in the 18th century regarded the economy as part of legal science. The economy as such takes shape only in moment when there was awareness of market and the manner of market functioning. Time 500-300 BC was dominated by warfare. The greatest significance had economic and organizational efficiency, while the man was the center of everything. A lot of confidence is not given to self-regulatory abilities of individuals who made decisions and influence to maximize human happiness, but they could not at that time to reveal a self-regulatory market which actually represents a modern economy (Ekelund & Hebert; 1997, p. 15.). If we consider the economy and given today's economy there isn't a very large gap, as economy and trade today similarly are functioning. However, today's economy is that market is more demanding due to a number of similar or nearly identical products and services offered on the market. Today's market can be called a game where the best win and weaker lose. For this reason there is a need for networking and merging. In order to prove above mentioned in this paper are processed data obtained from manager of cooperative OZAS (trades production and service, trade association) in Samobor.

According to the Law on Cooperatives (NN 34/11, 125/13, 76/14), "the Cooperative is a voluntary, open, stand-alone, and independent society which is managed by its members, and through work and other activities or use of its services, on the basis of collectivity and mutual assistance they achieve, advance, and protect their individual and collective economic, social, educational, cultural, and remaining needs and interests, and achieve the goals for which the cooperative was founded"

Relations between the members of the cooperative are governed by cooperative principles:

- Voluntary and open membership - membership in the association is voluntary and open to all people who use its products and services
- Control of operations by members - cooperative is a democratic society whose work is controlled by its members and actively participates in the creation of policies and decision-making.
- Economic participation member's cooperative and distribution - duty members of the cooperative, according to their interests and abilities, participation in the work and contribution to the development of cooperatives. Members of cooperative distribute profits on one or more of the following purposes; development of cooperatives, increase reserves, to members - proportion to business with the cooperative and to support other activities cooperative
- Autonomy and independence - as an autonomous and independent legal entity cooperative in legal transactions with other legal entities and state authorities rely on work of its members and cooperative resources.
- Education, training and information to members cooperative - cooperative carries out education and training of their members, elected representatives, managers and employees to contribute to development of their cooperative.
- Cooperation among Cooperatives - cooperative serves their members most effectively and strengthens cooperative system of coordination and cooperation at local, regional, national and international levels.
- Caring for the community - cooperative operates in a way that it contributes to sustainable development of environment and local community (Pavičić Rešetar, et.al; 2016, 10).

2. HISTORY OF OZAS IN SAMOBOR

OZAS is Trade and production-service, commercial cooperative in Samobor. OZAS was founded in 1948, and throughout the history of its operation changed its name several times. The cooperative in 1970 becomes authorized to perform craft work. The beginnings of cooperatives date back to the distant past and may be required at a time when the family became the first form of a common economy and common life, or home cooperatives. After the dissolution of feudalism, social change and development of the economy and industry, home cooperatives perish. In the second half of the 19th century, farmers and workers associated in cooperatives to, in the conditions of rapid development of industry and shopping economy, protect its position and interests. The history of entrepreneurship in Samobor dates back to early 1241, when the Charter of the Hungarian-Croatian king Bela IV granted Samobor the status of free royal town. Samobor was developed as a town in the territory of the former Okić feudal fortress. That part was and still is full of natural resources due to its geographical position. From Bela's Charter, or from the middle of the 13th century in Samobor was possible to freely dispose of property, sell it, inherit and trade. The surviving archival records from the 15th and 16th centuries mention craftsmen, as an example on the construction of Samobor parish church where they were engaged numerous craftsmen (bricklayers, stonemasons, blacksmiths, painters, etc.). In the mid-18th century there was a list of master craftsmen who were required to pay taxes. Craftsmen have organized their guilds, since merging in guilds gained them safer working conditions and survival on the market. Guild's where established by competent authority or ruler. In postwar 1948 preparations begin for craft cooperatives establishment, although the law allowed it, the problem was in administration. Yet its members succeed in their plans, and on 1 September 1949, they established a cooperative called Crafts purchase sales cooperatives and they are entered in the register of cooperatives of the District People's Committee Samobor. The establishment was published in the Official Gazette but in 1951 and only then cooperative can start with the business.

The subject of business was defined as wholesale:

1. Leather and accessories
2. Textiles and leather goods
3. Iron and other metallic goods
4. Paints, lacquers, chemicals
5. Cosmetic goods
6. Construction materials
7. Glass, china

8. Foodstuffs and household necessities
9. Toys
10. Tobacco products, cigarettes. (Škiljan et.al.; 2008.,141.)

Members of cooperatives final products could be sold for consumer use throughout the country, but raw materials and intermediates cooperative could sell only to their members. OZAS even today successfully operates, but has solely focused to construction sector. Cooperative today has 25 members which can meet all requirements in the construction sector.

3. SITUATION AND MOVEMENT IN CONSTRUCTION SECTOR IN CROATIA

The construction sector forms an important part of Croatia economy, so that the share of construction business in GDP in the observed period from 2000 to 2015, underwent a major expansion and a major recession. Looking at period from 2000, when the share of the construction sector in GDP was 5.0%, it grew until 2008, when it stood at 8.5%. The reason for expansion is located in two directions, first direction is development and investment in transport infrastructure, while the other direction is growth of housing construction. However, in period from 2010 to 2015 the share of construction sector begins to decline. During this period, ongoing recession hit construction sector, as can be seen from tables and charts.

Table 1 - The share movement of construction sector in GDP

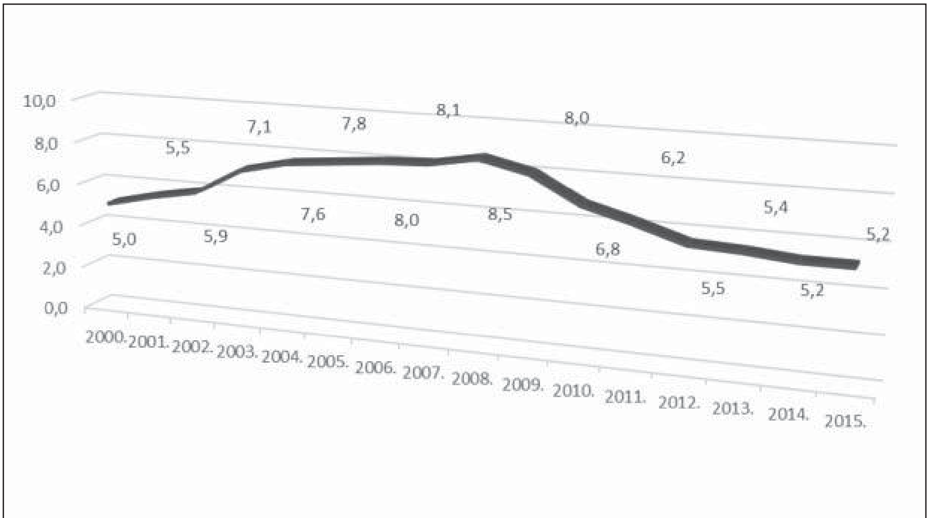
Year	% u BDP-u
2000.	5,0
2001.	5,5
2002.	5,9
2003.	7,1
2004.	7,6
2005.	7,8
2006.	8,0
2007.	8,1
2008.	8,5
2009.	8,0
2010.	6,8

2011.	6,2
2012.	5,5
2013.	5,4
2014.	5,2
2015.	5,2

Source: created by authors based on UNECE

According to the table above it is possible to make a graph to visualize the share movement of construction sector in GDP in Republic of Croatia.

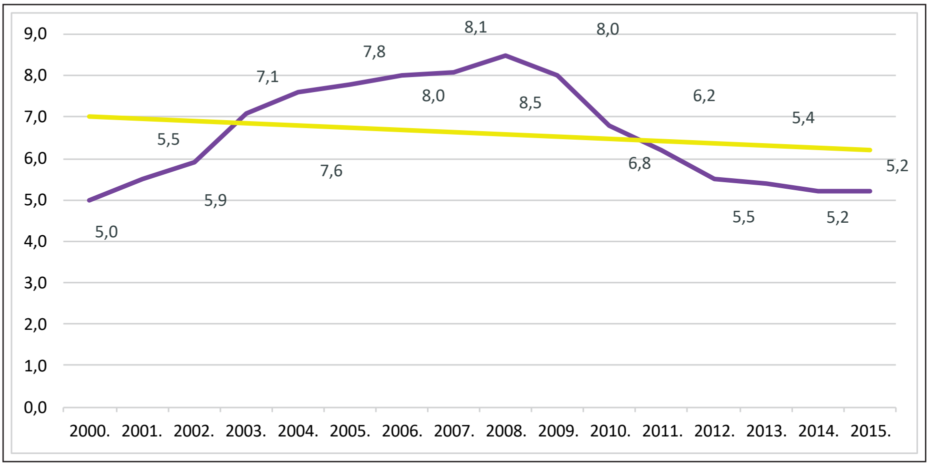
Chart 1. - The share movement of construction sector in GDP



Source: created by authors based on UNECE

Trend in share of construction sector in GDP is seen in Chart 2, and it can be seen that the trend has declining character.

Chart 2. – Display of construction sector share trend in GDP



Source: created by authors based on UNECE

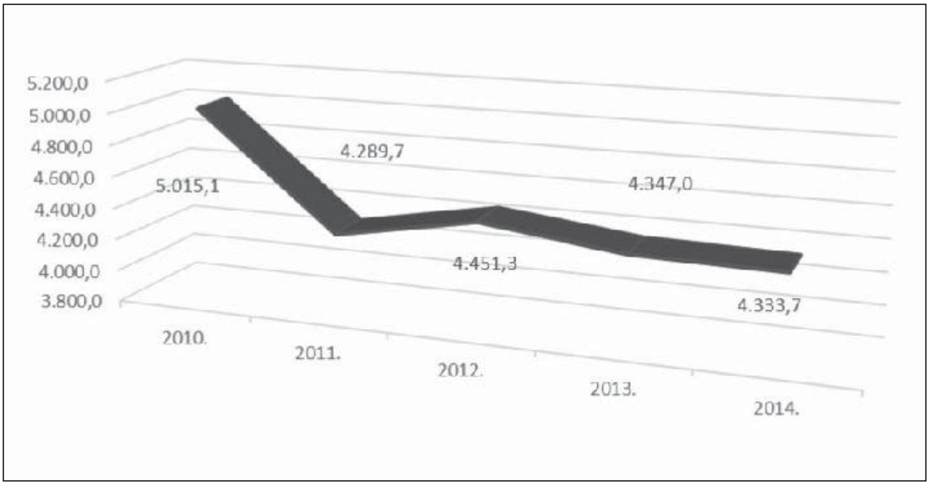
Ten largest businesses that earn revenue primarily in the construction sector recorded a big drop in total revenue. The base year is 2010, and a decline in 2011 is 14.46% in 2014 there was a decrease of 13.59%. Yet another indicator that recession hit construction sector. If comparing 2014 with 2010, one can see a significant drop in revenue top ten enterprises in the construction sector of 13.59%. In all years of the analyzed period there was a decrease as can be seen from Table 2.

Table 2 - Display of total revenues top ten enterprises in the construction sector (in mil. kn), by chain and base indexes

Year	Total revenues (in mil. kn)	Chain indexes	Rate of change	Base indexes (2010)	Rate of change
2010.	5.015,1			100,00	
2011.	4.289,7	85,54	-14,46	85,54	-14,46
2012.	4.451,3	103,77	3,77	88,76	-11,24
2013.	4.347,0	97,66	-2,34	86,68	-13,32
2014.	4.333,7	99,69	-0,31	86,41	-13,59

Source: created by authors based on UNECE

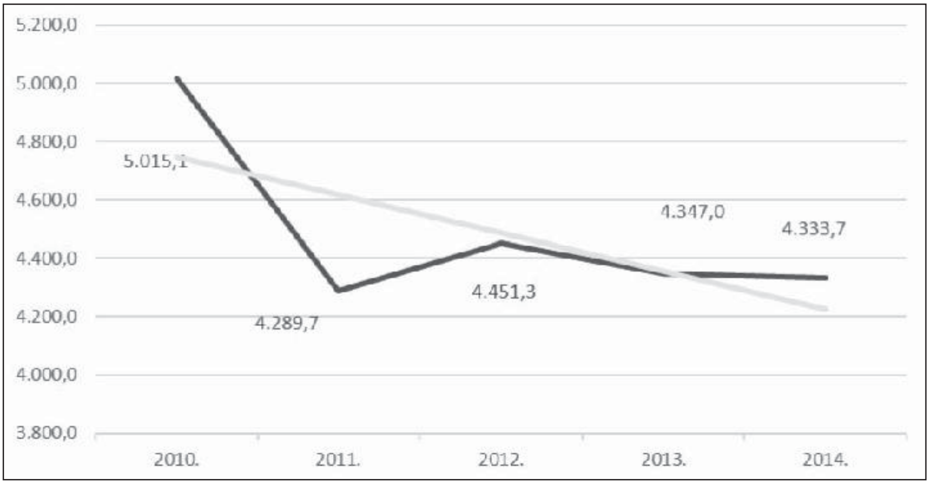
Chart 3. – Display of total revenues top ten enterprises in the construction sector (in mil. kn)



Source: created by authors based on UNECE

Trend of total revenues top ten enterprises in the construction sector is seen in Chart 4, and it can be seen that the trend has declining character.

Chart 4. – Trend of total revenues top ten enterprises in the construction sector (in mil.kn)



Source: created by authors based on UNECE

According to Chart 4, which shows trend of total revenues top ten enterprises in the construction sector major decline is visible, with a focus on year 2011 compared to 2010, where is recorded the biggest drop by 14.46%.

Given that information on the share of the construction sector in GDP and display of total revenues top ten enterprises also in the construction sector can be concluded that the construction sector in period of 2010 to 2014, has a tendency to fall or stagnate.

4. OVERVIEW OF REVENUES AND BUSINESS OPERATIONS IN OZAS-IN

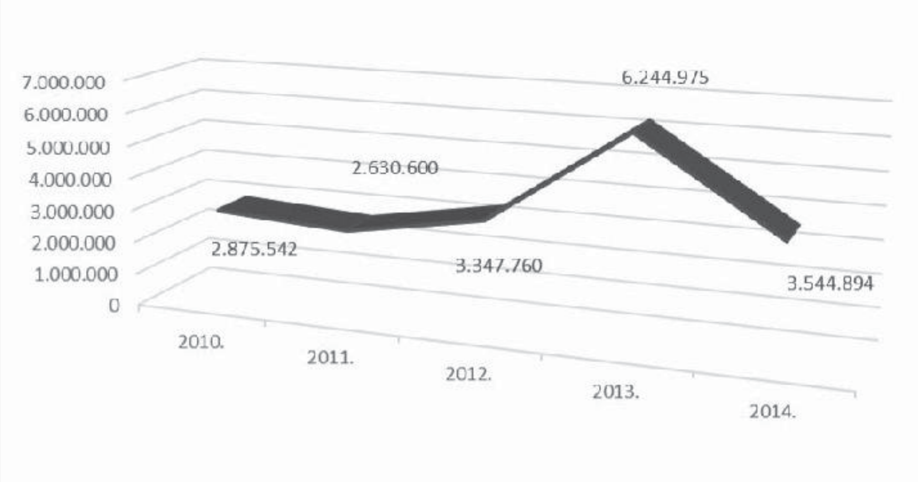
In the period from 2010 to 2015, the construction sector in Croatia had a tendency to decline. OZAS does not share the same fate in observed period as the construction sector in Croatia, and as the top ten enterprises in the construction sector. Looking at the data from Table 3, one can see that the total revenues in 2011 decreased by 8.52% compared to 2010, but it is necessary to consider the reduction in the top ten enterprises in the construction sector, which amounted to 14,46%. However, in 2012 compared to the year 2011 total revenues comes to an increase for 27.26%, while the top ten enterprises in Croatia increased over the same period of 3.77%. Largest growth in total revenues is in 2013 relation to the business in 2012 of 86.54%, while the top ten enterprises in Croatia had recorded a decline in total revenues of 2.34%. Precisely these data and the comparison proves that during the recession businesses can reach growth with the help of association such as OZAS.

Table 3. Movement of total revenues of OZAS (in mil.kn)

Year	Total revenues (in mil. kn)	Chain indexes	Rate of change	Base indexes (2010)	Rate of change
2010.	2.875.542			100,00	
2011.	2.630.600	91,48	-8,52	91,48	-8,52
2012.	3.347.760	127,26	27,26	116,42	16,42
2013.	6.244.975	186,54	86,54	217,18	117,18
2014.	3.544.894	56,76	-43,24	123,28	23,28

Izvor: izradili autori prema podatcima upravitelja OZAS-a

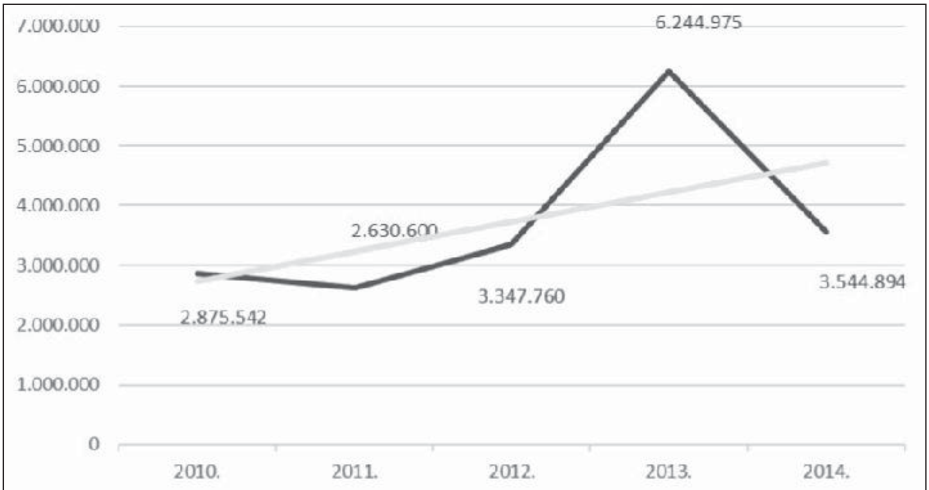
Chart 5. - Display of total revenue of OZAS (in mil.kn)



Source: created by authors based on data obtained from the OZAS manager

Trend of OZAS total revenues is seen in Chart 6, and it can be seen that the trend has growing character.

Chart 6. – Trend of OZAS total revenues (in mil.kn)



Source: created by authors based on data obtained from the OZAS manager

OZAS its revenues and revenue of its members realizes as a part of public work on public spaces and institutions and individual clients, and the ability to offer a greater range of services due to different profiles of its members is exactly reason why clients choose OZAS. It should be noted that OZAS members also act independently on market, and very often collaboration between each other, so we can say that cooperative is transmitted to the business outside the cooperative. Here we can really see synergy effect. Small craftsmen and entrepreneurs are renowned for their agility in business, and unlike large companies can quickly adapt to the new situation. Cooperative OZAS can be a shining example of how the small businesses can together do more. In the observed period some of the works carried out shows variety of services offered by the cooperative:

1) Old Town Žumberak - archaeological conservative works
2) Church. Petka - Budinjak - drainage around the church
3) Settlement in Rakov Potok - construction of the secondary network
4) Primary school Samobor - Construction of the boiler room for gasification
5) City Hall Samobor - Roofing work, painting facades and windows

5. CONCLUSION

According to the Statistical Yearbook for 2015 in Croatia on 31.12.2015 in construction sector there is a total of 888 cooperative and from them 168 are active. The key to success for micro and small businesses and craftsmen is joining in different shapes and forms, in order to join forces and be competitive on market. It is not merely a long-term alliance, but also on temporary alliances to produce and perform a specific task. Based on the financial success or results can be demonstrated that association can help in surviving the economic crisis. Cooperative OZAS operates in the construction sector, which has proven to be stagnating during the recession. The share of the construction sector in Croatian GDP began to decline in 2010, and total revenues of the top ten enterprises also in the construction sector in period from 2010 to 2014 had tendency to decline. Reported decline in the construction sector in that period, can't be equated with the cooperative OZAS because the cooperative through the most difficult period of recession had tendency to grow. Total revenues in 2011 decreased by 8.52% compared to 2010, but it is necessary to consider the reduction in the top ten enterprises in the construction sector, which accounted for 14.46%. However, for 2012 compared to the year 2011 comes to an increase in total revenues for 27.26%, while the top ten enterprises in Croatia recorded an increase over the same period of merely 3.77%. The largest growth of total revenue is 2013 in relation to the business in 2012 of 86.54%, while the top ten enterprises in Croatia had recorded a decline of total revenue of 2.34%. Based on these data we can see how joining in OZAS has helped craftsmen at a time when the construction sector had tendency to decline. It is only through association of joint forces, knowledge, skills and abilities can achieve positive financial results and respond to new challenges both in the domestic and foreign markets.

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CONTEMPORARY BANKING DISTRIBUTION CHANNELS – WHAT IS THE CUSTOMER'S OPINION?

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Abstract

Contemporary banks use multiple marketing channels to reach their customers. In addition to the traditional branches, advanced technology allows banks to develop new electronic channels. These channels, along with other changes in the banking business (new competitors, deregulation) and changes in the environment, influence the customer behavior and attitudes. In order to remain competitive in their business environment, banks should investigate and gain knowledge about the contemporary financial costumer. The main aim of this paper is to identify the advantages as well as disadvantages of contemporary bank sales channels and the specific features of their use, and to determine the level of satisfaction of bank customers with their sales channels.

The research was conducted among banks and their customers in Croatia and, along with the theoretical knowledge acquired, it could be useful for managers in developing distribution strategies and managing relationships with customers.

Keywords: *Bank marketing channels, electronic channels, bank customer*

JEL Classification: M31; M54

1. INTRODUCTION

The banking sector has been facing a lot of challenges over the past decades. Namely, global competition, new market participants (non-bank enterprises), and deregulation have been threatening the banking sector (Williams, Gillespie, 1997). Moreover, the development of technology has been working in two directions. Firstly, it enables various competitors to expand relationships with former bank customers and to selectively penetrate the areas where they have advantages (Williams, Gillespie, 1997, pg 1281). At the same time, it strongly impacts on bank distribution channels.

Traditionally, the most important banking channel was branching. The establishment of new bank branches induces high costs (Wright, 2002). These costs, as well as the deregulation and new competitors in the financial market, pushed the banks worldwide to use the benefits of technology in their businesses.

Contemporary financial sector, as one of the fastest growing and highly profitable sectors, is characterized by multichanneling i.e. most banks use both traditional and technology-enabled channels (Palić, 2005, pg. 228).

Due to all above mentioned reasons, the relationship between the customer and the bank has been altered. Contemporary customer is less loyal, seeks a competitive interest rate, is task-oriented (less interaction-oriented), prone to using electronic channels for buying groceries and branches for more demanding products, and pushed by the introduced transaction and account fees to think about switching banks (Wright, 2002, pg. 92). It has also been highlighted (Nitsure, 2003) that customers are empowered by the easiness of comparison of service features and prices between banks and by the easiness of changing banking partners in an e-environment. All these facts should prompt banks to care about the attitudes and satisfaction of their own customers.

The main purpose of the paper is to identify any advantages and disadvantages of the contemporary bank sales channels and the specificity of their usage, as well as the customer satisfaction with the sales channels used by banks.

Accordingly, our research can contribute to the body of knowledge with specific insights on attitudes and utilization of the currently most important bank distribution channels, as well as on the satisfaction of customers with such distribution channels.

Managers could also benefit from our paper because the identification of specific knowledge about the customer view on the above mentioned distribution channels can help in developing better distribution strategies. Furthermore, the presented results can also help managers to better satisfy their customers in order to influence their loyalty and compound in the contemporary environment. And finally, our paper can show areas of potential improvement in order to nurture relationships with customers.

The paper consists of seven chapters. After the introduction, the second chapter provides an overview of the literature. The third chapter presents the methodology of the conducted research i.e. the sample and data collection and the research questions. In the fourth chapter, the main research results are highlighted. The fifth chapter outlines the major results. After the discussion, implications and directions for further research, the last chapter provides a conclusion of the paper.

2. LITERATURE REVIEW

As mentioned above, branches are a traditional bank distribution channel. Although some authors, e.g. Williams and Gillespie (1997), have argued that traditional branches may become obsolete, branches still play an important role in today`s banking business.

At the same time, the use of technology allows banks to remove geographical obstacles and to lower costs, thus creating benefits for the customer.

In his paper, Nitsure (2003) highlighted the high impact of technology on the banking business, calling it the e-banking revolution. The use of technology in the development of bank distribution channels began a long time ago. In 1969, the first automatic teller machine was installed in the USA, telephone banking appeared in the 70`s and online banking in the 90`s (Breitenstein, Mc Gee, 2015).

The results of the applied technology showed some important figures; e.g. in 1995, more than half of bank transactions were performed electronically (Angehrn and Meyer in Wright, 2002).

Moreover, according to O`Connell (Wright, 2002), one of the first internet banks, ING Direct (founded in 1991), gained over 50,000 customers in the first year of operations without branches. The number of virtual (internet) banks has increased. According to Nitsure (2003), there were 30 virtual banks in the USA, two in Asia and several in Europe in early 2000.

This applied technology influences the banking business as showed above, the customer behavior, and the relationship between the customer and the bank.

Namely, technology delivers significant cost savings for banks and drives customers to embrace self-service (Wright, 2002). In addition, it impacts the bank - customer relationship by weakening this link and despite there is no more unconditional, or at least traditional, lifetime binding to a single bank, the bank customer is predominantly stayer rather than switcher (Wright, 2001), due to the specific nature of financial services.

Based on the above mentioned, it has become yet more important to study the influence of today`s banking channels on the customer perception, satisfaction and use of such channels.

According to Xue, Hitt, Chen (2011), all of the top 50 US banks offered internet banking by 2002 and 91% of US households had a bank account, but only 17% of users adopted online banking. Moreover, the American Bankers Association survey (Fisher, 2007) found that only 23% of US customers use online banking as primary banking method.

According to Matilla (in Seyal, Rahim, 2011) customer satisfaction is key enabler of internet banking success. Moreover, Seyal and Rahim (2011) found that around 50% of online banking customers are satisfied. Furthermore, they found out that age, educational level, income level and prior experience with internet greatly impact the overall satisfaction of online banking users. These findings were in line with Berger and Gensler`s (2007) results which pointed out that internet banking users are younger, better educated, with higher income and usually live in an urban area.

In their research conducted among banking users in Brunei Darussalam, Seyal and Rahim (2011) highlighted that online users worry about security, slow internet and lack of internet skills. They pointed out that if the bank management addresses these issues and solves them, customers start to look for their internet banking services.

It has been also suggested (Xue, Hitt, Chen, 2011) online banking users buy more bank products and perform more transactions. Yet more importantly, these users are not prone to leave their bank. Namely, online banking users drive increased loyalty and product usage and maintain a longer relationship with the bank, which increases lifetime value potential for the banks (Xue, Hitt, Chen, 2011).

There are various factors affecting the online banking adoption. Service transaction demands, customer efficiency and local penetration, and age are linked with major online banking adoptions, while the availability of the branch channel does not affect the adoption (Xue, Hitt, Chen (2011, pg. 304).

Modern trends in economy and marketing are increasingly turning to mobile devices like smart phones. Kennedy (2015) highlighted that a survey conducted in 2014 in the USA showed that 87% of U.S. adults have a mobile phone and 39% of adults with both mobile phones and bank accounts use mobile banking (a 33% increase in usage from 2013).

Porteus (in Economical and Political Weekly, 2010) highlighted two effects of the mobile banking development; the first additive (m-banking as an additional channel for existing users), and the second transformational model that could be used as an instrument for financial inclusion of unbanked people, which is especially important in developing countries.

According to a study conducted by the US Federal Reserves in 2015 (FED, 2016, pg 1), internet-enabled smartphones are in widespread use, 87% of U.S. adult population has a mobile phone, 77% of which are smartphones (compared to 71% in 2014 and 61% in 2013). Moreover, the use of mobile banking has risen; 43% of all mobile phone users with a bank account used mobile banking in 12 months before the survey (39% in 2014 and 33% in 2013). Three most common activities using smartphone were checking account balances or transactions (94%), transferring money between an individual's own accounts (58 percent), and receiving an alert (e.g. a text message, push notification, or e-mail) from their bank (56 percent). Mobile payment is the less common use of mobile banking (28%). The most common mobile payments were for paying bills (65%), purchasing a physical item or digital content (42%), and paying in store using a mobile phone (33%). Younger adults often use mobile financial services. The main impediments for the adoption of mobile financial services are the preference for another banking method and concerns about security. Most consumers used online and offline methods for interacting with the financial institution. 54% of mobile bank users cited mobile channel as one of the three most important ways to interact with the bank, 51% cited teller at the branch, and the ATM was cited by 62% of users.

Despite the identified positive effects of banks' IT adoption, such as reduced operational costs, performance of standardized low value-added transactions online, which allows more resources for the performance of high value transactions through branches, the facilitation of transactions for customers and similar (Rohlfs, 1974, Milne, 2005, Ho, Mallick, 2010), there are studies (Ho, Mallick, 2010) suggesting that (at the individual level) the diffusion of IT investment can negatively impact the bank profit.

3. METHODOLOGY

3.1. Sample and Data Collection

For the purpose of this paper, the websites of two big Croatian banks were analyzed to identify the distribution channels of banks in the Republic of Croatia. Subsequently, the primary research was conducted to explore the preferences and specific features of use, as well as perceived advantages and disadvantages of contemporary channels. In addition, the research aimed to determine bank customer satisfaction with banks' distribution channels. The research was conducted in July 2016. The measuring instrument was developed by the authors for the purposes of the research. It consisted of 17 closed-type questions (dichotomous questions and selection of one or more answer choices). A five-point Likert-type scale was used. The questionnaire included questions about the age, gender, educational qualification. The questioning method was used to obtain the necessary primary data. The research was conducted online using the research tool Google Form. The questionnaire was distributed to respondents via email.

A total of 62 filled-in questionnaires were collected.

As shown in Table 1, younger age group ranging from 18 to 25 years (50.8%) is prevalent in the sample structure. A smaller percentage of respondents belong to the group from 26 to 35 years (34.4%), followed by the group from 36 to 45 years (13.1%), and only one respondent was above 45 years of age (1.6%). The sample consists primarily of high school graduates (36.1%), followed by respondents with higher education/university degree (34.4) and junior college degree (26.2%), and a small percentage of respondents holds an elementary school degree (3.3%). Women (83.6%) are prevalent in the sample structure, while men account for 16.4%.

Table 1: [Sample structure]

Age (years)	18-25	50,8
	26-35	34,4
	36-45	13,1
	>45	1,6
Gender	F	83,6
	M	16,4
Education	Elementary school High school	3,3 36,1
	Junior college	26,2
	University degree	34,4

Source: Authors' calculation

3.2. Research Questions

Based on the theory presented in the second chapter and for the purpose of our research, the following research questions were developed:

Research question 1: Do bank customers in the Republic of Croatia use contemporary bank sales channels - internet and mobile banking - to a large extent?

Research question 2: Are users of bank sales channels satisfied with them?

Research question 3: What are the advantages and disadvantages of contemporary bank sales channels (internet and mobile banking) identified by users of these services?

4. RESEARCH RESULTS

For the purpose of this paper, an analysis of the distribution channels of two big banks in Croatia was conducted. Both banks together accounted for 44.7% of the total assets, 45.4% of the total loans, and 45.1% of the total deposits of all banks in the Republic of Croatia in 2015 (HNB, 2016). The research of the banks' distribution channels was conducted primarily by means of analysis of the data available on the banks' websites. As a result of this analysis, the authors found out that both banks have a large number of branches and subsidiaries (the first bank has 128 branch offices, and the second bank has 200 branches and subsidiaries). Likewise, the first bank has 860 automated teller machines, whereas the second bank has more than 550 ATMs. Furthermore, in Bank 1, bank customers also use branch offices of the major national financial agency to perform their payment transactions, as well as self-service machines for filing of payment orders and universal bank statement printers in Bank 2. In addition, both banks have developed and are applying their own internet and mobile banking solutions. Besides, Bank 1 has an online branch office which allows for direct communication with the banker via chat, video call, and audio call. In addition to the above, both banks offer the possibility to use a day/night depository, and they also have call/contact centers as well as their own POS devices. Furthermore, both banks use social networks. Based on the above results/data, it can be concluded that the two leading banks in the Republic of Croatia use very varied and modern banking channels.

In addition to the above, for the purposes of this exploratory research, the authors chose to investigate the views of users of both traditional and electronic banking distribution channels, namely branch offices and internet and mobile banking.

Based on the research conducted, 95.2% of respondents use banking services, whereas 4.8% of respondents do not use banking services. Among the respondents that use banking services, as many as 83.9% of them use internet banking. Likewise, an interesting data is that as many as 66.1% of respondents apart from internet banking also use mobile banking.

Therefore, in relation to the research question 1, we could conclude that bank customers in the Republic of Croatia use contemporary bank sales channels, i.e. internet and mobile banking, to a very large extent.

With the research, the authors further wanted to measure the customer satisfaction with specific aspects of the service provided. It resulted that respondents are very satisfied with the availability of bank branches (43.5%), and only a small number of respondents, i.e. 4.8%, are very dissatisfied. Respondents are mostly satisfied with the opening hours (43.6%), whereas they are very satisfied with the helpfulness of employees (51.6%). Respondents are mostly satisfied and very satisfied with the availability of ATMs (85.5%). Finally, 54.8% of respondents are very satisfied with the use of modern banking (internet and mobile banking).

It can be concluded from the above results that bank customers are mostly satisfied with the contemporary banking sales channels, which represents an affirmative answer to the second posited research question.

Furthermore, the aim of the research was to identify the specific features of use of bank channels and to determine the advantages and disadvantages of contemporary sales channels (internet and mobile banking). The answers of respondents identifying the above mentioned specificity are presented below, which are also the answer to the third research question. Namely, respondents using bank services do that mostly (35.5%) once a week. 30.6% of respondents use the same services once a month, and 19.4% of them do that on a daily basis. Among the respondents, 83.9% of them use internet banking, mostly (37.1%) once a month, whereas 24.2% of respondents use it once a week, and 19.4% every day. Internet banking is mostly used to check the balance on the accounts (85.5%), followed by payment of bills (56.5%), transfer of funds between own accounts (50%), and online shopping (33.9%), purchase of cell phone prepaid cards (29%), and finally purchase and sale of shares in investment funds (4.8%). The most important reason for choosing internet banking over traditional sales channels is its 24-hour availability (for 29% of respondents). Said reason is followed by speed and ease of management of own finances (25.8%), and by the fact that is does not require personal visit to the bank branch (22.6%). In addition, 62.9% of respondents consider internet banking safe, but to a certain extent. At the same time, they mostly (45.9%) agree that internet banking is exposed to risks such as fraud, misappropriation and the like. An interesting information is that as many as 66.1% of respondents apart from internet banking also use mobile banking, mostly (34.7%) once a month, followed by once a week (22.4%), while 22.4% of all respondents use mobile banking on a daily basis. As was the case with internet banking, respondents mostly use mobile banking to check the balance on their accounts (63.9%), followed by payment of bills for 39.3% of respondents. Likewise, 47.5% of respondents strongly agree with the statement that new technologies positively impact on customer buying behavior (it makes buying easier), and 57.4% of respondents strongly agree with the statement that the information and communications technology (ICT) greatly contributes to enhance the quality of bank services. Nevertheless, 78.7% of respondents mostly agree and strongly agree that a disadvantage of contemporary banking is represented by less interactive (direct) communication between the bank and the customer.

5. DISCUSSION AND IMPLICATIONS

The present study shows that Croatian banks use multiple channels to access their customers and that these channels are rather well developed. This conclusion can particularly be drawn related to two bigger banks whose cases were analyzed. However, this is also confirmed by the answers of users of all bank services in the Republic of Croatia. In today's competitive environment, it is of particular importance that banks monitor their users, especially their needs and wishes, and to make use of the possibilities offered by technology to increasingly promptly meet these needs and wishes. Bank customers use various channels to a large extent, i.e. branch offices as well as internet and mobile banking. Accordingly, the large number of internet, and especially mobile, banking users can be related to the large number of young respondents in the sample (50.8% of respondents is 18-25 years old) and the educational level of respondents (38.6% of respondents hold a junior college and higher education degree), which would be in line with previous researches. What is especially important for banks is that their customers are mostly satisfied with their sales channels. Of course, the available technology implies many advantages for the user and it impacts on the buying behavior. However, what users are partially worried about is the issue of security of contemporary channels and lack of living and direct interactive communication with the bank i.e. bank employees. Taking all the above in account, banks have to continue monitoring the needs of their customers and develop distribution strategies in line with such needs. Furthermore, they have to work on eliminating or mitigating the observed disadvantages and on actively using the identified advantages. For instance, while continuously using technology for development of channels, at the same time they should work on mitigating the sales inhibitors in contemporary channels and on the technological aspects of security, and use branch offices in which customers will be further able to establish a direct contact with bank employees.

6. LIMITATIONS AND FUTURE RESEARCH

As a limitation to the current study, we should mention the fact that business users were not included in the sample. In order to obtain a more comprehensive view, they should be included in further research. Moreover, in order to allow wider generalization of the results, the sample should reflect the current structure of the banking sector, i.e. take into account and include all banks users based on the bank`s market share or another indicator in the sample. Namely, the questionnaire of the current study was distributed without knowing with which bank the users are dealing with. Moreover, when determining the sample, some other elements that were found significant in the use of contemporary banking distribution channels should be taken in consideration, such as the age, educational level and income level.

7. CONCLUSION

The research showed that users in the Republic of Croatia use contemporary banking distribution channels to a large extent and are quite satisfied with them. Of course, the technology applied in banking impacts on the development of distribution channels, but also on the customer behavior and their perception of advantages and disadvantages of such contemporary distribution channels. Likewise, the applied technology influences the relationship between the customer and the bank. Nurture and development of such relationship should be of particular interest for banks, especially in the context of contemporary marketing based on relationship. It is to be expected that technology channels will further develop in the future. In the new reality (e.g. virtual branches), banks will have to make efforts, being engaged in continuous research, to develop their relationship with customers in order to achieve the maximum lifetime value. Finally, technology will greatly influence the lives and behaviors of users, also in the way banks do business, by reshaping them. The responsibility rests on banks to coordinate the above changes.

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Economic Development, Technological Change and Growth

SILVER ECONOMY: DEMOGRAPHIC CHANGE AND ECONOMIC OPPORTUNITY

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Abstract

Various sources dealing with demographic trends such (e.g. UN Population Division, WHO, ILO) point out that population across the world is getting older. By the 2050 there will be more than 20% of world population age 65 and over. This negative demographic transition, i.e. population aging has been showing four very distinctive features: unprecedented, pervasiveness, endurance and profound implications on human life in general.

Statistics for the European Union are supporting the above mentioned. Namely, the age structure of the European population is expected to change significantly over the next decades and by 2060, the share of people aged 65 and above will increase from 18% to 30% compared to now, while the share of people aged above 80 will more than double. Thus, it is not surprising that the European Union has launched a notion of "Silver Economy" related to economic activities of population aged 50 and over and their impact on various sectors of the national economy. Elderly persons have been for a long time considered the fiscal burden, but EU countries have recently started to turn the negative demographic trend of aging into market opportunities for new products, services, jobs and consequently growth.

The purpose of this paper is to discuss the issue of silver economy with particular focus on investigating the potential economic value of active aging and elderly people in general. Supporting the silver economy in theory and practice means considering elderly population as an opportunity not a threat to local, regional and national economic development.

Keywords: *Silver Economy, Active Aging, Entrepreneurial Opportunities, Social Innovations*

JEL Classification: J11, N3

1. INTRODUCTION

The population aging it the reality across the world. According to various reports, such as UN *World Population Aging 2015* (UN, Department of Economics and Social Affairs, 2015) there is no country in the world that is not facing this negative demographic trend in term s of growing number of older persons in their population. If predictions are correct, by the 2050 there will be more than 20% of world population age 65 and over. The same holds true for the countries in the European Union (EU). Namely, the age structure of the European population is expected to change significantly over the next decades and by 2060, the share of people aged 65 and above will increase from 18% to 30% compared to now, while the share of people aged above 80 will more than double. More specifically, the 65+ population as a percentage of the population aged 15-64 is projected to increase from 26% in 2010 to 53% in 2060, meaning that we are going to witness a change in *dependency ratio*; there will be just two people in the working age of 15 to 64 for every person aged 65+ in 2060 (ration 1:2), compared with four in 2010 (ratio 1:4). Due to the retirement of aging workforce and insufficient number of new employees may result in a shortage of up to 2 million health workers in the EU is predicted by 2020, as noted in the *2015 Aging Report* by the EU officials (European Commission, 2015).

Such data on demographic trends calls for rethinking about the role of population aging in terms of economic and social development, particularly if we take into consideration that rapid aging is due to increased longevity combined with stagnating or falling birth rates. A medical note is in order prior to further discussion on the impact of elderly people on economy and society as a whole. If one observes a long enough timeline, getting older is much different today than it was some time ago. The research by Max Planck Institute for Human

Development suggests that, for example in Berlin, the people who turn 75 nowadays will be, on the whole, more intelligent, physically fit, and happier than the people who turned 75 roughly two decades ago (Gerstorf *et al.* 2015).

The population aging is having a profound impact on all sectors of economy, including labour markets, financial markets, demand-side of economics in terms of goods and services needed for their age (housing, transportation, leisure) up to social protection and the like. Taking into consideration a significant societal challenge as well as a major opportunity for economy (new jobs, innovations in goods and services etc.), it is of utmost importance to make a shift associated to ageing population as being (solely) fiscal burden to being an economic potential.

Population aging and its impact on economy and society have been vividly described as „Silver Tsunami“ and „Silver Economy“ in the literature. These two metaphors are suitable to illustrate four very distinctive features of population aging: unprecedented, pervasiveness, endurance and profound implications on human life in general (World Population Aging 1950-2020: xxvii-xviii): (i) population ageing is *unprecedented* in the history of human kind because by the year 2050 the number of older persons in the world will exceed the number of young for the first time in history; (ii) population ageing is pervasive as a global phenomenon affecting everyone in the society and having a direct bearing on the intergenerational and intra-generational equity and solidarity that represent the foundations of each society; (iii) population ageing has major *consequences and implications* for all facets of human life, from economic, social up to political sphere, raising numerous challenging issues along such as age discrimination, influence on voting patterns and representation; (iv) population ageing is *enduring* in terms of rising the proportion of older persons from 20th century to 21st (e.g. proportion of older persons was 8% in 1950 and 10 % in 2000, and is projected to reach 21 % in 2050.)

These worldwide facts on population aging and trends are becoming an important issue for both academic community as well as for policy makers. While economic theory mostly identified demographic trends as a burden for the economic growth, there is growing number of scholars across different social fields claiming otherwise.

The purpose of this paper is to discuss the issue of silver economy with particular focus on investigating the potential economic value of active aging and elderly people in general. Supporting the silver economy in theory and practice means considering elderly population as an opportunity not a threat to local, regional and national economic development. The paper is organized in 5 section. After introductory remarks, the section 2 deals with the population aging and development providing a short insight in theoretical and empirical findings on the issue of elderly and development. Section 3 discusses the notion of "Silver Economy" a new coined term for the economic opportunities arising from the public and consumer expenditure related to population ageing and the specific needs of the population over 50. Section 4 deals with policy issue and best practice. The paper concludes with section 5.

2. LITERATURE REVIEW ON POPULATION AGING AND DEVELOPMENT

Population and development go hand in hand in the economic research. Much of academic research has been focused on investigating how inequality in age structures, especially in the case of a growing old age group, is expected to have multiple effects on the overall economic performance of countries, particularly related to important variable of economic growth: consumption and saving patterns, public expenditure, and human capital.[1] Older population is an obstacle to growth due to their lower productivity, less labour force participation, and less investment in human capital (see, for example, Bloom et al., 2001, Creedy and Scobie, 2002; Alders and Broer, 2004; Sobotka *et al.*, 2010). Long time ago Hensen (1939) called the negative influence of aging population on growth and development a „secular stagnation" claiming that the elderly create an excess of savings relative to investments. Gordon (2016), has identified demographic change as the first "headwind" slowing down economic growth in the developed world, for an older population will reduce labour force participation and productivity. Aging population results in the fewer numbers of working-age individuals (Anderson & Hussey 2000; Bloom et al. 2011). Further, when a country faces an increase in the old age population, public spending on social security expenses and the medical system will be higher than the corresponding spending on education and other forms of development (Lisenkova *et al.* 2012, Brooks, 2003).

[1] An extensive bibliometric analysis can be found in Nagajaran et al. 2006, http://www.fep.up.pt/investigacao/workingpapers/wp505.pdf (accessed 20.02.2017.)

Contrary to a range of theories and hypothesis that aged population translates into a weak growth, there are academic scholars whose researches are showing otherwise. For example, Acemoglu and Restrepo (2017) examined the relationship between aging population and aggregate economic growth and had found out that there is no negative relationship between older population and economic growth (in terms of GDP). Namely, some regression analyses results pointed into a positive relationship between these two variables, even though this relationship is weaker when they look at only high-income countries. The explanation they offer is technology - as populations get older, businesses are more likely to adopt technology to help increase the boost productivity (for more details see Acemoglu and Restrepo, 2017). Research conducted by Prettner (2013) regarding the effect of demographic change on economic growth perspectives in the long run also indicate, among else, that decreasing mortality positively affects long-run growth as well as population aging is beneficial for long-run economic growth.

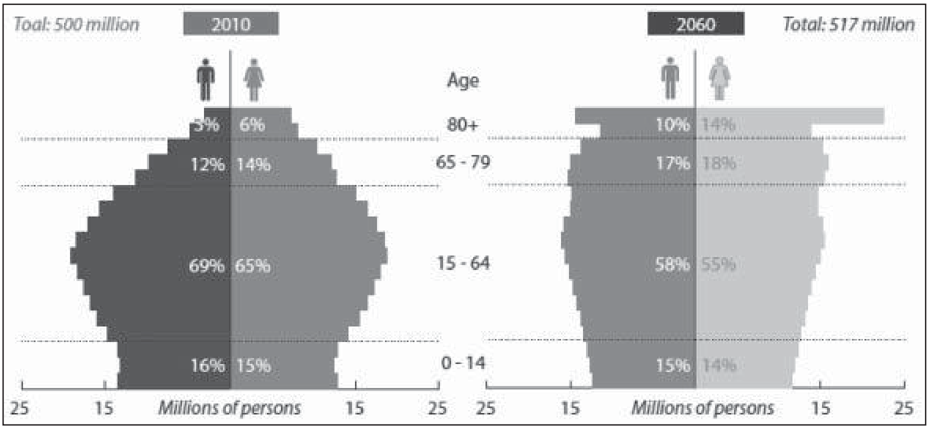
Bloom et al. (2008) pointed out that a standard approach to population aging and its impact on economic growth could be misleading when it comes to changes in fundamental contributors to national income due to the age (e.g. earnings, savings, employment and the like). As an example, if an individual expect to live longer he/she may want to remain longer active at work, she/he may later start saving etc. Furthermore, Bloom et al. (2008) suggest that institutional context such as retirement polity, health care, efficiency of the labor market, play a crucial role when it comes to effects of aging population on economic growth.

One must acknowledge that the issue of population aging is transdisciplinary in its nature calling for academic scholars across various fields to look for theoretical understanding and empirical evidences dealing with the complex effects that ageing is causing in the economy and society. Effects of aging should be treated in interdisciplinary and multidisciplinary manner such as aging and discrimination at the labour market and/or in the society (see, for example Barković and Nedić, 2015), aging and gerontechnology (see, for example, Mansfield and Biddison, 2007), aging and traffic law (Reuben et al, 1988) etc.

3. ECONOMIC POTENTIAL OF AGING: FROM THE FISCAL BURDEN TO ENTREPRENEURIAL OPPORTUNITY

Population ageing in European Union has a significant impact on whole society in terms of economics. Lower birth rate and increase of life expectance is going to change the look of age pyramid in European Union. During next fifty years, proportion of people aged 65 and over will be almost double. (Figure 1). This will result that in 2060 there will be one older person for two workers. Employed persons, because of this change, will face increasing burden in taxes and social contribution to support older persons. As alternative, older people will be forced to accept potential lower support and services or going to pension in higher age.

Figure1 Forecast of EU population 2010 - 2060



Source: adapted from Sabbati (2013)

Ageing population is becoming challenge for many economies, but today's political and economic discussion on the issue of ageing population are focused more on older adults as fiscal burden rather than an economic opportunity. Annual government expenditure on older adults which is today at 20% of EU GDP will continue to grow by 1,8% in next 50 years. Silver economy should not be undervalued, particularly if taking into consideration that the European market for silver economy is estimated at approximately 90 billion EUR. According to Euromonitor (2012) the global spending power of adults over 60 years will be over 15 trillion USD in 2020 while in Europe older adults have spending capacity of 3 trillion EUR and this makes silver economy 3rd largest economy in the world. Thus, there is a huge economic opportunity in silver economy – both consumer and public market. (Table 1)

Table 1 Silver Economy opportunities in Europe

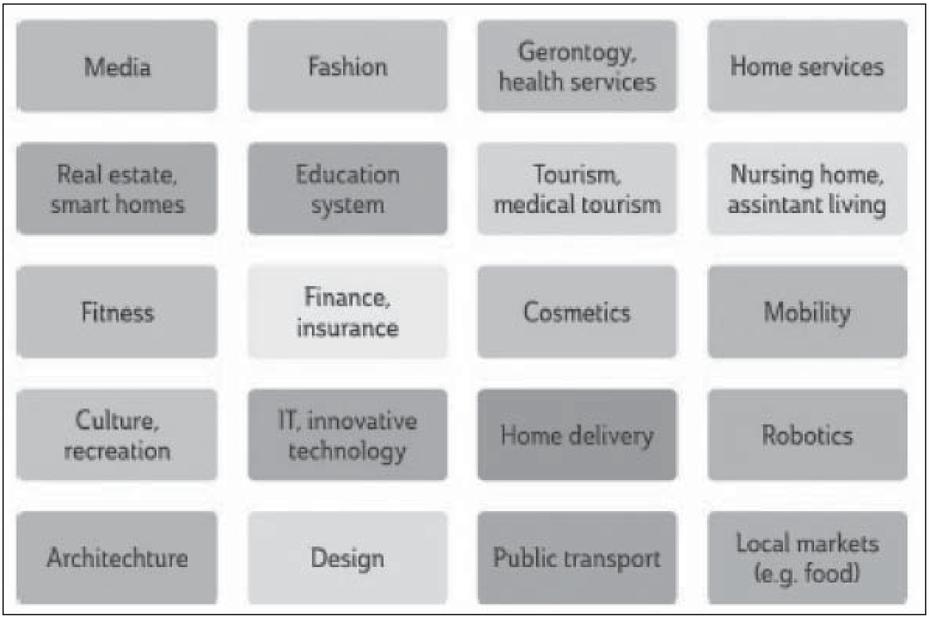
Consumer Market	Public Market
85 million consumers over 65 years of age	Care costs 1 trillion EUR/year in Europe – 8% of GDP
3 trillion EUR wealth by older adults	100 billion EUR /year - 10% for innovation
<15% ICT use	

Source: adapted from Iakovidis (2015)

European union started using term Silver economy in its development agenda for describing activities connected with needs and wishes of older adults and their influence on different economic sectors. This is significant change from previous perception of older adults (retired persons) as exclusively fiscal burden where member countries of European Union started to transform negative demographic trend of ageing into market opportunities which are creating new jobs and working places. The "Silver Economy" can be defined *as the economic opportunities arising from the public and consumer expenditure related to population ageing and the specific needs of the population over 50. The ageing population can be divided in 3 groups, each with their own need-patterns: active, fragile and dependent. Thus, the Silver Economy comprises a large part of the general consumer economy, but with considerable differences in spending priorities and patterns.* (European Commission, 2015: 2)

Silver Economy is influenced by new consumer market for produces and services designed for older adults' population and by the necessity to increase sustainability of public expenditure linked to ageing (European Commission, 2015) The silver economy influences quality of life of older people and at the end whole economy in Europe. The silver economy concept seeks to look holistically at ageing and the opportunities it presents, bearing on the future direction of a broad range of polices such as those on the built environment, 50+ employment, life-long learning, and preventative healthcare. Moreover, it seeks to embrace new technologies (e.g. health monitoring, smart homes, driverless vehicles, and care robots) and use them to lower the costs of ageing and improve the lives of older citizens whilst simultaneously helping to boost the economy. Silver Economy includes all activities performed in economic sector which are covering older adults' needs. This includes among other free time, wellbeing, transport, housing, education, nutrition and health issues and potential employment. (Figure 2)

Figure 2 Economic segments of Silver Economy



Source: adapted from Zsarnocky and Gyorgy (2016: 2)

Zsarnocky and Gyorgy (2016) in their research indicated that silver economy can and will influence and affect all segments of economy. Because of this changes, new demand will be part of the market with its specific need for older adults that have income and want to pay for new products and services. As an answer to new demand, supply side should find answers to questions like does the older population want to use new technological developments to live longer or healthier. All these segments of silver economy invite various stakeholders (governments, companies, NGO, etc.) to act in entrepreneurial way or to use various entrepreneurial ways of doing business (e.g. social entrepreneurship, family entrepreneurship). Particularly interesting would be to consider franchising that can be an excellent way of transferring examples of good practice in entrepreneurial new venture.[2]

[2] Many EU countries, as we as well as other countries across the globe have made a significant progress towards developing activities towards active aging in general, i.d. silver economy. That is why for countries that have less experience with third age economy franchising is something to think

During last several decades, companies were focused on younger consumer groups because older adults were, according to the stereotypes, financially week individuals and very reluctant consumers (Meiers, 2014) but today they will need to be more prepared to accept special requirements of older adults as the population is growing older (Moschis and Pettigrew, 2011). This was confirmed with Eitner *et al.* (2011) research which found that the companies didn't pay attention to older adults as consumers due to the negative connotations of term *old age* and that resulted that older adults had best attention in healthcare markets for products like geriatric aids, tonics or products for aiding older adults. Thus, ageing was seen as a burden and risk to the sustainability of the economy and society as whole.

View of older adults' market as undesirable one is slowly changing due to the demographic change and since older adults are becoming significant for many companies as potential customers who are financially independent (Klebl, 2007). Eitner *et al* (2011) stated that today's older adults have many abilities that can be used for a bigger social and personal advantage in education, in volunteer service and in labour market and in and by economy. Research and different scientific studies show that older adults have above average income and assets (Meiers, 2014) and that the 55-65-year-old spend twice as much money on different products in relation to younger age group of 25-44. Stroud (2005) found that age group 55-65 asks for higher quality products, travels more and buys mainly new cars and Antony *et al* (2011) in their research confirmed that older adults are excellent consumers for financial and travel related services. Based on previous studies and research, older adults are becoming the most wanted group of consumers for the decades to come. Finally, numerous surveys have confirmed that the older adults are the richest generation in the world and will be probably driving force in different commercial sectors of national economies (Tempest *et al.*, 2011). Older adults could be seen as important resource in contributing to society while creating growth and new jobs. They can also be important asset on labour market and as volunteers for providing different services to national economy and society as whole (European Commission, 2015).

about. Worldwide we can see examples of franchise systems intended for older adults (e.g. Age Performance, Age Advantage Home Care). See more about franchising in Erceg & Čičić (2013), Alpeza et al. (2015).

4. POLICY ISSUES AND BEST PRACTICE: CONSUMER AND PUBLIC MARKET

Although today it is not very much known about Silver Economy, it will become significantly important for European Union and its future development. Older people will significantly influence future shape of European economy since they will be big and increasing part in most of the consumer markets. European Commission aims to stimulate Silver Economy in Europe (Cornet, 2015) through different EU measures and calls to help European economy. Since the Silver Economy is relatively new in EU there are many questions about it and its connection to the future of EU economy. Questions include following:

- What is the size of Silver Economy in European Union?
- What role can it have in possible economic growth of Europe?
- How policy makers can enable and support design and creation of new products and/or services with intention to increase quality of older adults' life?
- Will companies recognize potential of new market and increase their activities toward older adults?

Some of the world best known companies have recognized the potential of the market opportunity for products and services geared to the older adults (Table 2) and are using them to increase their market share and competitiveness.

Table 2 Companies and Silver Economy

Company	Example
Intel	Helping cities, healthcare institutions and consumers to achieve healthier and more active ageing Collaborating with innovators to enable and encourage careers, engagement and active ageing after retirement.
Nestlé Skin Health	Created "Ageing Strategy" for a globally dispersed demographic with diverse but substantial skin health needs Partner with SHIELD centres for education of stakeholders about impact of skin health on active and healthier ageing
Fujitsu	Smart phone - product exclusively for 60+ population – easy to use, easy to hear and easy to read functionally
Pfizer	"Get Old" programme designed to engage older adults into conversation about lifestyle choice that will enable healthier ageing Sponsoring age-friendly community initiatives
Home Instead Senior Care	Active in hiring older adults and in providing services that reflect specific needs – more than 30% caregivers older than 60 years
Bank of America Merill Lynch	Innovative and comprehensive approach to assist effective financial planning across the life course Only Financial Gerontologists Program that helps clients to focus on seven life priorities – health, home, work, family, leisure, giving and finance
Akbank	The Internal Trainer and Retired Trainer Practice programme hires retires to provide education and training to young employees while young employees can provide technology education to older executives and company retirees.

Source: adapted from World Economic Forum White Paper (2015)

The European Commission is already started with initiatives and policies relevant to the silver economy. During last several years European Union supported several research projects which have direct application to older adults through 7th Framework Programme from 2007 to 2013 or through current Horizon programme from 2014 to 2020 (European Parliament Research Service, 2014). Project and policies are intended toward products and services such as low-season tourism, sustainable long-term care system innovation for healthier and active ageing through European Innovation Partnership on Active and Healthy Ageing – EIP on AHA and the Active and Assisted Living Joint Programme - AAL JP (European Commission, 2015). Current and new silver economy related initiatives within the European commission can be divided into several categories: health, age-friendly environment, health and social care systems' transformation, silver economy indicators, fostering jobs and growth. Transversal issues, research and innovation funding mechanisms. Examples of some of the current policies, programs and projects are presented in Table 3.

Table 3 Examples of European policies and projects

Program / Policy / Project	
European Innovation Partnership on Active and Healthy Ageing	It connects all relevant stakeholders to achieve (technological and systemic) innovation at European scale and to help create new jobs and growth for Industry in Active and Healthy Ageing, enhancing the competitiveness of European industry in this fast-growing global market.
European Commission Research Centre	Program for research on eHealth, integrated care and Active and Healthy Ageing which contributes to informing policies and provides direct support to the EIP on AHA initiative
EU Health Programme 2008-2013	Program for addressing the issues of ageing society and for investing in health
European Commission Access City Award	Program for recognizing cities for their efforts to remove barriers that people with disabilities face in key aspects of everyday life and to improve accessibility
ECVET for Elderly Care	Program for development of new education scheme for older adults' care base on the needs of working life
The Active and Assisted Living Joint Programme	Program for applied market-oriented innovation in field of ICT products and service for better ageing. It is intended to accelerate the emergence of innovative products and services targeting the needs of an ageing population
The European Area for Skills and Qualifications	Anticipating the skills necessary for older adult's markets so they are clearly classified recognized and transparent.
More Years Better Lives	Project for measuring wellbeing, effects of learning on life quality, ways of engaging older adults in society
Companionable project	Project which developed a robot for monitoring older adults' and for giving cognitive training and reminding to take medication

Source: adapted from European Parliamentary Research Service, 2014 & European Commission, 2015

Programs and policies for entrepreneurship and new skills development for meeting the needs of older adults are reinforced by a Knowledge and Innovation Community on Healthy Living and Active Ageing under the European Institute of Technology. Since more than 100 European regions recognized Healthy and Active Ageing as specialisation priority European Regional funding has also significant role in this. All these initiatives are accompanied with different sectorial and national initiatives to provide public policy actions that can include voluntary norms and quality labels for providers of silver economy products and services.

5. CONCLUDING REMARKS

Population ageing is a worldwide demographic trend and biological axiom. While mainstream thinking across various social and natural science fields have focused on the detrimental effects it has on society in general and economics in particular, the attitude towards elderly is changing. There is growing number of academic literature dealing with the economic opportunity that ageing population offers due to their relative number in the total size of population, but also due to their longevity and vitality. The "Silver Economy" is an increasingly popular notion that captures it best. Economically speaking, one needs to focus on elderly from two perspectives: from the consumer market and public market. The elderly, locally and globally, have always constituted a demographic group yet nowadays this group has become an important part of society that changes the economic landscape.

The EU has shown a great interest to investigate the size and scope of the Silver Economy by intensifying theoretical, empirical and policy research on the issue of aging and market opportunities for new products, services, jobs and consequently growth. Various questions are raising when dealing with population aging and its economic impact. For example, what does (economically) active aging imply; how can the awareness of economic value of elderly people be raised; and how can we develop the silver economy at local, regional and national levels? These, and many other questions are providing an incentive for further research on the global, EU and national levels.

Turning population aging into entrepreneurial opportunities is a challenge for various sectors – media, culture, urbanism, traffic, health service etc. We are witnessing an increase in entrepreneurial activities across EU related to increasing the quality of life for elderly (e.g. Third Age University, Senior Fitness, Senior Assisted Living, Age-Friendly Cities etc.). The common wisdom suggests that all these activities must have a strong institutional support in terms of appropriate regulatory frameworks and policies since elderly people represent a vulnerable group of any society. Many problems that had appeared in the past regarding population aging may be attributed to inadequate institutional and legal framework which has been too rigid to encompass complex issue of getting old in economic, social or any other sense. Thus entrepreneurship of all kinds (social entrepreneurship, franchising etc.), market opportunities and public policies at local, regional and national level, as well as EU level should become a research focus of those who find population aging as a challenge not a treat.

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GEO-ECONOMICS AND REINDUSTRIALIZATION – CHALLENGES FOR CROATIA AND SERBIA

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Abstract

Inherited instability and great imbalance in the market of the region in the context of new geopolitical trends require serious geo-economic structural changes. The development will be conditioned by economic and social changes in the future and depend much more on internal factors than on external environment. Hence, the paper aims to discuss appropriate solutions and concepts which should be sought in: 1) the development of a stimulating environment for the implementation of reindustrialization for development and comprehensive engagement of available economic, technological and human resources with innovative optimal allocation of production factors based on cooperation of all participants of modern industry and innovative society and 2) intensifying structural changes in technological and organizational performance of companies. The content of the goals and actions of sustainable development should be based on the paradigm of reindustrialization in the context of: 1) improvement of all forms of management, especially in the field of export enterprises, business networks and alliances, 2) respect for the principle of territorial cohesion of economic and social partners, and 3) precise and transparent professionalization and decentralization of public regulation of the economy and economic development. Finally, the paper discusses what a decentralized *approach to industrial and cohesion policy should entail in terms of new geo-economic structural changes.*

Keywords: *geo-economics, reindustrialization, regional dimension of industrial policy, cohesion policy*

JEL Classification: K23, L15

1. INTRODUCTION

The process of adaptation of the regional market to market economy standards has been slow. Its operation has been strongly affected by (its unfavourable) position on the global market, due to exposure to the following four exogenous trends: 1) globalisation, 2) the transformation of the production system (undergoing (post)socialist restructuring following the European concept), 3) a growing impact of technological advancement and innovation, and 4) hyper-competition. The labour market, on the other hand, is increasingly affected by two groups of endogenous factors. As a consequence of the first group of factors, the supply of a quality (and adequately structured) workforce that meets the needs of modern consumers has been decreasing since the early 1990s. The second group of factors have caused a radical decrease in the demand for labour. Both groups of factors have caused imbalance, which, combined with economic developments, has led to unemployment and a change in the employment structure in favour of the service sector. The mentioned exogenous factors now provide a market framework that needs to be understood properly in order to identify the causes of current geo-economic changes in the framework of geopolitical developments. The impact of these factors is (to some extent) underestimated by experts on geopolitics and business professionals. Valid proposals are expected in the future, which will help create the framework for (often painful) adjustments. It is essential to analyse external environmental factors and identify the consequences of internal incompatibility of national economies with the structure of demand on the European Single Market. Special attention must be given to the causes of radical de-industrialisation. The focus should be on identifying the internal causes and consequences of long-term inadequate structural development trends and a drop-in employment. The development of a policy aimed at reducing economic (structural) imbalance in the market in accordance with the European concept of endogenous, self-propulsive and self-sustainable development must be consistent with visible results of the geo-economic trends of reindustrialisation aimed at the economic, social and territorial cohesion of the Region[1]. The most recent financial and economic crisis has shown that a strong industry is the basis of a strong economy. There is a challenge to create the institutional framework and material conditions for the implementation of the European concept of sustainable development through the transformation of the national socio-economic system. The greatest "flaw" of economic policies of the countries in the region is an obvious and tragic neglect of industries, especially the manufacturing industry, and thereafter an almost complete standstill in technological development, which has resulted in the closure of many facilities. Today's innovation-driven industrialized economy must find solutions to address the challenges of developing a new regional production system and identify regional and sector development objectives. The new model of development must be based on innovative knowledge so as to increase exports of value-added products in a way that will take into account the economic, social and spatial cohesion and preserve and enhance the natural and climatic resources for the benefit of future generations. It should be noted that no monetary or fiscal "combinations" can satisfy these requirements, although this line of thought also has its proponents.

2. CONCEPTUAL ISSUES OF REINDUSTRIALIZATION

Productive and innovative economies must be EU's permanent development target and its main economic priority should be the industrialisation of all economic systems and the restructuring of those sectors that will be innovation development drivers. As industrial policy must contribute to the overall economic growth, whose multiplicative effects[2] will reflect on the national economy, it can be called a national industrial policy that includes national economic planning and the well-being at the level of the entire state (DiLorenzo, 1984). Obviously, the strategy employed to achieve this objective entails intensive technological as well as human capital development. The validity of this solution is confirmed

[1] (Ex)socialist countries in East Europe.

[2] Nearly one in four private sector jobs is in industry, often highly skilled, while each additional job in manufacturing creates 0.5-2 jobs in other sectors; industry generates over 80% of EU exports and 80% of all private investment in R&D and 1 billion EUR of foreign trade surplus a day; see more in: Rueda-Cantuche, José M.et al. (2012). The Single Market as an engine for employment growth through the external trade. Joint Research centre, IPTS, Seville

by American attitude towards in-shoring, the program of returning to technologically innovative industries. There emerged some major studies highlighting new thinking about frameworks of reindustrialization: "*industry as national power*" (Supple, in Cipolla, 1980:285, in Bianchi & Labory, 2006), "*reawakening through reindustrialization*" (Murtha, Lenway & Hart, 2001; Spar, 2001; Vernon, 1971, 1998, in: Spencer, Murtha and Lenway, 2005; Heymann & Vetter, 2013; SWD, 2013), "*a fresh approach to industrial policy*" (COM, 2010), "*rethinking industrial policy*" (Haque, 2007), "*manufacturing imperative*" (Rodrik, 2011), "*new industrial revolution*" (Marsh, 2012., Anderson, 2012, in: Nordås & Kim, 2013), "*manufacturing the future*" (McKinsey, 2012; Foresight, 2013, Deloitte, 2015), "*the rejuvenation of industrial policy*" (Stiglitz, Lin & Monga, 2013), "*industrial renewal*" and "*industrial renaissance*" (SWD, 2014), "*ManuFuture*" (Westkämper, 2014).

Aiginer (2014) pointed that the renewed interest in manufacturing is based on two economic arguments: 1) emerging-market countries' increasing share of global GDP[3] and 2) the evidence from the financial crisis that a decline in the manufacturing sector combined with a current account deficit delayed recovery – as a result, politicians and industrial policies experts are unanimously calling for a new industrial policy in high-income countries. It is business firms that, noted Haque (2007:2), in pursuit of profit, generate and manage technological improvements bringing to the market new products at diminishing costs. An economy that is dominated by technologically dynamic firms will tend also to grow faster. Thus, what makes firms to thrive, grow and compete in the world market is central to an understanding of the process of catch up of the poor with the rich countries (Haque, 2007:2). The starting point of the new industrial policy in the Region must be the analysis of the current situation, so-called technology mapping by means of well-defined programs that include: 1) stimulating the investment climate, 2) efficient institutions, and, traditionally, 3) an appropriate macroeconomic context of human resources; products, services, labour and financial capital markets. As Stiglitz, Lin & Monga (2013:11) noted, the question is not *whether* any government should engage in industrial policy but *how to do it* right. Decision-makers must stimulate small and medium capacities to form development poles in the framework of the investment policy

[3] But, as The *Economist* magazine reports, for example, that some companies' production costs in California are now only 10% higher than those in China if transport costs and customs duties are included (see: Heymann and Vetter, 2013).

with an aim to create value added. The external environment must act as a key determinant of the national market and "competitiveness trigger", which directs the basic trends of foreign market economic exchange (and, as expected, trade) towards all segments of the global market. In doing so, it is necessary to consider the impact of three phenomena:

1) *The production systems of the European Union economies are undergoing a transition*

Since the mid-1980s, the production systems of the European Union economies have been undergoing a transition, which is expected to be completed by 2030/2035. As with any transition, two stages should be differentiated.[4] The first is the abandonment of the old production system, which in the case of the EU-15 is characterised by deindustrialisation[5], which was practically completed during the early 1990s. The second stage began in parallel with the first. In other words, the development of new industries and companies and creation of new jobs, i.e. the structuring of a new production system that has not yet been completed, began with the abandonment of the old ones. In the early 1990s, this process assumed the proportions of re-industrialisation, which in accordance with the specific situations of Member State has yielded different (interim) results. This is what prompted the joint institutions to design the first strategy for re-industrialisation of the European Union (the Lisbon Agenda). Although it was discovered relatively early on (2004) that by the deadline set, it would not be possible to implement it (only revise it), it was only in March 2010, as a result of the first wave of the global financial and economic crises, that the new common re-industrialisation strategy called EUROPE 2020 was presented and then adopted in June that same year. Both strategies propose socio-economic reforms which focus on creating the conditions for a high rate of employment of all relevant categories of the population, especially the young and highly-qualified individuals who can drive innovative and creative development. The EU is a major producer of new knowledge in key enabling technolo-

[4] For more, see interesting production system evolution in three phases: 1) decentralization, 2) discontinuity and 3) competition in Nuti, 1992 in Esposito and Mauriello, 1995.

[5] As Rowthon & Ramaswamy noted in 1997, deindustrialization is not a negative phenomenon, but is the natural consequence of the industrial dynamism in an already developed economy. Prisecaru (2015) pointed that nowadays, especially after financial crisis in 2008, deindustrialization is no longer natural process of economic development because problems in structural adjustments and services which are not „value added„oriented.

gies especially based on industrial biotechnology or advanced materials. But, usually EU products based on key enabling technologies are mature and need to compete on price. Adding more innovative and complex products to the product portfolio will help manufacturers move up the value chain (SWD, 2013:9).

2) (Post)socialist transition model after the restoration of capitalism

Historically, in the framework of the global trends of production system transition and the European solution to this problem, the (post)socialist transition of European (ex)socialist countries should be considered the first phase of adjustment aimed at creating the social and economic conditions for penetration into the European Single Market. However, many structural constraints that are still evident today were underestimated. The first is the fact that in the (relatively small) European area two similar production systems have been developing simultaneously. That is why Europe, as a whole, had two economic structures at the beginning of the (post)socialist transition. At first glance, Western Europe had a big advantage owing to the high level of productivity, technical advances and the developed market institutions. However, East Europe was not without some advantages. Although outdated, the production facilities were physically capable of producing with multiple cost benefits: 1) these facilities were mainly written off and they had little or no book value, i.e. low depreciation, 2) the labour force was relatively well-qualified and cheap 3) the costs of environmental protection and improvement, which had a profound impact on a significant part of the industry, companies and jobs in Western Europe, did not represent a major part of business costs in Eastern Europe. Western Europe had two options. The first was to purchase eastern companies and in that way relocate environmentally risky production. The outsourcing of energy-intensive production that carries higher environmental risks would speed up the restructuring of their economies, but slow down the process of structural adjustment of the economy of the "host country". The second option was to purchase competitor companies and close them down, which would enable them to gain control of the internal market. However, neither of those options was beneficial for the existing manufacturing industry or employment. This is directly linked to another incompatibility, which has intensified the competition during the process of leaving the old market (Council for Mutual Economic Assistance; *Sovjet ekonomičeskoj vzajmopošči, or* SEV,) and heading towards the new EU market. After the disbandment of this Council, Eastern European economies were faced with major structural problems, both on the supply side and the demand side. They had to position themselves, with the same or similar products, on the highly sophisticated EU market on which the common policy produced a range of visible and invisible mechanisms for the protection of its industry. Similar developments affecting internal demand took place, which, again, benefited the EU industry. A large portion of the manufacturing sector was faced with a choice between the (necessary) rationalisation and restructuring on the one hand, and low investment capacity for their preparation and implementation, on the other.

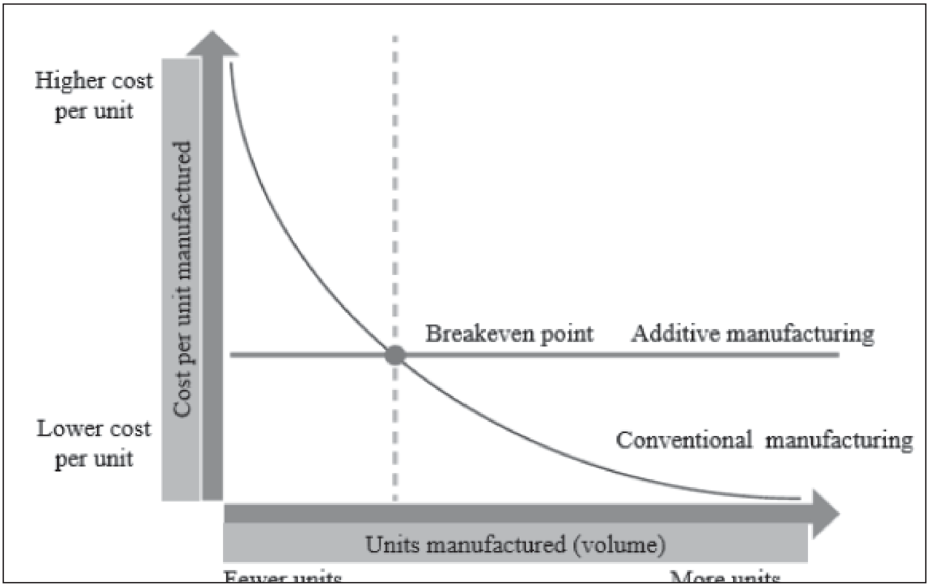
3) *Transparent market constraints*

Transparent market constraints were particularly evident in: 1) the poor quality and high prices of key industrial products for export, and 2) underdeveloped business services sector. The first forced out national industrial products from the internal market and the markets of European ex-socialist countries. On the other hand, the underdeveloped business services sector was further limited and disoriented by the process of structural adjustment of companies and farms. Finally, the cumulative effect of the mentioned exogenous factors has significantly affected unemployment dynamics and caused long-term disruption of economic equilibrium, which is still evident. Viewed from a historical distance, it is clear that their impact is a consequence of the selected model for adapting of national production structures to significant and challenging global changes through inadequate instruments of (the wrong) economic policy. Today, the recovery of the industrial sector through FDIs and partially also domestic investments (using mainly foreign capital), is visible in the increased production volume and employment. However, there are still major constraints as the structure of sectors is not adequate and does not cater for the development needs of national economies. A new, more modern production is needed that will make use of the modern technology, in particular the IT, to a much greater extent in line with the national structural development concept, which requires new qualifications, skills and knowledge. A challenge for these economies is the "collision of industries", i.e. the transformation of relatively traditional industrial base and considerable growth of new industries based on creating value added, technology improvements[6] as well as 4.0 industries (see Figure 1). Stan Shin,

[6] Basu & Weil (1996:3) mark one interesting question: do technology improvements that raise the productivity of combines in the US also improve the productivity of farmers in India? They answer

the founder of Acer computers involved "smile curve" in which he explained that R&D, design and marketing are the core services activities that create value for the company, while fabrication is a low-margin activity that could be outsourced to specialised "fabs" (Nordås & Kim, 2013:10).

Figure 1. Breakeven analysis comparing conventional (traditional) and additive (AM – encompasses manufacturing technologies) manufacturing processes



Source: Deloitte, 2015:16, originally by: Cotteleer & Joyce, 2015

In recent years, new patterns of regional disparities and internal polarisation have developed, i.e. internal spatial imbalances between metropolitan and non-metropolitan areas, between core regions and peripheries, forcing improvement in economic geography of Paul Krugman, clustering and improvement in intra-industry trade, drawing the attention of economic policy makers. There is a need to develop new strategies and new approaches in structural and sectoral

was obviously – No. Standard models of economic growth, which index technology by a single coefficient that is independent of factor proportions, would say Yes. In these models, technology improvements in the US should immediately improve total factor productivity in India. To escape this problem, standard models often assume that technological improvements are country-specific. Also, see Khan (2013) and his paper Technology Policies and Learning with Imperfect Governance and Basarac Sertić, Vučković & Škrabić Perić (2014:394) and econometric results which pointed that the dynamics of manufacturing exports varies between Member States, so EU countries must create a macroeconomic environment conducive to enhancement of manufacturing technologies, which has been recognized as one of the key priorities for achieving long-term improvement in economic performance.

policies that will maximize the use of available resources and latest IT technologies. EU has a higher share of domestic content of exports than established and emerging industrial competitors, while at the same time has a higher share of its intermediates in other countries' exports. This is evidence of a strong industrial base which allows EU enterprises to source most of their high-tech inputs (goods and services) domestically, while also supplying them to the rest of the world (SWD, 2013:10). Their inclusion changes the essence of industrialisation. The phenomenon of re-industrialisation involves primarily a change in the basic development paradigm, according to which the phenomenon of successful industrial development no longer relies upon the possession of natural resources and capital used for mass manufacturing, but increasingly depends on the available technology, education and motivation of entrepreneurs, managers, experts and workers, scientists, investment efficiency, and skills, as well as ensuring cooperation with key partners in the reproduction chain. Reindustrialisation is therefore characterized by the following socio-economic phenomena:

1) Socio-economic changes have to create the conditions for fulfilling the requirements for continuous improvement of functions, quality, reliability, serviceability and other changes.
2) Socio-economic conditions should be favourable for increasing the share of knowledge (research and development, design, marketing, financial knowledge, engineering, management process, and the like) in the total costs of simple and expanded reproduction of the national economy in the creation of value added. The main implications and an increasing role of industrial (manufacturing) entrepreneurship and education must have an innovative impact on all other elements of the production superstructure.
3) The revitalisation and development of an economy must be based not only on the changes in its structure, organisation, technical and human resources, but also the corresponding changes in all social structures.
4) Re-industrialisation entails considerable costs of the development and implementation of high technologies. Operationalization will require the consolidation of research potential in the economy, its specialisation and participation in international cooperation programs on certain types of business ventures, on the one hand, and focusing on day-to-day unpredictable business and technology innovations that may affect even the smallest business units and their staff. In Serbia there is no socio-eco-

nomic framework that will facilitate the fulfilment of these requirements, whereas in Croatia this framework is still inadequate. This may create the impression that the problems will be resolved on their own through the current project of European integration. However, this will not be possible without substantial and in-depth restructuring of national economies and strategic action.

5) An important characteristic of re-industrialisation is reflected in the creation of conditions for "development privatisation". Unfortunately, the failure to create conditions for increased investments in new technologies has impeded the implementation of projects aimed at revitalizing the existing facilities and equipment by using modern technologies and reconfiguring the available factors of production based on industrial production entrepreneurship and intensification of innovation activities by changing the production structure in the context of innovative changes oriented towards sector development.

About 40% of EU manufacturing employment is in low-tech sectors. Therefore, in SWD Report (2013) is noted that the policy priority attached to key enabling technologies which lead to new materials and products in all manufacturing sectors has a strong potential to upgrade EU competitiveness not only in the high-tech sectors but also in the traditional industries. Global competitiveness data indicate that we need to increase competitiveness, exports of high value-added products, and business process innovations, and reduce unemployment. This paper asserts that there are three alternatives for the implementation of the reindustrialisation strategy aimed at creating the conditions for long-term sustainable economic growth and development: 1) defining the industrialisation process oriented towards sector development in the region with the possibility of increasing the creation of value added, 2) radical modernisation of large infrastructure and production systems, and 3) development of creative society and innovation economy based on broad and interactive cooperation and the principles of the European concept of endogenous, self-propulsive and self-sustainable territorial development (in accordance with the processes of the implementation of the Smart specialisation strategy - if the adjustment is not purely "cosmetic").

The first alternative is built into existing national production and organisational, business and institutional system, as well as the current economic and development policy. Its implementation is based on the policy of low wages and prices of (national) basic inputs and the obtaining of capital and technology from external sources. Since its implementation does not require considerable effort (in the sense of reducing spending in favour of greater investment), this alternative is built into existing production systems. Two main factors hinder its further implementation. The first one is long-term and refers to the existing human capital and the new human capital, produced by a relatively developed higher education system, which is of inadequate structure and increases labour surplus in the current production system. This highly-educated and creative workforce resorts to either emigration, internal migration towards, mainly, the capital or tries to find their place in some (political) interest groups. The second, equally difficult problem are the effects of internal and external (global) economic crisis, which are reflected in the restricted access to external financial sources and the target segments of the global labour market. The third alternative is expected to present itself in which highly-educated and creative individuals will try to channel their "frustration" by actively participating in an effort to have the first alternative discarded and start with the implementation of the second and/or third alternative. The second alternative is accomplished by integrating larger national production systems into transnational business systems to ensure competitive access to the global market and rapid technological and business modernisation. This alternative allows the activation of what was left of inherited resources (short-term) and available (in the medium term) human resources, and enables larger manufacturing systems to become (in the medium term) local hubs of development and modernisation of micro, small and medium-sized enterprises. This would cause the sectors of manufacturing, education, research and public administration, which are currently exceedingly insular, to become the drivers of sustainable development. This would create (new) development structures and ensure faster transfer of modern technology and the (partial) externalisation of development risks. However, there are two limiting factors: 1) lack of the basic preconditions for ensuring attractive, stable and safe environment for business and development; and 2) fierce competition between states with regard to the implementation of reindustrialisation. In order to achieve the third alternative, which is scientifically desirable because of sustainable employment, the following is required: 1) a consistent understanding of the problems of modern development, 2) a new, active and responsible role of executive authorities and local self-government in the public regulation of the economy and its development (so-called intelligent role of the state, see more in Vedriš and Šimić, 2011), 3) developed DTK infrastructure that meets the needs of entrepreneurs in accordance with the latest technology trends, 4) balanced functioning of market, strategic, cooperative and hierarchical mechanisms of regulation of economic life, 5) reducing the impact of distribution-oriented activity, 6) greater acceptance of risks, 7) creating conditions for achieving a balance between individual and collective interests, and 8) increased motivation of employees and other population sections for creative lifelong learning. Finally, the implementation is contingent upon social and political innovation in terms of creating environmentally responsible society acting in the best interest of future generations; a non-parasitical institutional system; and freedom of choice and preservation of the basic ethnic, cultural and spiritual values.

3. FROM DEINDUSTRIALIZATION TO REINDUSTRIALIZATION – POLICY IMPLICATIONS

The socio-economic framework for long-term sustainable growth and development should be a product of a mix of mentioned strategies for reindustrialisation, which would encompass the changes to the structure of the national production and organisational systems, as well as the business and institutional systems, at the same time taking into consideration the regional, sub-regional and local specificities. By increasing reliance on the existing resources, creative potential and labour force, gradually the conditions could be created for their more effective usage by allocating them to those sectors, companies and ventures that have the best chances for success in the global and European division of labour. To make this happen, it is essential that public support is directed towards the development of areas for which companies have already expressed an interest in investing, as well as the development of large corporations with a great potential for creating value added and generating profits. Adoption of good institutions and openness to foreign technology may well prove insufficient to spark a sustained process of economic transformation and growth (Hausmann & Rodrik, 2002:35). An adequate organisational structure must be devised primarily as a result of integrated public regulation of the economy and the strategic planning of future activities, which will be informed by the content of the current economic, social and educational policies (see Table 1.). The concept of such development "regulation" should be based on the implementation of the following elements of the development model: efficient, innovative, competitive and creative economy.

Table 1. State support for selected firms

Traditional industrial policy	Liberalization and re-regulation of competition
Legal monopoly	Licensing
National technological standards	European and national regulatory standards
Prices set by governments	Regulated tariffs
Subsidies	State guarantees; cross-subsidies; tax arrangements
Public orders	Long-term state contracts; overseas orders
State-private cooperation on R&D	

Source: Thatcher, 2014:26

There are at least three arguments for a 'critical size' of the manufacturing base: 1) manufacturing still accounts for a major part of the innovation effort in advanced economies and this translates into above-average contributions to overall productivity growth and thus to real income growth; 2) there are very important 'backward linkages' from manufacturing to services which provide important inputs for manufacturing and 3) higher productivity growth in manufacturing is important because the sector of origin of productivity growth may not be the sector which benefits most from the productivity growth (SWE, 2013:16). As is proven so many times, Basarac Sertić, Vučković & Škrabić Perić (2014:393) noted that "a strong industrial base is essential for achieving long-term sustainable economic growth and export competitiveness, especially in the circumstances when the consequences of the economic crisis are still being felt". Stojčić and Aralica (2015:16) calculated that in Croatia in addition to capital, coastal regions traditionally inclined to tourism are characterized with decline in both manufacturing output and employment. In Serbia, however, signs of deindustrialization can be observed in addition to main metropolitan areas in some of its eastern regions that were known in pretransition period as centers of heavy industry. Authors concluded that a likely reason behind such findings is stagnation and declining competitiveness of industrial producers from these regions[7]. Economic prosperity requires ensuring the conditions for stable and significant production and employment growth, and the distribution of value added to all members of society. The concept of development of creative society and innovation economy must be based on strengthening research and technological capabilities by a productive integration of education, research activities, and the production of public goods and services in a way that ensures effective

[7] For more details about countries improvement and key reforms/recommendations see: EBRD at al., 2016

acquisition of new knowledge and skills as a major factor in boosting economic, social and cultural development. Creative society and innovation economy are two of several (sub)systems of the overall regional, economic, social, and cultural system. Their operationalization requires that economic policy instruments and measures be used to facilitate the development of a favorable business environment which must be consistent with key sector development policies, agro-industry development strategy, trade and educational policy, entrepreneurship development policy, small and medium-sized enterprises development policy and the technology development strategy.

The effects of measures and instruments of economic policy is very limited when 1) there is no system of automatic incentives, i.e. various market and non-market forms of motivation, 2) the general economic climate, i.e. general economic structure significantly shortens the time horizon for key business decisions, 3) the fiscal and parafiscal liabilities from normal business operations are large, and 4) the gains from the introduction of business innovation and greater international cooperation are marginal compared to other opportunities for acquiring economic and status gains. Based on the national economic structure it can be concluded that both Croatian and Serbian economies have a considerable development potential that can be classified into two groups: 1) sectors with an active development potential, and 2) sectors with a passive development potential. Sectors with low concentration ratio have an active development potential. A significant number of companies in these sectors are competitive on foreign markets, despite issues that threaten their competitiveness. These issues primarily concern outdated technology and the possibility for finding adequate business partners. Adequate vertical policies that would target existing sector-specific problems that the companies face would facilitate sector consolidation through new investments and entrepreneurial ventures. Development potential depends entirely on the synergy of several factors, i.e. resources: knowledge, tradition, regulations, geopolitical position, etc. (see Table 2.). As a rule, sectors with an active development potential are made of a relatively large number of companies. An active development potential is found in the food industry, as well as in high value-added sectors such as the chemical industry, metal processing, manufacture of machinery, wood industry, textile industry, and the like. As is it noted in Commission Report (SWE, 2014:150), to increase the value-added of manufacturing and especially of exports, the planned strategies in the areas of industry, innovation and smart specialization must be implemented.

This is important because, as Romano (2016:12) notes, heterogeneity in the observed dynamics assume that no "one-size-fits-all" plan to re-launch manufacturing in EU can be effective. But also, as Stojčić and Aralica (2015:17) noted, that in majority of Region both manufacturing and sector share effects are negative which may signal declining labor intensity accompanied with the loss of sectoral competitiveness. Such pattern is typical for industries going through restructuring towards more technology intensive products but it also may signal deindustrialization. This is almost naturally process - as movement from one segment of the market to another requires certain period of adjustment, so a short run loss of competitiveness can be expected (Stojčić & Aralica, 2015:17).

Table 2. Global Manufacturing Competitiveness Index, selected country rankings

2016		Country	2020 (Projected)	
Rank	Score*		Rank	Score
1	100.00	China	2	93.5
2	99.5	US	1	100.0
3	93.9	Germany	3	90.8
4	80.4	Japan	4	78.0
5	76.7	S. Korea	6	77.0
6	75.8	UK	8	73.8
7	72.9	Taiwan	9	72.1
8	69.5	Mexico	7	75.9
9	68.7	Canada	10	68.1
10	68.4	Singapore	11	67.6
11	67.2	India	5	77.5
15	59.1	Poland	16	61.9
23	55.3	Czech R.	20	57.4
33	42.8	Romania	28	45.9

*Score: Index sore, 100=High, 10=Low
Source: authors selected according to: Deloitte, 2016:4

Horizontal measures are designed to reduce barriers to market entry; facilitate access to more favorable funding sources; facilitate the production of an educated workforce; create conditions for a functional legal system; achieve macroeconomic stability; create an adequate infrastructure network, as well as other elements that make the business environment attractive. Vertical measures are built upon the horizontal ones and should target priority sectors. But as is it noted in research by Nordås & Kim (2013:11), whether intra-industry trade is horizontal or vertical, a range of business services is needed to make such trade economical. Public R&D support at the national level is positively related to the share of innovative turnover. Firms appear generally to have higher commercialization performance when making use of EU-level public R&D support, with a consistently strong and positive effect of public funding being found especially for firms and medium-high and high-tech industries (SWE, 2013:18). A cost-benefit analysis in the sectors with a passive development potential should determine their real importance for the national economy and provide decision-makers with the data needed for development incentive programs.

4. CONCLUSION

"You become what you export",
Hausmann, Hwang & Rodrik, 2006

Long-term sustainable economic growth and development (both, in the short and long term) can be achieved, obviously, through significant investments. However, the question is how to ensure domestic private investments that are funded (to a greater or lesser extent) by domestic financial resources. Long-term sustainable growth of economic systems in the entire region, and thus a sustainable improvement in living standards of the population can be achieved through significantly increased investments that tap into knowledge, technology, new markets, and most importantly, the human capital (but as Stojčić & Aralica pointed, assuming results of research, it appears that development of knowledge intensive services has adverse effect on industrial development as two sectors compete over same profile of skilled workers, for more, see: Stojčić & Aralica, 2015). Unfortunately, these are available only in the developed countries, whereas the transition countries and regions (with the exception of most CEE countries which have adjusted their structure in accordance with the EU requirements early enough) are characterised by low technology activities of large companies whose main and only motive for investing is to reduce costs, primarily the cost of labour.[8] These firms open plants and employ local work-

[8] But also, we are witnessing and must consider "*the arise of Mighty 5*" - Malaysia, India, Thailand, Indonesia, Vietnam which garner the interest of global manufacturers looking for alternatives to China,

force to perform manual operations, and receive subsidies for "a newly created job" from the host countries. This approach leads to the region becoming an important segment of the "ad hoc economy". Numerous "cosmetic repairs" (or "reforms", as they are fashionably referred to in the region) have not helped create an efficient economic structure. Growth rates amounting to approximately 1.9 percent, as a consequence of failure in the economic, social and, what is especially worrisome, cultural development, are not enough to "maintain the system". In order to compensate for macroeconomic and institutional disorganisation, the solutions for a successful regional policy of the neighbouring countries should be sought in the radical change of geo-economic trends of reindustrialisation aimed at economic, social and territorial cohesion.

Unfortunately, economic policy makers in the region are "fixated" on attracting FDIs, believing that they would solve the problem of unemployment, but forgetting that the key problem today is the quality of employment. FDIs from developed countries should be and are a priority; however, this priority must be aligned with the national strategic objectives. The way to move forward is to understand that industrial policy is not that special: it is just another government task that can vary from routine to urgent depending on the nature of growth constraints a country faces (Rodrik, 2008:26). In addition to sector transformation, it is vital to redirect economic development towards high-tech and complex products and services that will result in value added exports. Also, Nordås & Kim (2013:5) suggests that better service contribute to moving up the value chain in industries where a country already has technological capacity and comparative advantage, but better service alone may not stimulate product differentiation in sectors where a country is far from the competitive edge – at least not in the short run. The underlying cause of poor and inefficient investment activity lies in the so-called "x-inefficiency". In other words, it is a consequence of poor development, economic and technology performance of companies. To increase the efficiency of business development and investment policies, fundamental changes in the strategy and redesign of business processes need to take place with an aim to create conditions for maximum satisfaction of customers in the European Internal Market or some other segment of the global market[9]. Only the need for survival in the environment characterised by

especially because of declining of BRIC countries. For more, see: Deloitte, 2016.

[9] In 2015 Euro area had 12% of world GDP in PPP (US 15.8%, Japan 4.2% and China 17.3%), create 25.1% of total value added in industry (including constructions; US 20%, Japan, 28.9% and China

global competition and dynamic changes in the socio-economic systems, will force companies to design a development and investment policy – and create *"smart competitiveness pact"* due Hausmann & Rodrik's *"self-discovery"* (2002) and *"smart regulation* due COM (2010). Each and every one of these countries needs to find adequate solutions depending on its development vision, the available internal and external resources, specific situation and nature of the process of adjustment. None of this is achievable without an adequate and effective economic policy, the "forbidden" industrial policy, and a logical integration of industrial and regional policies.

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40.9%), exports of goods and services was 27.6% of GDP (US 12.5%, Japan 17.9% and China 21.9%) and finally, share of world exports, including intra-euro area trade was highest in the World with 25.2% (US 9.2%, Japan 3.8% and China 13.9%) (for more, see: European Central Bank, 2017).

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APPENDIX

Table 1. 1. Product Complexity Rankings, selected years

Rank	Product, 1995	PCI	Rank	Product, 2000	PCI
1	Artificial Textile Machinery	2.5523	1	Machinery Having Individual Functions	2.636
2	Woodworking machines	2.36669	2	Silicone	2.471
3	Gas and Liquid Flow Measuring Instruments	2.22504	3	Textile Fiber Machinery	2.409
4	Machinery Having Individual Functions	2.22392	4	Developed Exposed Photographic Material	2.311
5	Other Measuring Instruments	2.19399	5	Laboratory Ceramic Ware	2.298
6	Industrial Printers	2.13989	6	Laboratory Reagents	2.233
7	Nickel Pipes	2.13543	7	Motor-working Tools	2.231
8	Laboratory Reagents	2.11149	8	Acrylic Polymers	2.199
9	X-Ray Equipment	2.10891	9	Micro-Organism Culture Preparations	2.185
10	Other Non-Metal Removal Machinery	2.084	10	Boat Propellers	2.1
Rank	**Product, 2005**	**PCI**	**Rank**	**Product, 2010**	**PCI**
1	Photo Lab Equipment	2.48	1	Blown Glass	3.589
2	Photographic Chemicals	2.474	2	Developed Exposed Photographic Material	2.498
3	Non-optical Microscopes	2.298	3	X-Ray Equipment	2.242
4	Machinery Having Individual Functions	2.278	4	Fork-Lifts	2.215
5	Developed Exposed Photographic Material	2.272	5	Silicone	2.094
6	Industrial Printers	2.147	6	Tool Plates	2.09
7	Non-Mechanical Removal Machinery	2.101	7	Metalworking Transfer Machines	2.069
8	Tool Plates	2.081	8	Nickel Pipes	2.066
9	Photographic Paper	2.077	9	Chemical Analysis Instruments	2
10	Nucleic Acids	2.005	10	Zirconium	1.94
Rank	***Product, 2015***	***PCI***			
1	Photographic Chemicals	2.343			
2	Photo Lab Equipment	2.324			
3	Non-Mechanical Removal Machinery	2.285			
4	Tool Plates	2.246			
5	Metalworking Transfer Machines	2.19			
6	Chemical Analysis Instruments	2.165			
7	Non-optical Microscopes	2.079			
8	Silicone	2.059			
9	Nickel Pipes	2.035			
10	Steel Bars	2.008			

Table 1.2. Economic Complexity Rankings, selected years

1965			1975			1985		
Rank	Country	ECI	Rank	Country	ECI	Rank	Country	ECI
1	Switzerland	2.23743	1	Japan	1.91791	1	Japan	2.14286
2	Sweden	2.19291	2	Austria	1.83344	2	Switzerland	1.99311
3	Austria	2.19021	3	Sweden	1.79896	3	Sweden	1.96578
4	United Kingdom	2.18424	4	Switzerland	1.76538	4	United Kingdom	1.90519
5	Japan	2.15077	5	United Kingdom	1.67298	5	United States	1.82261
1995			**2000**			**2005**		
Rank	Country	ECI	Rank	Country	ECI	Rank	Country	ECI
1	Japan	2.40943	1	Japan	2.35193	1	Japan	2.58229
2	Germany	2.27392	2	Germany	2.25528	2	Germany	2.13201
3	Switzerland	2.24882	3	Switzerland	2.12261	3	Switzerland	2.1282
4	Sweden	2.20024	4	Sweden	2.038	4	Sweden	2.02871
5	Austria	1.98488	5	United Kingdom	1.96008	5	Finland	1.91958
2010			**2015**					
Rank	Country	ECI	Rank	Country	ECI			
1	Japan	2.10229	1	Japan	2.29979			
2	Switzerland	1.87028	2	Switzerland	2.13711			
3	Germany	1.8533	3	Germany	2.08832			
4	Sweden	1.68883	4	Sweden	1.85253			
5	Austria	1.67758	5	United States	1.83254			

Source: authors according to: The Observatory of Economic Complexity: OEC, 2017 first created by Simoes, AJG, Hidalgo, CA (2011). *The Economic Complexity Observatory: An Analytical Tool for Understanding the Dynamics of Economic Development,* Workshops at the Twenty-Fifth AAAI Conference on Artificial Intelligence, available at: http://atlas.media.mit.edu/en/ (accessed at: 15-02-2017)

Table 2. Performance of services and competitiveness of manufacturing

Services variable	Product differentiation	Export prices
Interest spread	Negligible impact	Higher interest rate spread is associated with lower export prices in the electronics sector for upper middle and high-income countries.
Telephone density	Relatively large to moderate positive elasticities. Most important for low-income countries in clothing and for middle and high-income countries in electronics.	Positive, highest elasticity in pharmaceuticals in high-income countries.
Time for exports and imports	Relatively large and negative elasticities. Most important for low and lower middle income countries.	Varies with sector and income group without any clear patterns.
Transport costs	Moderate to low elasticities. Mostly negative and most important for middle and high income countries.	The incidence of transport costs tends to fall on the exporter.
Years of schooling	Large and positive elasticity in low and lower middle income countries in clothing. Important for high-income countries in electronics and pharmaceuticals.	Large and positive elasticities in middle and high income countries, particularly in electronics and motor vehicles.
Electricity distribution reliability	Large positive elasticities. Highest in sectors of assumed comparative advantage	Large positive elasticities in electronics and motor vehicles, negative elasticities in clothing.
Number of contract Enforcement procedures	Strong negative effect. Most important for low-income countries in the clothing sector and for middle and high-income countries in the electronics sector.	Relatively large and positive elasticities in clothing and electronics, no impact in motor vehicle industry.
FDI restrictions	Negative, moderately large elasticities Elasticity largest for low-income countries in clothing, in other sectors the marginal impact is larger the richer the country. FDI restrictions in the transport sector, however has a larger elasticity in low-income countries.	Mainly negative, small to moderate elasticities. Most important in low-income countries.
Product market regulation (PMR), telecoms and air transport	Moderate to high negative elasticities, with the largest marginal effects in low-income countries.	Moderate to high negative elasticities. In telecoms, the elasticities do not vary much with income, and is highest in the motor vehicle industry.
Tariffs	Large and mainly negative elasticities. The elasticity rises with income level except in the clothing industry.	Large mainly negative elasticities that rises with income.

Source: Nordås & Kim, 2013:34

Table 3. Classification of sectors according to technology categories

High-technology	**Medium-high-technology**
Aerospace	Electrical machinery
Pharmaceuticals	Motor vehicles
Computers, office machinery	Chemicals, excluding pharmaceuticals
Electronics-communications	Other transport equipment
Scientific instruments	Non-electrical machinery
Medium-low-technology	**Low-technology**
Coke, refined petroleum products and nuclear fuel	Other manufacturing and recycling
Rubber and plastic products	Wood, pulp, paper products, printing and publishing
Non-metallic mineral products	Food, beverages and tobacco
Shipbuilding	Textile and clothing
Basic metals	
Fabricated metal products	

Source: Nordås & Kim, 2013:41

THE CAPITAL STRUCTURE OF ENTERPRISES IN THE FURNITURE INDUSTRY CLUSTER

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Abstract

The European Union is recovering from its longest ever recession. Even the recovery remains modes the EU is on the right way aiming to release strategies for post-crisis sustainable growth and modernisation of Europe's industrial base and the promotion of a competitive framework for EU industry. Therefore, in January 2014, the Croatian Ministry of Economy published the Industrial Strategy of the Republic of Croatia 2014– 2020 in which the industry of furniture manufacture was assigned a strategic role, and the sub-area C31.0 – Manufacture of Furniture, was classified as one of key industrial sub-areas or Initiators. Aiming to release full potential of SMEs growth, the European Commission, among other prior objectives highlighted potential of clusters as being able to facilitate cross-sectoral and cross-border collaboration, helping SMEs to grow. In this regard, focus of this research is on furniture industry cluster from section C - Manufacturing, division 31 - Manufacture of furniture, class 31.09 - Manufacture of other furniture. Accordingly, using spatial autocorrelation enterprises from class 31.09 - Manufacture of other furniture are clustered by determinants geographical location (latitude and longitude), the number of employees, average net salary and value added into *seven clusters. In order to examine the relationships between variables which formed clusters and capital structure, regression analysis is applied.*

Keywords: *furniture industry, cluster, Small and medium sized enterprises (SMEs), capital structure*

JEL Classification: L5, L53

1. INTRODUCTION

The European Union is recovering from its longest ever recession. Even the recovery remains modes the EU is on the right track striving to create basis for post-crisis sustainable growth and modernisation of Europe's industrial base and the promotion of a competitive framework for EU industry. Still, the economic challenges that EU member countries are facing remain important. The above mentioned is evidenced by *Europa 2020 strategy* (European Commission 2010) under Flagship Initiative: *"An industrial policy for the globalisation era"* where Commission among other objectives, seeks to improve the business environment, especially for SMEs through the promotion of clusters and improving affordable access to finance developing a strong and sustainable globally competitive industrial base. Furthermore, in renewed industrial strategy outlined in 2012 Communication, the Commission seeks to reverse the declining role of industry in Europe from its level of 16%3 of GDP in 2012 to as much as 20% by 2020. Following that ambitious goal, in 2014 the European Commission adopted a new Communication, '*For a European Industrial Renaissance*' setting out the Commission's key priorities for industrial policy and more important stressing the importance of full and effective implementation of industrial policy in the EU. EU industrial policy has paid much attention to small and medium enterprises, emphasising their importance in EU economy mainstreamed them into policy actions. Aiming to release full potential of SMEs growth, the Communication among other prior objectives highlighted potential of clusters as being able to facilitate cross-sectoral and cross-border collaboration, helping SMEs to grow. But to be effective, policy actions must be well co-ordinated and consistent from regional to the EU level. Therefore, in in January 2014, the Croatian Ministry of Economy published the Industrial Strategy of the Republic of Croatia 2014– 2020 with the aim of repositioning the identified strategic activities in the global value chain towards the development of activities that create added value. In doing so, the Strategy divided and arranged subareas into five groups on the basis of valuation models and ranking. The valuation model was based on three criteria used for the evaluation of sub-areas, grouping the sub-areas and their ranking within the group: profitability (EBITDA per person employed), export orientation, and size of the sub-area (defined by the number of persons employed in a specific sub-area) in which the industry of furniture manufacture was assigned a strategic role, and the sub-area of the wood sector C31.0 – Manufacture of Furniture, was classified as one of key industrial sub-area or *Initiator* (Družić, Basarac Sertić, 2015). Additionally, the furniture sector stands to benefit from above mentioned Flagship *An industrial policy for the globalisation era* placeing emphasis on the role played by the European manufacturing industry as a driver of economic growth and employment levels in Europe (CEPS, CSIL, The EU furniture market situation and a possible furniture products initiative, 2014). In this regard, focus of this research will be on furniture industry cluster from section C - Manufacturing, division 31 - Manufacture of furniture, class 31.09 - Manufacture of other furniture. Enterprises are clustered by geographical location (latitude and longitude), the number of employees, average net salary (in HRK) and value added (in HRK). The empirical analysis was conducted on a sample of 287 enterprises. More specifically, small, medium and two large enterprises. Focus in this research is on small and medium enterprises because most of the observed enterprises are small (275), ten are medium-sized companies and only two are large (Prima commerce d.o.o. and Tvin d.o.o.).

The rest of this paper is structured as follows. The next section, key sectoral facts in the context of the furniture industry in Croatia, comes after this introduction. Capital structure is discussed in section 3. Section 4 describes data and introduce the methodology adopted. Empirical results are presented in section 5. Finally, section 6 concludes and discussion.

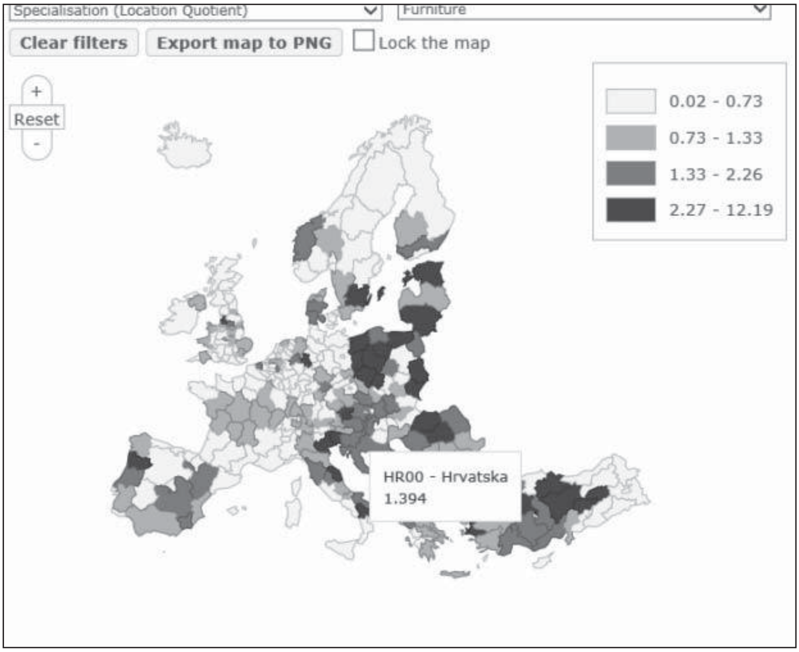
2. KEY SECTORAL FACTS IN THE CONTEXT OF THE FURNITURE INDUSTRY IN CROATIA

The furniture industry is a labour-intensive and dynamic sector dominated by small and medium-sized enterprises (SMEs) and micro firms. EU furniture manufacturers have a good reputation worldwide thanks to their creative capacity for new designs and responsiveness to new demands. The industry is able to combine new technologies and innovation with cultural heritage and style, and provides jobs for highly skilled workers (European Commission). As mentioned in introduction, focus in this research is on enterprises from section C - Manufacturing, division 31 - Manufacture of furniture, class 31.09 - Manufacture of other furniture, classified by activity based on the National Classification of Activities (NKD 2007, OG 58/2007) grouped into seven furniture industry clusters. Clusters are groups of specialised enterprises – often SMEs – and other related supporting actors that cooperate closely together in a particular location. In working together SMEs can be more innovative, create more jobs and register more international trademarks and patents than they would alone (European Commission). According to newest data, 3 000 strong clusters across Europe account for more than 54 million jobs and 45% of all traded industries' wages (23% of the overall economy). Wages in strong clusters are close to 3% higher than in industries not located in such regional hotspots, and the wage gap towards both other traded industries and the overall economy is growing (European Cluster Panorama 2016, November 2016). Clusters "are cross-sectoral by their nature, as they refer to a concentration of related industries and institutions, and thus, they can be platforms for innovation and industrial change (...). They transform and reinvent themselves in response to changes in the external environment or changes initiated within the cluster, which can be amplified through positive feedback between this external environment and the cluster itself" (European Cluster Trends, Preliminary Report, European Commission, Brussels 2014, p. 12). Furthermore, according to European Cluster Panorama 2016, cluster performance are measured using two-stage approach. In the first stage, 'strong clusters' are identified by specialization1. According to measure of specialization2, Croatia's location quotient in furniture industry is respectively 1.394, meaning that Croatia is not 100 per cent specialized in the given industry, but is on the right track (Figure1). Further progress is essential.

[1] Situations in which a region is specialised in a set of related industries relative to peers.

[2] Specialisation, measured by the relative size of regional employment in a given (sectoral or cross-sectoral) cluster category reflected in its location quotient (LQ). This relative measure indicates how much stronger a region is in a cluster category than would be expected given its overall size, compared to the average employment size in the specific cluster category across all regions. A localisation quotient equal to 1 means that the given region is not specialized in the given industry. A localisation quotient equal to 2 means that the given industry is represented by a 100% bigger share of employment in the given region than the industry's share of employment on the level of all regions. This indicates that the region is specialized in the industry.

Figure 1: Specialisation (Location Quotient) of Croatia in a given industry relative to Europe

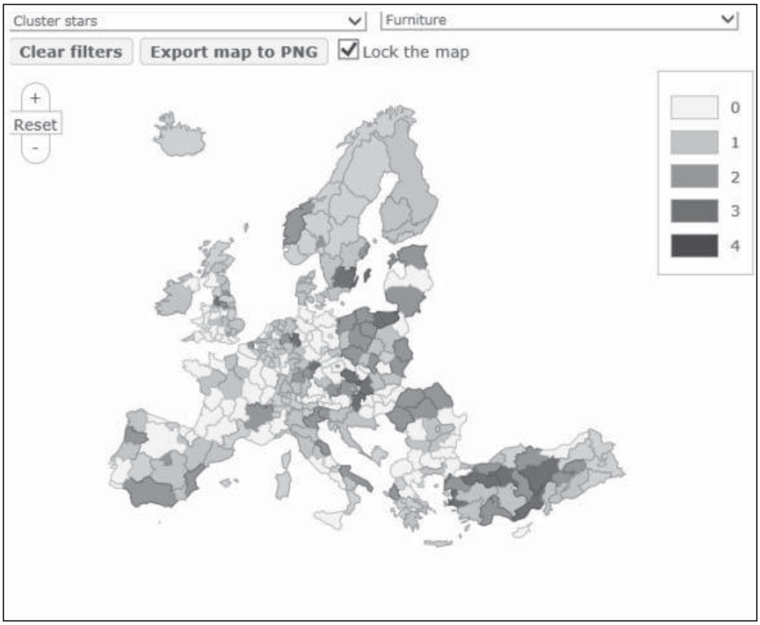


Source: The Cluster Mapping tool, European Commission

In the second stage, 'four star' methodology[3] is used to capture how well a location is leveraging the presence of a cluster.

[3] A cluster gets 1 star for being in top 20% in Europe along each of the four dimensions: size, specialisation, productivity, and growth. Data are extract from 2013.

Figure 2: Four star methodology in a given industry relative to Europe



Source: The Cluster Mapping tool, European Commission

In Figure 2, furniture industry cluster in Croatia is ranked by 1 meaning that Croatia's furniture industry cluster falls into the top 20% of European regions because location falls in any of the four dimensions: size, specialisation, productivity, and growth.

3. CAPITAL STRUCTURE IN THE CONTEXT OF THE FURNITURE INDUSTRY CLUSTER

Capital structure is one of the most intriguing fields in financial management. Since the publication of the famous paper of Modigliani and Miller in 1958, the relation between debt and equity has generated a great interest among researchers. Capital structure researches are focused toward two theories: trade off theory (TOT) and pecking order theory (POT). From the theoretical point of view, existing empirical studies widely used two models of capital structure: the trade-off theory and the pecking order theory. Trade-off theory implies that a company's capital structure decisions involve a trade-off between the tax benefits of debt financing and the costs of financial distress. The pecking order theory points out that there is a certain order in financing, starting from retained earnings as a primary source of internal financing, then moving to debt and using equity only as the last resort. Each of these theories suggests how certain determinants affect capital structure. According to Shamshur (2010) capital structure theories offer a number of determinants that are responsible for various impacts on capital structure, while the empirical literature tend to find evidence that firms behave in accordance with the theoretical predictions. Mostly they focus on those determinants which are more likely to have a major role on leverage decisions. Although there have been various studies analysing capital structure, it is still debated what the determinants of capital structure are and how they impact capital structure decisions. According to theories, researchers found various impacts of determinants on capital structure depending on the country they are analysing. From these theories a number of relationships between determinants and debt-equity choice can be derived. The aim of this paper is not to analyse the fundamental determinants of the capital structure, but to analyse the capital structure of enterprises in the furniture industry cluster in Croatia through the analysis of the variables which formed clustered enterprises and capital structure measures. In such a way this paper is filling the gap in the capital structure analysis. Following Degryse et al. (2010), in this research the leverage of a company is calculated as the ratio of total liabilities to total assets, long-term liabilities to total assets and short-term liabilities to total assets.

Regarding unfavorable and difficult macroeconomic conditions for clusters, but in order to support Commission's efforts in improving the business environment, the following hypotheses will be tested in this paper: there are positive relationship between variables which formed clustered enterprises and capital structure measures.

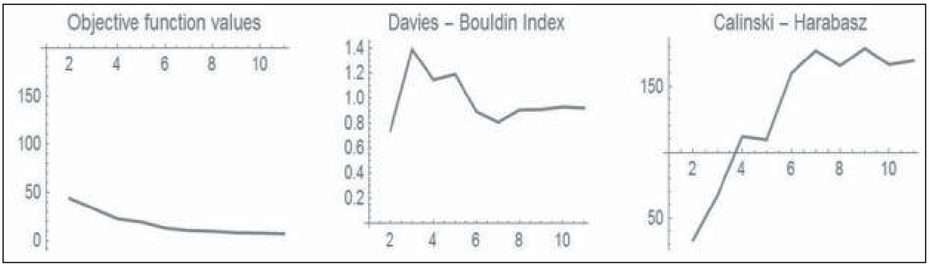
4. DATA AND METHODOLOGY

The research was conducted on a data sample of 326 small, medium and large enterprises classified by activity based on the National Classification of Activities (NKD 2007, OG 58/2007). The data used in this paper were taken from the business database of Poslovna Hrvatska [4]. Each enterprise is observed over the year 2015. According to the NKD 2007, the observed enterprises are included in section C - Manufacturing, division 31 - Manufacture of furniture,

[4] www.poslovna.hr

class 31.09 - Manufacture of other furniture. The listed enterprises perform their core activity mainly in section C - 31 - Manufacture of furniture. The observed units are enterprises with limited liability and joint stock enterprises. Financial statements in the form of balance sheets and income statements were available for all SMEs in the sample. Due to the absence of any business data, 39 enterprises were excluded from observation. The final sample consist of 287 enterprises. In order to cluster observed enterprises five variables are used: geographical location (latitude and longitude), the number of employees, average net salary and value added. On the data set the fast partitioning algorithm proposed in Scitovski & Scitovski (2013) is applied and optimal partitions with 2 ≤ k ≤ 11 clusters are determined. In each iteration of the algorithm the corresponding clustering validity indexes Davies-Bouldin (DB) and Calinski-Harabasz (CH) were calculated (Scitovski, Briš Alić, 2016).

Figure 3: Selection of the partition with the most suitable number of clusters. (a) Objective function values, (b) DB index (c) CH index



From Figure 3, it is evident that CH and DB indexes show that an optimal partition with k = 7 clusters is the most appropriate partition.

Figure 4: Optimal partition with k = 7 clusters

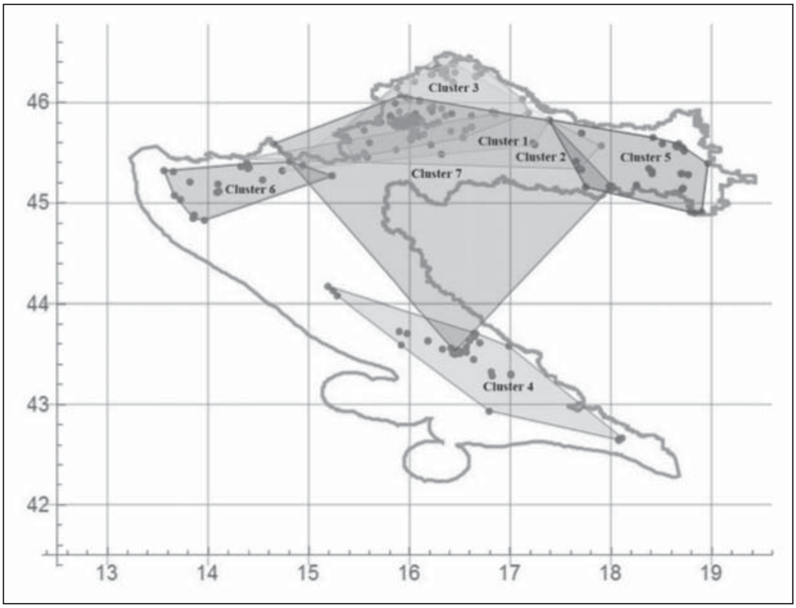


Figure 4 shows that the resulting geographical clusters intersect. This occurs because the algorithm groups the enterprises also by the observed properties (the number of employees, average net salary and value added), and this does not have geographical priority.

After the enterprises are clustered into seven clusters we have selected those five variables which formed clusters as independent variables with purpose to see their effect on capital structure. Dependent variables are capital structure measures. In the Table 1, there are names, description and descriptive statistics of the variables used in the research.

Table 1: Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Leverage 1	287	0.00	45.07	1.52	3.86
Leverage 2	287	0.00	18.85	0.26	1.35
Leverage 3	287	0.00	45.07	1.26	3.59
Geographic longitude	287	13.56	18.96	16.33	1.10
Geographic latitude	287	42.65	46.48	45.34	0.89
Number of employees (based on average number of working hours)	287	0.00	743.00	17.37	69.61
Average net salary (in HRK)	287	0.00	7161.00	2474.41	1642.73
Value added (in HRK)	287	0.00	48032602.00	1446055.64	5501477.17
Valid N (list wise)	287				

Source: calculation of the authors

Descriptive statistics includes the mean, standard deviation, minimum and maximum values for the year 2015. The data contain 287 enterprises. From Table 1 it can be seen that the mean leverage L1 (total liabilities/total assets) of the analysed Croatian enterprises is respectively 1,5217 indicating that enterprises from the furniture industry cluster are extremely highly levered. Also the ratio of short-term liabilities in total assets (L3) of the enterprises is respectively 1,2587, indicating a highly proportion of short-term debt in total liabilities of enterprises from the furniture industry cluster. The ratio of long-term liabilities in total liabilities of the enterprises was around 26%, indicating that enterprises from the furniture industry cluster are not extremely long term indebted. These results can be caused by reduction in lending to enterprise sector after the economic crisis or insufficient access to finance as a key factor for the development of an enterprises. In this regard, enterprises from the furniture industry cluster are operating with short-term debt.

A correlation analysis for each of seven clusters was performed to verify possible association between and among the variables, in order to test weather is any linear correlation between and among the variables. Table 2 and Table 3 show that only in cluster 2 and cluster 6 there are significant correlations between dependent and independent variables.

Table 2: Correlation matrix in Cluster 2

		Leverage 1	Leverage 2	Leverage 3
Geographic longitude	Pearson Correlation	.400	.150	.369
	Sig. (2-tailed)	.504	.809	.541
Geographic latitude	Pearson Correlation	-.584	**.935***	-.654
	Sig. (2-tailed)	.302	**.020**	.231
Number of employees (based on average number of working hours)	Pearson Correlation	-.183	.783	-.255
	Sig. (2-tailed)	.768	.118	.679
Average net salary (in HRK)	Pearson Correlation	-.481	-.425	-.419
	Sig. (2-tailed)	.412	.475	.482
Value added (in HRK)	Pearson Correlation	-.255	.875	-.333
	Sig. (2-tailed)	.678	.052	.584

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Source: calculation of the authors

Table 3: Correlation matrix in Cluster 6

		Leverage 1	Leverage 2	Leverage 3
Geographic longitude	Pearson Correlation	.329	-.135	.357
	Sig. (2-tailed)	.101	.510	.073
Geographic latitude	Pearson Correlation	-.057	**-.460***	.065
	Sig. (2-tailed)	.782	**.018**	.751
Number of employees (based on average number of working hours)	Pearson Correlation	**.781****	-.165	**.807****
	Sig. (2-tailed)	**.000**	.419	**.000**
Average net salary (in HRK)	Pearson Correlation	.131	.173	.084
	Sig. (2-tailed)	.522	.398	.684
Value added (in HRK)	Pearson Correlation	**.745****	-.156	**.769****
	Sig. (2-tailed)	**.000**	.446	**.000**

Source: calculation of the authors

5. EMPIRICAL RESULTS

In order to test hypotheses that there are positive relationship between variables which formed clustered enterprises and capital structure measures, we preform regression analysis. In the first part of our analysis, we analysed cluster 2. Each determinant is individually tested in a way that bivariate regression analysis is done with dependent variable L2 (long-term liabilities/total assets) and independent variable geographic latitude. After that, regression analysis is developed with the cluster 6.

Table 4: Results of regression analysis - Cluster 2

Dependent Variable: Leverage 2					
	Coef.	Std. Error	t	P>|t|	R Square
Geographic latitude	0.93463	0.29516	4.55224	0.01986	0.87354

Source: calculation of the authors

In Table 4, estimated regression coefficient is 0.93463 with p-value <0.05 showing that the relationship between long-term leverage and geographic latitude is positive and statistically significant. This is verified also by *t*-statistics. According to R-square, 87,35 percent of the variation in long-term leverage can be captured by independent variable geographic latitude. Results show that with the increase of geographic latitude, there is an increase in L2 (long term leverage).

Table 5: Results of regression analysis - Cluster 6

Dependent Variable: Leverage 1

	Coef.	Std. Error	t	P>|t|	R square
Number of employees	0.78079	0.00235	6.12212	0.00000	0.60963
Value added	0.74482	0.00000	5.46832	0.00001	0.55475

Dependent Variable: Leverage 2

	Coef.	Std. Error	t	P>|t|	R square
Geographic latitude	-0.45989	0.19084	5.46832	0.01809	0.21150

Dependent Variable: Leverage 3

	Coef.	Std. Error	t	P>|t|	R square
Number of employees	0.80697	0.00228	6.69374	0.00000	0.65119
Value added	0.76936	0.00000	5.90014	0.00000	0.59192

In Table 5, results show that in cluster 6, number of employees and value added positive influence leverage measured by ratio of total liabilities to total assets. The same is shown and with the short-term leverage. It can be noticed that long-term leverage will increase with decrease of geographic latitude, although we expected positive relationship, contrary to cluster 2, where this relationship is positive.

6. DISCUSSION OF RESULTS

The aim of this paper was not to analyse the fundamental determinants of the capital structure, but to analyse the capital structure of enterprises in the furniture industry cluster in Croatia through the analysis of the variables which formed clustered enterprises and capital structure measures. First, it is evident that enterprises in furniture cluster are extremely short-term levered indicating that increase of value added and number of employees induces increase of short term leverage. The results are particularly significant in Cluster 6, where among other clusters, only small and two medium sized enterprises are operating. In Cluster 6 there are 65.4% of enterprises with up to 5 employees, 26.8% enterprises whose number of employees is between 5 and 25, 1 enterprise with 114 employees, and 1 enterprise with 180 employees. According to characteristics from Cluster 2, which has only 5 enterprises, but almost 50% of all employees (47.09%) is employed in these five enterprises, and are no enterprises without employees in this cluster, only the increase of geographic latitude will induce the increase in long term leverage. Regarding these results we can conclude that capital structure can be analysed and through determinants which formed clusters. Regarding our hypotheses there are positive relationship between variables which formed clustered enterprises and capital structure measures, finally we can acknowledge that due to observed variables in furniture industry cluster, number of employees, value added and geographic latitude effect capital structure.

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IMPACT OF EU FUNDS ON REGIONAL DEVELOPMENT

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Abstract

The paper investigates the impact of EU funds on the development of a region. The concept of region has been defined in a number of ways, depending on the perspective, e.g., geographic, economic, social, statistical, etc. The European Union has established a common classification of territorial units for statistics, known as 'NUTS' (based on which Nomenclature of Units for Territorial Statistics of the Central Bureau of Statistics of the Republic of Croatia, i.e. NUTS:HR was developed). The NUTS nomenclature, which subdivides national territory into regions, facilitates the use of structural funds, on which this paper focuses. Croatia has undergone the regionalisation process several times, having been divided into five NUTS regions initially; it now has two, i.e. three. In order to achieve a more equitable distribution of available funds, increase regional competitiveness and promote development, it is important to adequately subdivide the Croatian territory into NUTS regions. The current subdivision has enabled Osijek-Baranja County, which forms part of Pannonian Croatia, to absorb a significant amount of pre-accession funds. Upon accession of the Republic of Croatia to the European Union, it continued to withdraw consid-

erable funds, thus giving an example of good practice that other counties in Croatia should follow. The European Union offers Slavonia new opportunities for development, as confirmed by the official data of the Ministry of Regional Development and EU Funds on the availability of EUR 10.7 billion from EU funds. Opportunities for withdrawal of funds are ample; however, in order to facilitate cooperation between the EU and Croatia, it is necessary to raise the level of expertise and professional skills for the staff dealing with these issues in Croatia.

Keywords: *European Union, regional policy, European Union funds, NUTS regions, Osijek-Baranja County*

JEL Classification: P25, R1

The present-day territory of the Republic of Croatia includes a number of geographical regions with different historical background and size. These reflect the political fragmentation of the Croatian lands in the past, and partly also the position of Croatia at the meeting-point of several large, geographical regions which constitute Europe. The best-known historical regions include Dalmatia, Slavonia and Istria. Contemporary regional division is made on the basis of relief features of the country. The northern, predominantly lowland part of the country is divided into Eastern and Central Croatia. Eastern Croatia encompasses the traditional regions of Slavonia, Baranja and the western part of Srijem, i.e. lowland area of the Pannonian Plain, which is bordered by the largest rivers, the Sava, Drava and Danube. This area boasts the optimal conditions for agricultural production. The effective centre of the region is Osijek. (Portal Hrvatska.eu - Regije)

Instead of the division into three statistical regions, without any advance notice or any form of discussion, on 22 August 2012 the new classification of statistical regions at NUTS 2 level (National Classification of Territorial Units for Statistical Purposes 2012, Official Gazette No. 96/12) was adopted, according to which Croatia was divided into two NUTS[1] 2 regions: Continental Croatia and Adriatic Croatia (Information on statistical division of the Republic of Croatia, September 2012).

[1] Nomenclature of territorial units for statistics (From French: Nomenclature des Unités Territoriales Statistiques)

Four years later, in 2016, the mentioned decision still stands. However, the change of government brought new proposals for regional division of Croatia. Discussions are underway about the most recent proposals by Dubravka Jurlina Alibegović (former Minister of Administration) and the current Minister of Regional Development and EU Funds, Gabrijela Žalac, for the division of Croatia into three, five or even seven regions.

Territorial reorganization into five or seven regions was proposed by a team of experts from the Institute of Economics, Zagreb, as part of the study, conducted in 2010, entitled "Analytical basis for effective decentralization in Croatia". The study proposes a new territorial organization of regional self-government units, i.e. the division of Croatia into seven regions. The study draws on the experiences of Denmark, according to clear criteria: (1) minimum number of inhabitants, (2) fiscal criteria for municipalities and cities, and (3) regional economics. The division into seven regions was made based on factor and cluster analyses, taking into account the efficiency of public service delivery and effective performance of the role of the local and regional development coordinator. (Jurlina Alibegović et al.; 2010, pp. 224-226)

The Study put forward a proposal for decentralisation, i.e. division of Croatia into the following seven regions:

1. Međimurje, Podravina and Western Slavonia,
2. Northwestern and Central Croatia,
3. Dalmatia,
4. Lika,
5. Slavonia,
6. Istria, Primorje, and Gorski Kotar,
7. Zagreb region. (Jurlina Alibegović et al.; 2010, p. 242)

1. THE RELEVANCE OF THE NUTS CLASSIFICATION FOR THE USE OF EU FUNDS

The European Union is an important trading power, which has considerable international influence. Its trade policy is closely linked to its development policy. The historical roots of the European Union lie in the Second World War. Europeans are determined to prevent such killing and destruction from ever happening again. (EUROPE – The history of the European Union: 1945-1959). The European Union was set up with the aim of ending the frequent and bloody wars between neighbours, which culminated in the Second World War (EUROPE – The history of the European Union). The European Union was created as an economic and political union to promote the social well-being both in the Member States and around the world. One of the positive implications of this union, which promoted the economic growth, is the abolition of customs duties in the trade between Member States.

In the opinion of Fontaine (2010:7), European post-industrial societies are becoming increasingly complex. Living standards are growing steadily, but there is still a significant gap between the rich and the poor. This gap could be widened further by factors such as economic recession, industrial relocation, the aging population, and problems with public finances. It is important that the EU Member States work together to address the real challenges facing society: environmental protection, health care, technological innovation, etc, because the activities of the European Union affect the daily lives of its citizens.

In order to become a member of the European Union, a candidate country must meet specific requirements put before it by the European Union. The requirements are to be fulfilled during the pre-accession process and the candidate country can join the EU and become a full member only once the requirements have been met. Fontaine (2010:16) asserts that by the end of this decade, European Union membership could grow from 27 (28 with Croatia) to 35 countries. This would be another major enlargement and would probably require further changes in the way the EU works. The author gives the following arguments for "EU membership:

(a) Legal requirements - European integration has always been a political and economic process, open to all European countries that are prepared to sign up to the Treaties and take on board the full body of EU law. According to the Lisbon Treaty (Article 49), any European state may apply to become a member of the European Union provided it respects the principles of liberty, democracy, respect for human rights and fundamental freedoms, and the rule of law.

(b) the Copenhagen criteria - in 1993, following requests from the former communist countries to join the Union, the European Council laid down three criteria they should fulfil so as to become members. By the time they join, new members must have:

- stable institutions guaranteeing democracy, the rule of law, human rights and respect for and protection of minorities;
- a functioning market economy and the capacity to cope with competitive pressure and market forces within the Union;
- the ability to take on the obligations of membership, including support for the aims of the Union. They must have a public administration capable of applying and managing EU laws in practice.

(c) the process of accession to the European Union." (Fontaine, 2010:16)

Throughout history, there have been many countries that wanted to join the European Union as soon as they could without meeting the demanding requirements. European integration began in the 1950s and gradually, a growing number of European countries have joined the process. A gradual and well-planned accession to the European Union should be supported. However, prior to joining such an important community as the EU, the motives for joining, goals and strategies need to be painstakingly analysed. Countries wishing to join the EU should first reach a level of economic, political and social development which will enable them to sustain, perhaps even advance their economic growth, and increase gross domestic product (GDP). Regrettably, we are faced with a different reality. Countries are becoming members of the Union and paying membership fees thinking that the EU will help them. The reality is 'a little' different. The European Union was not founded to help its members out of solidarity. Just as any other EU system, it was created primarily for the benefit of the Union (membership fees), not to voluntarily help its members. This aspect of the EU should be condemned. We live in a time where the purchasing power is declining (especially in Croatia); the economic crisis is deepening, not to mention the low morale. It would be ideal if the EU had a lot of money to share with less developed countries, countries in transition, countries which require financial help. Unfortunately, reality often falls short of our expectations. It is harsh and unfair. (Ribić, 2014).

In order for Croatia to find its feet both as a member of the EU and in international business in general, it needs adequately trained professional staff. It needs to make sure that individuals chosen to represent it in the European Parliament are adequately educated in the field for which they are responsible. The conditions, under which they will be elected to lobby in the EU for the development of Croatia, in particular its underdeveloped parts, need to be clearly defined as soon as possible so that uneven regional development in Croatia could be addressed. Only adequately educated and trained experts and professionals can effectively lobby for Croatia thereby facilitating its cooperation with the EU to mutual satisfaction.

Upon becoming a member of the European Union, Croatia became part of the single market which produces a fifth of the world's GDP. The EU is also the world's largest exporter and importer of goods and services. 61% of Croatia's export trade and 60% of its import trade are made with EU Member States (Croatian Bureau of Statistics, 2010).

Membership of the EU is beneficial for Croatian economy as it provides access to the single market, which gives Croatia a privileged position relative to other European countries that are not EU members.

The most obvious disadvantage of membership for Croatia is the reduction of fiscal revenues due to reduced customs protection against third countries and the obligation to pay 75% of revenue from customs duties into the EU budget. In 2010, Croatia's customs revenues amounted to HRK 1.6 billion or 0.5% of its GDP (Ministry of Finance, 2010:43).

EU membership has brought benefits of a large market with half a billion potential consumers for manufacturers whose products bear the protected geographical indication, protected designation of origin or traditional specialties guaranteed, as well as for organic products. As much as 91.6% of Croatian territory is classified as rural, with 47.6% state population share. (Rural Development Strategy of the Republic of Croatia for the period 2008 - 2013).

Freedom of movement for workers and free movement of goods and services greatly facilitate international trade and business in the European Union. By removing product specifications their quality and characteristics are standardized throughout the Union. Croatian producers and exporters have an opportunity to expand into new markets and increase production as a result of increased demand, i.e. a larger consumer market.

Product recall compensation mechanisms should be adopted, which will result in considerable savings. Products that do not have a customer would not be placed on the market, which would prevent the waste of capital on the production of unwanted products so that it can be used for products that customers actually want.

Upon its accession to the Union, Croatia started to participate in formulating the supranational Common Agricultural Policy. The responsibility for agriculture subsidizing has been gradually transferred from national governments to the EU. The share of the EU budget in direct payments is set to gradually increase from 25% of the total financial envelope allocated to Croatian agriculture, in the first year of membership, up to 100% of that amount in the tenth year of membership. The difference to the full amount of the current subsidies to our farmers will be allocated from the national budget and the EU funds for Rural Development (Treaty of Accession of the Republic of Croatia to the European Union:86).

The NUTS classification is extremely important for the drawdown of the funds from the European Union, the use of EU funds, and for determining allocations. The regionalization of Croatia has been a subject of discussion for quite some time, and the alterations to the territorial organization have been very frequent. The chronology of these changes has been illustrated on the example of Croatia.

The EU provides funding for a broad range of projects and programmes covering areas such as the development of quality and safe production, further development of tourism, etc., which can boost trade and economic activity. The European structural funds (the European Social Fund, the European Regional Development Fund, and the Cohesion Fund) are intended for Member States, while the Instrument for Pre-accession Assistance (IPA) is the means by which the EU supports reforms in the 'enlargement countries'. Upon accession to the Union, Member States are classified into NUTS regions for statistical purposes. Eligibility of regions for EU funding is based on NUTS classification. Croatia needs investments and capital in order to be able to expand its international trade.

EU's regional policy is based on the transfer of funds from rich to poor countries. The funds are used to boost economic growth in the less developed areas, revitalize industrial regions in decline, help young people and all those seeking a job; to modernize farming, and to help resolve challenges facing rural areas. Reduction of regional disparities is an essential condition for economic and political development of the EU. However, achieving equality in terms of standard of living in different regions is neither desirable nor possible because this would impact negatively the drivers of growth. The main factors that have an adverse impact on economic, social and territorial cohesion in the Union, highlighted by Kandžija and Cvečić (2010:1054) are as follows:

1. high concentration of economic activity and population in central metropolitan regions,
2. regional disparity in GDP and employment levels,
3. limited availability of certain services in some regions and cities,
4. socio-economic challenges facing remote and isolated areas.

Membership of the European Union has both advantages and disadvantageous depending, to an extent, on the Member State's capability to look after itself, and ensure its financial security. Croatia should increase its project preparation capabilities so as to ensure that as many projects as possible are approved, thereby contributing to Croatia's development and prosperity.

Upon becoming a full member of the Union, Croatia became eligible for structural funds: the European Regional Development Fund, the European Social Fund, and the Cohesion Fund, i.e. funds intended for the less developed regions of the EU. Moreover, Croatia was able to start using the funds intended for agriculture, fisheries and rural development, the preparation for accession to the Schengen Area, as well as other programmes and initiatives (Delegation of the European Commission to Croatia, *2011*).

In order to absorb as much financial resources as possible from the EU with a view to promoting the growth and development of the country, Croatia first needs to apply for project funding. Following a call for proposals by the EU, Croatia, like any other member of the Union, has the right to submit its proposal accompanied by the appropriate documents. Funds are provided in the form of:

- Grants for specific projects, usually following a public announcement known as a 'call for proposals'. Part of the funding comes from the EU, part from other sources.
- Contracts are awarded through calls for tender, goods or work performed to ensure the work of the EU institutions and the implementation of the program. Contracts awarded through tenders (public procurement) account for a number of different areas: education, technical assistance and training; counselling, organization of conferences, procurement of equipment, etc. As a group, the 28 EU Commissioners have the ultimate po-

litical responsibility for ensuring that EU funds are spent properly. But because most of the funding is managed within the beneficiary countries, responsibility for conducting checks and annual audits lies with national governments (EUROPE - EU funding).

For a project to be considered for EU funding, a call for proposals must be published, which supports the general and specific objectives of the project. The application process is laid down in the tender documents that are published together with the call for proposals. The most important document is the Guidance for Applicants, containing all the information needed for application: interventions eligible for funding, eligible applicants, deadlines and other conditions. The tender documents also inform the applicant about the conditions for implementation of a grant, should it be awarded. The steps for obtaining EU funding include (Structural Funds - Funding - Step 1):

1. The first and most important step is to learn about the opportunities for obtaining funding for your project ideas/projects.
2. Search for open calls for proposals to find calls that correspond to your area of interest or your status as a beneficiary and check whether you are eligible for funding!
3. Once you have found a call for proposals whose priorities are in line with the objectives and the mission of your project, carefully study the tender documents and the accompanying forms and prepare your project proposal using the necessary forms. Before submitting your application to the relevant institution by the deadline specified in the call for proposals, double check the application to make sure that all the forms have been filled out correctly and that you have all the documents required.

2. CROATIA ON THE PATH TOWARDS OPTIMAL REGIONAL DIVISION

Croatia needs to be decentralized as soon as possible. Centralisation will only lead to an even greater gap in the regional development divide, the decline in GDP, growth and progress. Each region, i.e. county, has its own advantages that must be used for the benefit of the entire country. Each region should focus on its most profitable activities to generate maximum profits. If, for example, Eastern Croatia (Osijek-Baranja County, Požega-Slavonia County, etc.) focuses on agricultural activity, there will be no need for importing agricultural products and employing farmers in the exporting country. Instead, Croatian farmers will be employed. This would improve Croatia's competitiveness in the field of agriculture. Increased competitiveness increases the demand for labour, which, in turn, increases purchasing power.

Croatia lags behind in terms of competitiveness, innovation and technology transfer, as compared to the majority of the Member States. The priority of the Regional competitiveness operational programme is to unlock the development potential of Croatia by strengthening regional potential for economic growth, and providing support for entrepreneurship development, small and medium-sized enterprises (SMEs), as well as innovation and technology transfer in the country. Some of the expected outcomes at the end of the implementation period in 2016 are shown in Table 1.

Table 1. Some of the expected results at the end of the implementation period in 2016

200	new gross direct jobs created
90	new SMEs set-up in the supported business and research infrastructures
18	new cooperation agreements between research institutions and businesses
18,000	more visits in the tourism equipments supported

Source: European Commission, http://ec.europa.eu/, (accessed: 8 September 2014)

The classification of Croatia into statistical regions is vital for achieving a more balanced socio-economic development of the regions, which is the main goal of EU funding. The allocation is determined based on regional development indicators. The differences in the level of development between countries and regions in the EU have always existed; however, the process of economic integration within the Union has deepened them even further. While some regions are more successful in adapting to change, others are lagging behind the EU average, thus creating greater disparities in income, production volume and unemployment rates. (Kandžija, Cvečić, 2010:1054)

A division into five statistical regions is probably the most logical and the most appropriate division for Croatia because each geographical unit constitutes a separate statistical region. This division into territorial units is the most favourable for Croatia in terms of the drawdown of funds from the European Union and a balanced development of all of its regions.

Upon its accession to the European Union in July 2013, a number of funding opportunities opened up for Croatia. The European Union provides financial support to Croatia, providing submission of an adequate application, its approval and a proper implementation of projects. EU funds are public funds contributed towards the EU by taxpayers, and therefore grants are financial assistance provided for the public, not private, good. They are not used to generate profit; however, they can be used for developing companies' internal capacity (employee training, business modernization, etc.) with a view to increasing their competitiveness in the market. EU funds are made available to beneficiaries in Croatia in the form grant schemes, public contracts and special credit lines provided by financial institutions of the European Union. (EU funding 2014-2020)

3. CHARACTERISTICS OF SLAVONIA

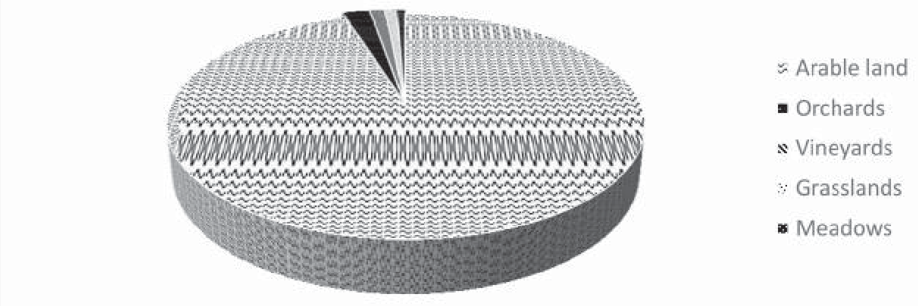
According to the mentioned subdivision of Croatian territory into seven regions, Osijek-Baranja, Brod-Posavina, Vukovar-Srijem and Požega-Slavonia Counties comprise the fifth territorial unit, i.e. Slavonia.

Thus, Slavonia encompasses 19 cities and 92 municipalities, or 17.5% of the total population of Croatia. Slavonia has the highest unemployment rate in the country, i.e. 31-37% in 2013, an above-average share of the primary sector, and an 11%-share in GDP in Croatia in 2014. At the time of the writing of this study (2009/10), the average GDP per capita in Slavonia was 68.8% of the GDP in Croatia, and the unemployment rate was 16 percent higher than the national average, i.e. 23.6%. (Jurlina Alibegović; 2010, p. 243)

3.1. Osijek-Baranja County

The natural resources of Osijek-Baranja County include the composition of the soil and climate which are suitable for agricultural production. Thermal waters, preserved environment and a unique wetland area - Kopački rit are only part of the benefits provided by the Osijek-Baranja County. The importance of agricultural production in the county can be illustrated by the fact that 212,013 hectares of land are arable, while forests cover 99,928 hectares. (Natural Resources)

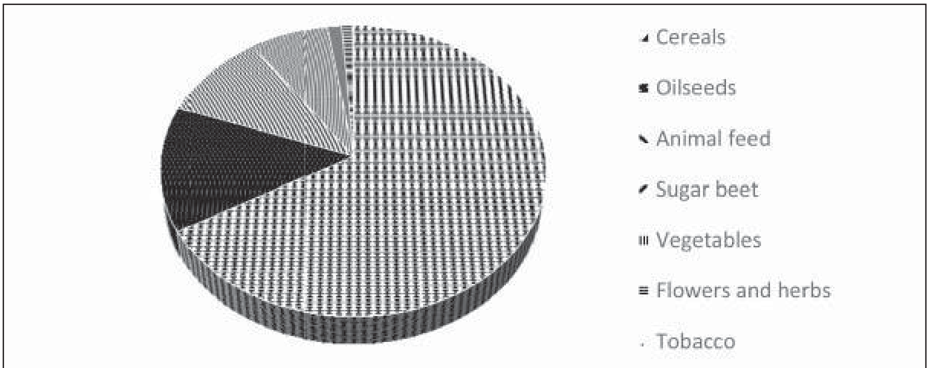
Figure 1: Agricultural land use in Osijek-Baranja County



Source: Agricultural land use in Osijek-Baranja County in 2015; 2016 p. 15

The most widely-produced grain crops are wheat and corn, while sugar beet and sunflower are the most widely produced industrial plants. Wet soils along the river are suitable for growing vegetables, and the hills and hillsides are more suitable for orchards and vineyards. In addition, livestock raising, predominantly of pigs and cattle, is an important agricultural activity (Natural resources). Figure 2 shows the share of the most widely-produced crops.

Figure 2: The most widely-produced crops



Source: Natural resources, Investment guide of Osijek-Baranja County, http://www.obz-invest.hr/index.php?option=com_content&view=article&id=30&Itemid=87 ()

The current land use is the result of land consolidation and a well-developed drainage network. Overall, the drainage system works satisfactorily. Osijek-Baranja County has a great development potential which can be exploited through planned irrigation projects, which have already been initiated due to extreme rain and drought. The county has rich water resources that should be used for irrigation. (Features)

3.2. Brod-Posavina County

Brod-Posavina County is located in the southern part of the Slavonian plain, surrounded by Psunj, Požega and Dilj mountains in the north and the Sava River in the south, a portion of which (163 km) is also the state border with Bosnia and Herzegovina. It covers an area of 2,034 km^2, accounting for 3.61% of the Croatian territory. In the east, it borders with Vukovar-Srijem County, in the northeast with Osijek-Baranja County, which altogether may constitute the region of Slavonia. The landscape of Brod-Posavina County consists of mountains, plateaus and lowlands. The plateau occupies the largest part of the terrain along the edge of fertile Slavonian plain. The lowlands along the Sava River are interlaced with streams, canals and wetlands. The available resources include water, forests, fertile soil, navigable rivers and European travel corridors which are used for the development of economy, transport, trade and culture. From an administrative and territorial aspect, the county encompasses two cities, 26 municipalities and 185 settlements. 45.67% of the population lives in urban areas. Of that, 63,268 live in Slavonski Brod, which is the centre of the county, and 15,736 in Nova Gradiška. 54.33% of the county population lives in rural areas. Numerous cultural and historical sites speak of the turbulent and long history of this border region. (Brod-Posavina County/ Position/ Geographic location and structure)

Although, similarly to Osijek-Baranja County, the economy of Brod-Posavina County is underdeveloped, i.e. ranks below the Croatian average in terms of development, it is rich in natural and cultural resources and known for several economic activities. One of the assets of the county is Đuro Đaković Holding, a metallurgical company situated in Slavonski Brod. Brod-Posavina County is also known for its crop and livestock production.

3.3. Vukovar-Srijem County

Vukovar-Srijem County lies in the interfluvial area between the Danube and the Sava rivers, and encompasses parts of the historical province of Eastern Slavonia and Western Srijem. Vukovar-Srijem County covers an area of 2,448 km^2. Important fluvial and land routes pass through this area, and the international transport routes from the east to the west along the Danube, and from the north, across the Sava River, to the Adriatic Sea intersect here. This is where the Western European civilization and eastern cultural circle meet. The rich plain has witnessed numerous conflicts and migrations. Owing to the extremely fertile soil, very favourable climate, natural resources and good geographical position, this area has been inhabited since ancient times. For more than a millennium, Croatians have been building their social life and establishing traditions in this area. The high density of settlement was the result of numerous oak forests, which sprouted in the once rich wetlands of the southern part of the county. The area is predominantly covered with arable land, vineyards, orchards, and forests. Vukovar-Srijem County has the most fertile arable land (150,000 hectares of extremely fertile land). The most fertile black soil is on the Vukovar plateau. (Vukovar-Srijem County/About the County/Features/General data)

4. SLAVONIA'S ABSORPTION CAPACITY OF EU FUNDS

Despite having rich natural resources, Osijek-Baranja County is a less developed part of Croatia. However, it is seeking to change that with the financial assistance from EU funds.

Osijek-Baranja County is one of the most successful counties in Croatia in terms of the absorption of EU funds. This has been achieved primarily due to the perseverance and professionalism of employees of the Regional Development Agency of Slavonia and Baranja. Broken down by counties, the most successful in the drawdown of EU funds is Osijek-Baranja County, with 46.5 million euros, followed by Zagreb County (15 million euros) and Zadar County (14.6 million euros). Lika-Senj County, which drew down only 0.5 million euros is ranked last; Virovitica-Podravina County with 2 million euros and Sisak-Moslavina County with 9.3 million euros fared a little better and ranked second and third to last, respectively.

By comparing the websites of the regional development agencies of Brod-Posavina and Osijek-Baranja County, one can see a number of open calls for proposals for EU finding, conference and training announcements, and advice on how to prepare a good proposal, and the like.

One of the major projects that has recently been realised in Brod-Posavina County received funding from the European Social Fund through the Human Resources Development Operational Programme Local initiative for employment development. Project duration was 12 months (February 2015 - February

2016). The project value was 35,519.72 euros, of which 29,996.40 euros or 85% was co-funded by the EU. The Development Agency of Brod-Posavina County was the project coordinator, and project partners were Brod-Posavina County Administrative Department for Development and European Integration and the Croatian Employment Service Regional Office in Slavonski Brod. The project aims were to improve opportunities for partnership approach to the local labour market by establishing specific local development initiatives for employment, and to improve their efficiency by strengthening and developing their performance capabilities and decision-making abilities. (Our projects - Technology Development Centre)

It may come as a surprise that Brod-Posavina County has been rather successful in applying for EU funding in spite of being less developed than Osijek-Baranja County; so much so that it is now very close to being equally successful in obtaining funding from the European Union. Some of the major projects in Brod-Posavina County include.

Three projects worth more than HRK 7 million (projects of the Municipality of Gornji Bogićevci, Secondary Agricultural School Matija Antun Reljković, Slavonski Brod, a joint project of the Centre for Technology, the Development Agency and the Agricultural School M.A. Reljković) are some of many valuable projects that Marijan Štefanac, the Head of the Administrative Department for Development and European Integration, mentioned on the eve of the accession of the Republic of Croatia to the European Union, pointing out their importance. When it comes to projects with long-term benefits for Nova Gradiška, the longstanding cooperation between the Industrial Park and the County Department, which began in 2004 with the then-current CARD program called "Business Innovation Support Centre" has proven to be a solid foundation and starting point for all other projects prepared in the Industrial park, such as the Technology park and the ongoing Pannonian green industrial park, which is considered to be one of the best programmes in Croatia. 2013 was the year of IPARD. After 18 calls for proposals for the 6 accredited IPARD measures, implemented over the past three and a half years, the Paying Agency contracted 348 projects with a total investment value of 1.25 billion and a grant in the amount of HRK 704.66 million. In the same period, 12 projects worth more than HRK 40 million came through for payment. In addition, the Agency awarded HRK 4 million in grants. It is evident that Brod-Posavina County is a regional champion in terms of the implementation of IPARD. As much as 69%

of all realised IPARD projects were conceived in Slavonia and Brod-Posavina County received the highest share of disbursement. The data show that almost 40% of funding for Slavonian projects was disbursed to Brod-Posavina County. However, experts agree that there is still room for improvement and a more efficient use of funds, because the overall absorption of IPARD is extremely low - according to the relevant ministry, out of 38% of the contracted funds, only 2% were drawn down and disbursed.

Considering the above, the classification of Croatian territory into two NUTS regions is not favourable for Brod-Posavina County. It did not win the approbation the County mayor, Danijel Marušić, either. Such a division would impede the effective absorption of European Union funds. If this division of Croatia into two territorial units for statistics did not take place, there is a good chance that Brod-Posavina County would be even more successful in the absorption of EU funds allowing for its further development and improvement in the quality of life of local residents.

The discussion about regionalization and NUTS classification, and the collected information regarding the financial resources from EU funds and their effectiveness, with a focus on the Osijek-Baranja County, has led to the conclusion that Croatia needs a rational and economical division into several NUTS region and decentralization in order to enhance its absorption capacity.

5. INSTEAD OF A CONCLUSION - THE IMPORTANCE OF NUTS REGIONS FOR THE USE EU FUNDS

EU members, Croatia included, seek to achieve a balanced socio-economic development. However, Croatia has not been very successful in this endeavour. A balanced regional development requires decentralization, which has not been carried out successfully, thus preventing a balanced, or potential, economic development of all counties across Croatia. While some counties are progressing, thanks to the division into two NUTS regions, others, despite their resources and potential, regress or, at best, lag behind the Croatian average.

In particular, Continental Croatia is put in a disadvantaged position by the division into two NUTS regions. The example of Osijek-Baranja County proves that with a lot of effort and adequately trained professional staff the difficulties in absorbing EU funds can be resolved both at the level of Continental Croatia and the national level. Although the current NUTS classification is not favourable for Osijek-Baranja County, the benefits gained from EU funding are numerous and include increased competitiveness of the agricultural sector, high quality products as a result of using appropriate technology, successful international and interregional cooperation, creation of new jobs, etc.

Croatia is set on the right path towards enhancing its development by using the EU funds. However, it still needs improve its capacity to absorb EU funds. To do that, it needs to be better informed, adaptable, and have professionally trained staff who will deal with tenders, the writing and implementation of projects to ensure that they bring prosperity and benefits to Croatia and its citizens. Once these issues have been adequately addresses, Croatia will be able to effectively and efficiently spend its EU fund allocations.

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THEORETICAL FRAMEWORK: BENEFITS OF USING ONLINE TRAVEL AGENCIES

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Abstract

Modern traveler has become used to booking flights and hotels online, to browse and search prior to booking, be it on computers or mobile devices. Online travel agencies are dominating in the arena of sales against direct bookings through hotel websites, they are also becoming the preferred reservation method. They drive the majority of bookings around the world and they are a primary source of revenue for most property owners. This paper proposes a theoretical framework to better understand the benefits associated with the integration of online travel agencies with property owners.

Keywords: *Online travel agencies, tourism*

JEL Classification: Z3, Z32

1. INTRODUCTION

Tourism is one of the fastest growing industries worldwide and, in general, the Internet continues to gain importance in the tourism sector (Crnojevac et. al.; 2010, 42). The search process is now longer than it has ever been - people are searching an average of 22 travel websites before making a booking, communicating with friends and family via Facebook, conducting mobile search, etc. (Starkov & Safer; 2010, 3). This means that they are seeing hotel marketing messages across a variety of different channels. Travelers have direct access to much larger sources of information, tourist organizations, private corporations and other users. Many travelers search for information on travel, buying airplane tickets online, online booking of accommodation and other facilities, rather than relying on travel agencies to do it for them. Due to the popularity of Internet applications, most travel organizations, such as hotels, airlines and travel agencies, introduced Internet technology as part of their marketing and communication strategies (Crnojevac et. al.; 2010, 42).

According to OECD trends and policies in 2016, tourism is both a major adopter of, and is heavily influenced by, technological developments. Mobile technology is now mainstreamed, enhancing connectivity and enabling real-time information provision. Digital technology, social media and online distribution platforms are changing the relationship between consumers and producers, supporting co-creation and facilitating the more personalised experiences sought by consumers. The next digital revolution is expected to come from the growth of the Internet and the rise of embedded and wearable devices. Furthermore, the growing importance of digital technology and social media in tourism creates challenges and opportunities for national and regional tourism organisations and tourism enterprises. Tourists are increasingly connected to the internet, utilising any number of tourism-related mobile apps; accessing real-time news, transport and online booking platforms (e.g. travel agents, airlines, trains, rental cars, Uber), and; utilising social networks to review, assess and book accommodation (e.g. Airbnb, Trip Advisor), restaurants (e.g. thefork, MyTable, OpenTable), and other tourism services. These trends in consumer behaviour and expectations in relation to the digital economy are necessitating a major shift towards digital marketing and promotion, but also in relation to capacity building and product development.

In the last years, the emergence of the Internet has deeply changed the industry of tourism, the organization of markets and the pricing mechanisms developed by firms. Tourism is by far the most developed and innovative online business, fostered by the creation of Online travel agencies (OTAs) of diferent kinds and sophisticated pricing and segmentation strategies (Ogonowska & Torre; 2010, 2).

It seems like with the tremendous growth of online travel agencies modern traveler has become used to booking flights and hotels online, to browse and search prior to booking, be it on computers or mobile devices. Not only are OTAs dominating in the arena of sales against direct bookings through hotel websites, they are also becoming the preferred reservation method. They drive the majority of bookings around the world and they are a primary source of revenue for most property owners. Therefore, the question is – what are advantages and disadvantages of OTAs for property owners and is it essential resource for property owners to generate revenues?

2. INTERNET IMPACT ON TOURISM AND BOOKINGS

As early as 2004, travel and tourism was recognized as the top industry in terms of the volume of online transactions (Werthner & Ricci; 2004, 101-105). Within the industry, online hotel booking is the second largest sales item after air travel, in terms of revenue generated through online channels, according to Marcussen.

Although hoteliers have been reluctant in adopting new technologies (Buhalis; 2003, Law & Jogaratnam; 2005, 170-180), the advantages resulting from ICT developments have greatly affected the hospitality domain, both in terms of marketing possibilities and sales opportunities (Schegg et al., 2013, 554-565). According to Buhalis and Law (2008, 609-623), the modern traveller is more conscious of the opportunities offered by the internet and therefore is more exigent. Besides, developments in research into online information searches (Xiang et al.; 2008, 137-150) has demonstrated that travellers spend time to locate accurate information on the internet, checking different information providers (Inversini & Buhalis; 2009, 381-392) before choosing the most appropriate tourism product and ventually making their online reservations (Vermeulen & Seegers; 2009, 123-127). Although the hotel website remains the focus of the online strategy (Baloglu & Pekcan; 2006, 171-176), travellers also rely on different information sources available in the long tail (Buhalis & Law; 2008, 609-623; Inversini & Buhalis; 2009, 381-392) to support their decision process.

Information is a crucial factor in the planning, booking and during the travel, and sometimes even after that. Because of this, tourism is one of the industries on which the rapid changes in technology over the last twenty years have had the greatest impact. The important role of information in tourism is followed by the important role of applying information technology in tourism. The use of information technology, in particular, has grown from the viewpoint of the customers (tourists). It can be considered as one of the most influential technologies that changes the behavior of tourists (Crnojevac et. al.; 2010, 41).

Internet has created many advantages for the consumer. At any one time, Internet users have easy access to travel and tourism information, since there are no operation hours for online shopping. Travelers do not need to dependent on travel agents for information, as now they could surf online to gather information for their vacation destination (Low; 2009, 11). Online distribution and booking technologies have had a great impact on the hospitality industry (O'Connor & Frew; 2002, 40). Since 2001, online distribution has been viewed as a promise of a progressive shift from traditional reservation channels (Kasavana & Singh; 2001, 130) to online channels, stimulating dis-intermediation (Bennett & Lai; 2005, 9; Tse; 2003, 455). According to Schuckert (2015, 608), 71% of independent travelrelated bookings are done online, while 36% of all package tours are booked online. Many travelers have booked a room, made an airline ticket reservation, or reserved a table at a restaurant online in recent months. Hotels, be they luxury or best value, use online travel agents (OTAs) or booking platforms, and online sales form the biggest part of their revenue (Buhalis & Law; 2008, 609-623).

3. ONLINE TRAVEL AGENCIES

Online travel agencies (OTAs), which emerged in the 1990s (e.g. Expedia, Travelocity, Priceline), play a crucial role in online distribution. They are third-party companies that have become increasingly more powerful than hotels in terms of internet readiness (Morosan & Jeong; 2008, 284-292) and economic force, putting hotels in the disadvantaged position of selling a large portion of their inventory through third-party intermediaries at heavily discounted rates (Carroll & Siguaw; 2003, 3-50). According to Clemons et. al. (1999, 8) online travel agents (OTAs) provide a point of contact via Internet to enable customers to search for appropriate flights and fares and make a selection, which is then booked and ticketed by the OTA. With all that in mind, online travel agent can be defined as an online agency for aggregating travel related services, such as accommodation and transportation options, and enables users to make a decision based on price or other incentives.

Online travel agencies framed market opportunities by looking at the value system with a lens that yields ideas about new business possibilities (Mohammed et. al.; 2002). With the development of the Internet, online travel agencies facilitating e-commerce have emerged as a powerful and efficient intermediary within the travel industry. Shopping via the Internet affords consumers the opportunity to experience convenience through reduced shopping costs vis-a`-vis physical effort. Online travel agencies have thus become an alternate powerful distribution channel in the travel industry, and therefore it is very important that they, like any other retailer, learn how to promote customer loyalty and raise customer retention rates. OTAs offer hoteliers and consumers much more than a distribution channel. Sites such are often consumers first stop when researching travel plans. They can offer value to consumers at all stages of the buying process: problem recognition, information search, evaluation of alternatives, purchase decision, purchase, and postpurchase evaluation.

Compared to hotels websites, OTAs have the advantage of offering to consumers a one-stop-shop for book hotel rooms and even buying the entire holiday (O'Connor; 2008, 47-58), mostly at a convenient price (Lee et al.; 2013, 95-107). Additionally, OTAs have built their success on economies of scope, aggregating products and reducing costs to provide the final consumers with cheaper solutions (Kim et al.; 2009, 403-412) and using data mining, direct mail, and loyalty programs, thus profiling the consumers and pushing travel products to them in different ways (Toh et al.; 2011, 18-189). Finally, the use of different business models (Lee et al.; 2013) and smarter business practices related to pricing (Tso & Law; 2005, 301-307; Enz; 2003, 4) enables OTAs to provide cheaper room rates than those offered by hotel brand websites (Gazzoli et al.; 2008, 381).

According to Clemons et. al. (1999, 9) a central issue in determining the structure of competition among OTAs is buyer search costs. Search costs in this market represent the time, effort or other costs of locating and obtaining prices from competing OTAs. In this context, it is plausible that these costs are quite low. For the novice OTA user, the ability to search is greatly enhanced through search engines and directory services, which are among the most visited Web sites. The reduction in consumer search costs in electronic markets puts vendors under increased price competition, resulting in converging prices and ultimately eliminating any extraordinary profits (Malone et. al.; 1987, 490; Bakos; 1991, 295-310; Benjamin & Wigand; 1995, 62-72).

It becomes more and more difficult for traditional travel agents to compete with web sites that offer online booking possibilities. One of the main reasons for the increasing number of people booking online is that online experience has much greater potential in visualising travel destinations (Bogdanovych et. al.; 2006; 2).

However, Inversini and Masiero (2014, 16) highlighted that active social media presence and the presence on OTA portals are essential factors for modern hoteliers who, on the one hand need to engage with former and prospective clients to raise awareness of and interest in their property and, on the other hand, need to find a convenient commercial outlet for their property. A particularly interesting aspect of this last issue is the negative effect observed for the importance of commission, which suggests, from a hotelier perspective, the willingness to lose part of the marginal profit in exchange for gaining a larger overall volume of bookings (or overall revenue) expected by the use of a popular and important online travel agency platform.

Although OTAs can provide lower-cost travel options to travellers and the freedom to plan and reserve when they choose, they have posed challenges for the tourism industry and travel services infrastructure. The majority of popular OTA sites are owned by just a few companies, causing some concern over lack of competition between brands. Additionally, a commission that many OTAs charge accommodation providers and operators to be listed in their inventory system. Commission-based services can have an impact on smaller operators who cannot afford to pay commissions for multiple online inventories (Carey et. al.; 2012). According to Wescott et. al. (2014) being excluded from listings can decrease the marketing reach of the product to potential travellers, which is a challenge when many service providers in the tourism industry are small or medium-sized businesses with budgets to match.

Study by Guo et. al. (2014) highlighted that appropriate sales effort of the OTA could expand the demand of the hotel, increase the occupancy rate, and ultimately increase the profit of the hotel and OTA itself. Given the numerical examples, it has been found that the second-best equilibrium in the decentralized scenario incurs a 35% profit loss for the supply chain compared with the integrated one, which is a result of double marginalization effect. Furthermore, the principal-agent contract consists of a unit commission fee for each sold room through the OTA cannot coordinate the participants of the online supply chain. Fortunately, a quantity discount contract based on revenue sharing can coordinate the OTA, in which the hotel pays the OTA commission fees based on the total number of realized customers including both the t-travelers and w-travelers instead of only the w-travelers.

Results of one study show that social interaction with travel agents, their expertise and the possibility to save time on search can be of even higher importance (Bogdanovich et. al.; 2006). Study also sugests that travellers like the convenience of booking online, where they can enjoy the comfort of their familiar environments, fast responses on travel-related requests and multitasking. Additionally, the survey identified that the number of impulse travellers and people who enjoy collaborative booking is very high. However, respondents in general trust travel agents more than web sites and feel more secure about booking with people. The results show that this situation may change in the future. An on-line travel agency needs an online environment that supports mentioned advantages. In particular, the online booking approach should be extended with mechanisms that support wide range of human-to-human interaction as well as the exchange of information between software agents and humans.

According to Anderson (2009, 5) hotels that are listed on third-party distributors' websites (OTAs), gain a reservation benefit in addition to direct sales. That benefit, often called the billboard effect, involves a boost in reservations through the hotel's own distribution channels (including its website), due to the hotel is being listed on the OTA website. The study found that when the hotels were listed on third party website, they saw an increase in reservations from their own distribution channels (that is, not through third party website). The theory behind this phenomenon is that the would-be guest gains information about the hotel from its OTA listing, but then books the room through a channel controlled by the hotel or its chain family.

One of the longstanding positions of most OTAs has been the need to participate on the OTA to create visibility, as much as to generate OTA reservation volume. The billboard effect is the marketing and advertising benefits hotels receive by being listed in a search on an OTA, because online travel agencies have a larger reach to consumers, and would-be customers use these third-party websites to research a hotel's location, brand, rates, and service experience (Anderson; 2009, 6).

4. ADVANTAGES OF ONLINE TRAVEL AGENCIES

Literature examination imposes conclusion about undeniable benefits of using OTAs for property owners. Advantages can be summarized as:

- Exposure, visibility and broad reach
- Reduction of marketing costs
- Simplicity
- Trustworthiness

a. Exposure, visibility and broad reach

Online travel angencies are often consumers first stop when researching accomodation and transportation. There is no doubt that property owners can benefit from added exposure and visibility, which leads leads to more bookings and revenue.

OTAs receive millions of website visitors every month from all over the world. In addition, they have a reputation as an authority on all things travel-related. When a guest discover property on OTA website, most of them will do further research about the property using search engines, which can lead to direct website and increased direct reservations for propery owners. This is called the billboard effect, and since many potential guests start their travel searches on OTA websites, it is a great way for smaller property owners to become visible to an enormous number of potential customers. Even larger operators will benefit with listing property with the OTAs because they can rech wider market compared with their efforts alone, and by doing so they will drive potential guests back to their website.

b. Reduction of marketing costs

Conected with previously mentioned advantage, use of OTAs can lead to reducted marketing costs because of high exposure. Additionaly, OTAs will invest in marketing and advertising to attract potential international customers.

Another advantage is with identifying target market, which is essential to creating an efficient marketing strategy. Online travel agencies allow customers to identify themselves whether they are price sensitive or are looking for luxurious accomodation. Identifying target market will help property owners in the long run, which is relevant when trying to increase direct bookings. It will help in capturing attention of the right tipe of customers and can lead to increased direct bookings. This will reduct the cost of reaching customers.

c. Simplicity

One of the main reasons customers use OTAs is because they offer a large number of choices, and at the same time they compare relevant information side by side. They can offer value to consumers at all stages of the buying process: problem recognition, information search, evaluation of alternatives, purchase decision, purchase, and postpurchase evaluation. This saves time and simplifies purchasing decision. Some property owners may feel threateed by this, but it can be taken as an opportunity to stand out and highlight the property advantages. Even though customers do notice the price, it is not the only thing they compare – quality, location and other services are also important factors in making a decision.

d. Thrustworthiness

Because of previoulsy mentioned authority on all travel-related things people trust recommendations they receive from OTAs, so by being listed on an OTA not only helps with the exposure, it gives a reputation of thrustworrthy source of information. OTAs also enable customers to see other customer reviews which can influence their decision of making a booking. This is also a great way of responding directly to customers about any issue that may come up.

5. DISADVANTAGES OF ONLINE TRAVEL AGENCIES

By exploring the literature, disadvantages of using online travel agencies can be determined:

- Commissions and reduced margins
- Terms and conditions
- Technology and marketing investment
- No human contact

a. Commisions and reduced margins

Most online travel agents charge commission on every sale, which usualy range between 10-20% of the gross cost, but it can be up to 30%, depending on the OTA. As OTAs become larger and merge with one another, property owners have less negotiating power and OTAs can charge higher commission, resulting in lower profit margins. That is the reason why those costs must be controlled and constantly monitored so they do not erode profit. Additionaly, property owners need to review opportunities for maximising all of the advantages of using OTAs, especially broader reach of OTAs which can lead to converting customers into more profitable guests in the future.

b. Terms and conditions

Every OTA has its terms and conditions which can be restrictive and considered before making any decision about cooperating with a certain OTA. They include guest cancellation and automatic room reselling policies, and every online travel agency have their own list. Property owners must make sure to operate within those rules.

c. Technology investment

Using OTAs does not reduce the need to have own website with booking engine. To find a way of managing room availability across a range of OTAs, own website, and front desk can be time consuming and labour intensive. It is necessary to integrate with OTAs websites and this requires technical experience and strong domain knowledge; reviewing technological capabilities and investing in them is essential in order to integrate seamlessly and avoid costly mistakes.

d. Marketing investment

Even though marketing costs will be reduced, property owners may still need to invest in a balanced multi-channel marketing strategy to maximise direct booking potential and profits.

e. No human contact

In online evironment there is no people contact, making it hard to establish a realationship with customers before arival. Studies have shown respondents in general trust travel agents more than web sites and feel more secure about booking with people, but also that travellers like the convenience of booking online, where they can enjoy the comfort of their familiar environments, fast responses on travel-related requests and multitasking. This is why online booking approch should be extended with engaging with customers the minute they come through the door, creating and developing relationships with them from that point forward.

6. CONCLUSION

Today, online travel agencies drive the majority of bookings around the world. Not only can they show the multitude of travel options to the potential customer, but also offer trusted reviews and accurate local information. They are a primary source of revenue for most property owner, and they have evolved into sophisticated marketing channels for property owners of all sizes.

Many potential guests start their travel searches on OTA sites which gives the posibility to take advantage of the billboard effect. Furthermore, A booking that has happened with an OTA helps creating future booking opportunities; when a booking has happened on an OTA, it is wrong to assume that it would have happened without OTA participation, as well ast it is wrong to assume and that those bookings do not create future opportunities.

Using OTAs is a great way for smaller property owners to become visible and to reach customers without having to invest larger sums of money in marketing. Even larger operators will benefit using OTAs because they will reach even wider market comparing to their efforts alone. As a result, higher visibility, exposure and bookings will be created, as well as reduced marketing costs.

It is clear is that the OTAs are here to stay, so property owners should use them for their benefits, but do not rely soley on them to keep delivering new customers. Further research might explore ways of maximising distribution channels and direct bookings; it is necessary to create and develop such strategy to use OTAs to get new visitors and encourage them to come back without the use of OTA the next time, in order to have greater margins and maximised profit.

Possible ways of increasing direct bookings could be to optimize OTA listings and capitalize on the billboard effect. Investment in techology and user-friendly website is necessary in order to make a customer book directly without using OTA site. Since customers use their smartpones to browse and search for accomodation or transportation, mobile optimized website can make a difference between a potential guest successfully making a booking, or abandoning website due to frustration. Social media presence is also one of the important factors for modern property owner who needs to create interest for his property and needs to engage with potential clients.

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THE IMPORTANCE OF LIFELONG LEARNING OF HUMAN RESOURCES FOR THE IMPLEMENTATION OF EU PROJECTS

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Abstract

Based on theoretical approach the aim of this paper is to contribute to discussion on human resource management within the project cycle management (PCM) and importance of lifelong learning. Due to the influence that EU funded projects have on the national, regional and local level, staff skills and competences has become one of the crucial instruments which effects overall success of the project i.e. can undermine or enable growth on all levels.

Paper provides a brief overview of designed support systems on EU level and in the Republic of Croatia in order to make lifelong learning an integral part of the education systems and to receive much needed public visibility. Paper assesses Osijek – Baranja County example as possible solution for boosting regional performances by common work and joint effort of all stakeholders on regional level. The paper concludes with recommendations on further actions needed to exploit the full potential of EU funds.

Keywords: *Lifelong learning, project management, EU projects, Croatia*

JEL Classification: O1,O15

1. INTRODUCTION

While some authors highlight benefits Croatia gained by entering the EU others emphasize its unpreparedness. Regardless of their initial standing point they all undoubtedly agree that Croatian accession has initiated numerous changes at all levels. Republic of Croatia has withdrawn 997.6 million Euros in grants in the pre-accession period 2007-2013 (URL: http://www.strukturnifondovi.hr/ipa-2007-2013). Total amount of all funds that Croatia might receive in the new EU financial perspective covering the period from 2014 to 2020 amounts to EUR 6.34 bn (Sopek;2013.,32). By joining the EU, Croatia will be able to use more financial resources than as a candidate country, thus increase the opportunities for economic growth and development through financing projects from available EU funds (Perić&Martić;2013.,170). Withdrawal of much larger funds might help the entire economy to start moving in the desired direction, but for that process to start it will be necessary to prepare, apply and implement larger scale projects. By joining the European Union, the Republic of Croatia will face the excellent opportunities offered to us through new funds, with a much larger amount of funding than ever, but on the other hand with the unwillingness of people and institutions to prepare and implement projects through such serious programs (Tolušić et al.;2013,217). Although the Republic of Croatia has human resources for project implementation, so far they have had experience only with application and implementation of somewhat financially smaller and less complicated projects. If we want to annul and minimize inexperience and unpreparedness so its not an obstacle, it is of utmost importance to have adequate human resources capable of responding to project management requirements and withdraw funds that will enable futher development on multiple levels. Readiness of absorption capacities for effective use of EU funds is divided into 1) Financial readiness 2) Institutional readiness 3) Staff readiness 4) Legal (law) readiness 5) Documentation readiness (Daszuta;2010.,442). Emphasis in this paper will be put on absorption capacities of human potential. The reason for that is the possibility to manage these resources on all levels - local, regional, national. Very few authors are dealing with the potential to absorb the funds (Devčić&Šostar;2011.,28) but human potential and their readiness and capacity are one of the key determinants of quality application and project implementation thus achievement of the desired project results.

2. IMPORTANCE EU PROJECTS HAVE ON FUTURE DEVELOPMENT AND GROWTH

The implementation of projects funded by the European Union is, beside importance it plays for national level, out of strategic importance for the regional level also. These funds are not conditioned by national level decisions and priorities thus its possible to apply projects of local and regional significance. The more a region or a county is dependent on EU funds or bases its development ipon them, the more important is quality planning and management of regional absorption capacities. Such case can be found in Slavonia or more precisely in Osijek - Baranja County. So far OBC has withdrawn 457.271.403,05 Euros for 764 projects (URL: http://www.slavonija.hr/) from pre-accession funds and funds available after entering the Union. Although the fact that funds are available for reginal/county governments, opens up many possibilities it also brings a certain level of responsibility, since the success is entirely dependent on decisions, strategic documents and the quality of human resources in the region. Adequate use of EU funds increases the competitiveness of less developed regions, which will ultimately also affect the development of the economy as a whole. In the future, it will be possible to systematically monitor the impact of EU funds on national level primarily through the impact on GDP growth, since Cohesion (regional) policy can directly influence the development of undeveloped regions of EU Member States (URL: http://bit.ly/2qm3UEW). Outstanding importance to the future of Croatia is the document "EU Funds and Juncker Plan - potentials to be utilized" from November 2015, where it was stated that the use of the full potential of funds from EU Cohesion Policy funds could increase GDP growth by 2 - 3 percent each year (URL: http://bit.ly/2qeduNX). When speaking of development and the strength of the economy as a space where additional effort is needed, it is worth mentioning the Parity of Purchasing Power, which value should be closely monitored in the future. There are 276 regions of the NUTS II level in the EU. According to GDP per capita data for 2014, regions of Croatia are ranked at 238th place (Continental Croatia) and 245th place (Adriatic Croatia). Below our regions there are regions from less developed EU members (primarily Bulgaria, Romania and Hungary) (URL: http://ec.europa.eu/eurostat/web/nuts/overview). In Croatia, Actual Individual Consumption (AIC) expressed in Purchasing Power Parity in 2014 was 41 percent below the European average (URL: http://bit.ly/2oDRoEl).

3. CHALLENGES OF HUMAN RESOURCE MANAGEMENT

"Human resource management can be defined as a strategic approach to managing the most valuable resources of an organization, the employees who work in the organization, and individually or collectively contribute to the achievement of its goals (Martinović&Tanasković; 2014,4). In the current economic climate and fast-moving business environment, generating value whilst remaining competitive has become a key concern for the long-term sustainability and survival of organisations (Thiry, 2013, From single projects to contextualized project organization. Paper presented at PMI® Global Congress 2013—North America, New Orleans, LA. Newtown Square, PA: Project Management Institute). Whatever definition of human potential and management we choose we will see that they all share a common emphasis which is that human resource management is the most important resource in which permanent and continuous investment is „a must". Many researchers agree that the human resource function is one of the most crucial elements for an organization's success. (Belout;1998,21). Regardless of whether it is a large business systems or small startup, in order for human resource to grow we must firstly enable growth and development so that each and every employee can reach their personal potential and be a valuable asset to the company. This applies in particular in sectors where specific knowledge and skills are necessary and where innovative ideas are highly valued. Every company wants to have highly motivated, enthusiastic, capable and innovative employees who are ready to work, but also to use their abilities to help the enterprise grow through ideas of employees and become stronger than the competition (Kassa&Raju; 2015,154). The ultimate goal in the sector, such as the implementation of EU projects, is to have employees with all of the above-mentioned features that have innovative approach to daily job assignments. Although Institute for project implementation (URL: http://www.pmi.org) has been established number of years ago, the scope of EU project implementation and its particularities has not yet been scientifically explored. Only recently it is possible to find research focusing on EU project implementation and its issues. *„There is further evidence within the literature to support the contention that earlier project management forms were almost exclusively reliant on tools and techniques, with little concern or attention given to the socio-behavioral influences that form an integral and increasingly important part of the management of projects now. There is, however, a gradual move within the evolving literature from the use of projects as a toolbox of techniques and processes based on planning and control of specific tasks, to the wider behavioral and organizational aspects of managing work using project-based teams"*. (Leybourne; 2007,3). Project can be defined as a temporary endeavor undertaken to create a unique product or service (URL: http://www.pmstudy.com/about-pmp/project.html) while project management includes a series of activities implemented in the project in co-operation with project team members and other stakeholders in order to meet the timelines, costs and technical requirements of the project. Certain „shift" is visible in literature toward understanding that human potential is a high-value asset which is crucial for the implementation of EU projects. Practitioners often manage multiple projects and face competing priorities on a daily basis, particularly as they simultaneously manage several projects at various stages of their life cycles (Jugdev&Müller;2005,19). This multitasking and high versatility of areas of operation is a caracteristic specific to project implementation. Therefore staff working on the project. should be continuously engaged in acquiring knowledge and skills. A system (company, institution, government) that will understand the requirements of project management and create the conditions for staff performance according to standards that EU project management requires - are of crucial importance. In the period preceding accession and during the accession, initialy, important role was placed on the national level bodies and institutions and their readiness to adapt to the new mode of operation expected after joining the EU. It is also known that most challenges a country faces during the preparation for accession relate to the capacity of its public administration to handle that process, to propose legislation, and ensure its adequate implementation (Longares Barrio;2008,6.) Given that each system is comprised of people and relies on them, the management of human resources is of utmost importance. For this very reason, but also due to the experience gained from previous accessions to the EU, considerable resources are invested in order to initiate a smooth transition. The EU has financed many projects in the public administration reform area with a total allocation of 8.5 million Euros since 2001. (Longares Barrio, C. (2008). Reform of Public Administration and EU Funded Assistance. Conditions for Success. The Croatian Case. Hrvatska i komparativna javna uprava : časopis za teoriju i praksu javne uprave, 5-16. Retrieved from http://hrcak.srce.hr/135578). The high amount of invested funds clearly confirms the importance that human potentials has in the entire proces of accession. Moreover, it is necessary to work on eradication of the old ways of thinking which exclude additional education after completion of schooling and once a person is employed regardless of the actual needs even within his current job or the labor market in general.

3.1. Importance of lifelong learning and human resource management

The need for continuous education and the development of skills is a result of rapid changes in the global market. Due to fast changing trends in all sectors, the principle of lifelong learning as a comprehensive approach has become over the years an integral part of the strategies of many countries and their education systems. Lifelong learning is the provision or use of both formal and informal learning opportunities throughout people's lives in order to foster the continuous development and improvement of the knowledge and skills needed for employment and personal fulfilment (URL: http://bit.ly/2qmedJ3). Declarations, documents, conferences and action plans point out the importance of expanding and strengthening such an approach. The European Commission's recommendation (URL: http://bit.ly/2qdVUH2) from 2001 and the EU Council Resolution (URL: http://bit.ly/2psZX4k) from 2002 emphasize the need for transformation of education systems to more flexible one to enable and support and timely development of every individual in accordance with its interests. Another important step was taken in 2006 when the document „Key competences for lifelong learning" (URL: http://bit.ly/2paZrHi) was adopted, stating that „Education in its dual role, both social and economic, has a key role to play in ensuring that Europe's citizens acquire the key competences needed to enable them to adapt flexibly to such changes". When talking about lifelong learning and its recognition by the institutions of the Republic of Croatia, we have to emphasize that the Law on Adult Education (URL: http://bit.ly/2poNgoO) was adopted quite early, in 2007, and the concept of lifelong learning was included. In 2008 another important document has produced - the Strategy for the Development of the Vocational Education System in the Republic of Croatia 2008 – 2013 (URL: http://bit.ly/2oDZFs3). The number of adults involved in any type of lifelong learning is very low, only 2.4%, despite the high unemployment rates in Croatia. The number seems even more alarming if compared to the EU average, which is 9% (URL: http://bit.ly/1GLi43v). From these unenviable statistics we can conclude that it is equally necessary to invest in a sustainable and modern education system that can respond to all labor market demands and additional informal education, but also in the awareness of individuals who should understand the importance of continuous acquisition of knowledge and proactive participation in the process of lifelong learning. The whole system must be a quality support to individuals because everything depends on their awareness. This individual must be conscious of the need to learn permanently, to actively monitor changes in society and in labor market demands since lifelong learning is "ongoing, voluntary, and self-motivated" (Cliath, B.A., et al., 2000, Retrieved from: http://bit.ly/2nIh51v). In order to come closer as a country to the EU average and actively participate in labor market trends and be competitive, at least 15% of adults (age 25-64) (URL: http://bit.ly/2qmdAPF) should be involved in some form of lifelong learning.

In the context of EU projects and project cycle management which are in the focus of this paper, continuous gaining of knowledge and skills of each individual is an imperative. Projects range from infrastructure, human resources, marketing, agriculture, ect., and they demand a variety of skills from different, sometimes not even remotely related areas. Due to frequent changes in any of these areas, exceptional readiness of project staff to learn is needed. The lack of knowledge and skills in any of the areas required by PCM can greatly affect the quality of project implementation and ultimately its success. Of course, the most important components to be included in education are general and specific knowledge of project manager and other staff members but also the entire process of human resource management (Vukičević&Đurović;2006,39). The area of project implementation is very specific because it requires advanced knowledge from different areas which have to be available to everyone regardless of the level they are on, thus information can not be preserved only for the capital of Croatia, larger cities and/or business centers. If we look at the map (URL: http://www.strukturnifondovi.hr/karte-projekata) and areas where projects are being implemented we will notice that large scale projects are being equally, if not more so, implemented in underdeveloped and/or rural areas. We can derive a conclusion that it is necessary to have staff with the identical skills, knowledge and information both at regional/local and national level as they are equally necessary.

At regional level, more precisely in the Osijek - Baranja County, a need for human resources with PCM skills has been taken very seriously. Beside funds systematically invested from the national level, a number of projects have been launched over the past period to further equip young people with additional skills and knowledge including PCM skills. Institutions, agencies and non-governmental organizations in the OBC have implemented 100 projects worth 16,686,392.03 Euros (URL: http://www.strukturnifondovi.hr/karte-projekata). More than 90% of implemented projects were focused on strengthening employability, raising general and specific skills and knowledge, PCM required skills and competences, increasing awareness of importance that active inclusion in the labor market has, promoting youth employment with work experience gained outside the regular employment system and / or specially designed educational programs. Lifelong learning was recongnized both by the organisation implementing mentioned projects and by the human resources.

4. CONCLUSION

Human resources can be crucial for the success of the entire organization's operations so most attention should be dedicated to it. Since economic changes are occurring daily, it is necessary to constantly emphasize the importance of lifelong learning, i.e. continuously invest in acqusition of new knowledge and skills in order to maintain the competitiveness of the workforce, hence each individual. Therefore, it is crucially important to continue the processes initiated before the accession of the Republic of Croatia in terms of funds invested into human resources. Only systematic, methodical actions and perpetual emphasis of imporance that lifelong learning has, will create sufficient influence on people's awareness and their individual decision to continue education. Only personal decision and the desire to continuously acquire new knowledge and skills will ultimately support the planned growth and development at all levels and consequently the entire country.

Large number of projects implemented in the OBC have raised the young people awareness on skills and knowledge necessary for the labor market, as well as for the future career in project implementation or related positions. If this type of activity continues to be supported by all stakeholders on regional level as has been so far in OBC, utilization of Cohesion Fund and other funds could influence, in the long run, the competitiveness of the region. Each region could learn from this example and consequently it can have a positive impact on the purchasing power of the entire NUTS II region the belong. Ultimatively, it can have a positive impact on acomplishment of the results stated in Juncker plan.

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IMPACT OF BUSINESS INTELLIGENCE ON INCREASING EFFICIENCY OF OPERATIONS IN SMALL AND MEDIUM SIZED ENTERPRISES

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Abstract

The scope of this paper is an introduction of model of business intelligence in the area of on increasing operations in small and medium enterprises. The model is based on research conducted in Vojvodina on small and medium enterprises. With this model, we shall explain how the techniques and tools of business intelligence affecting the business. This paper focuses on monitoring information and decision-making, as well as the impacts of information and communication technologies solutions to this process. The effort of the author is to show the differences between the types of enterprises in use of the techniques and tools of business intelligence in decision-making.

Keywords: *small and medium enterprises, business intelligence, information and communication technologies, decision making, business processes*

JEL Classification: D8, D83

1. INTRODUCTION

Through this paper, we shall present model of impact of business intelligence (BI) on increasing efficiency in the operations of small and medium-sized enterprises (SMEs). The model is based on the results of research conducted on the territory of Vojvodina. The focus point in our model are data and information gathered through the information system of the enterprise. The goal of the information system shown in our model is to support decision-making. When decisions are made, it must take into account the consequences that this decision may cause. Through careful analysis of collected data and placing them in a certain context it is possible to create information that reduce the level of risk in decision-making. Information that is processing through business intelligence and presented, can to some extent, to improve the business environment.

"The roots of BI&A ('business intelligence and analytics') originate from decision support systems, which first emerged in the early 1970s when managers used computer applications to model business decisions" (Olszak, 2015: 90). With the development of Internet technologies and of the concept of BI we come to the powerful system that can help in making decisions and predicting the impact of the decision to the further course of business

The concept of BI analytics has been developed over the years, so that "... BI analytics has been traditionally confined to corporate data, mainly gathered from internal IT processes, paying little attention to the business contextual information" (Berlanga, Nebot, 2015: 87). In other words, base of data collection expands beyond the borders of the organizations.

BI Analytics is constantly improving, so "...new developments have allowed line managers to access relevant and timely information (such as daily customer and product updates) and make better and instantaneous decisions" (Elbashir et al., 2008: 149). This helps companies to reach a higher level of competitive advantage.

"In a hypercompetitive world, the speed of a decision and the consequent action can be a key advantage" (Maheshwari, 2015: 23). Faster decision-making leads to better market position, from this can be made that the speed with which decisions are made is one of the decisive factors in achieving market success. It must be emphasized that the BI system is not focused only on increasing the speed of data collection, but also to increase the quality of information required for decision support.

There are several goals of BI system, however,"…the major goal of business intelligence is to help managers make faster and smarter decisions, organizations now realize that a vast gulf exists between having the "right knowledge" and making the "right decision" (Michalewicz et al, 2007: 239). No matter on collected and codified knowledge, decisions must be in accordance with future market requirements. The knowledge that has been collected is oriented on past events and often happens that this knowledge is outdated. BI systems with their analysis can predict trends in the business sphere. Unfortunately, there are still no systems that could accurately predict changes in the market for a longer period. However, in the short period of time with quality information, BI systems can provide a relatively higher degree of accuracy of the market trends.

BI is the only tool that has its limitations, and the biggest limitation is the possibility of the organization itself to take full advantage of the information system on which BI is based system. In the foreground is the business model of companies, "…the business model helps to understand where an enterprise's inputs come from and to which customers they are sold, including how they are processed internally and how the enterprise interacts with its environment" (Freitag, 2015: 66). The business model can be described as the way business is done; when we talk about competitive advantages largely it indicates the superiority of one business model over others. If a business information system is not a part of the considered business system, it is very hard to implements the BI in organization.

"Most data used in BI are so-called secondary data from internal and external sources collected for other purposes than usage in BI applications" (Grossmann, Rinderle-Ma, 2015: 74). The nature of the data collected has been obstacle in the implementation of the Bi systems. With the development of computer science and the emergence of new models of data management problems with secondary data can be largely mitigated.

"Introduction of Business Intelligence into companies is strategically important for the companies, because it enables the decision-making process based on facts, creates and increases the overall level of knowledge in companies,… " (Turkelj et al., 2016: 27). BI is focused on facts and knowledge. This system gives management the ability better to comprehend the business.

"Rational decision making is based on timely information that are produced from the vast amount of data that result from the recording of business processes, or business events that change the business structure" (Dukić et al., 2015: 952). Data can be collected relatively easily thanks to information systems. However, it is necessary to get to the data on which it is possible to make valid business decisions

"Tangible values are usually related to the resources and costs, these indicators are relatively easily monitored. However, intangible indicators are associated with the human factor" (Vladisavljevic et al., 2016: 432). In other words, the human factor always plays a key role in business, so it is in the case of the introduction of BI System. Through the monitoring indicators of performance and motivation of employees it is possible to create an environment in which will be easier to accept the BI system

So far, we have discussed the issue of BI, from previous considerations it could be concluded that the Bi systems are designed for large companies. However, this is not the case because the benefits of the BI system can have small and medium size enterprises (SME). The survey was conducted on the territory dominated by SMEs; this can be seen from the official statistics of the Republic of Serbia. According to the Statistical Yearbook of the Republic of Serbia (2016: 215) number of employees in SME exceeds thirty percent. This indicates that the SMEs are in great advantage compared to large enterprises, only the micro enterprises are stronger by the number of employees', but these companies are not part of our investigation.

The chance of market success SMEs may have in close cooperation with major systems. On the other hand, original equipment manufacturers (OEM) are always looking for reliable suppliers and partners. "Smaller suppliers – which are often SMEs – are very much interested in such close cooperation with OEMs ('Original Equipment Manufacturers'), but are considered due to different reasons (mostly because of their size) not as reliable as necessary…" (Duin, Thoben, 2010: 38). However, with implemented BI system the SMEs can be displayed as a reliable partner in dealing with OEM.

”In the pursuit of success, every enterprise has constantly got to become acquainted with and face its adversaries, by either defending itself – for example with similar changes in the offer of products/services – or attacking, for example with customer services that feature a unique ability to personalize products” (Biazzo, Garengo, 2012: 39). Innovations in business sphere becoming a necessity not only for success but also for survival. Competition is the force that drives change in a certain direction. The adoption of BI in the system of SMEs business expand their business processes and improve the functioning of existing business processes.

SMEs have a great advantage that is reflected in the flexibility. ”SMEs have the opportunity to concentrate on specific tasks or components within the production process” (Bijaoui, 2017: 3). This means that SMEs can be highly specialized in a specific area, in this way the product and / or services may be of higher quality. The introduction of electronic business (e-business) greatly helps SMEs to master more easily the business processes. Although the introduction of e-commerce is major condition for achieving competitive advantage, this is unfortunately not the one condition. In other words, ”...investments in e-business alone are not sufficient to improve business performance, especially if they are not coherent with the environment and strategic objectives of SMEs” (Raymond, Bergeron, 2008: 591). In addition, here is the problem of compliance with the principles of the business model with modern business information systems. In the foreground is a problem with the introduction of BI systems that must be supported by the entire organization. Without this condition, we do not have the necessary foundation on which to rest BI system.

2. RESEARCH METHODS

For the purposes of this study we have used the method of questionnaires, interviews and recording situation in the field. The questionnaire is made up of a large number of questions and statements, for this paper we have picked the four most interesting statements that examine the efficiency in the use of information systems in decision-making. During the research we have avoided the term business intelligence because we wanted to relieve respondents of unnecessary jargon. As independent variable, we have used the type of company. In the initial stages of research, we have identified three dominant types of companies and there are: manufacturing, trading and service companies. With statistical analysis, we shall test whether there are differences between types of companies. The logic behind this decision is that every type of company has its own characteristics in the approach to the use of information and decision-making. For example, manufacturing companies are furthest from the market, while trading and service companies in direct contact with customers. It should be also noted, that the service companies are directed toward the customers, and the very nature of service is that customers have a major impact on service creation.

Four statements that we have chosen for this study are:

1. In my daily work information system of organization provides me with all the necessary information.
2. When making decisions I can rely on the information system of the organization.
3. It's easy for me to follow the information in an organization where I work.
4. My organization is appreciated by direct users.

The questionnaire was formulated in the form of a five-point Likert scale, subjects have evaluated every claim from one to five. The minimum estimate indicates total disagreement with the statement, and the highest the highest level of agreement. In this way, we were able to collect data that would make it easier to process them statistically.

With the statement "In my daily work information system of organization provides me with all the necessary information" we have examined the impact of information systems on daily operations. In the past, only certain segments of the company were computerized, this has led to the emergence of "information archipelagos". By connecting these segments of information, organizations create a unique system that provides features that every employee receives the necessary information.

Following statement "When making decisions I can rely on the information system of the organization" has have examined the extent to which information system supports decision-making process. This statement is the closest examination of BI as a phenomenon in the surveyed organizations. Once again, we emphasize that we have deliberately tried to avoid the name of BI because of the possible miscommunication.

The third statement " It's easy for me to follow the information in an organization where I work" has examined the extent to which business model of observed organizations has accepted the information system. To monitor business process through the information system it is necessary to establish strong support of all prevalent factors. It is necessary to modify the procedures and rules in the observed organizations in order to fit properly the information system.

The last statement "My organization is appreciated by direct users" has examined outputting of information systems of organization. If organization has made a valid decision it is possible to satisfy end users. In this way it is possible to achieve competitive advantage. In order to make a valid decision it is necessary to have data and information on which we can form a judgment about something, in this part the BI system is of a crucial importance.

Based on these statements, and the premise that they have brought to our research, we can form research questions. Research questions have been used due to its flexibility and clarity on the basis of which we can easily get to the necessary conclusions.

Research Question 1: *Is there a significant difference between the efficient use of information systems and type of enterprises?* For the purposes of this research question, we have analyzed the first statement "In my daily work information system of organization provides me with all the necessary information".

Research Question 2: *Is there a significant difference between supporting information systems in decision-making and type of enterprises?* To answer a question we have analyzed the second claim "When making decisions I can rely on the information system of the organization".

Research Question 3: *Is there a significant difference between the ability of information systems to support business processes from the point of monitoring information and type of enterprises?* In this case, we have analyzed the third argument "It's easy for me to follow the information in an organization where I work".

Research Question 4: *Is there a significant difference between the results of customer satisfaction and the type of enterprises?* To answer the fourth question we have analyzed the fourth argument "My organization is appreciated by direct users".

3. RESULTS

The sample for our research were 76 employees in SMEs, we have chosen companies that are active. The selection of respondents was based on the principle of random selection (Table 1).

Table 1. The distribution of respondents by type of enterprises

	Frequency	Percent	Valid Percent	Cumulative Percent
Production	18	23,7	23,7	23,7
Trade	50	65,8	65,8	89,5
Services	8	10,5	10,5	100,0
Total	76	100,0	100,0	

From the previous table we can see that we have 76 respondents, 18 (23,7%) respondents are coming from production enterprises, 50 (65,8%) respondents from trading enterprises, and 8 (10,5%) respondents from service. At first glance, it looks like we have a small number of respondents from the service sector, However, according to official statistics of the Republic of Serbia"...professional, scientific and technical activities (11.2%)..." (Statistical Office of the Republic of Serbia, 2016: 35). In other words, in the observed population we do not have a large percentage of SMEs in the service sector.

The answers to the first question/statement, which is: *In my daily work information system of organization provides me with all the necessary information* have been the following: *strongly agree* - 36 (47,4%) responses, *agree* - 26 (34,2%) responses *undecided* (neither agree nor disagree) - 8 (10,5%) responses, respondents who answered *disagree* – 6 (7,9%). The answers to the second question/statement which is: *When making decisions I can rely on the information system of the organization*, have been the following: *strongly agree* - 18 (23,7%) responses, *agree* - 24 (31,6%) responses *undecided* (neither agree nor disagree) - 26 (34,2%) responses, respondents who answered *disagree* – 4 (5,3%) responses and finally *strongly disagree* – 4 (5,3%) responses. The answers to the third question/statement, which is: *It's easy for me to follow the information in an organization where I work* have been the following: *strongly agree* - 18 (23,7%) responses, *agree* - 20 (26,3%), responses *undecided* (neither agree nor disagree) - 28 (36,8%), respondents who answered *disagree* – 10 (13,2%) responses. The results of the fourth question/statement, which is: *My organization is appreciated by direct users* have been the following: *strongly agree* - 30 (39,5%) responses, *agree* - 30 (39,5%)

responses *undecided* (neither agree nor disagree) - 14 (18,4%) responses, respondents who answered *disagree* – 2 (2,6%) responses.

For statistical analysis we have used the nonparametric Kruskal-Wallis test. The reason for using non-parametric analysis lay in the fact that we have a relatively small sample, based on our selection we will amortize this deficiency. This test will indicate us on where is a statistically significant difference. Unfortunately Kruskal-Wallis test does not give us information about which groups are significantly different, to answer to this question we will use the Mann-Whitney U test (Table 2).

Table 2. Kruskal-Wallis test

	type of enterprises	N	Mean Rank
In my daily work information system of organization provides me with all the necessary information.	Production	18	48,94
	Trade	50	35,26
	Services	8	35,25
	Total	76	
When making decisions I can rely on the information system of the organization.	Production	18	57,72
	Trade	50	30,30
	Services	8	46,50
	Total	76	
It's easy for me to follow the information in an organization where I work.	Production	18	54,28
	Trade	50	30,46
	Services	8	53,25
	Total	76	
My organization is appreciated by direct users.	Production	18	42,39
	Trade	50	34,62
	Services	8	54,00
	Total	76	

Table 3. Test Statistics[a,b]

	In my daily work information system of organization provides me with all the necessary information.	When making decisions I can rely on the information system of the organization.	It's easy for me to follow the information in an organization where I work.	My organization is appreciated by direct users.
Chi-Square	6,191	23,586	21,154	6,939
Df	2	2	2	2
Asymp. Sig.	,045	,000	,000	,031

a. Kruskal Wallis Test
b. Grouping Variable: Tip preduzeća

Kruskal-Wallis test (Table 3) gives us the following results. *In my daily work information system of organization provides me with all the necessary information* (production; n=18, trade; n=50, service; n=8) c2 (2, n=76)=6.191, p = .045 *When making decisions I can rely on the information system of the organization* (production; n=18, trade; n=50, service; n=8) c2 (2, n=76)=23.586, p = .000 *It's easy for me to follow the information in an organization where I work* (production; n=18, trade; n=50, service; n=8) c2 (2, n=76)=21.154, p = .000 *My organization is appreciated by direct users* (production; n=18, trade; n=50, service; n=8) c2 (2, n=76)=6.936, p = .031.

In all analyzed questions / statements we have identified a statistically significant difference between groups. In the next part of the paper we have used the Mann-Whitney U test to identify which groups have significant differences. Three analyzes were performed, first we have analyzed production type of enterprises in relation to commercial enterprises. In the following analysis, we analyzed relationships between manufacturing and service companies. In the final analysis, we analyzed the relationship between trade and service companies.

In my daily work information system of organization provides me with all the necessary information, $z = -2.356$; $p = 0.18$. Production type of enterprises has a higher average rank and it is 43,17. When making decisions I can rely on the information system of the organization, $z = -4.453$; $p = 0.00$. Production type of enterprises has a higher average rank and it is 51,50. It's easy for me to follow the information in an organization where I work, $z = -4.032$; $p = 0.00$. Production type of enterprises has a higher average rank and it is 49,83.

When making decisions I can rely on the information system of the organization, $z = -2.491$; $p = 0.017$. Service type of enterprises has a higher average rank and it is 42,50. It's easy for me to follow the information in an organization where I work, $z = -3.010$; $p = 0.03$. Service type of enterprises has a higher average rank and it is 45,25. My organization is appreciated by direct users, $z = -2.577$; $p = 0.015$. Service type of enterprises has a higher average rank and it is 42,75.

4. DISCUSSION AND CONCLUSION

Based on the research we can conclude that we have statistically significant differences between the types of enterprises and analyzed statements. So we can conclude that all of our research questions answered is confirmative. In addition, it is important to emphasize that in manufacturing enterprises have statistically significant difference in the first three questions in relation to the trading enterprises. On the other hand, trade enterprises have a statistically significant difference in the second, third and fourth question in the relation to service companies. This can be explained by the fact that manufacturing and services are relatively more developed in relation to services. On the territory where we conduct our research historically, production and trade had dynamic development.

This conclusion can be confirmed by interviews and recordings from site. Although not explicitly show, with the results of those methods we have confirm the conclusions we get an analysis of questionnaires. The key question for the impact of BI on increasing business in SMEs is the fourth question of our questionnaire. As an indirect output, satisfaction of end users can be considered as a positive impact of BI systems. In many cases the end users are satisfied with the work of observed SMEs, and this can be seen in the financial reports.

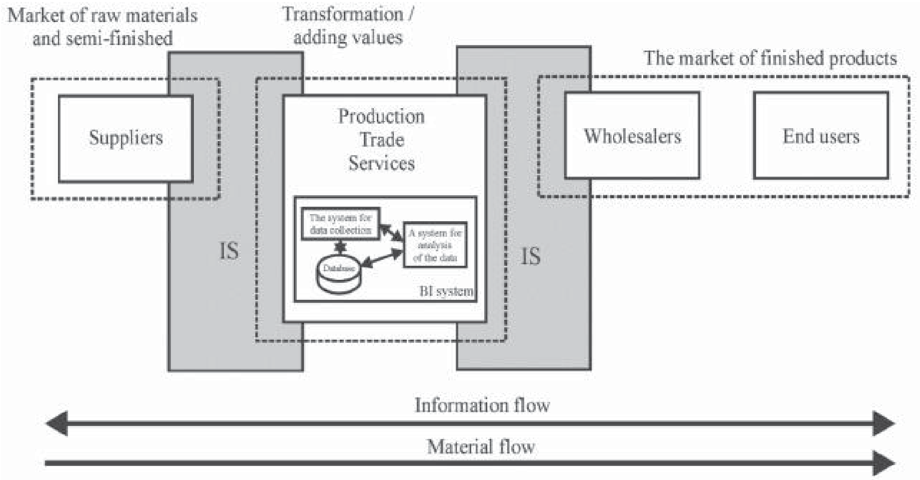

Figure 1. Model of BI impact on SMEs operations

In the previous figure (Figure 1), we can see the BI system affecting the company's business. The companies are in close relationship with their suppliers and customers. Suppliers are a part of the market of raw materials and semi-finished products. In recent years, suppliers have bigger impact on the enterprises. On the other hand, we have intermediaries and end-users, they represent a market of finished products. Observed systems are part of the transformation and / or the system added value.

The link between these segments is accomplished by means of information systems. The Internet has greatly changed the business and facilitate connections. This is the case with SMEs, which we have researched. We have found that in most cases the observed enterprises were able to connect with their target market. BI systems are in limited form present in the surveyed enterprises, through a series of related technologies for collecting, storing, processing and presentation of data. An environment in which enterprises operate is such that the access to high-tech techniques is easy. One of the reasons is the existence of "Novosadskog" IT cluster.

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MULTIMEDIA AS A COMMUNICATION TOOL

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Abstract

Online technology and particularly capabilities provided by Web 2.0 open up new ways to communicate with consumers that allow a greater interactivity in communication, affecting the emotions of consumers and the overall experience. These technologies are educational and consequently influence the establishing of a special relationship with consumers, provide a greater loyalty and satisfaction level of consumers. Based on high technology, multimedia as a communication tool provides consumers with an expanded view of reality, revealing new insights in a different way and offers added value to the overall communication with consumers. Consequently, the aim of this paper is to critically analyze the use of multimedia as a communication tool for communication purposes and interpretation of area by national parks. For the collection of primary data, available documentation from national parks was analyzed and a qualitative analysis of national parks web pages was conducted. The contribution of the paper will be shown as identification of key determinants for application of multimedia as a tool in modern communication.

Keywords: *multimedia, modern communication, web 2.0., visitor centers*

JEL Classification: D8, D83

1. INTRODUCTION

Intensive application of information - communication technologies (ICT) in business enables new ways of communication, commerce and trade, a new approach to production activities, increasing the quality of the process of providing services to customers, creating new products and services which will make businesses more competitive on the market etc. Since tourism is a highly competitive industry, consumers have a large selection of tourist destinations and contents that will provide them with the most value for their money. Taking advantage of ICT and multimedia opens up the opportunity for a more comprehensive and higher quality interpretation of tourist resources, presentation of tourist destination offer, growth and strengthening of the local tourism industry in general as well as the development of the economy on the territory of a destination. Tourism offer in an online environment has the advantage of a possibility to be presented by multimedia, communicated without spatial or time limit which can significantly affect the quality of the presentation and interpretation of tourist offer as well as create a unique tourism experience. It also affects communication with consumers and the general consumer satisfaction. This work will deal with the analysis of applying multimedia as a communication and interpretation tool on the example of national parks with the aim of determining the extent to which national parks apply multimedia as well as information and communication technologies in their operations, for presentation of their tourist offer, communication with visitors and interpretation of their area.

2. ROLE OF MULTIMEDIA IN THE COMMUNICATION PROCESS

Development of information and innovative technology as well as digitization, with more and more widespread application of computers and the Internet are creating "new values and wealth, re-arranging and diverting the social, economic, natural - physical entities and facilities and stimulate the development of innovative knowledge" (Jadrešić; 2010,25). The environment in which it all takes place today became multimedia (lat. Comprised out of multiple media, which occurs through multiple media) (Rječnik hrvatskog jezika; 2000, 621) environment and everyday life is enriched by content that includes text, image, sound, video, animation and interpretation (elements of multimedia content).

Tools for using multimedia are becoming simpler, more user-friendly and require knowledge of the Internet as a medium of communication that is used by almost all groups from children, teenagers, employees, unemployed to pensioners (Vodopija; 2006).

Previously mentioned is closely connected to the communication, which in the communicative sense, includes everything related to the spread of messages, logical argument and refutation of proof, followed by communicational education, media presentation, ethics, multimedia animation, coding and decoding of information (Plenković; 2015). Generally, any communication, in order to obtain a successful feedback should be accurate, reliable, clear, short, fair and modern (updated) which is proven by the online environment through multimedia. We have sound and image in real time and can add a response. What often stands out as the biggest feature of such communication is the time saving and rapid efficacy of resolving requests, because today's (modern) individual wants an answer right away, displayed visually and in synchronized time.

For a quality and creative communication in an online environment, it is necessary to know specific knowledge and skills. Vodopija (2006) states that these skills are analysis, projecting, implementation and maintenance. Analysis means to assess whether a certain degree of communication is line with the needs and objectives of the organization, projecting, in turn, means that if a person is not an expert in something, a person who is should be hired, eg. A web designer. Implementation means to accomplish conceived and should be given to the experts in communication, and in the end, it's important that everything achieved is continuously maintained since a characteristic of what is available online is that it is alive, dynamic and interactive.

Tomić (2016) considers that the new media have enabled more work to be done in less time, because the productivity has been increased through use of various tools such as e-mail, e-calendars, and databases, and as a great advantage emphasizes the speed of transmission and timely arrival of messages as well as the ability to transfer and archive information at the same time. However, some have a tendency to criticize by pointing out the serious problem of information overload, which is true, but the recipient of the information must be trained to know how to find in the "forest" of data that data which is useful and usable by him, in other words, he must be IT literate.

3. INTERRELATION OF MULTIMEDIA AND TOURISM

Culture of sublimated communication in tourism is explicated and analyzed as a multimedia creative tourism, communication, anthropological, psychological, sociological, political and philosophical phenomenon of sublimated communication in tourism from the aspect of a human and tourist (Homo Touristicus) on all levels of tourist destinations (globally, regionally, nationally and locally) (Tomić; 2015, 3). Plenković (2015) points out that subliminal (lat. sublimare=exalted) communication in tourism, as a new multimedia and communication trend on all levels of tourism communication, viewed from the maximum level- globally, to the lowest level- locally, under the influence of media convergence and digitalization, and in particular the rapid development of ICT, is increasingly defining and determining the information processes, interactive communicating and expansion of the network of citizens on the Internet.

According to Grbavac and Grbavac (2015) the target of virtual reality technology (which includes different sets of communication technology) is to provide an inexpensive and fast way to communicate regardless of the large spatial distance and in this context the possibilities of application are numerous: from the use in systems of e-education, e-commerce of multinational companies or by "small users" who eg. through Skype lead a virtual conversations from their home.

Integrated ICT systems contribute to the promotion and commercialization of tourist destinations on the global level. They also provide support to potential visitors in the form of providing necessary information and services for planning and enjoying their vacation and ICT systems help the local tourism industry to acquire and improve their competitiveness on the global market (Petti & Passiante; 2009).

The Internet is due to its features, especially the globality, multimediality, and interactivity, very suitable for promotion and presentation of integrated tourist products of a destination (Ružić et.al.; 2009). According to Tomić (2016), a modern tourism promotion is based on high professionalism, creativity, and interdisciplinarity, and therefore the use of media in tourism for promotion is conditioned by their profiling, socio-demographic and socio-economic characteristics of their recipients. E-promotion is a cross-functional process for planning, carrying out and analysis of communication which is aimed at attracting, maintaining and multiplying the number of clients on the Internet (Ružić et.al.; 2014). New technologies allow the economic subjects a direct connection with consumers by creating interactions and relations with them. Interactive Internet applications are enabling marketing professionals to establish a dialogue with consumers, raise the possibility of a two-way communication with each consumer individually as well as the creation of tourism products and services tailored to individual requirements of consumers with relatively low costs (Ružić et.al.; 2014).

Main trends in the application of multimedia through marketing communication in tourism can be summarized as follows:[1]

- use of the Internet and Web 2.0 technology for the promotion of tourist destinations,
- "Mash-up" and user-generated content (UGC)
- mobile web and mobile applications,
- the use of QR codes and augmented reality technology (AR)
- use of GPS satellite navigation for destination marketing,
- use of IPTV technology for destination marketing.

According to the data of Croatian tourism in numbers (2015), almost 30% of the tourists have used the internet in preparation for the journey as well as during their stay in Croatia in the summer of 2014. Guests were usually looking for information on websites of accommodation facilities, on social networks, websites of tourist boards and sites of online travel agencies. In addition to gathering information, Internet is used to upload photos of travels on the Internet, updating status with details of trips on social networks (Facebook, Twitter, Flickr), updating content on a blog with details of travel, uploading video content on the Internet (Youtube) and writing reviews on websites such as TripAdvisor.[2]

All technologically conscious destinations should enable the purchase of travel products and services via the Internet, use web 2.0 functionality, implement multimedia and new technologies such as GPS, IPTV and mobile telephony for the needs of their promotional activities as well as interpretation of their tourist offer, communication and education of visitors or have a proactive

[1] http://www.netokracija.com/e-marketing-turizam-60408(Accessed 20.3.2017.)

[2] http://www.iztzg.hr/UserFiles/Pdf/Tomas/Tomas-ljeto-2014-Prezentacija.pdf(Accessed 20.3.2017.)

approach in attracting, understanding and fulfilling the desires of their online and offline clients in order to achieve and maintain a competitive position on the market and be a recognizable and desirable tourist destination.

4. APPLICATION OF MULTIMEDIA FOR COMMUNICATION AND INTERPRETATION OF NATIONAL PARKS TOURIST OFFER

According to the Nature Protection Act in Croatia (NN 80/13, čl.113, st.1) a national park is a vast, mostly unchanged area of land and/or sea with extraordinary and multiple natural values, which encompass one or more preserved or insignificantly altered ecosystems, and is primarily intended for conservation of autochthonous natural and landscape values. National parks have a scientific, cultural, educational and recreational purpose. They represent areas that are extremely attractive for ecotourists segment of tourism that can be defined as tourists looking for a unique experience in a natural environment and behave in a sustainable way, both in terms of relations to protect the environment and in the context of socio-cultural sustainability (Smolčić Jurdana; 2010, 201). Generally, when talking about ecotourism and ecotourists, one must bear in mind the fundamental concept of ecotourism or responsibility towards local natural and social community. The above implies a strong educational component aimed at visitors as well as "green" business standards and a preference towards small businesses in local ownership for the local population. In this sense, the success factors of ecotourism include attractiveness of the destination, interpretation of area, environmentally and socially conscious practices (Izvještaj 9. Marketing koncepcija turističkog razvoja, 2013) which points towards expressed educational component of ecotourism as a sustainable form of tourism. As a result, education and communication aimed at developing individual awareness and responsibility of visitors about the need to protect and preserve the environment are becoming an important aspect of visitor management, and interpretation of area is an efficient way to which it is possible to implement key activities for educating and informing visitors about the natural areas. Methods for transmission of educational messages to visitors are publications and official websites, electronic educational resources, visitor centers and building a system of signposts with educational components that are placed on the main pedestrian, bicycle or off-road vehicles paths (Table 1.).

Table 1. Summary of major interpretation techniques

Technique	Application	Strengths/advantages	Weaknesses/disadvantages
Publications and websites	Supply of pre-contact information; visitor orientation and trip planning; support for visitor centers and self-guided trails; information on landscape, fauna andflora.	Cost-effective and portable information; many possible distribution/access points with wide dissemination.	There is no active visitor involvement; does not necessarily cater for different visitor needs; can be expensive if subject to frequent updates and alterations.
Electronic educational resources	Support for visitor centers and self-guided trails; information on geology, landscape, fauna and flora	Portable information and visitors able to explore trails at their own pace; high appeal to young people who are used to operating electronic devices; opportunities for frequent updating	There is no active visitor involvement; does not necessarily cater for different visitor needs; can be expensive subject to frequent updates and alterations
Visitor centres	Information landscape, fauna, floraand management; opportunity for face-to-face contacts with staff; located at the entrance gates to national parks and within popular nature-based recreation areas.	Recognizable sites where visitors can obtain information; scope for the application of a wide range of techniques (e.g. audiovisual, verbal interpretation, interactive displays and original objects)	Can be expensive to set up; may not be designed to cater for different audiences (e.g. focus may be entirely on school groups)
Self-guided trails	Focus of attention for visitors in various natural settings; opportunities to provide messages through signage	Always available and visitors can explore trails at their own pace	Signs and displays subject to vandalism; signage may contain too much information; generally not suitable for children
Guided touring	Wide application in all environments; especially important in forests, geological and wildflower tourism and during wildlife observation; time frames can be only 1 hour or up to 2 weeks	Very powerful and highly effective if applied properly; interpreter can respond to client needs and deal with various levels of complexity; information can be constantly updated; an interpreter can facilitate active involvement	Requires the availability of well trained, certified and effective interpreters; training courses likely to be expensive; requirement for audience attention and commitment to being involved

Source: Newsome, D.et.al.(2012). Natural Area Tourism:Ecology, Impacts and Management, 2nd edition,Channel View Publications, Bristol, UK., p. 304

4.1. Methodology

The Republic of Croatia has eight national parks: Plitvice Lakes, Northern Velebit, Risnjak, Mljet, Kornati, Krka, Brijuni and Paklenica. All these national parks are continuously recording an increase in the number of visitors (Table 2).

Table 2: Number of visitors to national parks

	SIZE IN HECTARES	ALTITUDE	NUMBER OF VISITORS		INDEX
			2014.	2015.	2015./2014.
Brijuni	2.700	0 - 55	153.086	160.010	104,5
Krka	14.200	0 - 253	804.411	951.106	118,2
Kornati	30.200	0 - 236	105.000	115.000	109,5
Mljet	3.100	0 - 391	100.787	112.156	111,3
Paklenica	6.617	50 - 1.571	122.189	119.686	98,0
Plitvice Lakes	19.479	380 - 1.280	1.184.449	1.357.304	114,6
Risnjak	3.014	680 - 1.528	11.338	12.715	112,1
Northern Velebit	10.900	518 - 1.676	14.360	16.471	114,7

Source: Croatian tourism in numbers 2015, available at: http://www.mint.hr/UserDocsImages/TUB2015HR.pdf (27.3.2017.)

In order to obtain the necessary knowledge on the application of multimedia in communication, presentation and interpretation of tourism offer (natural resources) of Croatian national parks, a primary research was conducted in the period from 10th of March to 25th of March 2017. The objective of this study was to determine to what extent are national parks in Croatia applying multimedia and information communication technology for the purposes of interpretation of area and their offers through different means from websites, various publications (online and offline), visitor centers, Web 2.0. applications and system of signposts with educational components.

The sample included all national parks on Croatian territory (eight national parks). For the purpose of obtaining the relevant data, available documentation of national parks was analyzed and a qualitative analysis of national parks websites was carried out in accordance with the proposed model (Table 3). Conducted analysis included the following components:

1. interpretation of the natural heritage on the website and publications (use of certain forms of multimedia, moving images, virtual panoramas, 3D presentations, digital collections, virtual exhibitions ...).
2. analysis of the equipment in visitor centers for multimedia content
3. usage of Web 2.0. applications for the purposes of interpretation of area, presentation of offers and communication with consumers

4.2. Results of research

Research results (Table 3) showed that most of national parks have audio-visual materials (web catalogs, brochures about offers, photo galleries, video galleries, etc.), information about the possibility of coming to national parks (majority use interactive maps available on search engines, such as Google Maps), information about the natural and cultural heritage within the park and information on the possibilities for accommodation in the area. There is a lack of interactive content that would include moving around the national parks, such as interactive maps of hiking trails and the possibility of using GPS maps (there is only one application - Trails of Plitvice Lakes-GPS Maps for hiking).

With regards to the application of Web 2.0. technology, all national parks are present on the Facebook social network, while four National parks have a profile on several other social networks like Twitter, Instagram, Linked, Pinterest and Google+. Two national parks have a link to the Youtube channel. When it comes to mobile applications, apart from joint mobile application Parks of Croatia, four national parks also have their own mobile application. Especially highlighted are the Krka National Park, which among others, has an application "KIDS Krka" which represents educational application intended for children as special market segments and Plitvice Lakes National Park with its application Trails of Plitvice Lakes - GPS maps. Furthermore, five national parks have modern visitor centers with multimedia content for education purposes about the elements of the natural and cultural heritage of the park, interpretation of the park area as well as branding of the park on tourism market. All visitor centers were built during the 2015 and 2016 and have contributed towards increasing the quality of offers, particularly in relation to the interpretation of the park area and educational components.

Table 3: Application of multimedia content and ICT in National Parks business operations

Categories/Key elements for grade	Brijuni	Krka	Kornati	Mljet	Paklenica	Plitvice Lakes	Risnjak	North Velebit
Interpretation of the natural heritage and tourist offer (on the official website and in publications)								
Web catalogue/ Brochures	+	+	+	+	+	+	+	
Video gallery	+	+			+	+		
Photo Gallery	+	+	+	+	+	+	+	+
Virtual walk/360 panorama	+	+	+		+	+		+
3D presentation								
Interactive maps of hiking / cycling / educational trails		+						
Use of QR codes on info boards	+				+			
Use of GPS satellite navigation						+		
Possibility of purchasing / booking tickets online	-			+				
Information about the possibility of visiting the national park	+	+		+	+	+	+	
Weather forecast	+		+		+			+

Information about the broader destination area and accommodation facilities	+	+	+	+		+	+	+
Visitor Centers	„House for boats“	„ Forester's house “	„ House of the crowned sea “ (in construction)		Underground city Paklenica		„ Mountain house of knowledge “ and “Birthplace of the river Kupa “	„Krasno“
Web shop		+		+	+			
Book of guests		+						+
Web 2.0 technology								
Social networks (Facebook)	+	+	+	+	+	+	+	+
Twitter	+	+	+					
Linked	+	+						
Web blog/ Internet forums			+					
Instagram	+				+			
Pinterest	+	+						
RSS feed			+					
Google +			+					
Youtube		+			+			
Mobile applications for visitors	+	+		+	+	+		

Source: authors on the basis of analysis of the official websites of Croatian national parks[3]

[3] http://www.npkrka.hr/; http://www.np-brijuni.hr/; http://www.np-paklenica.hr/; http://np-mljet.hr/; http://www.np-kornati.hr/hr/; http://www.np-sjeverni-velebit.hr/; http://np-risnjak.hr/; http://www.np-plitvicka-jezera.hr/ (27.3.2017.)

5. CONCLUSION

Multimedia, Internet and general information-communication technology have become an integral part of all tourist consumers lives. Consumers of today are expecting websites addresses and profiles of tourist destinations on social networks. Same is expected of hotels and all other stakeholders in the tourist offer that they are intending to visit, including the routes, recommended itineraries, weather forecast, interactive maps, a multimedia interpretation of area and many other pieces of information.

Ecotourism as a specific and sustainable form of tourism has a strong educational component which creates a challenge for all holders of tourism in a protected area when it comes to designing a quality interpretation of area, that will allow for key activities of educating and informing visitors about the natural areas to be carried out. In modern business conditions by using the advantages of ICT and multimedia, a number of benefits can be produced by the creators of interpretive and educational contents, from commercialization of their offers on the global level, high-quality educational contents that meet the requirements of today's highly sophisticated consumers as well as connecting with consumers by creating interactions and relations with them.

Research conducted within the scope of this study has indicated that national parks in Croatia, do not fully use the advantages of applying multimedia content for the presentation of their offers and the interpretation of area nor the advantages of ICT and Internet in general. The tendency in the development of e-national parks should be a greater orientation towards the benefits of Web 2.0 technologies, more intensive use of social networks (not just because of the access to content that is offered, but also because of interactivity where the visitor becomes a co-editor of content that is linked to a particular national park), application of QR codes in the interpretation of educational, hiking, cycling and/or mountain trails, creating GPS maps available to visitors, opening multiple visitors centers as well as educational information centers and application of virtual and augmented reality technology that will credibly interpret the key attractions of a park (accessible to the visitors in all weather conditions).

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Urban, Rural and Regional Economics and Growth

ACCESSABLE AND HIDDEN GROWTH POTENTIAL OF TOURIST OFFERING FOR THE CROATIAN PART OF BARANJA

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Abstract

The importance of improving the tourism offering in rural areas is related to the recent trends of tourism development in Europe. Changing trends in demand led to the fact that tourists are increasingly looking for adventure, fun, excitement and are more environmentally conscious. These changes in demand are characteristics of so called individual or soft tourism and just specific forms of tourism can create such tourism product. The aim of the study is to identify the spatial, social, economic and other determinants of the tourism offering development in the Croatian part of Baranja and to analyse the existing and hidden potentials for the advancement of the tourism development in this Croatian region. The diversity and number of farm tourism offering is an assumption of tourism offering development of the Croatian part of Baranja. Particularly important are the hidden potentials contained in the agricultural resources, natural conditions, hunting and fishing tourism, as well as Enogastronomic offer. Hidden tourism potential of the region is only partially explored therefore the advisability of conducting further research in this field is unquestionable.

Keywords: *Tourism offer, hidden potentials, Baranja*

JEL Classification: Z3, Z32

1. INTRODUCTION

The importance of improving the tourism offer in rural areas is related to the recent trends of tourism development in Europe. The tourism in rural areas of the continental Croatia is underdeveloped, as a result of long-term orientation towards the development of Croatian tourism in its coastal part. Changing trends in demand led to the fact that tourists are increasingly looking for adventure, fun, excitement, and are more environmentally conscious. These changes in demand are characteristics of so called individual or soft tourism, and it is these specific forms of tourism that can create such a tourist product. The diversity and abundance of tourist offers of farms premise the development of the tourist offer of the Croatian part of Baranja. Particularly important are the hidden possibilities found in the agricultural resources, natural conditions, hunting and fishing tourism, as well as oenology and gastronomy. Hidden tourist potential of the region are only partially explored, the advisability of conducting further research in this field is unquestionable.

2. SPECIFIC FORMS OF TOURISM AS A POTENTIAL FOR THE DEVELOPMENT OF TOURISM

The specifics that are worth visiting and seeing represent the potentials of the development of tourism, at the same time these specifics represent comparative advantages for the development of tourism in a given area. It is necessary to determine what are the hidden development potentials, and to use them as the basis for development of tourism product with a strong development perspective. Available and hidden potentials with the possibility of the development of the tourism product of the Croatian part of Baranja are all those objects that are associated with the nature park Kopački rit, tourism and wine routes as well as the ethno collection in the village Karanac. According to the National Catalogue of rural tourism Baranja area represents the most concentrated area with accommodation facilities throughout eastern Croatia.

Figure 1. Map of rural tourism of Eastern Croatia

Source: http://www.mint.hr/UserDocsImages/hgk_2015_ruralni_turizam_katalog.pdf

According to Figure 4 it is possible to identify the concentration of facilities with accommodation capacity and food that are shown in green, and the facilities for one-day and half-day stay, excursions, wine tasting and wine shops are shown in yellow. It total there are 27 accommodation facilities shown out of which 7 are intended for one-day and half-day stay, while 20 facilities are intended for accommodation and food. There have been specific forms of tourism developing at the Baranja area with the growing trend, namely: rural tourism, cycling, gastronomy and oenology, cultural tourism, eco-tourism, golf tourism, adventure and sports tourism. According to the Tourism Development Strategy of Croatia by the year 2020, these selective forms (www.mint.hr) have been identified as tourism products with a strong development perspective.

Rural tourism - it is estimated that this form of tourism participates in the total of international tourism with a share of about 3% with an annual growth of about 6%. Faced with underdeveloped domestic demand and disincentive environment, Croatian offer of rural tourism is developing very slowly. The only exception is Istria and Osijek-Baranja County.

Cyclotourism - in European terms it is estimated that the share of travel where cycling is the main activity or a bike is the main means of transport will increase in the next 10 years more than 10%. It is a more significant market segment to those who find cycling important recreation during the holiday. Although Baranja is relatively well-linked by local and regional cycling routes, some of which are a part of the international bike routes, the product has not yet been adequately evaluated and commercialized.

Gastronomy and oenology - tourism product consumed by almost all the tourists, although relatively small, there is a certaing number of international tourists who travel exclusively for gastro-oenological experience, thus the growth in demand is generated mainly by domestic population. According to research, about 160,000 Croatian citizens visit the wine roads, where 61% of them buy local wines, and 63% buy local food products. Furthermore, 53% of visitors order local wines in restaurants. Although gastronomy and oenology as a tourist product was originally developed in Istria, then in Dalmatia, and finally in Slavonia, systematic approach to the development of the food and wine tourism offer is still insufficiently evaluated, although it has been an integral part of tourist promotion for many years.

Cultural tourism - tourism products that fits well in the overall tourist offer of Baranja area restored through traditional economy, tourism services in family farms and the enjoyment of horticulture, gastronomy and customs, tour through cultural properties - castles, monasteries, religious heritage, museums and various thematic collections, historical, archaeological and memorial sites, visiting cultural events and festivals throughout the year. Baranja is characterized by diverse natural and cultural and historical heritage, which is an important factor in the development of tourism. The main reason for this is its specific geographical location in the Pannonian plain of continental Croatia. Thanks to the adoption of a national strategy of development of cultural tourism, as well as systematic work on the creation of regional and global recognized event, this tourist product has a significant growth potential for both local and national tourism.

Ecotourism – it is estimated that 3% of international leisure travel is motivated by eco-tourism, and being supported by a growing awareness of customers, the product shows a strong growth of between 10-20% per annum. Despite available attractiveness and conservation of natural resources, eco-tourism in Croatia is still extremely weak. Of special concern is the fact that ecotourism is neglected even in the most protected natural sites. At the Baranja area the basis for the development of eco-tourism is Kopački Rit Nature Park, which is the center around which one can potentially develop tourist offer and thus create a unique tourism product.

Golf tourism – as being one of the oldest sports, and entertainment for centuries for the social elite, golf is popular globally, with an estimated 60 million players and 32,000 courses in the world. Croatia currently has only four golf courses with 18 holes, two playgrounds with nine fields and several driving ranges. Therefore, Croatia currently does not exist on the map of tourist golf offer despite being, today and in the future, one of the most important market segments of Mediterranean tourist demand, especially in the period outside the main tourist season.

Adventure and sports tourism - it is in its range an increasingly important and rapidly growing product group for which some operators reported growth of 30% per year, which includes, for example, diving, kayaking and canoeing, rafting, adventure sports, hunting and fishing. Croatia still under-uses its comparative advantages for the development of this group of the tourism product.

3. SWOT ANALYSIS OF TOURISM OFFER OF THE REGION

The current state can be methodologically analyzed by using SWOT analysis. The aim is to identify the internal resources, i.e. strengths and weaknesses of the destination in terms of development, and the threats and opportunities in the environment that can have a positive or a negative impact on its interior (Petrić, 2011:144). There should be made a review of the key factors of business, such as competition in the industry, the position of sales, production, purchasing and development potential and financial and human resources. The task is to evaluate opportunities to achieve new strengths, i.e. to minimize threats while cancelling weaknesses. In the process of forming the strategy of developmment it is important to include forecasting and projections of future events and trends of offer and demand on the market (Stipanović, 2006:105).

Table 1. SWOT analyses of the offer of Baranja region

Strenghts	Weknesses
• Vicinity of macro regional centre Osijek • Rich gastronomical and oenological offer • Nature park Kopački rit, Danube and Drava • A large number of farms • A pleasant and healthy climate • maintained bicycle paths and recreational walking • The hospitality of the local population • Preservation of the original culture and historical heritage • A pleasant and healthy climate • well-preserved nature, partly protected by law • The possibility of year-round tourist season	• Insufficiently diversified tourist offer • Insufficiently educated workforce • Insufficient cooperation of businesses • An outflow of capital and skilled labor from the region • Lack of accommodation capacities • Lack of knowledge of consumer preferences • The consequences of war • Low financial power of tourism entrepreneurs • The great political influence on daily life • Lack of awareness of the population possibilities of tourism development
Offers	**Threats**
• The use of EU funds for the development of the whole area • Increase of accommodation capacities • Introduction of eVisitor • The development of specific forms of tourism • Better cross-border cooperation for the development of the whole region • Increased connectivity • A large number of cultural events and religious buildings • Baranja forests as a potential for development of hunting and recreational tourism • The development of the mystical tourism • The development trend of social tourism • The development of organic agriculture, as well as the possibility of developing the economy and increase the purchasing power of the population	• The fall in purchase power • The lack of additional facilities • The aging population, reduced birth rate and emigration • The risk of excessive pressure on the environment • Better offer of neighboring countries, primarily Hungary • Small investments in continental tourism at the national level • Natural disasters: floods, global warming and climate changes

Source: creation of the author according to the Local Development Strategy of the Baranja for the period from 2014 to 2020 available at:
http://www.lag-baranja.hr/lag/images/dokumenti/LRS-2014-2020-LAG-Baranja.pdf

Based on the recognition of strengths, weaknesses, opportunities and threats in the development of tourism of the Baranja rural area it is possible that the local government and tourist community in the long run conceptualize objectives which will reduce the threats from the macro environment with its strengths, and reduce weaknesses and deficiencies in internal or in Baranja micro environment with opportunities for development.

4. MAIN DIRECTONS OF FUTURE DEVELOPMENT OF TOURISM OFFER OF THE REGION

The main directions of the future development of the tourist offer of Baranja after the analysis are cultural tourism, cycling tourism, ecotourism, adventure and sports tourism, health and business tourism as tourist products with a strong promise of development in the region. According to the Tourism Development Strategy of the management of Ethnological center of Baranja Heritage many forms of tourism from the perspective of future development are recognized (www.tzbaranje.hr).

Cultural tourism - the city of Beli Manastir noticed the problem that in the region of Baranja there is no systematic engagement in the preservation of cultural heritage which is gradually lost and fall into oblivion. Thus, the project of the Ethnological Centre of Baranja heritage was launched which is designed as a museum of Baranja tradition and heritage, but is necessary to adapt its content to current trends in the world so that its content can be introduced anywhere, through modern technology, to visitors using the Internet network. Ethnological Heritage Center of Baranja was opened in 2016.

Cycling tourism - Baranja region has several bicycle paths built , some of which are a part of planned international bike routes but are not interconnected. There are no necessary facilities and facilities for cyclists along the bike paths, such as campsites, hostels and other facilites, therefore cycling in Baranja has not yet been adequately evaluated or commercialized.

Ecotourism - is well developed in Baranja because of the nature park Kopački rit. Baranja has great potential for further development of eco-tourism, which needs to be adequately evaluated and protected in accordance with the concept of sustainable development. The hidden potentials are also the rural and family farms, which operate according to the principles of organic farming.

Adventure and sports tourism - the Baranja region is rich in water resources. It is necessary to organize associations or private initiative, with the removal of legal obstacles in order to begin using water resources for tourism purposes.

In the area of Baranja, in the municipality of Popovac is abandoned basalt mine, which attracts the interests of cavers and chemists, however, it is necessary to built a bike path to the mine.

Health tourism - the natural beauty of Baranja and favorable climate with competitive prices and generally good reputation of medical services, create the possibility for development of health tourism in the Baranja region through the provision of specific health or wellness programs. An important role in the development of health tourism in Baranja can be the test research on sources of hot water in the Osijek area, Municipality of Kneževi Vinogradi and restoration of abandoned wastelands homes for leisure. Positive results of the research would create a possibility to develop spas and special segments of health tourism in Baranja. For the development of health tourism in Baranja the significant role may have the restored spa Bizovačke toplice where as part of multi-day tourist packages the tourists would be offered scheduled departures to the spa.

Business tourism - There is a distinct lack of congress infrastructure and support facilities in the Baranja, which would be part of a systematic offer of space for paintball, sports facilities and jogging track. A conference hall with 600 places has only Hotel Patria in Beli Manastir. By removing the disadvantages, with the engagement of all other tourism professionals, it would be possible to create a market niche for a quality breakthrough in the Baranja for the provision and organization of business tourism for small groups.

4.1. Hidden potential to expand capacity of tourist offer of the region

The tourist market is dynamic and extremely focused on contemporary trends. Tourists want to discover and experience something new that is different from their everyday environment, and for the guests from urban areas Baranja area of continental Croatia is a new experience. Modern trends are identified in the specific forms of tourism such as cultural tourism and cyclo tourism and other specific forms related to agriculture and ecology. There is a demand for ecologically clean areas with a growing trend towards personal health. It is necessary to develop and commercialize a series of new, mutually complementary systems of tourism experiences such as cultural tourism, cycling, adventure and sports tourism, ecotourism, and golf tourism, and health and rural tourism.

4.1.1. Agriculture as a hidden potential development of tourism

In order to activate the rural area based on the valorization of its originality, it is necessary to link tourism and agriculture, particularly through organic production of healthy food. This connection would create a specific offer, which could revive the rural areas and traditional architecture and ethnological heritage. The increasing trend in the production of organic food products in the world, the natural geographical conditions in Croatia are a huge production potential. Taking into account the increase in the number of organic producers registered in the Register of producers in organic production of agricultural and food products in the period of enactment of the law on organic production of agricultural products and foodstuffs to the present day when there are 3,061 registered (www.mps.hr, 2015), it can be concluded that family farms recognized the potential of organic farming. In addition to the production and marketing of organic products family farming economy can also provide additional tourist services and specific services tailored to the demand of tourists. In this way the farms become carriers of eco-agrotourism, which is a trend in tourism demand. Organic agriculture is often introduced as the only acceptable form of food production in the areas of nature parks and national parks, protecting autochthonous plants and animal species and enabling development of eco-agrotourism (Brčić-Stipčević, et al., 2010).

Organically produced food in the tourist industry can largely find its place in rural tourism. For the tourist product of rural areas it is important to ensure the visitor a contact with nature and agriculture, a sense of physical and social environment and to provide him/her the opportunity to participate in agricultural activities, traditions and lifestyles of local people. Some of the prerequisites for the development of tourism in the rural economy are favorable climate, unpolluted natural resources and the absence of noise, which also represent the ideal hidden potential for the establishment of ecological food production. This kind of holidays at tourist farms fits in with the trend of the growing interest in eating locally grown, fresh and seasonal food. Ecologically produced food can also find its place in eco-tourism, health, sports, nautical and other forms of tourism (Krešić, 2012:105). During the tourist season in the coastal Croatian territory it is possible to launch organic products, which further improve its offer and creates synergy of continental indigenous agricultural products and Mediterranean cuisine.

4.1.2. Kopački Rit Nature Park the Development of Regional Competitiveness

Baranja belongs among the recognizable and more developed areas of the Croatian eco-tourism due to its geo-strategic location, nature reserve Kopački Rit and tourist activity enthusiasts and professionals who recognized the advantage of the area and the possibility of making a profit from the provision of tourism services (www.tzbaranje.hr). A key competitive advantage of the region of Baranja is geo-strategic position of Kopački Rit. Thanks to the great variety of flora and fauna, and in particular a large number of plant species, Croatia is one of the three European countries with the highest plant diversity in Europe. At the time of accession to the European Union, the Republic of Croatia had the obligation to implement the Birds Directive and the Habitats Directive in its territory (www.zakon.hr).

A significant part of the area of Baranja is in the Natura 2000 proposal as an important area in the Republic of Croatia for the preservation of endangered European species and habitats due, primarily, to Kopački Rit and the Danube River. It is necessary to create a tourism product that will suit the concept of rural tourism that integrates eco, rural, cultural, sports, hunting, ethno, golf, cycling and other specific forms of tourism, and the holders of development should be regional and local tourist boards and all entities participating in the creation of tourism. Nature Park Kopački Rit would thus serve as the hub of the overall tourism offer, and the villages around Kopački Rit become accommodation capacities, which at the same time develop more tourism facilities. Nature Park Kopački Rit should be crucial for the development so to connect regional attractions in a unique tourist product. In order to achieve that the synergy of the entire region and the local population is required. Interaction of all stakeholders would achieve the main objective of strengthening of regional tourism and economic prosperity.

4.1.3. Hunting and fishing tourism

Hunting tourism, as one of the most recognizable tourist products represents a significant untapped potential which at this moment is stagnant and is far from those results that can be achieved. For the Baranja region to compete with other more developed hunting destinations it is necessary to promptly establish legal, organizational, personnel, promotional and other preconditions.

Hunters as guests travel up to thousands of kilometers to live the experience of hunting, as a rule those are the guests who spend a lot more than just a regular guest, and along with hunting they use other tourist services. In order to develop hunting tourism in Baranja it is necessary to restore and build accommodation capacities of hunting lodges. Residences of Tikveš castle in Kopački rit and the castle of Eugene of Savoy in Bilje open up new possibilities based on existing resources. Since both castles are under the administration of the Public Institution of Nature Park Kopački Rit it is important that the management of the hunting ground, i.e. the administration, reconstruct and activate resources and put them in the function of tourism. Their estates that surround the castles open up many opportunities to broaden the offer through breeding hunting game for the enrichment of hunting resources, especially in the area of indigenous breeds - deer, roe deer, wild boar, pheasant, grouse and other game birds. It is necessary to take the hunting up to a higher level and thus create a tourism product for the interested hunters - craft maintenance of hunting equipment, cold storage for the reception of harvested wildlife, trade of hunting equipment, photography, recording wildlife and birds, participation in the environmental and biological workshops, crafts for making stuffed animals and trophies, renting of off-road vehicles, visiting historical and other sites, breeding and training of hunting dogs, as well as catering services for hunters, but also for accompanying persons.

Baranja has significant resources of carp ponds and fishing waters. After joining the European Union, the Republic of Croatia gained the access to available models of state funds for fisheries (www.obz.hr). Fish farming as a special branch of agriculture, coveres all the activities in the fisheries, aquaculture, transport, processing of fish and other aquatic organisms. Croatia has enough freshwater resources for its own purpose, both for the production of fish (aquaculture) and for economic and sports and recreational fishing, but they are not used in economically and environmentally sound manner. To activate hidden potentials for the purpose of fishing tourism, it should be noted that in addition to accommodation facilities it is necessary to provide other activities such as crafts with fishing equipment and crafts for the preparation of trophies, equipment rental and boat rental, catering services of recognizable gastronomy (fish stew, carp in wooden fork), which can be offered in various competitions and other events. It is necessary to segment the fishermen according to age groups and therefore elaborate and complete the fishing offer in order to enable a new experience to the youngest ones and to develop a long-term demand for this type of tourism.

4.1.4. Gastronomic delights and wine tourism

Gastronomy and new culinary trends are becoming an increasingly important factor in the creation of special tourist experiences. Although gastronomy is an integral part of every tourist travel, or visit to certain destinations, special tourism products based on the gastronomic legacy or new, popular trends in gastronomy, are increasingly becoming an essential travel motivations for specific segments of tourists (Bakan, 2015). Gastronomy and enology are developed and dominant tourist products in Baranja because on the tourist map of Croatia the Baranja area is known for its culinary delicacies. Baranja sausage (known as *kulen)* is a top quality cured meat product delicacy that is produced according to centuries-old recipes of old Baranja masters. The area of Kopačevo in the Municipality Bilje is known as the best natural habitat for the production of peppers in Europe, so this natural potential should be used to create a brand - Baranja peppers. Connecting science and practice is also important for the development of winemaking, in the sector of enology, with education of local winemakers and sommeliers.

For the wine producers from the area of Baranja marketing support is extremely important for the products to be positioned and recognizable. The vineyards of Baranja, especially the hill Banska Kosa is ideal for growing grapes, but these good conditions are probably the reason for the Baranja's good name, because in Hungarian Boranya means wine mother. In the area of Baranja it is necessary to encourage culinary heritage and indigenous Croatian food products. As Baranja gastronomic identity, it is necessary to promote home-made brandy, especially plum, wine, Baranja sausage, honey, homemade marmelaide and jam, homemade cakes, fish stew, catfish perkelt, dried paprika - sweet and sour, pike on a stick, carp in wooden fork. It is necessary for these products to organize a standardized production and supply. Since the oenological gastronomy is significant part of rural tourism it is necessary to create gastronomic map and guide to the ecological food of the region. According to Tomas researches (www.iztzg.hr), 2010-2014 growth of gastronomy is one of the leading motives of tourists arrival to a destination and this trend is expected to further increase.

4.1.5. Cycling and golf

For families cycling tourism with the network of bike routes and trails is more than just recreation and mode of travel. Bike routes are a prerequisite for the development of environmentally sustainable tourism, it presents an infrastructure that connects the region, promotes an active leisure and movement of citizens which ultimately result in the increase of life quality. Bike routes connect natural and cultural values, and through the culinary specialties tourists get to know the local customs and traditions of farm machinery. For these reasons, cycling routes have become a trend in the European Union and co-financing is encouraged through EU funds. Pannonian peace trail that connects Osijek and Sombor goes through the most valuable natural areas along the Danube. With the ability to connect with the international routes it is necessary to develop local routes that would trigger tourists to stop. According to the Tourism Development Strategy by 2020, it is expected that cycling tourism wll continue to grow rapidly, which is a trend supported by more and more increasing need of consumers for an active and healthy and environmentally responsible holidays. In accordance with the values and interests of new tourists further diversification of products is expected and new combined products that connects, for example, adventure-sports tourism and gastronomical, cultural or socially useful activity will develop within the meaning of travel.

In addition to cycling tourism, which is aimed at general tourism market, it is possible to develop high-end tourism in Baranja in the form of golf. A special advantage is the proximity of the urban areas of Osijek, good transport links, and thus the proximity of high class hotels in the area of Osijek and Beli Manastir. At the same time, supporting facilities such as swimming pools – Kneževi Vinogradi, numerous tennis courts, cyclotourism routes, paintball, geocaching, excursion, etc. enrich the offer of golf tourism. Following contents offered by the golf tourism increase tourist spending, and it is the golf players who recognize the fact that they have a high daily consumption (Bartoluci et al., 2007). In many countries, golf has become the subject of mass interest, and popularization of this sport is contributed to modern technology and media in a way that it is followed by numerous reporters who interest general public by transmiting the atmosphere from the court. In the future, development of golf would contribute to further development of tourism and the overall economy in the Baranja area.

4.1.6. Cultural and Historical Heritage

Cultural tourism is becoming an increasingly important part of the offer. It is necessary for the area of cultural tourism to identify the market with a special interest in culture and expand the offer to guests so they could visit an event, monuments and museums during the holiday. The wealth of cultural and historical heritage makes a great strength of resource and attractive essence of Baranja. Cultural heritage is an important resource base for the development of cultural tourism in order to meet the needs of tourists. Modern tourism implies activity, events and excitement. Cultural heritage must be revived by cultural activities. The specific needs of tourists and just reeling of tourism requires that cultural objects, places and events take on some specifics to be tailored to the needs of tourists (Richards, 2006: 68).

Culture determines the way and quality of life in a society. Cultural and historical heritage gives and reflects the identity of a particular area and they are non-renewable and limited resource that requires the preservation, care, evaluation and use of the principles of sustainability. In the area of Baranja there are significant protected religious and secular monuments, archaeological sites from the prehistoric, ancient, early medieval and medieval periods and cultural assets of local character that are of importance not only to maintain the cultural identity of the area but they can also be activated for economic purposes as an important tourist facilities. Among them the most famous are the castle of Eugene of Savoy in Bilje, the complex Tikveš castle and hunting manor, Esterhazy palace in Darda, Friedrich Habsburg castle in Kneževo which, if reconstructed and put into operation, could be used to develop high-end tourism. It is necessary to re-evaluate cultural and historical heritage and to put some effort into marketing in order for it to be recognized as the traditional value of the area that forms its identity. Cultural activities can be traced through music, musical theater and dance arts, drama arts, audiovisual activities, publishing, library activities, archives, museums and galleries art and other activities.

5. CONCLUSION

The development goals of tourism in Baranja are aimed at increasing the competitiveness of the economy by the business networking and strategic partnerships between public and private sectors. Due to geographical location and recognition of Kopački Rit, it is necessary to further develop tourism based on the concept of sustainable development because it is tourism that associates environmental, social and economic interests and resources of the Baranja area. For development processes it is essential to have human resources - educated young people with prospects of employment in tourism. It is necessary to organize the institutions that will provide formal education in tourism, but also through informal forms of lifelong learning.

Educated young people can initiate the development of tourism and the overall economy. In this way it is possible to achieve a number of objectives of employment, an increase in the birth rate, consumption growth, increasing purchasing power and living standards. This would result in the reduction process of depopulation, the departure abroad of highly educated people and stagnation of economic development. Human potentials activate the resources which are necessary to be identified and evaluated. Therefore, it is important to identify existing resources that make up comparative advantages. These existing resources are hidden potentials for development of tourism, and these are agriculture as the oldest and the dominant economic activity in the Baranja area, and Kopački Rit Nature Park as the center of the past development of tourism. Competitiveness of Tourism product of Baranja needs to be developed on the basis of specific forms of tourism that have a comparative advantage of the area.

The most selective form of tourism in this area is cyclotourism because it connects other forms of tourism. Bike paths connect the economic operators dealing with tourism, oenological gastronomy, fishing, sports and recreational tourism, and the largest number of bicycle paths go through Kopački Rit Nature Park, which belongs to the domain of eco-tourism. Tourism offer of those forms of tourism should be further substantially completed with others with the perspective of development, and belong to high-quality tourism - hunting and golf tourism. It is, however, important to point out the peculiarity of agritourism on the Baranja area that can offer a tourist product throughout the year. Specific forms of tourism developed in this area do not belong to the mass tourism, they are not concentrated by the resources, on the contrary, they are dispersed, which enables that the effects of the development of tourism contribute to a more balanced and stable economic development of the region.

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DEVELOPMENT OF LOCAL COMMUNITIES THROUGHT THE PRODUCTION OF REGIONAL INDIGENOUS PRODUCTS

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Abstract

The Republic of Croatia has numerous regional diversity both in natural resources and in the social-economic development assumptions. Dynamic changes in the economy have been initiated by globalization, which effects on strengthening competitive pressure in free market conditions. In such circumstances, from a regional point of view, there is a great challenge for local communities to preserve the regional identity in the historical, traditional, cultural and social values. Local communities - cities, villages, unfavorable inhabited places that have not found and realized opportunities for sustainable development are the conditions of uncertainty, uncertainties and potential loss of their own regional identity. Thus being said, their survival in the economic and territorial environment is questionable. Analysis results of previous researches have shown *that local communities have the biggest contribution to regional development. They have an important role in preserving the value of local recognition on which it is possible to build a long-term regional development. Strengths and comparative advantages of the region can be found in indigenous products of food that are the basis for a strong position, based on the originality of the product. After identifying the type of local regional products, it is important to encourage the primary production, manufacturing, and to connect it all through gastronomic offer. Local communities that are identifying and developing indigenous products will be separated from the others and thus will affect their own economic development. The production of indigenous products requires an adaptation of the current farm management for the purpose of newer/old product. This paper can be valued as a form of identification of the regional indigenous products, which contribute to the development of local communities, and as a review, and explanation of necessary changes in farm management.*

Keywords: *Local communities, indigenous food, farm management*

JEL Classification: R11,Q16, O32

1. INTRODUCTION

The Republic of Croatia and other European Union countries try to encourage the development of local communities but there is a lack of research on this topic. The assumption is that the initiative for economic development must be where it needs to be developed - locally. This reason is based on the fact that the local population knows everything about their resources - natural, social and economic conditions under which they live and work every day. All resources and their comparative advantages have no meaning if the human resources at the local level are not given the opportunity to work towards developing their own community. The bottom-up approach is the basis for the development of competitiveness both, at local and national level. In January 2017, the Ministry of Regional Development and EU Funds, Department for Regional Development, and the sector for the implementation of Regional Development announced the program for sustainable development of the local communities (https://razvoj.gov.hr). Sustainable development of the local communities is designed in accordance with the development priorities of the local community with the aim of economic development, social revitalization, social cohesion and sustainable development. The program of sustainable development of the local communities is carried out according to the methodology of the European structural and investment funds (ESI) with the aim of a more efficient use of available resources total of 10,676 billion EUR, of which 2,026 billion is for agriculture and rural development in the period 2014-2020 year (http://www.strukturnifondovi.hr). According to the Program, funds can be used by all residents of the local community, local and regional governments that take the initiative to carry out activities in order to realize of everything that is necessary and useful to the local population and for the wider community. Priority for funds of local governments are in Group I and II according to the development index and regional government classified in Group I, which means that their development index is less than 75% of the Croatian average and therefore those communities are target group of applicants (NN, 158/13). Acceptable are construction, reconstruction, renovation or upgrading facilities for public use, precisely communal, social and economic infrastructure. It is important to mention financing in the amount of 85-90% of the total amount of activities on reconstruction, rehabilitation, construction, reconstruction, renovation, upgrading and modernization of the buildings owned by the applicant or the legal entities when their facilities are available to the wider community - public markets, institutions that brings together local residents, cultural centers, homes and other public facilities.

Although there are many good examples of practice, implementation aimed for developing of local communities there is still not enough to make opportunities for people to live and work in rural local communities. According to the authors Tonč et al., (2005) great example of the small communities in the mountainous part of Kvarner County on the border with Slovenia, that has recognized the possibilities and show initiative in the development of local tourism. Activities of the local population in cooperation with the Association for healthy living and healthy nature and funding of the project Support to Croatian NGOs (CroNGO) made recreational routes with supporting infrastructure - renting recreational equipment, production of tourist maps for visitors in several languages and print advertising material. These routes attract visitors to local communities to visit many interesting villages, churches, folk museums with the presentation of the local population of their lifestyle, customs and other cultural heritage. The population actively and continuously is engaged in the maintenance of vegetation along the route and prepares indigenous production through gastronomic offer. Such activities of the local community are a powerful incentive for entrepreneurship in order to create apartments for tourists, small hotels, ethno gallery as well as the restoration of traditional houses. In these border areas, local community with its initiatives and activities has strengthen the cross-border cooperation with the local communities outside the Croatian borders.

2. LOCAL COMMUNITIES – THE CONCEPT AND IMPORTANCE

The basic concept, of the local community is a community of people linked together with their needs, traditions and identity in the area that allows them to communicate directly. Local communities have been living community with daily and spontaneous interaction and that can communicate with formal institutions in an organized manner. It is quite the contrary formal definition of local communities and local territorial units. The term, community, highlights the quality of solidarity linking of people connected by origin, religion and tradition (www.enciklopedija.hr).

According to Tönnies (2012) a group of people created by positive relationship is seen as a creature who acts outward and inside, and is called the connection. The term relationship or connection is understood as real and organic life – which is the essence of community. The mechanical creation - is a term of society. With this explanation Tönnies is trying to separate these two important concepts. He explains that every intimate, close co-existence can be considered as a life in the community. Society is a public world. The man is living in the community with their own fate linked to it from the birth. He goes into the unknown society. In the villages, human communities are stronger and more alive: the community is a lasting and real coexistence. The foundations of the society theory can be found within people, as well as in the community, living peacefully live together, although not significantly related, but separate: while in the first case remain connected despite all separations, in the second case they are separated despite the connection.

Meaning of local communities is even bigger in terms of globalization and urbanization of rural areas in the Croatia. Despite these intensive processes of local communities people continue to live based on family relationship, neighborhood, friendship and organized network of direct interactions in order to preserve the identity and sense of belonging. At the same time, they resolve financial and other problems at the level of local areas - infrastructure, environmental protection and others. The power of the local economies, in large part, depends on the strength of the local community.

In recent years, the focus of development activities has been placed on rural development, which is important for the Croatian agricultural policy under the Common Agricultural Policy of the European Union.[1] The objective of rural development measures is to reduce the gap in economic development and living conditions in rural areas and the creation of a strong agricultural sector, environmental protection and natural resources in order to preserve and improve rural areas and rural values. Agriculture provides great opportunities for self-employment and employment, but not only as a basic agricultural activity, but also as the basis for the diversification of the rural economy. Extension to non-agricultural activities and diversification of economic activities is a very important segment of the local rural communities because it contributes to job creation, reducing the depopulation and contributes to improving of the living conditions in the rural areas (http://www.mps.hr).

Consequently, the most significant potential for development of rural areas are its inhabitants. They are the initiators of change in the economic development, taking care of the traditional and cultural values and the environment protection. The best promotion and publicity of local values that are specific to each area can come from local people, group in the local community. Organized events in the local communities with the aim of promoting traditional values, strengthen agriculture as an economic activity and its recognizable products, is particularly important. That way, local communities can recognize and highlight the value of products that have, and therefore those products are more valued for consumers and the wider community. It is extremely useful to organize education that directs the development of the local area. Guest speakers for the local population, selected groups of interested parties may transfer the necessary information in order to adapt existing production or to start a new entrepreneurship application.

[1] According to the general objective 3. Improving living conditions in rural areas, economic development of rural areas and strengthen local partnerships in the Strategic Plan of the Ministry of Agriculture for the period of 2015-2017., p.p. 89-94

3. WHY? – CREATE OF THE REGIONAL INDIGENOUS PRODUCTS

The process of creating regional local products is actual topic and has multiple significance. Croatia has many natural comparative advantages which are very diverse and exactly they are the basis for the development of competitiveness. Regional diversity - natural, cultural, traditional customs and lifestyle, provides a regional identity and originality as a prerequisite for the creation and development of regional indigenous brands.

Therefore, precisely because of regional brands indigenous products development, region preserves its identity and creates a positive image for consumers. That way, the regional brands of indigenous products are guarantee for the quality to their consumers and in the special way they do the marketing promotion of the region. In addition, it is possible to conclude that the development of regional local products as regional brands directly affects the design of the whole region as a brand - regional branding (Oliva & Paliaga; 2012). Due to a strong impact of globalization and competitive pressure, many manufacturers are in the process of finding new products and new markets. Exactly, regional production of local products allows originality, a unique product, which can ensure the competitiveness of producers and recognition in the market which is not possible to copy. This unique value product has a fundamental significance for market positioning, and sustainable competitiveness.

In the long term, local communities that follow the tourist market can observe significant changes and adapt to them. According to Čavlek et al., (2011:39) there are radical qualitative changes of mass strategy, which is characterized by growth in demand based on large volume of traffic (3S - sun, sea and sand) in to the strategy of diversification of products that is suitable for a specific segment of consumers in accordance with their expectations and desires. This is how specific forms of tourism are based on social resources, but the most important is the gastronomic tourism and oenologist tourism.

Everett and Aitchison (2008) in their research emphasize the role of food in the sustainability of regional identity that is connects with the concept of regional regeneration. In the countryside there is a very close relationship between production and consumption. The survey identified a high level of correlation with food tourism interest and the retention and development of regional identity. Indigenous production have contributed to enhancement of environmental awareness and sustainability, an increase in social and cultural benefits celebrating the production of local food and the conservation of traditional heritage, skills and ways of life. The research of Vrsaljko et al., (2015) confirms that natural resources and cultural heritage is an important part of tourism and sustainable development as well as local indigenous production especially if they are from organic farming.

Branding of regional products is formed the possibility of creating regional destinations accordnig to the Lee and Arcodia (2011), which points out the importance of regional trade fairs food (food festivals), which offer the possibility of additional information, understanding and perception of the comparative advantages of the product. Fairs of food affect the growth of interest in gastronomic tourism. Local manufacturers are developing the strategy for the local market supply chains, where it is important to provide a standard quality of product that is influenced by tradition and authenticity. According to Bowen (2010), it is important to control the production of the product within the local area and the local market. As examples of good practice (best practice) are products from France (Champagne, Roquefort cheese), Italy (Prosciutto di Parma, Parmigiano Reggiano cheese), Spain (Rioja wine, Manchego cheese), Greece (Feta cheese, Kalamata olives), India (Darjeeling tea, Basmati rice), Sri Lanka (Ceylon tea), Mexico (Tequila, Mezcal), Brazil (Cachaça), and Colombia (Colombian coffee).

Requirements of tourist consumers are changing what influences on the formation of tourism. With organization of regional local products supply, local communities are directly affected by the creation of the image of their own region. Therefore, the inclusion of local indigenous products in rural tourism activities, especially its specific form of agritourism is especially preferred (Wicks & Merrett; 2003).

Busby and Rendel (2000) research is about the necessary transition from tourism on the farm to farm tourism, with the concept aim that the of farm tourism in a much broader context that includes a variety of offers and the availability of many daily very attractive facilities on the farm. Ružić 2011:150-155) focuses on the preconditions for development of rural tourism in Croatia, where it states the term rural tourism economy with explanations agritourism attractiveness. The following interpretation of the importance of developing tourism in the rural areas of local communities points out the importance of local products in Istria - olive oil, forest and medicinal herbs, honey truffles, a variety of beverages, meat and dairy products, and figs. Such indigenous products called "dead capital" that need to be evaluated and exploited. Many manufacturers of historical heritage and traditions cultivated the production technology and kept consumption customs of indigenous products. Examples are the various indigenous productions - meat products, wine, oil, cheese, fruits and vegetables. In this way they successfully preserved tradition in modern conditions of the market environment and become the basis for a new market position through indigenous products. That is why it is necessary to protect indigenous products because it can preserve the identity and originality of the region. So, regions receive specific form of added value similar to their products.

4. HOW? - TO REALIZE A REGIONAL INDIGENOUS PRODUCTS

The entire Croatian area due to its geographical position, diversity of natural and climatic conditions, the rich cultural heritage and traditions has a large number of indigenous agricultural products and foodstuffs. Such products are unique/original by its technological, nutritional and organoleptic properties and also with quality and uniqueness can compete successfully in the domestic and international markets.

All these products have great potential for the valuation areas in which they are produced, and also they contribute to the preservation of regional identity. However, if such production is not formally recognized and protected as such, it cannot be put into function of local communities' development. Few products have become recognizable, but also still there is a lot of them who have yet to be discovered, register and protect and in this way to become recognizable. Traditional knowledge, abilities and skills of production of local products, in modern market conditions, have more and more importance and attract the attention of consumers willing to pay a higher price for the expected quality.

Protection of indigenous products is carried out on the basis of the Low (NN 84/08, 75/09, 20/10). Therefore, the term Protected Designations of Origin (PDO) is the name for the labeling of products that originate them from specific place or region and their quality and characteristics essentially or exclusively attributed to special natural and human factors of a specific geographical area. Its production, processing and preparation is held in this geographical area. This label, through procedure of the protection and labeling, get thouse products created for many years of use and as such they are recognized especially for this area. (see the Apendix, Figure 2)

Following the interpretation of that regulations, the label Protected Geographical Indications (PGI) is given to products that originate from a specific place or region, and having a particular quality, reputation or some other characteristic recognizable in this geographical area while the production and/or processing and/or preparation is taking place in a particular geographic area.

On the basis of the same regulations, the label Traditional Speciality Guarandeed (TSG) is a traditional geographical name for labeling products that come from a place or region, and thereby meets the requirements to geographical origin and authenticity. Such products have a high level of reputation and are well known. Raw materials for the manufacture of such products may come with a wider area or different from the processing area, but under the condition that the area of production of raw materials is limited, then under special conditions for the production and under strict inspection supervision in order to fulfill the conditions. Croatia has a total of 24 protected indigenous products. At the same time, the total number of 16 were protected both at national level and the European Union with labels Protected Designations of Origin and Protected Geographical Indications. In the preparation is 7 products labeled Protected Designations of Origin (PDO) and 6 products labeled Protected Geographical Indications (PGI), shown in the following table (Table1.).

Table 1. Indigenous products with quality label - Protected Designation of Origin (PDO), Protected Geographical Indication (PGI), and Traditional Speciality Guaranteed (TSG)

Protected Designations of Origin, PDO	Protected Geographical Indications, PGI	Traditional Speciality Guarandeed, TSG
Ekstra djevičansko maslinovo ulje Cresa* Istarsko ekstra djevičansko Maslinovo ulje Korčulansko maslinovo ulje* Krčko maslinovo ulje* Istarski pršut* Neretvanska mandarina* Ogulinski kiseli kupus/zelje* Paška janjetina* Paška sol Slavonski med Šoltansko maslinovo ulje* Varaždinsko zelje*	Baranjski kulen* Dalmatinski pršut* Drniški pršut* Krčki pršut* Lička janjetina Lički krumpir* Međimursko meso 'z tiblice Poljički soparnik* Slavonski kulen/Slavonski kulin Zagorski puran*	Vrbovečka Pera

**national and EU label of protection*

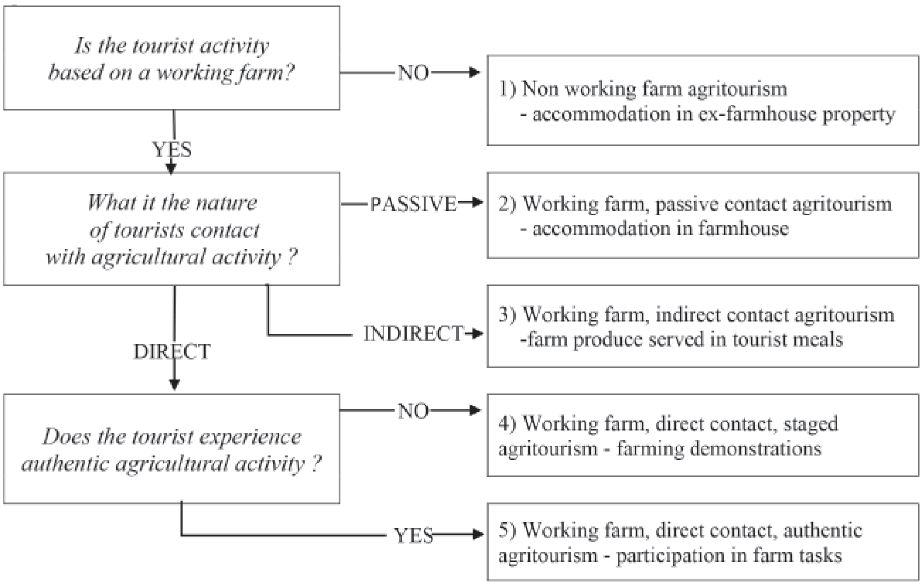
Source: Adopted according to data from Ministry of Agriculutre,http://www.mps.hr/default.aspx?id=10

In preparation are indigenous products with the label - Protected Designations of Origin (PDO): Zagorski bagremov med, Novigradska dagnja, Bračko maslinovo ulje, Krčki sir, Istarski ovčji sir, Meso istrarskog goveda boškarina i paški sir. Protected Geographical indications (PGI) are also Rudarska greblica, Kvarg, Zagorski štrukli, Varaždinski klipić, Međimurski krumpir/kalamper, and Lički škripavac.

For the purpose of evaluation and exploitation of indigenous regional products through agritourism authors Phillip et al., (2010) presented a wide typology of different definitions and ways to understand the agritourism to the participation of visitors and their activities on the farm: from passive appreciation of agriculturally-produced scenery, farm tours, farmhouse bed and breakfast, and working farm-stays. (Figure 1)

The first form is - non working farm agritourism (NWF), more specifically, tourism as a supplementary income stream for farm households. Second form is identified as - Working farm, passive contact agritourism (WFPC) to the agritourism the working farm provides the context for tourism, but the relationship between tourism and agriculture goes no deeper than that. Third, working farms, indirect contact agritourism (WFIC) in which agritourism begins to integrate agriculture on the farm with the tourism product. The following is the fourth form - Working farm, direct contact, staged agritourism (WFDCS), explaining that agritourism corresponds with the intermediate stages of continuum of authenticity, whereby tourists experience agricultural activities that have been put on purposefully (or staged) for tourism. The two key ways this happens is through reproduction on farm or organisation, (farm tour) of agricultural activities for tourism. Last form is working farm, direct contact, authentic agritourism (WFDCA) nd that is the form where agritourism tourists experience physical agricultural activities first-hand, for example 'pick-your-own' facilities, or participation in farm tasks. This is the only type of agritourism which goes beyond „normal" tourist settings into agricultural as a backround for the regional development.

Figure 1. A typology for defining agritourism



Source: Authors according to: Phillip, S., Hunter, C., Blackstock, K. (2010). A tipology for defining agritoursim. Tourism Management. 31:754-758

The presented typology makes framework for the implementation of local products in a specific, unique and distinctive way. Local communities should definitely define local goals of the tourism policy, which will meet the tourist demand, protect resources and ensure sustainable development of local communities through the creation of conditions for profitable operation of businesses in the tourism industry (Deže, et. al., 2016). Coordination of the work of the local community with a variety of business enterprises can create and implement a lot of new, innovative tourism products that achieve economic effects. They are the assumption of social sustainability of local communities, environmental protection and sustainable development.

5. CONCLUSION AND DEVELOPMENT OPPORTUNITIES

Considering the regional indigenous products in the local community development based on the results of the analysis at the national level, especially in comparison with international relevant literature, the authors have conclusion. With regard to "why", the development of regional brands of indigenous products region preserves its identity and creates a positive image for consumers. Therefore, regional organizations of local products offer is needed in the local community which directly effects on the creation of its own brand in the region. It is therefore necessary to protect indigenous products because they preserve the identity and originality of the region. Thus regions receive specific form of added value similar as well as their products. Regardless of "how", authors research has indicated that traditional production of local products is a comparative advantage that growing significance. Such production should be protected in order to keep the originality and uniqueness of labels: Protected Designations of Origin (PDO), Protected Geographical Indications (PGI) and Traditional Specialty Guaranteed (TSG). Local communities organized offer of such products through event, fairs exhibition - in particular by offering agritourism realized numerous benefits for consumers, producers and local communities.

The first part explains "why" produce and register agricultural and food product. Producers of local products operate in a market environment that creates strong pressure to conventional products. Due to the consumer aspects it is important that products should be registered to one of the label which guarantees the distinctive quality at a time when the demand for local products increase. This is also the way how the legal protection of indigenous products of abuse and damage to the reputation of the product. Indigenous production also have a cultural aspect as renew and develop local traditional values and contribute to the recognition of regional identity. Very close to this is the social aspect, because the production of local products can affect the increase producers income and to influence the prevention depopulation of local communities. Production of these products is specific by different technology from the industrialized production. Technological processes of local products production kept natural conditions in the region and the resource management is self-sustainable, ecological aspect. There are many benefits of regional production of local products in the economic development of local communities. Firstly, the products that have anyone of the registered marks belong to the group of products with a higher sales price which effects on increase of income of producers who produce such products. Local communities and their areas where products are become recognizable for this type of product. Secondly, it is great importance for rural development of marginalized local communities, especially those with a lower level of economic activity. Connection with tourism - agritourism provides a good way to revive growth and development of local communities. Thirdly, there are also single example of good production and business practices in the production of indigenous products while it can become an accelerator for economic change and initiate the establishment of stakeholders - cooperatives, associations, clusters, producer organizations. In this way the joint activities can strengthen its market position, both in the domestic and foreign markets, such production can become export products.

The second part gives an overview of ways "how" to develop the local community through the evaluation and implementation of regional indigenous products. It explains the procedure for the protection of local products and forms of labeling. According to previous research, there are numerous examples in which the regional indigenous products become recognizable local products - olive oil, wine, and honey and as such they are connected with agritourism. There are synergistic effect on the growth of tourism demand and supply of typical, indigenous and quality products. By offering in tourism, these products through catering services create added value which is higher than the economic value of the primary products. Connecting recognizable regional indigenous products with agricultural tourism contributes to the economic empowerment of all participants in the chain of sales, affecting the preservation of culture and heritage, relieves the consequences of depopulation and initiates SMEs. The development of agricultural entrepreneurship involves the introduction of tourist activities as well as additional activities on the farm and contributes to the economic viability and economic activities at the local rural area. Therefore, it is necessary to emphasize the importance of connecting high-quality, indigenous and geographically recognizable products with tourism. This paper can be evaluated as an explanation and identification of development opportunities of local communities through the regional production of indigenous products.

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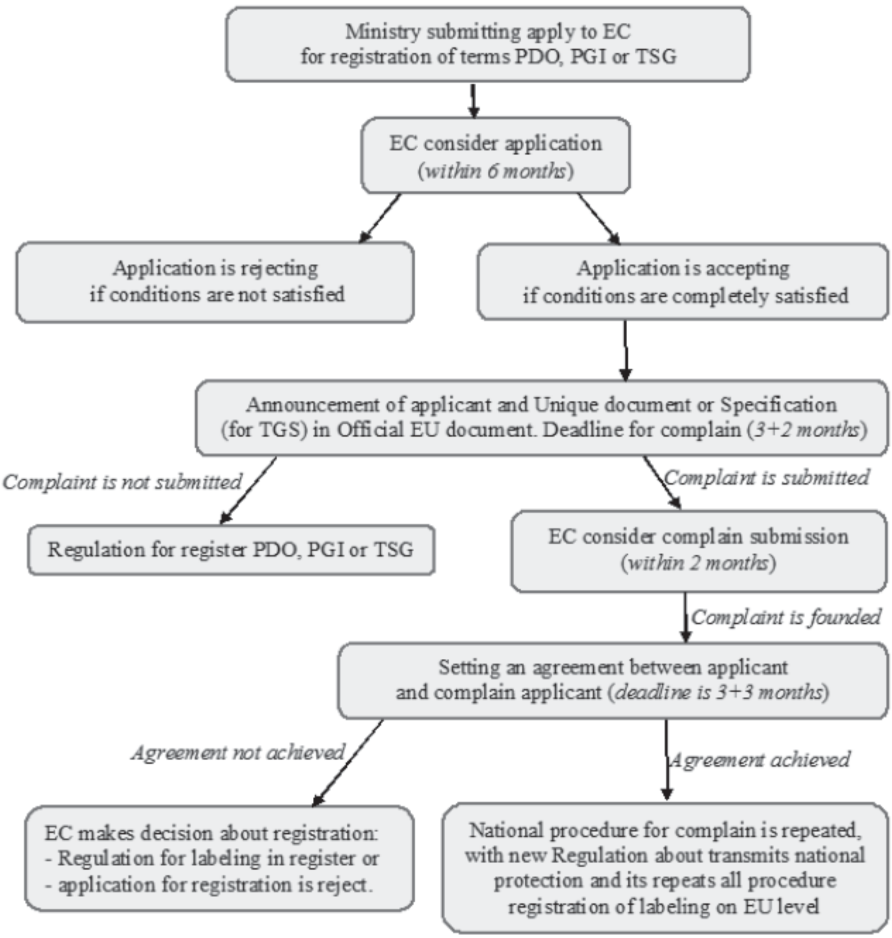
APPENDIX

Figure 2. National procedure for protection the labelling products by PDO,



Source: Autors based on Guidelines on the labelling of foodstuffs using protected designations of origin (PDOs) or protected geographical indications (PGIs) as ingredients by Ministry of Agriculture

EU – European Union
EC – European Commission
Ministry – Ministry of Agriculture
PDO – Protected Designations of Origin
PGI – Protected Geographical Indications
TSG – Traditional Speciality Guarandee

THE SITUATION AND POSSIBILITIES FOR THE IMPROVEMENT OF TOURISM SUPPLY AND DEMAND IN THE OPATIJA RIVIERA

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Abstract

When they visit a tourist destination, tourists set demands to tourist suppliers and prefer offers complex enough to meet their needs, which is also the key to tourism industry. The needs can be met only by offering adequate goods and services. In the current tourist practice of the Opatija Riviera, not much attention has been devoted to the quality and structure of tourists and increase in tourist spending. This destination should primarily work on improving the quality of tourist products and their diversification, primarily with regard to the acceptance of new product concepts. The local government has the role of a coordinator with other participants from the public and private sector, which could in synergy determine the direction of desired tourism development and set the foundations of the desired tourist destination management. The purpose and aim of this paper is focused on the attitudes of the local community on tourism development as an integral part of the tourist product of the destination. Positive or negative attitudes of the local community have a strong influence on further development of tourism of Opatija as a tourist destination.

Keywords: *destinations, tourism policy, local community, Opatija*

JEL Classification: P25, R1

1. INTRODUCTION

It can be concluded that, about 15 years ago, Croatian tourist offer definitely made a comeback to the tourism market (taking into account the specificities of each destination). It has thus become necessary to re-position the destination in the tourism market. *New tourists* are aware of the possibility of choice; they are searching for *experiences* that will reflect specificities of the locations they visit.[1] In the current tourist practice of the Opatija Riviera, not much attention has been devoted to the quality and structure of tourists and increase in tourist spending. This destination should primarily work on improving the quality of tourist products and their diversification, primarily with regard to the acceptance of new product concepts. Nowadays, tourists are no longer looking for just an overnight stay and food; they want to be offered an experience during their vacation. Therefore, it is necessary to combine services, i.e. basic elements of the product (accommodation, food, entertainment, etc.) in a single product that will be a new experience for guests which they will remember, and for which they might return to the same destination.

2. SWOT ANALYSIS OF THE OPATIJA RIVIERA

SWOT analysis (analysis of strengths, weaknesses, opportunities and threats) referrs to the key elements that characterise the attractiveness of the Opatija Riviera as a tourist destination and the elements that currently have an impact on tourism development in this destination. Internal strengths need to be emphasised, weaknesses reduced, opportunities used, and external threats avoided.

[1] According to: Main Tourism Development Plan of the Primorje-Gorski Kotar County, op. cit., p. 30.

Table 1. SWOT Analysis of the Opatija Riviera

STRENGTHS	WEAKNESSES
- GGeo-communication position - Accessibility by sea, land, air - Natural resources - Cultural and historical heritage - Beauty of the landscape - Tourism tradition Market recognition - Mostly well-preserved environment - Strategic documents and plans - High safety level - Proximity of the Rijeka Airport (Krk and Pula) - Proximity of and accessibility from Central European markets - Concentration of hotels Concentration of wellness and thalasso facilities - Nautical tourism - Conference tourism - Feeling of security and protection - Gastronomic tradition - Ethnographic tradition	- Domination of the traditional sun-and-sea product - Underdeveloped potential of tourist products - Pronounced seasonality - Insufficently differentiated offer - Lack of distinctive souvenirs - Unfavourable acommodation structure and its low quality - Lack of tourist amenities - Underdeveloped infrastructure - Privatisation and recapitalisation of major tourism companies - Transport issues – connection of islands with the mainland, local traffic, parking spaces - Lack of tourist signalisation - Lack of well-known brands - Unarranged beaches - Lack of operative synergy - Lack of integrated quality
OPPORTUNITIES	**THREATS**
- New tourist products - Selective forms of tourism - Diversification of regions and products - Branding of local gastronomic products - Constant improvement of integrated quality - Improvement of the marketing strategy Possibility of year-round business activities - Improved market position - Sustainable development - Promotion of local cultural identity - Increase in and expansion of protected natural areas - Partnership - Growing demand from new, distant markets (e.g. France, Great Britain, Sweden…)	- Turbulent and unpredictable environment - Conflicting development options - Competition from other Croatian coastal destinations (e.g. Istria, Dalmatia) - Increasing number of new destinations in the world tourism market - Risk of possible pollution - Visual pollution of space - Excessive building (appartments) - Saturation of space – exceeded carrying capacity of some areas - Current image – destination for the elderly - Faster development of competition in the environment

Source: Author's analysis according to the data from the Kvarner Tourist Board

The SWOT analysis shows that the Opatija Riviera is an area of great potential, especially in terms of natural, cultural and historical resources and geo-communication position. However, it is at the same time burdened with seasonality, underdeveloped, i.e. somewhat outdated development of the tourist product, and stagnation of expansion to other outbound markets, the ones outside Europe. Its specific advantage is that it is also accessible by sea. Rich history and over 160 years of cultural and tourist tradition make it interesting and distinctive in the tourism market.

2.1. Marketing of the Opatija Riviera

Marketing is very important for every industry, especially tourism; it attracts consumers – tourists. The idea of destination marketing is based on many studies, such as characteristics of the destination, image of the destination, planning in the destination, tourism supply, tourism demand, promotion effects, market competition between destinations and their comparative advantages, destination selection criteria, environmental protection, but also practical knowledge that marketing-mix theories were established for the business system. Hence, there is a need for a multidisciplinary approach which requires analysis of all relevant factors in the tourist destination with any direct or indirect influence on the mission, vision and objectives, all for the purpose of carrying out joint tasks of the Kvarner tourist destination as a whole.

The objectives of marketing activities are:

- to motivate as many tourists as possible to visit the destination,
- to accelerate tourism development,
- to improve the quality of the tourist product,
- to protect natural and cultural heritage from possible devastation.

Due to strong competition that has affected the increase in quality and product differentiation in recent years, it is no longer possible to use only individual marketing activities, price and promotion, to improve the market position of our tourist destinations. The basic question is no longer where to spend your vacation, because standards relating to accommodation, food and transport can generally be fulfilled anywhere. The question is how to spend your vacation, and it implies high quality and a multitude of possibilities during your stay in the selected destination.

Nowadays, the tourist destination Opatija Riviera is facing growing competition, changing demands of tourists and increasing operating costs. The goal of the tourist destination Opatija Riviera is to survive in these difficult conditions, to develop and achieve success in the tourism market. However, in order to reach this goal, it should systematically adapt to new changes and place marketing activities in the function of achievement of a satisfactory level of effectiveness and efficiency, which has become more difficult because the costs keep rising.

Operational implementation of destination marketing implies the following basic approach:

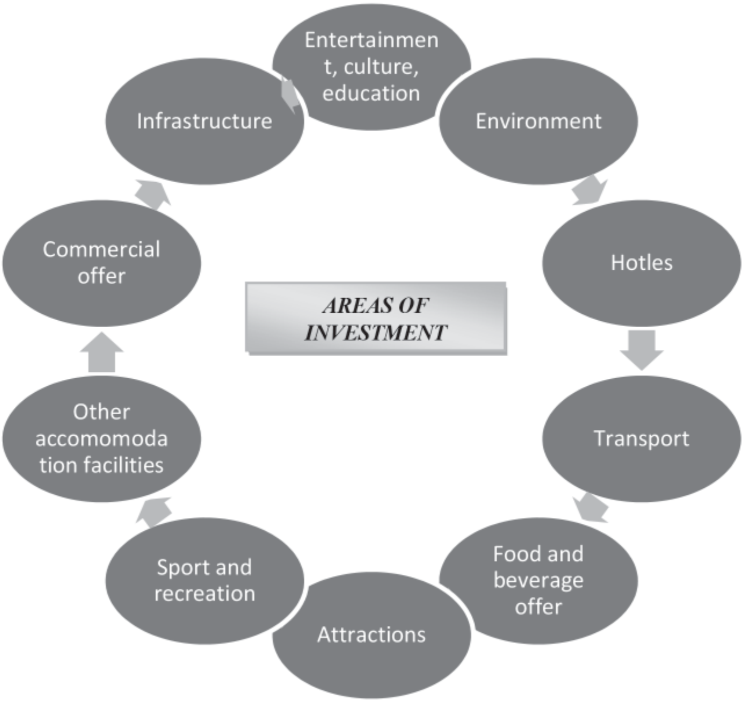
- that destination marketing is one of the most important activities of tourist destination management whose task is to unite and harmonise market positioning of all participants in the structure of the tourist offer;
- the subject is always a unique tourist product of the destination that represents spatially and temporally related group of products and services that represent the unity of diversity and are characterised by each individual subregion and tourist destination and other specificities;
- that destination marketing is facing a complex task of unifying heterogeneous offer of a number of individual entrepreneurs with varying degrees of power and ability who need to recognise that the benefits they could achieve individually can be multiplied only by working in synergy at the level of the tourist destination;
- that in theory and practice, marketing manager is recognised as information broker who follows the principle that information travels first by creating a single database and applying a higher level of Internet use;
- that the marketing concept must be based on a vision of the tourist destination which will bring together all stakeholders (small and medium-sized enterprises, small tourist boards) so that the fragmented tourist offer of the destination Opatija Riviera could have a unique marketing starting point;
- that destination marketing is based on recognition, the ability of tourist management to turn comparative advantages into competitive advantages.

Marketing positioning of the tourist destination Opatija Riviera by geographic principle requires a realistic assessment of its comparative advantages in the entire region, which should, taking into account customer needs and the selected offer routes, gain competitive advantage of the destination so that, by harmonising objective hierarchy, the Kvarner tourist destination is designed as an integrated system that must follow the corporate mission. Marketing tactics are a way to achieve the objectives defined by the marketing strategy, which means implementation of the planned tasks in order to place the tourist product on the target market.

2.2. Important Investments for the Tourist Product of the Opatija Riviera

The main obstacle to sustaining the positive investment trend is business investment climate. In the world of global competitiveness, capital is placed in countries that offer legal security, macroeconomic stability, more favourable conditions of the macro-environment and better market potential. In the area of the Opatija Riviera, high-quality tourism should be developed according to the criteria of sustainable development; historical heritage should be taken into account and valuable landscape should be protected. This should be taken into account as a starting point for the adoption of the *code of conduct in the area* of the tourist destination Opatija Riviera (foundations in the process of defining rules and norms) for all types of investments in tourism development, which should reflect the highest standards of quality. Guests visit a particular destination primarily because of its attractions; they should therefore be made available to guests as target users by making appropriate investments so that they could be adequately economically exploited. A four-and-five-star destination should also have an adequate commercial offer, which means that it is necessary to attract investors of well-known world brands and provide other commercial offers relevant for tourism. Studies have confirmed that significant investments need to be made in the receptive capacity, i.e. improvement of the quality of accommodation facilities (hotels and other forms of accommodation). This, however, does not imply a substantial increase in the number of beds, because it is estimated that, for reasons of carrying capacity, the Opatija Riviera should not be burdened with more than 10-15% of new beds. However, significant investments are necessary for increasing the standards of quality and amenities in order to fulfill the requirements of a mundane riviera. A similar approach should be implemented in terms of food and beverage offer (F&B), where stronger focus should be placed on a distinctive, but differentiated offer, adapted to the location and global development trends.

Diagram 1. Important Investments for Tourism Development of the Opatija Riviera



Source: Author's analysis according to: Strategic Development Plan, Kvarner Tourism Development with Strategic and Operational Marketing Plan 2016-2020, Faculty of Tourism and Hospitality Management and Institute for Tourism, 2016, p. 59-63.

The above diagram shows important investment areas for a better-quality and more complete tourism development. Especially important are investments in general infrastructure which includes water, sewage system, and general standard, with emphasis on transport infrastructure, i.e. roads, parking lots, garages, cable cars, local transport, etc., without which there can be no further development of tourism. It is necessary to transform the current infrastructure to quality organisation of conference tourism, but also culture, entertainment, sports and sports recreation events, etc. A tourist destination that aims at sustainable tourism development needs to make constant investments in protection and improvement of the environment, which should be in line with eco-standards and adequately valued in the market through promotional activities.

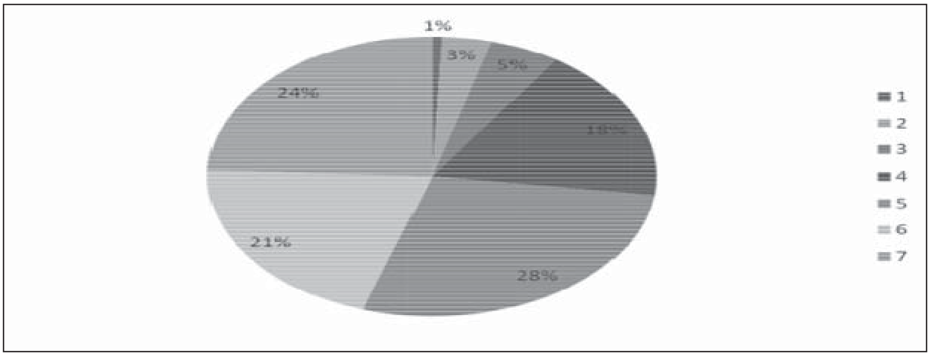
3. EMPIRICAL RESEARCH OF ATTITUDES OF THE LOCAL COMMUNITY TOWARDS TOURISM DEVELOPMENT IN THE TOWN OF OPATIJA

Research of the attitudes of the local community, i.e. surveying of Opatija's population on the impacts of tourism on the destination, i.e. the town of Opatija, was conducted using questionnaires. The questionnaires were divided into three parts. The first part referred to the assessment of satisfaction of the local community with elements of the offer in the tourist destination. Seven possible answers were offered (Likert scale), of which grade 1 represents great dissatisfaction with the element of the offer in the tourist destination, and 7 represents great satisfaction with the offered element. The questionnaires, i.e. examination of the population's attitudes on the elements of the tourist offer and impacts of tourism on Opatija area was conducted in the period between 28 January 2011 and 10 March 2017. In the scope of the research, 140 questionnaires were processed in the area of the town of Opatija, Ičići, Ika, Volosko, and Pobri.

3.1. Results of the Analysis

The majority (presented in Figure 1), i.e. more than 70%, of the surveyed population has a positive attitude towards impacts of tourism on the growth of social welfare. Great dissatisfaction was expressed only by 9% of the respondents who awarded the impact with grades 1, 2, and 3. Grade 4 was provided by 18% of the respondents who are partially satisfied with impacts of tourism that stimulate the growth of social welfare in the destination. As much as 24% of the respondents are very satisifed, and 21% of the respondents also expressed satisfaction by awarding the high grade 6, and 28% also awarded a satisfactory grade 5. It can be concluded that the local population is satisfied with the fact that tourism, by creating jobs and generating income, has an impact on the growth of social welfare of the population. Thus, tourists' satisfaction with the tourist offer and tourist management and employees is an indicator of the degree of impact of tourism on economic prosperity, improvement of the living and work environment and quality of life of the local population. The emphasis is on the assessment of social and economic impact on earning potential and employment. Tourism is also analysed from the point of view of its impact on general infrastructure, construction and improvement of valorisation of public facilities and the range and quality of other amenities in the destination. Assessment of subjective quality of life of the local population in the tourist destination is also important.

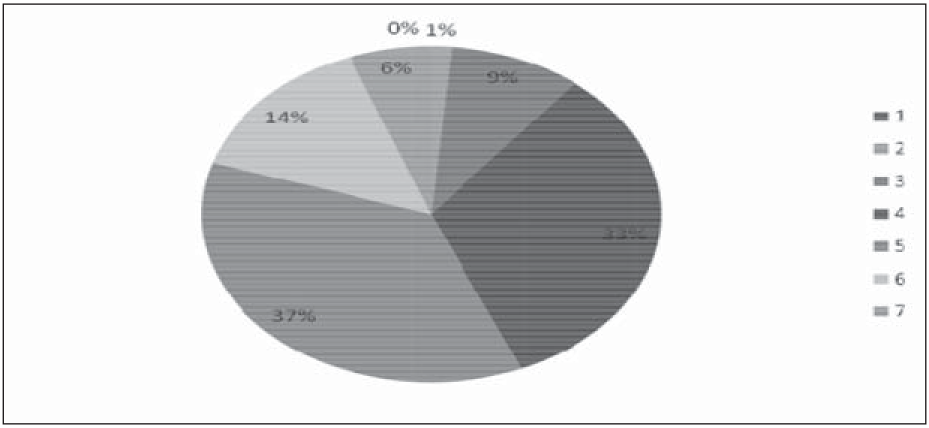
Figure 1. The Impact of Tourism on Growth of Social Welfare of the Population (%)



Source: Author's analysis according to the survey of the attitudes of the local community towards the elements of the tourist offer in the Opatija area.

In the modern, global tourism trends, culture and rich cultural heritage have become an important factor that reflects vital competitiveness of the tourist product. 25% of the respondents expressed great satisfaction with the impact of tourism on cultural heritage, and a somewhat lower grade was awarded by 21% of the respondents. Grade 5 was awarded by 18% of the respondents, and partial satisfaction was expressed by 14% of the respondents. Fewer respondents are not satisfied with the impacts of tourism on the preservation of cultural identity, of which 4% of the respondents expressed great dissatisfaction, and the remaining 7% and 11% of the respondents also awarded low grades 2 and 3. It is safe to say that most respondents are generally satisfied with the impacts of tourism on the preservation of cultural identity and heritage of the town of Opatija. Culture has a direct impact on tourism, and is an increasing motive of arrival of tourists to a destination. In fact, tourism can also have a physical negative effect on cultural heritage, and also cause significant damage to the local population, especially if they live in smaller tourist destinations. On the other hand, cultural heritage can also be a solution for the extension of the tourist season.

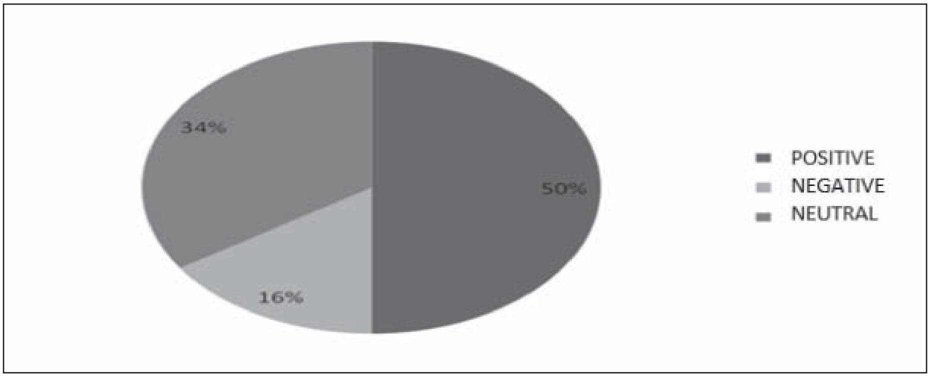
Figure 2. The Impact of Tourism on the Economy of the Destination (%)



Source: Author according to the survey of the attitudes of the local community towards the elements of the tourist offer in the Opatija area

Over 50% of the respondents, i.e. 57% of the respondents, expressed dissatisfaction with the impacts of tourism on the economy of the destination, by selecting grades 5, 6 and 7. Great satisfaction was expressed by 6% of the respondents. On the other hand, none of the respondents expressed great dissatisfaction, which is very positive. Low satisfaction grades, 2 and 3, were awarded by 10% of the respondents. 33% are partially satisfied. It can therefore be concluded that almost half of the respondents are not fully satisifed with economic impacts of tourism on the destination Opatija. Tourist spending is the basis of all economic effects of tourism, because without its realisation, not a single economic effect resulting from tourism development could be achieved. Economic impacts of tourism represent changes in the structure of economies of outbound, transient and receptive areas as a consequence of tourist movement and tourist spending, and ultimately, tourism development. Tourist spending is therefore the basis of all economic effects of tourism. In the further processing of the questionnaires, it was established that as many as 59% of the respondents are dissatisfied with the work of the Opatija Tourist Board; i.e. more than a half of the respondents have a negative attitude towards the work of the Tourist Board in their town. Also, it is evident that 29% of the respondents consider the work of the Tourist Board satisfactory, and only 12% of the respondents have a positive attitude. Based on the obtained results, we can conclude that the population is not fully satisfied with the work of the Opatija Tourist Board. The Opatija Tourist Board undoubtedly has a significant role in the promotion of tourism; it was primarily established to strengthen and promote tourism and economic interests of legal and natural persons in the hospitality and tourism industry and the related industries. Tourist board activities also include very important promotion of the tourist product of the area it operates in, and promotion of the town's tourism aiming for inclusion in the European and global tourism flows, followed by raising awareness of the necessity and importance of preservation and improvement of all elements of the tourist product of a certain area, environmental protection in particular.

Figure 3. Attitude of the Local Community Towards Overall Tourism Development (%)



Source: Author according to the survey of the attitudes of the local community towards the elements of the tourist offer in the Opatija area.

50% of the respondents have a positive attitude towards tourism development, the other 50% have a negative or neutral attitude. 16% of the respondents expressed a negative attitude towards tourism development, and the remaining 34% is neutral. The fact is that raising satisfaction level of the population requires work, and tourism development should be more adequate, because it can contribute to the vitality of communities in many ways. Some examples are events and festivals in which the local population is the main participant and thus, by responding to tourists' interests, they often work on their own development. Jobs created by tourism can be a vital incentive for the reduction of emigration to other, touristically more developed areas. Local population can also increase their influence on tourism development and improve their jobs and earning potential through professional tourism-related training and development of business and organisational skills.

4. CONCLUSION

The Opatija Riviera is a tourist destination with tourism tradition of many years, which has not achieved the expected results in its previous tourism development considering the available resources and other comparative advantages. Tourism in the Opatija Riviera is significantly lagging behind modern tourist trends. Therefore, the primary objective of this destination in future tourism development is the creation of a distinctive and high-quality tourist product, creation of its own identity, and destination management of tourism as the basis for tourist prosperity. Using a combination of marketing activities, the Opatija Riviera needs to be repositioned as an attractive and competitive tourist destination which will attract potential tourists with its distinctive image. By carefully directed marketing planning, the Opatija Riviera will achieve the desired inventiveness, originality and distinction in comparison with the competition, aiming to reach tourist prosperity. The attitudes of the local community towards the elements of the tourist offer and impacts of tourism in the destination are the following: the population points out the lack of attractiveness of the destination to the youth, i.e. lack of events for young people, lack of attractive entertainment (casino, clubs with dance music, bars…) and sports facilities (golf, mini-golf, walking tours, cycling…), a number of closed hotels, working hours of the supermarkets, boutiques and other service facilities (banks), and special emphasis is placed on underutilisation of products with original values (recognisable souvenirs, wine, spirit, vegetables, honey, *maruni* chestnuts, cherries…). With regard to the presented results of the survey of the attitudes of the local community towards tourism development, it can be concluded that this destination primarily needs work on increasing the quality of tourist products and their diversification, primarily regarding the acceptance of the new product concept. Therefore, it is necessary to combine services, the basic elements of the product, that imply accommodation, food, etc., and sets of products that would be a new experience for guests which they would remember, and that would make them return to the same destination.

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CREATING SPLENDID EXPERIENCES THROUGH SYNERGY OF GIFTS OF RURAL DESTINATIONS

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Abstract

Experiences are always made to last for life and are the result of the synergy of destination gifts:nature, material and spiritual culture, catering industry and trade, as well as hospitableness and guest-friendship of the host, i.e. all the factors, activities, relationships and processes of the tourist destination, which were taking place or are in progress.

The job of all jobs and the question of all questions of rural areas, all tourist destinations is:how to win and keep guests and preserve the ecosystem?The best way is to create wonderful experiences through synergy of:attractive nature, material and spiritual culture, catering industry, trade, the hospitableness and the guest-friendship of the host.

The question is what constitutes the tourist offer, how are tourist needs and desires developed and shaped, how are use-values created and how are values for the guests generated and how are experiences of products, services, attractions, events, relationships and their combinations as "goods" in the tourist market valued?

Man is both subject and object in tourism; he is the initiator and the investor, the one who operates and who is the subject of operation; he is the goal and the meaning of the tourist activity - the one who works and for whom others work.Therefore, tourism requires a very complex, interdisciplinary approach to the study of tourism needs and desires, motivations and expectations and the implementation of tourist programs, which should satisfy the expressed numerous needs and even greater aspirations, motivations and expectations.

Marketing research of tourism and rural areas in particular, requires investigation of all that constitutes the life of man, as a guest and as a host, in longer or shorter period of time, in the place of temporary residence.The study of tourism, of what guests gain with practice and experience in the tourist (and rural) destination, is not possible without an interdisciplinary approach of many sciences, such as sociology, psychology, anthropology, medicine, history, geography, ecology, law, marketing, architecture, civil engineering, economy and more.

It is known that the basic interests of tourists are linked to natural and cultural values - beauty

of landscapes, pleasant climate, cultural and historical heritage, but also to residential conditions - accommodation, food, transport to and in the tourist town, and to relations - of hospitableness and guest-friendship with the hosts, and the rural areas.Wonderful, great experiences in the rural area can be realized only by a broad combination of various products and services, in attractive conditions, with numerous events, with "human" relations, in a limited time, i.e. through the synergy of gifts:nature, material and spiritual culture, catering industry and trade, as well as hospitableness and guest-friendship - the spiritual gifts of a rural destination.

Keywords: *experiences of guests, synergy of offer, destination gifts, rural destination, destination branding.*

JEL Classification: P25, R51

1. INTRODUCTION - BASICS OF CULTURE OF EXPERIENCES, AS "TOURIST GOODS" OF THE 21ST CENTURY

In the economic history and the history of tourism, it has never been easier to produce, and at the same time, it has never been harder to sell what has been produced.In the global market, as never before, there is no shortage of "products and beds", but a shortage of "buyers and guests".Therefore, the real question is:what, how, when and where to really offer to buyers and guests, at what price, how to sell them, how to inform them, what kind of relationships and processes to establish and develop, what and how fast to innovate, and how to inspire and thrill the buyers-guests with "splendid experiences" to become loyal buyers - guests - partners?

How to achieve all this without attaching to the creation of a particularly attractive, impressive and valuable identity and unique brand of destination offer experience, virtual and real?

All marketing-oriented manufacturers are offering atmosphere today (Revlon offers beauty, Podravka offers the warmth of home, Starbucks offers socializing over a cup of coffee, Apple offers dreams...), personal satisfactions and pleasures, sublime experiences - enthusiasm and happiness.Modern providers and their economies thus grow from providers and offer of only materialized goods, intangible services and human relations to a higher level, into an offer of experiences, and not just any, but experiences with enthusiasm.Their economy thus grows into an emotional economy or how M. Gobe claims:"In the last fifty years, the economy has shifted from production to consumption, from the sphere of rationality to the realm of desires; from the objective to the realm of psychology." (M. Gobe , 2001.)

The foundation of all relationships, business and private, is based on communications.All the leading religions of the world and all the famous brands have built and build their reputation and the influence on their believers and users based on sensory and emotional communication.

In the essence of every human lies *unity* of body, emotions, rationales and spirit, which is expressed through the physical, emotional, intellectual and spiritual needs and desires, motives and expectations. Their satisfactions in the market economy are realized through the market. Then the human, as a searcher, communicates with the offerwith his senses of:sight, hearing, smell, touch, taste, and emotionally.

Human understanding of the world is completely based on the senses of sight, hearing, smell, taste and touch, as well as on emotions.The most effective course of action of providers and the most responsive for the demander is when all the senses and emotions are engaged in mutual communication.

Synergic effect of offer of:products, services, attractions, events, relationships, and prices, sales, promotion, process and progress is the most effective when demanders are influenced emotionally through all five senses.It should be noted, as demonstrated by Nobel laureate D. Kahnemanda, than the human is primarily an emotional being, and that "... people cannot be rational, but they should not be called irrational because of that".(Kahneman D., 2013.)Therefore, providers (companies, various organizations and institutions) in order to be successful in communication with their buyers, customers, guests, employees, must use names, symbols, pictures, colours, forms, rituals, stories, and great care, patience, compassion, honesty, tolerance, generosity, ... through the senses of:sight, smell, hearing, taste and touch, to establish a sensory and emotional connection and relationship.

All that we imagine, we do it in the framework of the five senses.Cities, destinations, products - brands are always appearing to us through the five senses, as products of hormones and brain activity.This shows that the senses and the intellect work together, where the senses give us the information and tell us, for example, about the current behaviour of a person:

is he/she smiling or frowning?

The mind uses the received information, compares them, analyses and draws conclusions.It can be concluded that the experiences of our world are experiences of the five senses, and our understandings of these experiences are products of our intellect.

New discoveries and new insights are extending human consciousness beyond the five senses.The intellect is having a hard time explaining us these new observations, and even if we still can not describe and imagine them; they are still new and very real experiences."Every one of us attaches greater value to things which we - consciously or unconsciously - in a way, experience as special." (Lindstrom M.,2012) The stone from the Berlin Wall is taken and kept as "...

a talisman (that brings good luck or protects from evil) which symbolizes the end of the Cold War.... (Therefore) ... when we brand things, our brain experiences them more special and more valuable than they actually are".(Lindstrom M., 2009.)

Maintenance of characteristics of offer of products, services, attractions, events, relationships and their combinations depends "... on three factors - the company or brand, products and people.People can make a real difference because they are able to provide a great experience.... everything is in the service ... and more than that - it's about the experience" (Bate N., 2013.).

The unique sensory system is consisted of five senses.This system can notice physical phenomena - everything there is to see, hear, touch, smell or taste. Other, non-material, system provides multisensory perception and awareness of intelligence, wisdom and compassion.It gives us new feelings and help like an invisible hand.

2. SYNERGY STRATEGY OF THE EXPERIENCE DESTINATION OFFER

Human learning about and understanding of the world is almost entirely based on his five senses:sight, hearing, smell, taste and touch.And, every perception of things and events is communication.Therefore, it is important what and how we perceive someone or something with sight, hearing, smell, taste and touch, but, more important, which emotions are created from all of it.

Almost always fear and suspicion spread some of the features, such as:hate, impoliteness, fury, jealousy, anger, anxiety, subordination, overeating, vindictiveness, arrogance, insensitivity, intolerance, drug use, ... and love and trust spread:peace, loving, joy, care, empathy, kindness, respect, satisfaction, courtesy, cooperation, partnership, patience, dedication, gratitude etc. (See Figure 3)

Even fear and doubt and love and trust in human life bring contents and meaning to the overall experience of - good/bad, pleasant/unpleasant, bright/dark, ... or the experience with a thrill, or perhaps with disappointment. Emotions not only make our sensory world more interesting, but they are the main reason for everything we do.

The first thing is to educate the whole human being.

Not only the head, not just the intellectual part, but the emotions and the will of the employees, providers, hosts - people.In order to have a real life and be creative, practical and effective, a human needs to know how to cultivate his will and emotions, build emotional and spiritual intelligence.

The offer of the rural region can provide great experiences of preserved nature, the one that particularly delights and excites us. How will the rural region achieve such an offer without attractive products, services, natural and cultural attractions, events, "human" relationships and their combinations that excite?And how can we get excellent companies and hosts that excite their guests and employees?How can this be achieved simultaneously without:a) offering great products and services, and b) without sensory and emotional communication?How can this be achieved today in terms of such rapid changes of offer and needs, desires, motives and expectations of guests and employees, in circumstances of strong, global competition?How can this be achieved without the creative, innovative capacity of employees and the fast response to all possible changes in the natural, technological, business, market and social environment?Above all, how can this be achieved without satisfied, preferably happy guests, employees, hosts, people as creators and users, and the entire rural region?

"A few of us have an excellent life; most of us are satisfied with a good life. The vast majority of companies never become great, because the vast majority becomes quite good - and this is the essence of the problem."Quality is, according to J. Collins, the enemy of excellence."(CollinsJ., 207.)The best quality, the highest experienced value of offer is short-lived if it is not permanently improved, notinnovated in line with the expectations of users - tourists. "It does not matter for what reasons people travel, whether to be closer to God (tourist as a pilgrim of our time) or to the source of their own inspiration, their motives are in fact similar:to be at least briefly elsewhere and inspired by the strange, new, exciting."(HorvatBožena1-2/1999.)

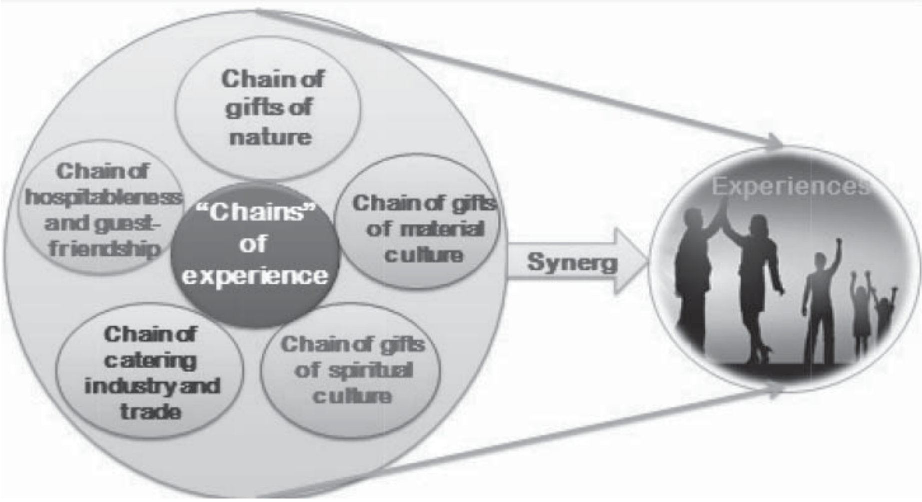

Figure 1 Chains of gifts of nature, culture, catering industry, trade and hospitableness

Guests and hosts are establishing a relationship with all destination gifts using their five senses:sight, hearing, smell, taste, touchandemotions.

From waking up until bedtime, guests register with their senses the "world" of the destination, natural and cultural environment, events, other people, their moods, feelings, products, services, attractions, events, relationships, their possible combinations and more.With the synergy of all senses and emotions, *connections and relationships* between guests and hosts in the destination become *physically, emotionally, rationally and spiritually stronger, more efficient, more valuable, and in return even more sensory and emotional.* Rural landscape - pleasant melody of the wind and waves, kindness - hostility, hospitable - inhospitable host, create favourable - unfavourable moods, causing joy - sadness, encourage even more positive - negative feelings and emotions among guests and citizens.

Selling on the rural area today, when products become increasingly similar and when information technology makes market more transparent, means above all, to establish a more than very good - a special relationship with the guests.In tourism this means "to be always at hand" and help guests with their problems and demands in a particular way.How?It's best to accept buyers and guests as partners, dear and nice people in the process of creation of offer to satisfy their desires, needs and requirements.The human brain is dominated by unconscious, automated processes, and not the conscious ones.Therefore, "We all display behaviour for which we have no logical or clear explanation."Because, "The big part of what happens in the brain is of emotional and not cognitive (conscious) nature." (Lindstrom M., 2012.) Therefore, usually, in the scuffle between the rational and emotional part of the brain, in a split second of indecision, emotions overcome and win over the ratio.

3. COMBINATION OF RURAL OFFER IN 21ST CENTURY'S ECONOMY OF EXPERIENCE

*Tourism - the search for experiences - represents a universal and global phenomenon of all times.*The overall experiences of the guests - physical, rational, emotional and spiritual - are becoming the central focus points that express the essence of the offer of "products" of experience economy.Therefore, the art of creation of the total – cultural (Jelinčić D.A., 2008.) offer and communication of experiences, as a commodity, "tourist commodity", is becoming the biggest challenge of destination management in the economy of experience of the 21st century.

How will the rural destination achieve tourist competitiveness in the world that uses the principle of excellence, excellent experiences, demanding mission of attracting great products and services, reputable companies and destinations, without a "guest-friendly" mood, love and trust, never fear and doubt, without the energy of "soul and heart", hospitableness and guest-friendship, strong emotions and imagination?

How will the rural region get the attention of guests, maintain their loyalty, hold them dear, respected and well-known "stars"?Because, it should be noted that the most valuable assets today are *our guests, their experiences, our reputation - the brand that guests give us*, and they are not kept in the accounting records.

Joy, health, success, hope, love, peace, happiness, confidence, ... and, on the other hand, fear, pain, sadness, loneliness, anxiety, envy, jealousy, ...can be "seen" on the faces of all the people.Every feeling of what is offered - "chain of gifts" and "chain of brands" - acts as an energy system that produces and processes energy of refusal to attraction in different ways, i.e. from fear to love, and vice versa to people - guests and hosts.

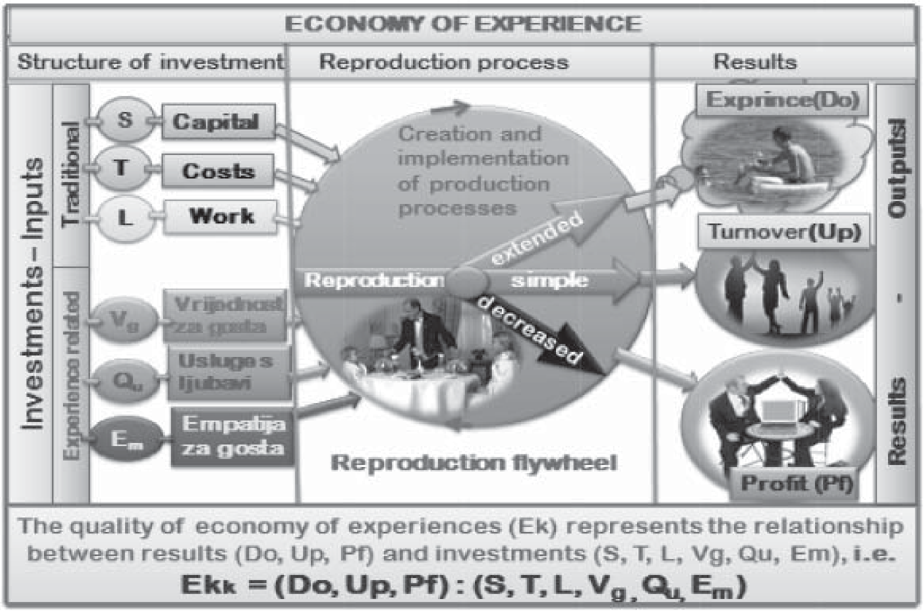

Figure 2 New economy - 21st century's economy of experience

If we received guests with negative energyin a rural household :with fear, pain, sadness, ..., how can we help them, how can we bring down this "house" of dissatisfaction?In a life of bad there is even worse, as well as with the good, there is always the better.A child crashes a house of cubes with joy and laughter, but in order to build an even better one.With their confidence and love for the guest and true listening with their ears, eyes and the heart, the host can sincerely, honestly and morally help the guest in bringing down the old "house of fear" and building a new, better "house of love".

The better "house of love" - social intelligence and empathy of the host - does not depend on happiness, beauty and innate kindness and attractiveness of the host, but on the *skills* which hosts can consciously adopt, develop and eventually take control over.

Figure 3 Creating excellent experiences of guests with love and trust, not fear and doubts

The impulse of curiosity, creativity, autonomy and purpose is still at the core of human nature.Impulses can "flourish" only if freedom is given to people. (WienerN. 1964.)"If we want to fully understand the human nature, as argued H. F.Harlow, we also have to consider a third impulse ... autonomy, excellence and purpose,"i.e. our inner need to manage our own life, learn and create something new and do well for ourselves and for others" (Pink D.H. 2013.)

4. BRANDING RURAL DESTINATION EXPERIENCES

Brands came into existence for a reason and at a higher level of economic and social development, they started an understandable, ever sharper, market competition for buyers, guests, citizens at the local, regional and global plan.In the work of constant invention, creation, building and implementation, the strategy of branding of rural destinations provides an apparent and *really tangible benefit*.Today, branding requires *a multidisciplinary team approach of competent people*.All destinations, also rural ones, in Croatia are now facing the challenge of change.

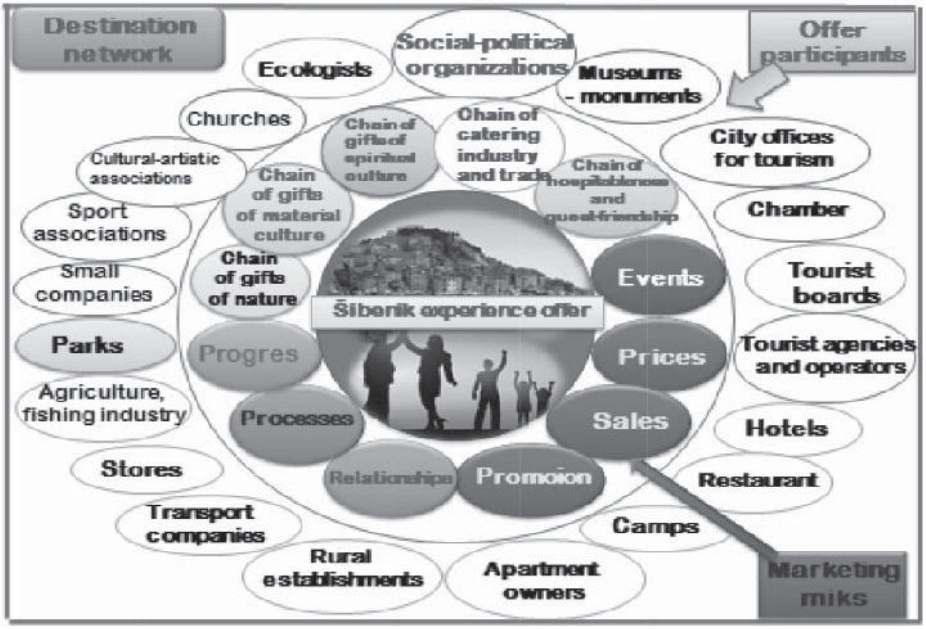

Figure 4 Destination network for destination branding

Brands always have a multidimensional meaning.Brands are:(1) products of intellect, (2) means of communication, (3) signs of orientation, (4) generators of added value, (5) holders of the image, (6) means of attraction, (7) signs of trust, (8) status symbols, (9) expression of business and consumer culture, (10) means of guarantee, (11) carriers of prestige - value.

Squares, churches, theatres, fortresses, museums, galleries, streets, parks, hotels, restaurants, shops and other objects are not houses of objects, paintings, stones, trees, but rather ideas, stories, songs, experiences, i.e. combinations of sensory and emotional - "fairy tale" - destination experiences of nature, material and spiritual culture, catering industry and trade, and hospitableness and guest-friendship of the host - the destination "packages":of products, services, attractions, events, relationships and their combinations and prices, sale, promotion, processes and innovations.Verbal and non-verbal, spiritual communication, empathic relationships, purpose and meaning, the overall experiences are important here. They show at different levels the satisfaction of physical, emotional, rational and spiritual needs, desires, motives and expectations of visitors and citizens.Their assessments of experienced values of a destination as a brand are essential.Scene, tangible, intangible and spiritual offer is important here, in order to satisfy all the senses and emotions.And the most important is the realized value of experience, degree of satisfaction - delight of visitors - guests and citizens. The aim is to *achieve "a positive synergy of all five senses"* with guests and citizens by combining (Lindstrom M., 2009.) *reputation - brand of rural destination, emotional and spiritual strength.*

All relations, all points of interaction that participants of the destination offer and citizens establish with visitors - guests are important for experiences of the brand of rural destinations.

It should be borne in mind that it is one thing what and how the providers and hosts - participants of offer work, how they treat guests, and it is another thing, and *most important, how this is really sensory and emotionally experienced by guests.* It does not matter how clear the arguments of provider and host are, if the guests have a completely different perception of the offered and consumed. It is important to be able to serve suggestively. And "to serve suggestively means to do much more for someone than expected ..., and by making an extra step, that will transform the ordinary interaction into an unforgettable experience." (Pink D. H., 2014.)

Every rural product and destination that attract more have a better image, they represent a more powerful and valuable brand. And all tourist and rural destinations of the world are faced with numerous questions - problems every day, such as:

a) how to *make* the rural *offer* - nature, material and spiritual culture, catering industry and trade as well as hospitableness, their offer packages: products, services, attractions, events, relationships and their combinations on the market, special, distinctive, more valuable, significant, visible, recognizable, exciting, memorable, socially accountable - uniquely attractive and more reputable - *excellent, for the guests,*

b) how *to take the identity and the image of your guest into account* (the totality of facts according to which the guest is different from all other guests) *and improve his status and reputation - the brand,* and

c) how to get to new ideas and solutions for the rural region: (1) for a better use of the market, (2) more effective business, (3) for attraction of visitors - guests?

Great ideas for reputation, brand of destination and rural destination were always "produced", built and maintained by talented people. "But even the best product in the world will be useless without a strong brand *preacher* who will promote it." (Gallo C., 2013.)

How to create the image of a rural destination - an idea, a story, an experience?How to attract attention, focus and interest for the identity of a destination brand, for all that is standing behind the brand and how is that brand different than any other brand.How and through which channels will "our rural destination" provoke the senses and the best emotions in guests, employees and partners?How will the "rural destination" reach first place with its brand, a leading position in the conscience and the emotional mind of its visitors, guests and citizens?"The essence of relationships with buyers (guests) is listening and collaboration on improvement ... the most interesting is the emergence of the intelligent buyer (guest) ... they are beginning to recognize their power by comparing prices, customization of products and requests of fundamental solutions of their problems - on their terms." (Fisk P., 2011.)

What and why we really buy?"... meanings of material things and symbols that are very important to us are always running from us towards the object, and not vice versa. ... we are attaching meaning and values to symbols, rather than what we get from them, ... perhaps a secret dialogue between what we buy and what we are should be ...*You are what you surround yourself with?No.You are surrounding yourself only with what you are*".(Walker R.,2009.)

5. CONCLUSION

We can conclude that the modern world is a world of brands - striving for more respectable products, companies, destinations, people,... a world where "experiences are being traded".Because man has always been a unity of the body, ratio, emotions and spirit, today he is more educated, informed, materially richer, his needs, desires, motivations and expectations, communicated through the senses of sight, hearing, smell, taste and touch, are much more complex. All this compels the manufacturers, vendors, all tourist destinations and rural areas, to quantitatively, qualitatively, emotionally and intellectually adapt sets of their offer of products, services, attractions and events, prices, sales, promotion, relationships, processes and progress, to changes occurring in the demand market, in order to achieve more splendid experiences and a greater turnover and profit.

Stories give meaning to rural areas, their items of offer and thus provide them with added value.Unique "rural stories" attract the senses and emotions of guests to become brands in their mind.By winning feelings of the guests, the stories become essential in every branding.Without the emotional story, the brand remains only a "naked and cold" product, service, natural and cultural heritage, event, destination with uninterested, indifferent visitors, guests, tourists.

The key question that is imposed before the management of rural areas today and in the future is not only *what* to do, offer, make, but *how* to sensory and emotionally do, offer, make for the guests, *how* to include all tangible, intangible, spiritual and financial resources, intelligence and imagination of the host, to ensure cooperation and coordination of all participants in the rural destinations to provide hospitableness and guest-friendship, for the thrill with the experienced and the branding of the destination.

The quality of experience of the tourist "package" of the product offer, services, attractions, events and relationships, i.e. the gifts of nature, material and spiritual culture, catering industry and trade and hospitableness, is not what is put into it.Quality is what guests receive from it, what they really get - sensory and emotional experience by visiting, staying in the area.

The principle of excellence of offer of the "chain of gifts" lies in the earned thrill experienced in the destination.The quality of offer is in the synergic effect of all what the guest encounters, what he experiences and how he experiences in the destination.This is contained in the "chain of experience". 1.) *gifts of nature*, 2.)*material gifts of culture of the* past, 3)*spiritual gifts of* ancestors, 4)*catering industry and trade*, and 5)*the gifts of hospitableness and guest-friendship of the* host.

In line with global market trends, all destination goods today should be seen and thought of as *"commercial activity" of experiences*, as true *"guest industry" of experience and economy of experience* - culture of atmosphere, hospitableness, guest-friendship, joyful receiving, acceptance, hosting, granting particular attention and empathy to all guests.

Instead of rational - deliberated, calculated and less warm guests, destinations in the 21st century are challenged to turn to the majority of emotional and intuitive guests (changes in demand) and to branding - *creation of goods that are sensory and emotionally "coloured"* for guests of the 21st century.

Which European guest would like a xenophobic and impulsive person, always ready for fraud, scam, theft... to be his host? How hard are we truly trying to bring joy and happiness, not sadness and unhappiness to guests and ourselves today? If we know how our mind works, we can facilitate and improve life.

It is certain that our knowledge, skill, imagination, awareness and actions can contribute to a better, more efficient and fruitful community, city, destination and country - our home.This will fulfil our inner self with limitless love, kindness, honesty, compassion, strength and personality, but we will also achieve guest satisfaction, sustainability of life, material and spiritual safety.

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INFLUENCE OF SOCIO-DEMOGRAPHIC CHARACTERISTICS OF EXAMINEES ON THE AWARENESS OF EGG QUALITY AND CONSUMPTION

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Abstract

The research into influences of socio-demographic characteristics of examinees on the awareness of the quality and consumption of eggs was performed by using a survey that involved 226 male examinees and 252 female examinees. The survey questions were directed towards socio-economic characteristics of examinees, as well as opinions of consumers about purchase of eggs, their quality and the knowledge about functional eggs when compared to conventional eggs available on the Croatian market. Statistical data analysis was performed by χ^2*-test, ANOVA and the „t" test. The research proved that educational structure, age of examinees, income per family, frequency of egg consumption and the indicators of egg quality were statistically highly significant (P<0.01)* *for both sexes. Examinees pay more attention to the egg shell cleanness and product safety (P<0.01) than to its nutritive value, shelf life and storage (P>0.05). Examinees of both sexes have positive attitude towards functional eggs (P<0.05) and are not afraid of cholesterol intake (P>0.05).*

Keywords: *survey, sexes, preferences, egg quality, consumption*

JEL Classification: A14, Z1

1. INTRODUCTION

In 2014, consumption of eggs per a household member in the Republic of Croatia was 152 pcs. (Statistical Report 1517, 2015), which was 5.55% higher than in 2008. Consumption of eggs in the EU countries is on average 200 pcs./ per capita (Eurostat, Global Poultry Trends, 2016). Egg is a foodstuff with high biological value. According to Li-Chan and Kim (2008), 100 g of edible part of egg contains: 75.84 g water, 12.58 g protein, 9.94 g fat, 0.86 g ashes and 0.77 g carbohydrates. Approximate composition of egg parts is presented in the Table 1.

According to the Regulation on egg quality (Official Journal - OJ 116/06, OJ 69/07, OJ 76/08), there are requirements defined for chicken eggs on the Croatian market related to quality, names, definitions, collecting of eggs, classification, labeling and packaging of eggs. Eggs available on the market should be produced, packaged, stored and transported in a manner that ensures preservation of their quality. According to egg quality, eggs are classified as "A" class or fresh eggs and "B" class used in industrial processing. When respecting egg weight, eggs of class "A" are divided into four groups marked with: "XL" - very large: eggs weighing 73 g and more; "L" - large: eggs weighing 63-73 g; "M" - medium: eggs weighing 53-63 g; "S"-small: eggs weighing less than 53 g. Eggs of the class "A" labeled as extra shall be classified, marked and packed within four days after laying. Eggs are consumed by all people, regardless of age, sex and ethical orientation. Due to high nutritional value and suitability for different methods of preparation, eggs are used in everyday nutrition.

The aim of this research was to determine preferences of consumers when it comes to consumption of eggs in households. Male and female examinees involved in the survey answered questions about socio-demographic characteristics, purchase of eggs, quality of eggs, as well as about advantages and shortcomings of egg consumption compared to other animal products.

Table 1 Approximate composition of whole egg, eggshell, albumen, and yolk

Egg component (% of total)	Approximate composition, % (w/w)				
	Moisture	Protein	Lipid	Carbohydrate	Ash (minerals)
Whole egg (100%)	66.1	12.8-13.4	10.5-11.8	0.3-1.0	0.8-1.0
Egg shell (9-11%)	1.6	6.2-6.4	0.03	Trace	91-92
Albumen (60-63%)	87.6	9.7-10.6	0.03	0.4-0.9	0.5-0.6
Yolk (28-29%)	48.7	15.7-16.6	31.8-35.5	0.2-1.0	1.1

Source: Li-Chan and Kim (2008)

2. MATERIAL AND METHODS

The survey was composed in two parts, and it involved 478 examinees of both sexes. In the first part of the survey, there were questions about socio-demographic characteristics of examinees, and in the second part of the survey, the questions were related to the attitudes of consumers towards purchase of eggs, egg quality, as well as the knowledge about functional eggs in comparison to conventional eggs available on the market. The survey involved male examinees (n=226) and female examinees (n=252) up to 30 years of age, 31-50 years and 51 and older. According to the income of the family, examinees were grouped as having an income of up to 500 EUR, then from 501 to 800 EUR, and 801 and more EUR. Referring to the consumption of eggs, examinees could answer: daily, once a week and once a month. Educational structure referred to primary education, secondary education, and higher education. According to the place for egg supplies, the examinees were offered the following answers: city market, supermarket and local grocery shop. Examinees were also supposed to answer to which of the following indicators they paid attention: egg class, price and packaging. The research involved the most important indicators of table egg assessment: quality (appearance and weight), stability (shelf life and storage possibilities), safety (purity of shell and product safety), nutritional value (content of nutrients). Furthermore, the research put emphasis on the benefits of table eggs in comparison to other food products: price, longer freshness, easy preparation of meals and multi-purpose use. Referring to the indicators of shortcomings in production and consumption of table eggs, the following was considered: greater possibility of infection (salmonella), the fear of excessive cholesterol intake, possibilities of damage during transport and aversion to egg consumption. For the last three sets of answers, grades from 1-5 were offered according to the Likert scale, where 1 stood for minimum and 5 for maximum grade. The empirical data collected within the survey were analyzed by using several statistical methods. Statistical data analysis applied research methods for numerical and attributive characteristics. The frequencies of individual characteristics related to socio-demographic overview of examinees were processed by the χ^2-test.

In order to calculate the χ^2-test, the following expression was used

$$\chi^2 = \frac{(f_1 - e_1)^2}{e_1} + \frac{(f_2 - e_1)^2}{e_2} + \ldots\ldots \frac{(f_i - e_i)^2}{e_i} + \ldots\ldots \frac{(f_k - e_i)^2}{e_k}; \qquad \chi^2 = \sum_{i=1}^{k} \frac{(f_i - e_i)^2}{e_i}$$

The χ^2 distribution represents continuous distribution of probability, where the frequencies of variants of the basic set were compared with the theoretical frequencies. Characteristics of egg quality, which were assessed according to the Likert scale, were analyzed by variance analysis (ANOVA) and the „t" test, by taking into account the influence of examinees' sex.

3. RESULTS AND DISCUSSION

3.1. Socio-demographic characteristics of examinees and preferences for egg purchase

Table 2 shows the frequency of examinees' responses to the survey questions. The largest number of male and female examinees comes from a family with 3-5 members. Significantly lower frequency was present in both sexes coming from families with 2 or 6 or more members. Examinees of both sexes possess mostly secondary or higher education qualifications. Analysis of examinees' age showed that they belong mostly to the younger population. When asked about the frequency of egg consumption, eggs were consumed once a week by more male examinees than female examinees. Relatively more female than male examinees consumed eggs daily. As a place for buying eggs, examinees of both sexes indicated that this was the supermarket. The analysis of quality factors as a criterion for purchase of eggs showed that male examinees pay equal attention to the egg class and packaging, but rather prefer the price. Female examinees also pointed out the egg price, and then packaging and class. An interesting fact is that examinees of both sexes prefer to purchase "S" class eggs, by showing the lowest interest in eggs of the "L" class.

Table 2 Statistics of the sample

Survey questions	Male examinees (n=226)		Female examinees (n=252)	
	N	%	N	%
Number of family members: ≤2 member 3-5 members ≥6 members	 46 126 54	 20.35 55.75 23.89	 60 132 60	 23.81 52.38 23.81
Educational structure: - primary education - secondary education - higher education	 4 126 96	 1.77 55.75 42.48	 2 148 102	 0.79 58.73 40.48
Age of examinees: ≤30 years 31-50 years ≥51 years	 118 82 26	 52.21 36.28 11.50	 96 104 52	 38.10 41.27 20.63
Income per family: ≤500 EUR 501-800 EUR ≥801 EUR	 72 42 112	 31.86 18.58 49.56	 80 70 102	 31.75 27.78 40.48
Frequency of egg consumption -daily -once a week -once a month	 44 144 38	 19.47 63.72 16.81	 60 150 42	 23.81 59.52 16.67
Place of buying eggs: -city market -supermarket -store	48 130 48	21.24 57.52 21.24	78 134 40	30.95 53.17 15.87
Factors for making a choice: class price package	70 86 70	30.97 38.05 30.97	74 96 82	29.37 38.10 32.54
Market class: -"L" (63-73 g) -"M" (53-63 g) -"S" (<53 g)	 26 84 116	 11.50 37.17 51.33	 12 74 166	 4.76 29.37 65.87

Source: Author's calculation

The Figure 1 overviews relative portions of demographic characteristics of female and male examinees, and the Figure 2 shows relative portions of consumers' preferences for purchase and quality of eggs.

The highest frequency of family size of 3-4 members was determined in female examinees (52.4%), as well as in male examinees (55.7%). Portions in family size of 1-2 members and 5-6 and more members were determined in female examinees (23.8%), and in male examinees it was 20.3% and 23.9%, respectively (χ^2=0.56 and 5.39). Differences in the level of education involving elementary education, secondary education, and higher education attained by female and male examinees were statistically highly significant (χ^2=87.07 and 77.88; P<0.01). Statistical group of up to 30 years of age involved 38.1% female and 52.2% male examinees. Frequency of older examinees at the age of 51 and over was in female examinees 20.6% and in male 11.5% (χ^2=22.07 and 41.90; P<0.01). According to the monthly income per family, the highest frequency in female (40%) and in male examinees (49.5%) was determined for the income of 801 EUR and more (χ^2=53.62, i.e. 103.38; P<0.01). When asked about the frequency of egg consumption, 59.5% female and 63.7% male examinees responded as once a week. Daily consumption of eggs was determined for 23.1% female and 19.5% male examinees.

Consumption of eggs once per month was recorded in examinees of both sexes (around 16.7%) (χ^2=11.71 and 17.21; P<0.01). The largest portion, 53.2% of female and 57.5% of male examinees buy eggs in supermarkets, and significantly few of them buy eggs on the city market (21.2% and 30.9%), or in small grocery shops (21.2% and 15.9%; χ^2=5.12, P>0.05 and $\chi^{2=}$28.80; P<0.01). When buying eggs, examinees of both sexes pay equal attention to egg class, price and packaging ($\chi^{2=}$14.79 and 12.86; P<0.01). Referring to the weight class of eggs, the most examinees choose the "S" class, i.e. eggs that weigh less than 53 g (females 65.9%, males 51.3%). Only 4.8% of female and 11.5% of male examinees buy the "L" class of eggs (63-73 g; P<0.01). This is probably influenced by the lower price of the S class eggs, when compared to the "L" and "M" class.

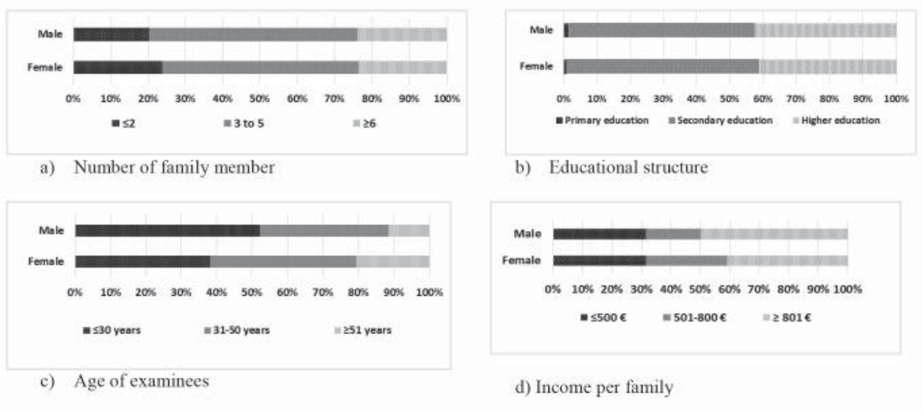

Figure 1 Socio-demographic characteristics of examinees

Source: Author's calculation

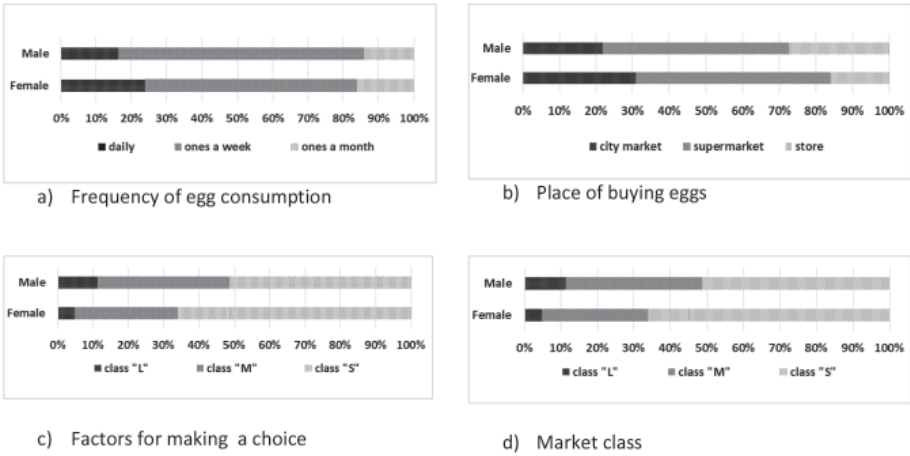

Figure 2 Relative portions of consumers' preferences

Source: Author's calculation

The Table 3 presents the results of testing the χ^2 distribution for characteristics related to socio-demographic status of examinees according to sexes.

Table 3 Test of χ^2 distribution significance according to the examinees' sex

Survey questions and answers	χ^2-test	
	Male examinees	Female examinees
Number of family members: ≤2; 3-5; ≥6	n.s.	n.s.
Educational structure: NS; SS; VIS/VSS	**	**
Age of examinees (years): ≤30; 31-50; ≥51	**	**
Income per family (EUR): ≤500; 501-800; ≥801	**	**
How often do you consume eggs? daily; 1xweek; 1xmonth	**	**
Where do you buy eggs: city market; supermarket; local shop	n.s.	**
Attention to: class; price; package	**	**
Market class: "L"; "M"; "S"	**	**

n.s. $P>0.05$; $^{**}P<0.01$
Source: Author's calculation

It was determined that the number of members in a family was not statistically significant ($P>0.05$) either in male or in female examinees. It was also determined that a place of purchasing eggs was not statistically significant for men, while it was highly significant ($P<0.01$) for female examinees. Referring to other characteristics, such as educational structure of examinees, age and income per family, there was high statistical significance ($P<0.01$) determined for both sexes. Place of purchasing eggs, as well as factors that influence their purchase were also statistically highly significant ($P<0.01$) for both sexes. Frequency of egg consumption (daily, weekly, monthly) was statistically significant ($P<0.01$) for both sexes, but the most examinees consumed eggs once a week. Interesting is that, when choosing eggs, examinees of both sexes defined egg class (indicating freshness), price determined by the egg weight and packaging as equally important, which is a guiding point for manufacturers to be taken into account. The packaging of eggs can be a factor of attraction for consumers to buy eggs. The standard of consumers probably influences the choice of egg classes, because the examinees of both sexes opted mostly for the "S" class of eggs ($P<0.01$).

3.2. Factors that influence consumption of eggs

Referring to the indicators of egg quality (Table 4), female examinees pay the greatest attention to egg shell cleanness and product safety (4.44), then to shelf life and storage (4.31). Male examinees select eggs firstly by their size (4.11), and then by their shelf life (4.19). The differences in the average assessment of egg shell cleanness and product safety between female (4.44) and male examinees (4.06) are statistically highly significant (P<0.01). When evaluating the advantages of table eggs in relation to other food products, male examinees select favorable price (3.69), and female examinees consider longer shelf life (3.48), and multi-purpose use of eggs (4.26) as more important than male consumers (4.03). There was a statistically significant difference determined in rating longer shelf life as important by female examinees, when compared to male ones (3.48: 3.21; P<0.01).

Easy preparation of meals made of eggs was more important for female than for male examinees (P>0.05), however, multi-purpose use of eggs in diets was highly evaluated by both sexes (4.26 and 4.3; P<0.01). When analyzing replies related to the possible shortcomings of egg consumption, such as fear of excessive intake of cholesterol, examinees of both sexes did not consider it a problem (2.79 and 2.85; P>0.05). Male examinees were more aware that there was a greater possibility of infection with salmonella through eggs than female examinees (3.60 and 3:37; P> 0.05). Female examinees considered shell damage in transport as a greater problem than male examinees (3.24 and 3.01; P <0.01). Aversion to consumption of eggs was not statistically significant in either male or female examinees (P>0.05).

Table 4 Quality, advantages and shortcomings of egg consumption

Grading according to the Likert scale	Grade[1]		„P“ value
	Females	Males	
Indicators quality table eggs			
Appearance and size	3.94	4.11	1.77 n.s.
Shelf life and storage	4.31	4.19	1.55 n.s.
Shell cleanness and product safety	4.44	4.06	4.22**
Nutritive value (content of nutrients)	3.89	3.91	1.81 n.s.
Advantages of table eggs over other food products			
Favorable price	3.52	3.69	0.197*
Longer freshness	3.48	3.21	3.14**
Easy preparation	4.21	4.07	1.40 n.s.
Multi-purpose use	4.26	4.03	23.16**
Shortcomings of table eggs over other food products			
Greater possibility of infection	3.37	3.60	2.16*
Fear of excessive intake of cholesterol	2.79	2.85	0.56 n.s.
Possibility of breakage during transport	3.24	3.01	2.16**
Aversion to consumption	2.17	2.19	0.31 n.s.

[1] Grades from 1-5, with 1-lowest grade, 5-the highest grade; *P<0.05, **P<0.01; n.s.= non significant

3.3. Functional food (eggs)

Examinees were asked additional question about their attitude towards functional food, i.e. eggs, and the answer could be either positive or negative. Out of the 252 female examinees, 135 or 53.6% expressed a positive attitude towards functional food. Out of 226 male examinees, 114 or 50.4% also had a positive attitude towards functional food (Figure 3). The answers are interesting because in modern nutrition, the use of functional products is preferred. Previous to this research, the authors conducted two studies (Kralik et al., 2014; 2015) about the same issue, and it is interesting to note that there has been a positive change in the way thinking and in attitudes of consumers. Further on, the paper also presents the research results of other authors who dealt with the same or similar issues.

The term functional foods (FF) occurred for the first time in the mid 1980's in Japan, and it referred to food produced with nutritive ingredients that support specific functions in an organism. There is no universal definition of functional food. There are several terms: nutraceuticals, medifoods, vitafoods and vitraditional dietary supplements and fortified foods. However, the term functional food is accepted as predominant (FAO 2007).

In addition to appropriate nutritional effects, functional food should have a beneficial effect on an organism and/or shall reduce the risk of diseases. It is consumed as part of usual diet, and its effectiveness shall be scientifically proven (Roberfroid, 2002). Eggs can be enriched with functional ingredients through modification of laying hens' diet, so that hens produce "designed" eggs that meet the criteria of functional food. Markovina et al. (2011) studied the population of younger consumers (14-30 years; n=1035) to define to which extent they were familiar with the concept of functional food. About 40% was familiar with the concept of functional food, of whom 27% buys these products. The most important attributes to functional food were the taste and costs, and consumers found the following factors important: health awareness, quality of functional products and the lack of confidence in properties of functional food. Kralik et al. (2014) also used a survey to determine that 30.7% of examinees were familiar with the concept of functional food. Čalić et al. (2011) and Kralik et al. (2015) stated that consumers interested in functional food should be continuously informed about the benefits of functional food in comparison to conventional products. Kralik et al. (2015) defined the reasons that influence the purchase of functional food products or the lack of it. The most consumers said that the purchase of functional food was affected by their health habits, good taste, reasonable price and prolonged shelf life. The research of Childds and Poryzees (1997) proved that older people showed less interest in buying functional food if compared to younger consumers. Stojanović et al. (2013) pointed out that the level of education, standard of a household, availability and uniformity of health claims for different functional products affected consumers when they choose and purchase these products.

For avoidance of purchasing functional food products, there are usually two reasons: price higher than of conventional products and suspicion about positive effects of functional products on human health. The most consumers that opt for purchase of functional food consider the health concerns, reasonable price and good taste as the most important reasons for purchase. On the other hand, consumers that avoid functional products stated that the reasons for it were higher price of such products in comparison to conventional ones, as well as suspicion to positive effect on human health. Weststrate et al. (2002) stated that a key to the success in wider use of functional food is that consumers need to believe in the safety of functional food and its positive impact on health, performance, growth and development. Menrad (2003) stated that functional products were products with a positive "image" to human health, which requires, without any doubt, to be medically studied.

Lewis et al. (2000) suggested that future researches should focus on the ratio between consumption of eggs enriched with n-3 PUFA and the risk of heart disease. It is recommended that consumption of n-3 PUFA eggs could meet part of the daily recommended amount for that nutricine.

Dutra de Barcellos and Laitano Lionello (2011) reported that the market of functional food in the Southern Brazil increased for 10% per year, i.e. three times more than conventional food market. The authors investigated the motives, attitudes and intention of consumers when purchasing functional food. They determined that consumers' knowledge was essential for defining the market development strategy, as well as of the market of functional products. Benefits that are expected from functional food should be defined according to scientific criteria, including studies about the safety and efficiency of such products. Consumers need to understand that functional food does not have "magical" properties, and it is not a remedy for poor health. Nutrition is only one aspect for healthy way of living that includes regular exercise, lowering of stress, non-smoking, maintaining optimal body weight and other aspects of healthy way of living (Hasler, 2002). Urala and Lähteenmäké (2007) determined that men and women do not differ in their attitudes towards functional foods. The main prerequisites for consumption of functional food are consumers' conviction and awareness.

Poulsen et al. (2011) reported that the Danes did not pay attention to functional foods, which was not the case with the Finns, who prefer omega-3 products. Martić Kuran and Mihić (2014) studied the factors that influence intention of Croatian consumers to buy organic food (n=332), in which they determined the following to be important: subjective norms, perceived financial situation, awareness on health and knowledge about organic food. When considering the demographic characteristics, they determined that marital status, age and income per household affected the intention of buying organic products.

4. CONCLUSION

The research into the influence of socio-demographic characteristics of examinees on their knowledge about quality and consumption of eggs included 226 male examinees and 252 female examinees. The highest frequency of family size with 3-4 members was found in the female, as well as in male examinees ($P>0.05$). The test of χ^2 distribution significance proved that the educational structure, age of examinees and income per family, as well as the frequency of egg consumption, price, packaging and egg classes were highly significant ($P<0.01$) in both female and male examinees. Consumption of eggs is also affected by shell cleanness, product safety, favorable price, as well as by multi-purpose use of eggs ($P<0.01$). Examinees are not afraid of the cholesterol intake, nor they have aversion to consumption of eggs ($P>0.05$). Positive attitude towards functional eggs is expressed by 53.6% female and 50.4% male examinees ($P<0.05$).

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ECONOMIC (IN)STABILITY OF KOSOVO – CHALLENGES AND PERSPECITVES

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Abstract

In this work are treated some of main issues related to regional development as sustainable, and importance to know and be aware by new generations, which make the main goal of the thesis.

First it will be treated the meaning of concept "sustainable development" based on what is written by other authors; its necessity and importance of education.

With this work is specifically treated the Kosovo case. The work has the goal to identify possibilities for sustainability, challenges to overcome and conditions for sustainability. The achieved results are important, because are showing the low level of knowledge and are required to undertake measures to improve the situation in the future.

Keywords: *Sustainable development, education, awareness.*

JEL Classification: D6, D69

1. INTRODUCTION

This report aims to shortly treat the challenges Kosovo is facing in its path towards creation of a sustainable economy, at the time when the National Development Plan is underway.

Main objective is to provide an overview of current situation and to underline strategic priorities and necessary policies to be implemented by the Government supported by stakeholders, which shall be served on the creation of a perspective for sustainable economic growth. It is normal that the report shall not remain as such, but it shall be further reviewed and elaborated for the following years.

2. ECONOMIC SUSTAINABILITY AND ITS IMPORTANCE FOR KOSOVO

2.1. An overview on Theoretic Concepts

In general, national economy is considered sustainable if it is capable to use its human, financial and capital resources and capacities, for the generation of continuous economic growth and to ensure the welfare of all its citizens. The importance of resources (human, financial and natural) is undisputable, but only its effective use ensures a continuous economic growth and social welfare. The growth is essential for achievement of social-economic sustainability and political development of a country.

The growth does not appear suddenly. It is a result of quality policies (productivity, technology, innovations and external effects). Human development includes not only the result of GDP increase, but also the increase of possibilities of access to education, health and creation of income from all members of society. In fact, this can be considered as an increase and quality development.

Serious reforms oriented towards economic development based on market and creations of an economic and political sustainability are key factors of growth in transitional economy.

Some theories:

(1) Linear stages theory – the experiences of Marshal Plan and developing countries during 1950s have promoted Rostow stages, a model of growth, which emphasis that during transition from the being, unde-

veloped to develop, in order for the societies to become economically sustainable and mature, first they should mobilize all local and international savings. From this time it outcomes the well-known model of investments for quick growth, supported by Harrod and Domar (Harrod – Domar model)

(2) During 1960s, the Change Model (known as Lewis model) promoted changes from basic agricultural into different industries. Economic services and urban areas. He uses two aspects – surplus labor in agriculture and its transfer in the advance technology sector and high salaries

But, this does not match with most of the cases of developing countries. In these countries even urban areas have a high unemployment. The main direction of sectorial changes is: from agriculture into industry; accumulation of human and physical capital; change of clients' demands; increase of cities and urban areas, farmers around small cities, downsize of families and the focus on education quality.

(3) Dependence theory (during 1970s) is based on neocolonial and neomarxist approach. Developing countries remain undeveloped, despite of the facts that they had international support, both in technology and finance. They prove the failure on FDI, and market failure.

(4) Neoclassical anti-revolution (1980): It emphasis that more important is offer, macroeconomic policies, market liberalization, reformation of public property and regular reduce by government. The main reasons of low development are the week allocation of resources, already few, and state increased intervention.

(5) New theory of waiting (1990) /endogen theory: It emphasis that more important is the government of production system and not external factors. The growth is a natural result of long-term equilibration (M. Todaoro: The Development Economics, 2003).

2.2. Economic Sustainability and its Importance to Kosovo

Can Kosovo have sustainable economy? This is a question that is made very often. Certainly, this is very important issue, which has direct impact on dignity and quality of Kosovars' life. However, whenever this is made in the aspect (connotation) "pro" or "against" the will of majority of Kosovars, not infrequently takes speculative direction and understanding, because also it could be made the question: who else shall ensure economic sustainability of the country, if this is not done by Kosovars itself. The bellow presented historical facts proves that economic growth of Kosovo was proportional to the Kosovars' possibility to govern themselves, and with issues that are very linked to political stability. The sustainability is something that Government owes to its citizens. In case of democratic societies, the lack of fulfillment of this task would bring the victory or loss of elections. Economic sustainability, in modern times of technological impact, is very connected to the governance quality than to natural assets or resources. In the other side, it is clear that, depending on economic sustainability, Kosovo would join or would remain behind the prosper societies and it would be on the position to comply with expectation and ambitions of its citizens.

From the other point of view, it would be discussed the impact of sovereignty and its importance on economic growth. The sovereignty and territorial control impacts directly on, including its natural resources, long-term investments. Also, it has effect on decision making on priorities and own issues. Political unclearness limits the possibility for alternatives, definition of economic order and governance.

On the situation of post war, the negative effects of lack of sovereignty are reflected negatively in many areas and in particular, on international cooperation with international organizations, as World Bank, WTO and other international-trade financial organizations, and on relation to other countries, on privatization and on creation of favorable climate for FDI (Foreign Direct Investments).

The question that now is asked and requires answer it has to do with strategies and policies to ensure resources for development in the future and to overcome the non-development.

It is clear that it is related to policies Kosovo has to follow to be a country with prosperity and is linked to developed world. Before we attempt to give the answer to this question, we will try to describe the current situation and challenges that it could faced towards the development and economic sustainability.

Financial transactions based on Euro have contributed positively on Kosovo macroeconomic sustainability. However, mid-term and long-term macroeconomic sustainability is jeopardized by critical imbalances, including here: imbalances between GDP and consumption, very high trade deficit, imbalances on labor market and the amount of budget compare to necessary capital investments.

Total consumption, according to International Monetary Fund, is 8-9% higher than GDP, which is mainly covered by the money sent by Kosovars living outside the country.

According to World Bank statistics of 2015, it comes out that 29.7% of Kosovo citizens lives under the national line of poverty, and 10.2% on extreme poverty. When it is taken into consider the limit of poverty and extreme poverty, which is only 1.72 and 1.20 euro per day, respectively, it could be concluded that the situation is miserable and the Government should take added care during policy making. Privatization is not a solution of economic problem, but the resolution of this problem is to invest for the regeneration of production, and on the industry of production process.

The economic sustainability is achieved by directing the investments on set up of medium and small businesses, by making efficient fiscal laws, by supporting with grants coal, chrome and zinc processors, and providing market to place agriculture products.

As soon as possible the eyes should be directed on processing and development of agriculture and not on importation.

2.3. Conditions and Factors Impacting/Supporting Economic Sustainability

Below, we are treating some core conditions in Kosovo to generate economic growth.

The necessary conditions to support economic sustainability can be viewed by different aspects:

- Human capital/resources
- Natural assets
- Accumulation of capital and investment resources
- Institutional capacities
- Macroeconomic stability and applicable economic policies
- Quality of public infrastructure

2.4. Challenges of developing countries, and for Kosovo too

As a part of economy included by globalization and growth, the focus, mainly should be to overcome the problems in these areas:

- Saving, respectively, inadequate investments
- Inadequate manpower
- Worsening conditions for trading
- Week institutions

It is concluded that high taxes (on wages and profit) discourage the growth, and the functionality of market and capital has positive effect. Also, opening of markets and trade are factors that support the economic growth.

Finally, we can conclude that economic growth is built up by the improvement of education, financial intensity, open market and good public infrastructure.

And, economic growth falls with extensive limitations, when the implemented policies are not in favor of macroeconomic stability (inflation, overestimation of currency exchange and the crisis in bank system), and in negative conditions of trade. Proper combination of economic policies may generate the model that ensures self-sustainability of economic growth.

3. HOW TO CREATE ECONOMIC GROWTH

3.1. The need to accelerate economic growth

Although Kosovo has achieved some successes during the post-war period, nowadays it faces with an unemployment rate of 40%, with a negative trade balance as described above (imports are covered by exports by 4-5%). Taking into consider that about 63% of population are of age under 30 and the absorbing capacities of economy is very low, every year there are 25,000-30,000 new jobseekers on the labor market. That requires an increase on employment with an annual rate of 6-7%. The other critical factor is the increase of exports. The participation of agriculture in GDP is estimated to be 25%, while the service sector is with 60%. The current participation of industry in GDP is 15%. These structural disproportions with current level of productivity impact on the level of competitiveness capability and on the quality of export demand.

3.2. Potential scenarios of economic growth

Question does not rely on that whether Kosovo needs a dynamic rate of economic growth, but more rely on the way to achieve it. Some countries of Central Europe, and some of Southeast Europe, have achieved high rated of economic growth, similar to those Kosovo needs during the transition period. They have their success mainly on imposition of liberalization of processes, on increase of competitive advantages, and on creation of a favorable business environment. These experiences are quite useful when the potential scenarios are discussed for economic growth in Kosovo, and when key factors are taken into consideration for the influence on economic growth as discussed above. Starting from today's conditions and some key factors that may impact on both investment activities and on increase of competitive capabilities of economy, we have complied three scenarios: "what if". Each of those scenarios creates certain conditions for development and investments.

4. NECESSARY INVESTMENTS FOR ECONOMOC GROWTH AND SUSTAINABILITY

4.1. Indicative projections for necessary investments

In case of Kosovo, the estimation of investment capacities (sectors & resources) are of particular importance having into consideration the need that Kosovo has for mobilization of all investment resources. This is significantly important for evaluation of public investment capacities. This estimation is totally indicative and is dedicated to show what attempts should be made to realize a dynamic economic growth.

4.2. Potential resource structure

Domestic investments of private business and household economies, including remittances, are estimated to achieve 49% (6.848 billion) and FDI (FDI – Foreign Direct Investments) 10% (about 1.389 billion).

How to create "favorable environment for investments"

Analyzing the above scenarios, it is clear that factors impacting on generation of economic growth are connected, above all, with effective functionality of democratic institutions, with implementation of law and resolved status. That would make the basis to establish a better investment environment. In addition, it should be added the approach on normal circumstances on IFI (IFI – International Financial Institutions) and the mobilization of public and private investments. The above described investments are imperative, but they are insufficient and itself do not generate development and increase on required rate. It should be created and function other economic and institutional conditions, such as: structural necessary changes, institutional capacities, management capabilities, qualified labor and abilities to make and implement projects.

5. TOWARDS A SUSTAINABLE BUDGET

Budget sustainability is facing some problems that shortly are presented as follows:

5.1. Current problems

Revenues collected by the impositions of tax instruments at the border make about 80% of total tax revenues, and the domestic revenues are quite modest, yet. The change of relation between these revenues through creation of a stronger capacity on higher collection of taxed inside the country against those at the border shall have strong impact on budget consolidation and on long-term sustainability. After the noted surplus until 2003, from 2004 the Kosovo budget turn on a deficit, this continues to be present till today. Budget deficit in 2005 participates with 13% on budget consumption or about 3.8% of GDP. The deficit during this period is covered by budget surpluses accumulated until 2003, respectively by the surplus of previous years.

The higher number of employees, already, in the administration/public sector had influenced that **the participation of wages on budget consumption is very high.** That has started to threaten budget sustainability and, according to IMF estimations, presents potential factor of budget destabilization. The heavy economic situation limits the possibility that the solution of this problem to be made through the reduction of number of civil service employees, because this would understand the increase of unemployment rate. In the other side, lowering the level of wages would create negative effect on already high poverty. On long-term, this problem would be neutralized through the continuous increase of budget revenues and through suspension of increase on number of employees on these services.

The significant importance on budget sustainability has **the increase of fiscal culture**, both on the population and state institutions. Creation of a connection and communication between taxpayers and government, and the refection of budget on public services offered to public, it will be an important factor on budget revenue enhancement and its stability. It is of great importance to be established a budget transparency and responsibility, which would drive the efficiency of budget consumption and broaden the fiscal base. Despite of importance on fiscal education, however it cannot compensate the creation of enforcement mechanisms and their effective implementation on payment of taxes and invoices for public services.

Fiscal decentralization, which is directed towards strengthening the **role of municipalities on collection of the own revenues, it is not providing the expected revenues**. Big differences on property tax rate, and the insufficient transparency against taxpayers in some environments, has impacted on having big differences between the municipalities with regard of property tax collection and own source revenues in general.

The most evident problem of the budget is facing the needs of capital investments, whether for new buildings or their maintenance.

Up-to-date projections of capital investments are separated from economic development strategy, due to the lack of this strategy. Therefore, PIP (Public Investment Plan) drafted and approved by government should be in line with mid-term national development plan and with basic goals of economic development.

According to what can be seen now, it is to be expected that Kosovo shall face difficulties to, at list on mid-term, ensure public capital investments because of structural problems. Therefore, on this segment is necessary the support of IFI (International Financial Institutions) and donors.

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CADASTRAL PARCEL – THE FOUNDATION OF GEOGRAPHIC INFORMATION SYSTEM FOR THE MANAGEMENT OF AGRICULTURAL LAND

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Abstract

Each cadastral plot of agricultural land is an important Croatian interest. Data collection and analysis of cadastral parcels create qualitative and quantitative insight into the available agricultural resources. Creating a geographic information system for agricultural land is a prerequisite for successful management of agricultural and land policy. The paper presents the disadvantages of previous management system of state-owned agricultural land by using available data of disposal and income from disposal. Therefore, paper suggests possible ways of improving disposal of agricultural land.

Keywords: *agricultural policy measures, cadastral plot, geographic information system, land management*

JEL Classification: D8, D83

1. INTRODUCTION

Agriculture is a strategic activity that with its economic, environmental and social role contributes to the sustainable development of the Republic of Croatia. The overall activity of economic policy makers in agriculture includes agricultural policy that through its measures achieves its defined goals. In the narrow sense, positive and effective land policy is the basis of competitive and profitable agricultural production. It deals with issues of granting the right of using and selling of agricultural land owned by the state, by improving management of agricultural land and the protection of agricultural land from pollution. In a broad sense, land policy measures cannot be just agricultural policy measures but they are also part of the overall sustainable development of the country as an important part of policy: protection of the environment, spatial planning and rural development.

The term land management (Land administration) has been present since the 1990s and was probably first officially used in 1996 by the UN Economic Commission for Europe (UNECE) (Steudler, 2004). Same year the Meeting of Officials in Land Administration (MOLA) issue Land Administration Guidelines in which land management is firmly associated with the cadastre (Mađer & Roić, 2011). Guidelines publish the definition of land management according to which it covers the processes of identification, registration and dissemination of information about rights, value and use of land when implementing land management policies (UNECE, 2005). Also, guidelines indicate that land management should include the registration of land and rights, cadastral survey and cadastral plan, tax, legal and multi-purpose cadastral and land information systems (Mađer & Roić, 2011). The term land policy describes a state instrument that includes the strategy and goals of social and economic development and environmental protection (Roić, 2012). In this sense, the overall land policy and its administration include development regulating and use of public and private land through the processes of collecting and sharing information about ownership, value and use of land. Part of this process is the determination of rights and other attributes of the land, their measurement, description and preparation of data for the land market. Further, the administration of land includes land development, land survey, registration of changes on land, land valuation and taxation, control and management of land use and infrastructure and municipal administrations.

The term land policy measures defined in the agricultural policy has a foothold in the Agricultural Law. The main objective of agricultural policy measures should be developing the land by creating a significant investment in land and/or by changing the existing land use, which also includes the processes of determining rights and other attributes of the land, their surveying, land development and the description and preparation of data for the land market. Although on the normative level agricultural land is declared as good of interest to the Republic of Croatia, the situation in nature is far from that (Kontrec, 2014). Until 2014 the exact status of data on agricultural land (state and private) is unknown and there are no procedures for managing this resource so lack of competitiveness of Croatian agriculture is not surprising. The development of geographic information system could resolve obvious problem and create a strong support for implementation of these measures.

The purpose of this paper is to point to the fact that for efficient and transparent management of agricultural land is necessary to develop a geographic information system based on the cadastral plot as the primary spatial unit.

2. LITERATURE REVIEW

It could be said that land management is a multidisciplinary activity that includes: policy – social and economic, legalization – the right to ownership and possession, the organization of the system of land management, land information system, cadastre and land registry, land development, zoning, rights to land and their renewal, land use planning and other (Frank, 2001). According to Williamson (2001) systems for land management, particularly their basic cadastral components, are important infrastructure that facilitates the implementation of land use policies. Modern concept of land management in rural areas should connect more areas as it was written about by different authors (Mastelić Ivić et al., 2005) and (Prosen & Kranjčević, 2002). Those areas are rural planning, procedures of registration of agricultural land and reparcelling process (land consolidation). Ciaian and Swinnen (2006) are investigating in their work the imperfections of the land market and the impact of agricultural policies to new members that joined the EU in 2004, and until then were under strict communist rule. The authors note that in that area the land reforms have created a class of new, sometimes absent owners, while the land is used by a combination of small individual farmers and large corporate farms. Lovrinčević and Cowan, (2008), on the other hand write about the limitation of agricultural development that can be viewed through the process of functioning of the market of agricultural land. According to them, agricultural land market performance is influenced by several factors: a general lack of land registers, land fragmentation, the state agricultural land and prices of agricultural land that are relatively low in the new EU member states and especially in Croatia. This is a result of the transition process, the restructuring of agricultural activity and government regulation of the market of agricultural land.

According to the UNECE (2008) technological progress enables the integration of attributes related to space, creating spatial information support that can service the increasingly complex society. Therefore, it is extremely important to know the position, shape and usage of each cadastral parcels of agricultural land. Measures of agricultural policy, as well as decisions on the management of agricultural land, is impossible to make, in particular implement, without the knowledge of these facts (position, shape and usage) that form the backbone of an effective system for the implementation of land policy. A land policy in the service of a dynamic development of the Croatian agriculture is explored by Svržnjak (2001) for the purpose of creating land policy that will increase the socio-economic efficiency and development of the agricultural sector. She propose resolving the current problems in terms of equipping the institutions responsible for managing state-owned agricultural land as soon as possible in order to monitor the condition of the state agricultural land with regard to its use, regular payment of fees, etc., as well as to establish better cooperation and information connection between the relevant institutions. It is concluded that the privatization of state agricultural land, with favourable loan terms, is a unique opportunity to increase the size of farms and resolution of land ownership rights. In the same paper, the author points out that the current land system in Croatia does not match the needs of a market economy that evolved after Croatia became independent. Land market limits the discrepancy between enrolment in the cadastre and land registry which results in the inability of sale and collection of taxes on real estate. Existing unregulated land registry makes it difficult to establish a lien which is an important instrument in the functioning of a market economy.

Spatial data have become an indispensable part of the economic development of each country (Landek et al., 2011). It is believed that 80% of all available information includes some spatial component, which lays claim to more efficient management of spatial data (Cetl, 2007). Resolving the issue of non-harmonized data cadastre and land registry is the first condition for the improvement of the economic situation in the company and it facilitate further development of the economy through investment. Geographic Information System (hereinafter referred to as GIS) has proven to be extremely important and practically indispensable tool, which highly developed countries accepted the basis of modern management and planning (Ball, 1994). It is a standard in environmental, geological, construction, geographic, military, energy, archaeological, sociological and many other research projects (Jurišić et al., 1998). It is widely accepted as a tool for decision support (Van der Meulen, 1992), in different geographical areas, such as resources, environment, land infrastructure, urban and regional planning, transportation and other (Sharifi & Rodriguez, 2002). An extensive review of GIS can be found in many elementary textbooks (Bernhardsen, 2002; Heywood et al., 2006; Longley et al., 2005; Demers, 2008). Despite the great possibilities and popularity, GIS was criticized by many authors, especially in the field of spatial planning (Carver, 1991; Birkin et al., 1996; Laaribi et al., 1996; Stillwell et al., 1999). Batty (2008) concludes that the GIS is too general for all types of spatial analysis and representation, and it limits functions on descriptive rather than predictive. Primarily due to GIS technology, today is possible to develop appropriate information systems with databases that in a relatively simple and fast way can make a number of thematic maps and thus reach the necessary spatial information to make the right decisions in planning, use and land management (Bogunović & Husnjak, 1999).

Pavičić et al. (2010) wrote about the establishment of the initial set Land Parcel Identification System (LPIS), while Scitovski et al. (2010) wrote about the quality control of the LPIS data according to the guidelines and recommendations of DG-JRC. Lemajić et al. (2009) wrote about support of the Croatian Geodetic Institute (hereinafter referred to as CGI) for building LPIS. Particularly interesting are the works about resource inventories in Croatia: (Jurišić et al., 2000), (Hengl et al., 2006), (Jurišić & Plaščak, 2009) and (Jurišić et al., 2011). Pilot study regarding the establishment of LPIS were made by these experts. About the results that are achieved by the end of 2010 in the ARKOD project was written in the article ARKOD – 365 days of implementation (Bakota, 2010), and there was published an article on the Eighth joint advisory committee of EU 2011 (Jurišić, 2011) about Croatian agricultural policy and the possible consequences of the reform of the common agricultural policy. Gregić and Štefanić (2012) writing about ARKOD and integrated approach are mentioning examples of other countries in the EU to show that it is possible to develop an integrated system, not only for control subsidies in agriculture, but also for agricultural land management, monitoring natural disasters, epidemic diseases, weed control and a number of other activities which meaning has far wider interest than just agriculture. With the synergy of relevant institutions, regional and local government, and the support of the scientific community, ARKOD system is possible to improve into the integrated system of agricultural land that could contribute to the development of agriculture in Croatia. Dale and McLaughlin (2000) wrote that the basic question is not can states afford such a system, but can they afford not to have it. Jurišić and Plaščak (2009) point out that such a system is based on the cadastral plot as the primary spatial unit, in which, apart from cadastral data can be recorded and a host of other information in the interest of the land management. It is based on a unique spatial reference system, which allows the connection of data within the system with other spatially related data. It consists of spatial data of specific area, and the procedures and techniques for collecting, updating, processing and data distribution. Only with such a support system for the implementation of the land policy, land policy can be a tool for the adoption of legal, administrative, economic and political decisions.

3. METHODOLOGY

In this study primary and secondary data sources were used. Apart from the available theoretical literature, official data on agricultural land obtained from the relevant institutions for the period 2001-2015 (statistically and cadastral data on agricultural land, data on agricultural land use, data on agricultural land in forest management plans and mine suspected areas, and data of state agricultural land) were analysed. Processing of the results obtained by research was conducted by statistical methods using standard deviation and coefficient of variation. The link between the variable values is interpreted by correlation, and description of a variable by regression equations. Standard statistical programs STATISTICA 12, SPSS Statistics and calculate statistics in Excel were used.

4. RESULTS

The geographic information system of state agricultural land is based on the cadastral plot as the basic geographical unit which implementation began in 2013. It is based on a unique spatial reference system, which allows the connection of data within the system with other spatially related data. The system consists of spatial data of specific areas, procedures and techniques for collecting, updating, processing and distribution of data. Retrieve data of state survey and real estate cadastre are spatial, graphical and alphanumeric. An analysis of condition of agricultural land in the Republic of Croatia is carried as well as data inventory on state agricultural land. The same was done by using existing spatial data of official land administration system that are the basis of the established geo-information system of the Agency for agricultural land.

Before the establishment of the information system (2001-2013), the disposal of state-owned agricultural land was under the jurisdiction of the local government units (LGU). All LGU were obliged to draw up a program of disposal which contained cadastral parcels number, surface, method of application, the name of the cadastral municipality and a graphical display of cadastral parcels of state agricultural land. Data were unplanned and unsystematic collected which results in the inability of proper management of agricultural land. This disposal method has never resulted in accurate data about exact number of state agricultural land in Croatia, where it is located and how much state-owned agricultural land is really under contracts. Based on data disposal program a central database which is based on the cadastral plot as the primary spatial unit was never established. Since it was not established it was not possible to effectively manage state-owned agricultural land. It has been shown in performed analyses of Charge record where the lack of transparency of this disposal method is reflected in the large number of users who do not pay the rent, who do not have contracts, or use the land and do not pay the rent, bad contracts (without PIN, signing dates, class, docket number, the wrong account number for payment), deceased users who are still paying rent and non-existent users. This disposal method is detrimental to the entire agricultural sector, but also for

Croatia because it undermines the confidence of citizens in a transparent institution operation.

In 2013 systematically collecting data on the state agricultural land began, along with the establishment of a database of state agricultural land which is based on cadastral data. From the State Geodetic Administration the following attributes are taken: number of cadastral parcels, name of cadastral municipalities, legal regimes (the landlord or owner), cadastral parcels use, surface and name of cadastral parcels holders. Taken cadastral parcels were registered as agricultural land: arable land, meadows, pastures, orchards, olive groves, vineyards, ponds, swamps and marshes. Overall, 601 893 cadastral parcels with associated attributes were taken. According to taken data[1], Croatia has 738,125.52 hectares of state agricultural land. Analysis of the data contained in this information system showed that for the quality of information systems and an effective and transparent disposal of state-owned agricultural land, it necessary to ensure continuous, not one-time access to databases of other relevant institutions in the process of disposal of state-owned agricultural land. There is noticeable difference in available surface in the period 2001-2013 (first period) and the period 2013-2015 (second period). In the first period of 13 years Croatia disposed with 268,073.78ha (an average of 20,000ha per year), while in the second period of 3 years Croatia disposed with 114,524.59ha (an average of 38,000ha per year). In the first period, the average gross income from disposal was 150,168,456.61kn, while in the second period the average gross income from disposal was 210,959,275.76kn. The increase of available surface, and thus the increase in revenues to the state budget, is directly connected with the development and use of ISAPZ (Information System of Agriculture Land owned by the Republic of Croatia). Visualization of data on the state agricultural land in ISAPZ gives an opportunity to display a certain amount of attribute data on agricultural land in a simple and picturesque form and enables quick and effective disposal.

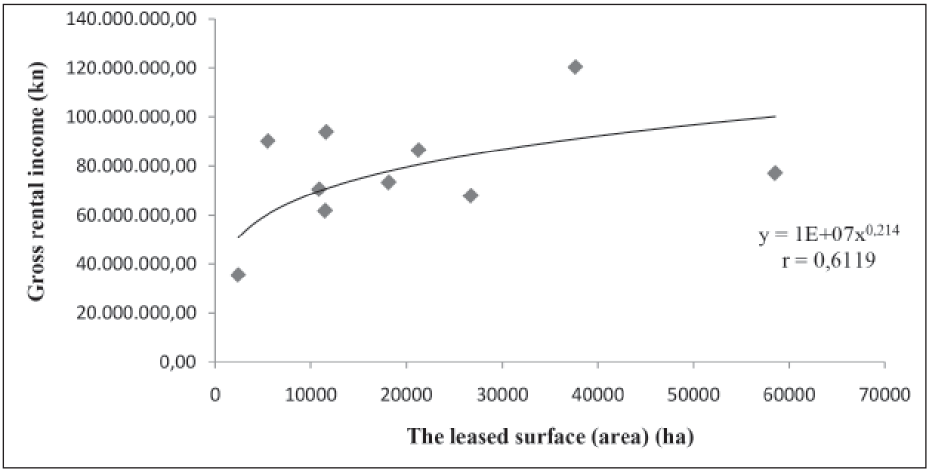
Data analysis of available agricultural land has responded to questions about the necessity of developing and upgrading the information system for management of agricultural land, related to the efficiency of agricultural land and its financial aspect. It was found that the increase in available surface is directly linked with the development and use of ISAZP that allows data systematiza-

[1] 30.06.2014

tion and visualization on the state agricultural land and more quickly and efficiently management. In this analysis it is necessary to give an overview of the spatial data that have been base for this process. There is a need for urgent creating of a new aerial photo images of the Republic of Croatia, since the last official recording is 5 years old and in many ways does not correspond to today, the real situation on the ground (built roads, highways and buildings, overgrown particles, etc.). Furthermore, there is a need to implement, but more urgent to control the implementation of article 57 of the Law on state survey and real estate cadastre (Republic of Croatia, 2007). This Law prescribes that the holder of the rights on the property shall within 30 days report new changes to the competent cadastre office. Only continuous and strictly controlled implementation of this Law could significantly speed up the harmonization of data on the ground with cadastral data and land registry. The result could be obtained within a very short time and it would be possible to avoid the future situations in which are in reality built morgues, highways and the like, but in cadastral are still listed as some of the crops, or situations in which the method of administration, position and shape of cadastral parcels do not correspond to the real situation on the ground. In this procedure, that has implied the impossibility of complete automation of land disposal. Awarding and acceptance of dispersed cadastral particles indicates extreme fragmentation of the free state agricultural land and the need for its consolidation as soon as possible what is best achieved by land management of the same. This would enable putting in use all chopped, unused, non-profitable and to farmers uninteresting particles, which leads to an increase in the economic viability of agricultural production for farmers and country. Analysis of application of ISAPZ responded to questions about the possibilities of development and upgrading information systems for land consolidation. It has been shown the basic parameters of the quality of the information system: data source, the time of the last update and the data accuracy.

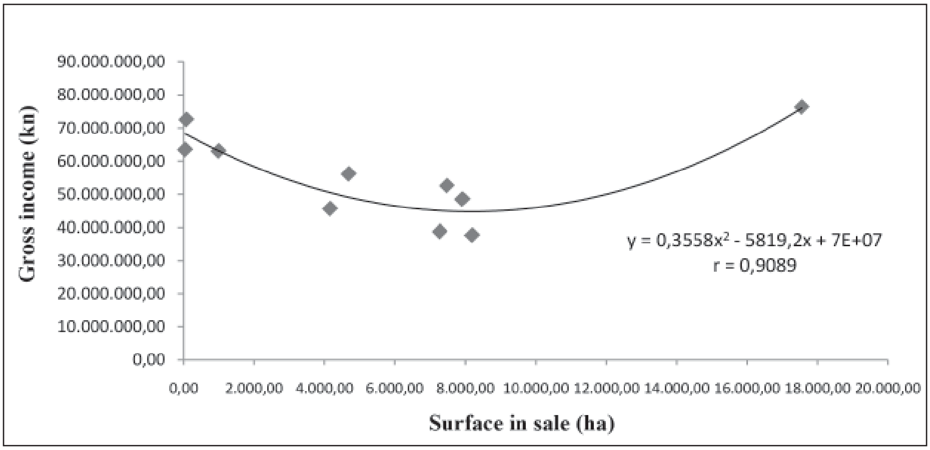
After the establishment of an information system based on the cadastral plot it was possible to make a correlation and regression analysis of the set of variables (size and income). Observed independent variables are areas which are leased or sold in the period from 2006 to 2015. Concession and long lease are considered through a period from 2006 to 2012 because after that this legal form ceases to exist. Observed dependent variable is the gross income of the disposal by type of disposition and overall in the period from 2006 to 2015.

Figure 1: The regression model of leased area and gross income



Source: Authors

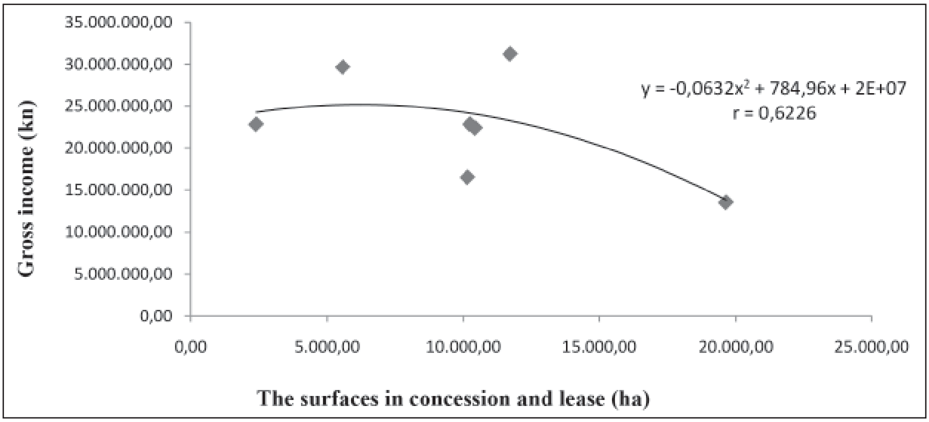
Figure 2: The correlation of surface in sale and gross income



Source: Authors

It was found that there is a significant correlation of leased surfaces and the gross revenue generated from leasing, highly significant correlation of surface in sale and generated gross revenue and significant and statistically reasonable correlation of surfaces that are given in concession or lease and gross income.

Figure 3: The correlation of surface in the concession or lease and gross income



Source: Authors

Multiple regression model shows the dependence of the surface in lease and sales and overall gross income for the period 2006 – 2015. According to the results of correlation and regression analysis, it is statistically proven that increase of available surfaces through any form of disposal (lease, sale or concession) leads to revenue increase in the state budget.

Based on the GIS it is now possible to efficiently, quickly and transparently implement the land policy measures, especially the disposal of agricultural land. Active implementation of these measures directly affects the average farm size growth, and thus the competitiveness of Croatian agriculture. Privatization of state-owned agricultural land is the measure that could also increase the competitiveness of agricultural production, and it can be carried out only on cadastral parcels which have regulated property-legal situation.

5. CONCLUSION

Until establishment of an information system in the Agency for agricultural land in 2014, there was no management systems of agricultural land, but only variety of records whose data were temporary and unrelated. Official records do not contain reliable information and status of official registers of spatial data is not satisfactory. It was found that the development of an information system for management of agricultural land, which is based on the cadastral plot as the primary spatial unit and the geospatial reference system, develops high-quality and transparent system that contributes to the competitiveness of Croatian agriculture.

Data inventory is necessary in order to obtain information on time that will be the basis for the adoption of agriculture, and land policy. Based on the inventory, state knows exact number and place of state agricultural land in its Land Fund, so can easily decide for what purpose should be used. State can plan measures for land development and consolidation, make decisions about the long-term lease or privatization, as well as plan the production in a particular area. The research confirmed that the well-defined agricultural policy must have a stable, transparent and efficient information systems as a basis for its implementation.

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AGRITOURISM: A NEW POWER OF CROATIAN TOURISM

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Abstract

Nowadays, tourism represents a propulsive labor-intense activity which transforms rapidly in terms of the structure under the influence of global contemporary trends. Mass tourism as a dominant form on the tourism market is being increasingly challenged by the specific forms of tourism which are based on the platform of meeting the tourist's desires, adventures and experiences. Rural tourism, especially agritourism as its internationally fastest-growing form is gaining more and more significance in the academic, as well as the tourist circles. However, with the focus solely on the Republic of Croatia, agritourism has not gained the place nor the significance that it deserves, i.e. it is not organized as it is in the leading countries of the sector of agritourism. In an academic sense, there is a frugal base of the theoretical and empirical knowledge. On the theoretical level, this paper therefore servers to terminologically determine the key terms that will certainly contribute to a clearer and more accurate understanding of this extremely confusing terminology. On the empirical level, research will be conducted on a convenient sample in order to determine the general characteristics of the business, the comprehension of the current situation on the Croatian market, as well as the elements of the attractiveness of the destination of agritourism and its economy. The research will cover the area of *five counties in Slavonia and the respondents will be the owners of agrotourism. The primary data will be obtained by means of a questionnaire and the analysis will be based on the standard scientific methods.*

Keywords: *contemporary trends, specific forms of tourism, agritourism*

JEL Classification: Z3, Z32

1. INTRODUCTORY CONSIDERATIONS

Tourism is one of the world's biggest industries whose limits are becoming insignificant due to the fact that the number of international tourist arrivals is increasing rapidly. The result of the mentioned is reflected in the new challenges of the management, as well as in the new rules of behavior on the global market. Regardless of its type or form, tourism is going through changes on a global scale. The tourist supply and demand are going through a certain structural revolution under the influence of contemporary megatrends. The traditional mass consumer is becoming a tourist with new habits and preferences, who is becoming an individual traveler, an active and dynamic consumer, who is well informed, independent, eager to learn, unpredictable, an explorer (he is looking for new unforgettable tourist experiences, exciting contents and authentic experiences), he is demanding in terms of "value for money" and "value for time", he is environmentally responsible and technologically oriented. The tourist is traveling more often and for a shorter period of time (several times a year), he is looking for an immediate contact with the provider of the tourist offer and has a peculiar sense of "good old times". It is thus not sufficient anymore to provide the new tourist consumer with a traditional tourist offer based on the 3S (Sun, Sea, Sand), but it is necessary to make the existing value system more innovative and/or to create a new one that will satisfy the physical, emotional, intellectual and the needs alike of the emancipated 21st century consumer. The result of such market access is reflected in the development of new specific ways of tourism. In a specter of terminology (for example alternative forms of tourism, New Age tourism, thematic tourism, selective tourism, etc.) and terminological definitions for the purpose of this work, the fundamental definition is the definition of the specific forms of tourism by Čavlek (2011:40) which is the following:

- Specific forms of tourism are a special group of tourist movements that are conditioned by the specified, dominant tourist motive that encourages the tourist consumer to travel into the destination whose tourist offer is in terms of the content adapted to the realization of the experience connected to the dominant interest of that consumer.

In comparison to the mass tourism, specific tourism types are based on the tourism product that is adapted to a certain segment; to the specific needs, motives and expectations of the tourist consumer. Rural tourism, especially agritourism as its fastest-growing form, appears among the propulsive special forms of tourism.

2. RURAL TOURISM: TERM DETERMINATION

Rural tourism has become a subject of a more intensive research of the international and European academic community in the last two decades of the 20th century. Numerous foreign and national authors have written about it, such as the OECD (1994), Lane (1994; 2009), Bramwell (1994), Kušen (1995; 2006), Oppermann (1996.), Šerg and Tomčić (1998), Roberts and Hall (2001), Petrić (2006), Leko-Šimić and Čarapić (2007), Sznajdera et al. (2009), Demonja and Ružić (2010), Liu (2010), Baćac (2011), McAreavey and McDonagh (2011), Neumeiera and Pollermanna (2014), Bartolucia et al. (2015), Tubića (2015) and many others. The scientific analysis has detected numerous terminological confusions and controversies of the terminological character. Viljeon and Tlabela (2006), Tchetchlik, Fleischer and Finkelsthain (2006), Polo and Frías (2010) and Mili (2012) note that there is no universal and commonly-accepted definition of rural tourism in the world. In other words, it varies from country to country and their cultural differences, which was confirmed by Tefler (2002) and Ghaderi and Henderson (2012). Mili (2012) also claims that rural tourism entails many manifestations, which implies a conclusion that other terms (such as village tourism, agritourism, etc.) are being used aside from the mentioned one to describe the tourist activity in the rural areas, and that they have a different meaning from country to country. In accordance with the mentioned facts, there are more reasons that prevent an unambiguous terminological definition. Although they were defined more than two centuries ago, the reasons that were introduced by the OECD (1994: 8-9) in the publication Tourism strategies and Rural Development are still recent (applicable):

- urban tourism is not only limited to the urban areas, but it encompasses the rural areas as well
- the rural areas are hard to define because the defining criteria differ from country to country;
- tourism that takes place in the rural area is not strictly "rural", it can be "urban" in its form as well when it takes place in the rural area;
- tourism is a historically urban concept; the greatest number of tourists live in an urban area. Tourism can thus have an urban influence on the rural area by triggering cultural and economic changes and new construction;
- different forms of rural tourism have developed in different regions;
- the rural areas themselves are in the complex process of change. The influence of global markets, communication and telecommunication are leading to the change in the market terms and to the orientation towards the traditional products. Although some rural areas are still experiencing depopulation, others experience an influx of people or a development of "non-traditional" jobs. What was once a clear difference between the rural and the urban is now dissolved by suburbanization, better communication and the growing number of weekend houses in the countryside;
- rural tourism is a complex activity, not only tourism on a farm. It includes the stay on the farm, but also some special forms such as a vacation in the nature and eco-tourism, trekking, climbing and horse riding, adventure, sports and health tourism, hunting and fishing, educational trips, art and cultural tourism. All of the above mentioned implies a growing interest of the market for a less specialized forms of rural tourism.

However, it is important to emphasize that the terminological issues of rural tourism began with the inexistence of an unambiguous definition of a rural area because the criteria (such as the size of the settlement, overall population density, agricultural quota, legal status of the settlement or the area, the infrastructure and a combination of more of the mentioned criteria) differ from country to country[1]. On the basis of the previous academic experience, Defilippis (2005) states that the criteria of the OECD are mostly used in terms of the terminological definition of the rural area on an international level. The OECD defines a rural area by two fundamental approaches:

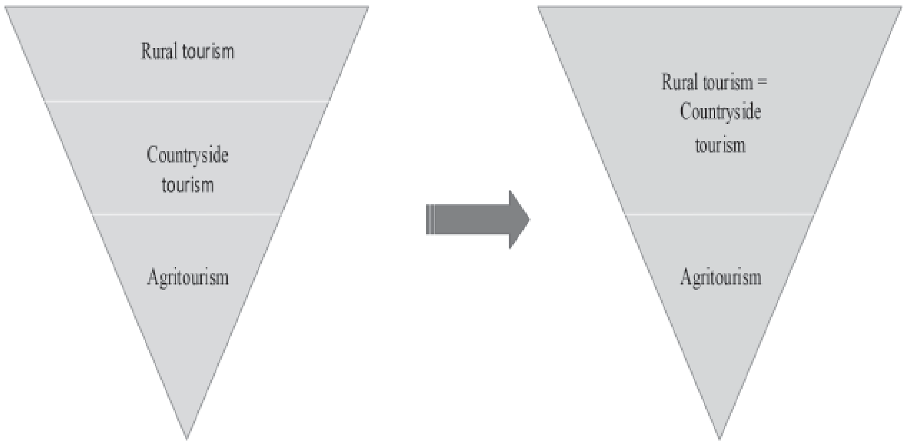
[1] See Tubić (2015) for more detail.

- the first one, the local communities (for example municipalities) are identified as rural if their density is below 150 inhabitants per square kilometer.
- the second one, the regions are classified by three categories:
    - a *Predominantly Rural Region - PR:* if more than 50% of the region's population lives in rural units (with less than 150 inhabitants per square kilometer);
    - an *Intermediate Region – IC:* if 15% to 50% of the region's population lives in rural local units;
    - a *Predominantly Urban Region – PU:* if less than 15% of the region's population lives in rural local units (European Commission, 2006: 3).

Following the criteria of the OECD as well as the views of Tubić (2015), and since it is the most comprehensive one, the basic definition of rural tourism in this paper is the one given by the OECD (1994: 34-35), which is given as follows: "*Rural tourism fundamentally takes place in the rural areas and is primarily in the function of agriculture. It is based firmly on the agricultural world with the special features of the open space, the contact with nature, the rural heritage and the society. Rural tourism must be in an agreement with the environment and the social community in which it takes place. The community includes less than 10,000 people and it includes the farms inside that area of work. The focus of rural tourism is oriented towards a whole line of sustainable business subjects and the community inside the rural area. The goal of rural tourism is insuring a long-time sustainability of the life in the region where it takes place; it must be a force for the preservation of the rurality and not a force of urbanization.*"

In order to understand the underlying theme of this paper more clearly, it is necessary to differentiate between three main terms of rural tourism, as shown in *Figure 1*. Three key terms that often cause a fierce scientific and practical debate are rural tourism, village tourism and agritourism. According to Baćac (2011), rural tourism is the widest form that represents a set of all tourist activities and services that take place within the rural area and it encompasses the forms such as village tourism, adventure tourism, wine tourism, health tourism, etc. It should be noted that rural tourism can but does not have to be an additional source of income- it can be a professional activity. Village tourism (a form narrower than rural tourism and wider than agritourism) includes all forms of tourist offer connected to the village and its surroundings, and it encompasses the tasting rooms, excursion sites, rural accommodation houses, ethno villages, rural camps, rural family hotels, ethno collections, village manifestations, the folklore and rural BB or bed and breakfast (Baćac 2011). Village tourism can be but does not have to be an additional source of income- it can also be a professional activity as it is the case with rural tourism. Agritourism is a form of tourism dependent on agricultural activity and it represents an additional source of income for the agricultural households (Baćac 2011). In other words, it allows the placement of the product of personal handicraft through the tourist offer.

Figure 1. A hierarchical division of rural tourism according to the source of



Source: adjusted according to Tubić (2015).

To minimize the terminological confusion between the mentioned terms, Tubić (2015: 68-69) proposed in his dissertation *The model of the development of rural tourism in Continental Croatia* to terminologically equalize rural tourism with village tourism. Since all three forms of tourism are defined by the rural area, he finds the stronghold of that in the fundamental elements, i.e. in the source of income and the dependence on the agricultural activity. To justify his opinion, Tubić (2015: 69) claims "Since rural and village tourism do not necessarily have to represent an additional source of income and they are not connected solely to the agricultural activity in comparison to agritourism, it is proposed that their terminological equation be made, as it was already pointed out previously. Taking into account the said, rural tourism stands as a synonym for village tourism and conversely, while agritourism represents a manifestation of rural, i.e. village tourism".

3. EMPIRICAL RESEARCH

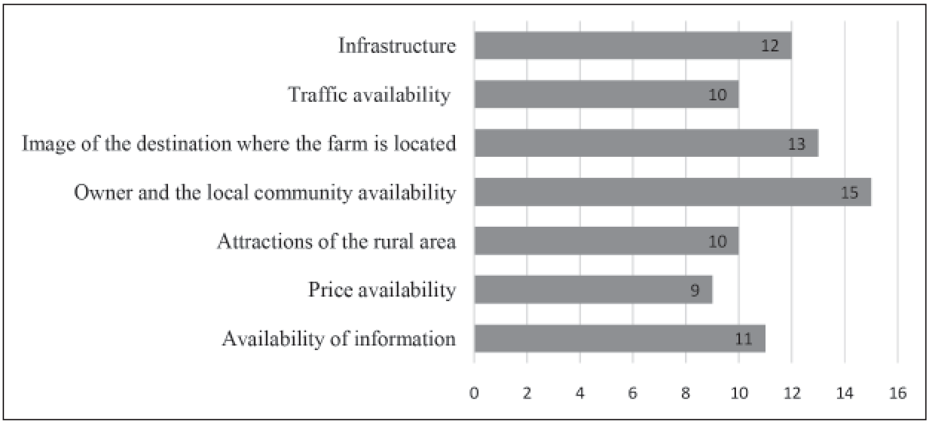
As Tubić (2015) claims, there is an insufficient and a poor basis of theoretical knowledge and empirical results within the Croatian academic community. The fact in favor of that view is that only one official research has been conducted so far (in 2017) in the whole area of the Republic of Croatia- the research conducted by the Croatian Chamber of Economy – the Tourism Department under the name of *Current state of tourism in Croatian rural areas 2008. See Miščin and Mađer (2008) for results of that research. The existent research show the regional/territorial fragmentation, i.e. they encompass mostly the counties, such as the Osijek-Baranja County, the Istria County and the Dubrovnik-Neretva County. It was only in 2015 that a research encompassing the area of 13 continental counties was conducted for the purpose of writing a doctoral dissertation under the name of The model of the development of rural tourism in Continental Croatia*. The significance of that research is reflected in the fact that it is the first research that included the creators and co-creators of the national tourism policy and the owners of TSOG. In accordance with that and in order to raise the awareness about the significance of rural tourism as the backbone of the future tourism development, the authors have conducted a research with the purpose of determining the general characteristics of business, the comprehension of the existing marketing conditions and the elements of attractiveness of the agricultural destination and economy. The research has incorporated 15 owners of TSOG in the area of Slavonia, Baranja and Srijem. The primary data were collected by means of a questionnaire in the time span from January 11 to March 7 2015.

3.1. The results of the research

Based on the sociodemographic data collected for the purpose of this paper, it can be concluded that an average male owner of agrotourism is aged from 51 to 60, with a degree from high school, an intermediate knowledge of English and that he is engaged in an agricultural activity for 7 years on average. An average agricultural farm is registered as a tourist farm (TSOG) or as a family farm (OPG), it is of a traditional exterior and interior with a high level of the representation of accommodation and food services as a primary product, as well as with different kinds of sporting and recreational activities and holistic services as a secondary product. The services are used mostly by domestic visitors that visit as individual travelers in one-day arrangements, and they are informed about the products and services through the Internet or by means of oral recommendation.

According to the owners of agrotourism, the crucial element of the attractiveness of the agricultural destination is the human factor, i.e. the kindness and hospitality of the owner and the local community, as well as the constructed image of the rural area that the guests are visiting (*chart 1. on the next page*).

Chart 1. Attractive elements of the agricultural destination according to the owners of agrotourism.



Source: research of the authors

From the *Table 1.*, it is clearly visible that all the recommended attractive elements possess a high level for the owners of agrotourism. The owners point the sociological features of the providers of tourist products and services, i.e. the kindness and hostility, as well as the commitment to the visitor during his stay at the destination as the most significant ones. The owners evaluate the primary offer (the fundamental element of the recognition and the core of the business), as well as the interior and exterior decoration as the second most important perceptive element of the attractiveness, with an average grade of 4.85. They evaluate the significance of the business connectivity with other similar farms in the area and the geographic position of the object with an average grade of 4.10 and 4.00.

Table 1. Perceptive elements of the attractiveness of agrotourism

Elements of attractiveness	Arithmetic mean
Sociological elements of the agrotourism owners and the work force of the farm	5.00
Primary offer and decoration of the farm	4.85
Innovative and creative business elements	4.75
Communication elements and advertising channels	4.60
Secondary offer of the farm	4.60
Ecologic and hydrographic elements	4.20
Business connectivity with farms in the area	4.10
Geographic position	4.00

Source: research of the authors

To evaluate the current situation on the agritourism market of Slavonia, Baranja and Srijem, the owners were offered five claims and asked to state their opinions and evaluate according to the 5-degree Likert type scale (grades: 1 – I completely disagree, 2 – I do not agree, 3 – I have no opinion, 4 – I agree, 5 – I completely agree). According to the results (see *Table 2*), it is evident that the majority of respondents, 14 of them, agree or completely agree that rural tourism presents a generative force for the development of rural areas in Slavonia, Baranja and Srijem. From the opinions of the owners of the agrotourism, it is evident that the creators and co-creators of the national tourism policy do not encourage the development of the agritourist activity in the area of Slavonia, Baranja and Srijem sufficiently or at all, which is a highly worrisome fact.

Table 2. Summarized results of the scores on the condition of rural tourism in Slavonia, Baranja and Srijem

Claim	I completely disagree	I do not agree	I have no opinion	I agree	I completely agree
Rural tourism is a strong generative force for the development of rural areas of Slavonia, Baranja and Srijem	0	0	1	3	11
There is a great tourist revalued resource base in the rural area of Slavonia, Baranja and Srijem	0	0	0	5	10
The interest connectivity of TSOGs of Slavonia, Baranja and Srijem with stakeholders alike is at the start of development	0	0	1	7	7
The creators and co-creators of the national tourist policy strongly encourage the development of agricultural activity in Slavonia, Baranja and Srijem	0	15	0	0	0
The educational skills of the agricultural product providers are highly developed	13	2	0	0	0

Source: research of the authors

4. CONCLUSION

Rural tourism of the Republic of Croatia does not possess the significance nor the position that it undisputedly deserves. In addition, we must add that the rural tourism of the Continental region has been in a disadvantage compared to the tourism in the Adriatic region for many years. Why? There is a very simple reason- a continuous strategic investment in the maritime tourism where the tourism of the interior of that area has also developed parallelly to the maritime tourism (with an unequal speed). The outcome of such strategic focus is a high and strong seasonality. Academically looking, even though a certain number of scientific research has been present for a long time, there is an insufficient basis of the recent theoretical insights. Such situation is also reflected in the empirical research, which was confirmed throughout the work. In support of that, it should also be emphasized that there has been only one official research in the Republic of Croatia from the year 2007, one research from 2015 on the area of Continental Croatia and certain research that are partially deployed geographically. From the perspective of the creators and co-creators of the national tourism policy, it must be said that a singular strategy for the development of rural tourism has not been developed despite the fact that the recommendations of the professionals and the academic community have placed a unanimous appeal at three Croatian congresses of rural tourism that were held previously. There is no rural tourism in the statistical sense, it is not orderly determined, it is strategically unrecognized, it lacks marketing, etc. In order to encourage the development of rural tourism in Croatia, it is necessary to raise the awareness about the interdependence and the cooperation of all the stakeholders at the local, regional and national level. Croatian tourism can and must do better, and agritourism is certainly emerging as a new tourist power.

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REGIONAL ECONOMIC DEVELOPMENT OF THE REPUBLIC OF CROATIA – REGIONAL POLICY REMARKS

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Abstract

Ensuring good quality public policy with the purpose of improving working and living conditions in all areas of Croatia, especially in assisted areas, is the mission of the Ministry of Regional Development and EU Funds. The policy of even regional development implies planning, implementation and coordination of activities of regional development policy as well as establishment of a comprehensive system of programing, management and financing of regional development. Development of assisted areas is one of the most important European Union guidelines and for this purpose almost one third of the EU budget is provided for cohesion policy implementation. Those funds are available through European structural and investment (ESI) Funds. In the 2014.-2020. budgetary period, Croatia has been allocated almost 10.74 billion euros from ESI Funds for various development projects which will contrib-

ute to an even regional development and help achieve a smart, sustainable and effective growth. Besides through ESI Funds, an even regional development is also stimulated through national funding and implementation of strategically determined policies, goals, activities and measures. The Regional Development Strategy of the Republic of Croatia identifies three strategic goals focused on diminishing regional development differences and encouraging sustainable development, which should be achieved through synergy of actions on national, regional and local level. These goals are: (1) increasing the quality of life by encouraging sustainable territorial development, (2) increasing regional economy competitiveness and employment rates and (3) systematic management of regional development. This paper attempts to define detailed strategic goals and elaborate priorities for several adequate measures.

Keywords: *ESI Funds, strategy, regional development, development programs, measures*

JEL Classification: P2, P25

1. INTRODUCTION

Through normative activities such as amendments to the Act on Regional Development of the Republic of Croatia, amendments to the Act on Reconstruction and Development of the Town of Vukovar, drafting the Act on Assisted Areas and the Act on Islands, redefining strategies and statistical regions, modifying the development index with the goal of eliminating recognized inequalities, constructing a special development index for islands and establishing a system for strategic planning and development management, the Ministry of Regional Development and EU Funds has stimulated a powerful turn in relation to areas in need what is the main purpose of the research. Through specially designed development programs such as the Program of sustainable development of the local community, Island development program and Regional development support program, local communities are provided with almost three times more projects funds than previous years. The amendments to the Income Tax Act and the Profit Tax Act have allowed tax reliefs for taxpayers who carry out business activities in areas of special national concern. For better absorbing the ESI Funds and contributing to the strengthening of regional competitiveness, the Fund for Co-Finance and Implementation of EU Projects on Regional and Local Level has been founded. Also, a new Fund for Regional

Development has been founded with a purpose of financing preparation and pre-financing EU projects on regional and local level. So, additionally, in this scientific paper is analiticaly presented, compared and analised contemporary phenomena related to modern regional policy (with majn Croatia's regional economic challenges) as important part of regional economic sciences.

2. REGIONAL ECONOMIC DEVELOPMENT – A LITERATURE REVIEW

Recent scientific literature analyzed in this paper present new advances and research results from the field of regional economics. As Capello & Nijkamp (2005) noted, one of the major tendencies which has accompanied the theoretical development in the field of regional economic sciences is the need for more realism in sometimes rather abstract conceptual approaches, by relaxing most of the glaring unrealistic assumptions of the basic theoretical models, a tendency common also in urban economics (see Table 1). So, location of production has a long history and major contributed to the field of regional economics: from Von Thürnen's analysis of agricultural land rent (1826), Weber's theory of the location of industries (1909) and the Marshall's industrial districts or 'an industry concentrated in certain localities' but also knowledge spillovers (1920) to Isard's regional science (1956) and later Krugman's 'new economic geography', 'core and periphery model' (1991) or forces affecting geographical concentration like 'centripetal and centrifugal forces' (1998) but also "learning regions" concept for overcoming and avoiding political lock-ins in old industrial areas (Florida, 1995; Hassink, 2005) and "new generation of regional policy" (Morgan, 1997, in: Hassink, 2005). We must not forget also Porter's contribution to regional science with his concept of clusters (Porter, 1990). Boschma & Lambooy (1999:419) showed that it is difficult to assess the impact of the local environment on the innovative behavior of firms: 1) it is *selection* ('fitness of the local milieu') which may be decisive for where new variety survives and prospers (path-dependency), and 2) the combination of *chance* and *increasing returns* may be powerful mechanism that determines which regions become successful innovators, regardless of their past. Finally, the emergence of a Storper's (1997) 'regional world' is essentially underpinned by the spatially-bounded localized forces that trigger economic development and push welfare to agglomerate in specific locations within countries (Ascani, Crescenzi & Iammarino, 2012:4).

Key sources of regional innovation are based on connecting the companies, improving public-private cooperation and the institutional framework. Innovation is the end product, while regional learning is a process, dependent on the quality and level of networking of companies, public-private cooperation and the institutional framework (Drvenkar, Marošević & Mezulić, 2015).

Table 1. Main tendencies in theories of regional economics

Tendencies in theories	Regional growth theories	Regional development theories
More realism in theoretical approaches	- Endogenous growth determinants; - A role in growth modes of the complex non-linear and interactive behaviors and processes that take place in space; - Imperfect market conditions in growth models; - Growth as a long-term competitiveness issue; - Technological progress as an endogenous factor of growth;	- Reasons of success and failure of SME cluster areas, local districts, milieu; - Non-material resources as sources of regional competitiveness; - An active role of space in knowledge creation;
Dynamic rather than static approaches	Evolutionary trajectories of non-linear interdependencies of complex systems;	Dynamic rather than static agglomeration economies;

Source: Capello, 2008, in: Capello & Nijkamp, 2009

3. STRENGTHENING OF CAPACITIES ON THE REGIONAL LEVEL: THE LEGAL AND STRATEGIC FRAMEWORK

Policy-makers in learning regions are involved in learning from institutional errors made in the past and by doing that in avoiding path-dependent development (Hassink, 2005). Redding (2008) highlights two key distinction in thinking about the determinants of location: 1) first-nature geography (exogenous) which is concerned with locational fundamentals (physical geography of coasts, mountains and natural endowments) and 2) second-nature geography (endogenous) is concerned with the location of agents relative to one another in geographic space, and the role that this plays in understanding spatial disparities). As Krugman (1998:7) noted, the results of multi-region simulations depend not only on parameters but on geometry of the economy. But also, Boschma & Lambooy (1999:421) explained that successful regions are regarded as good imitators which eventually overtake the original locations because they are not only better located but they also can bridge the gap in a techno-industrial field. This is based on, like Davalaar (1989, in: Boschma & Lambooy (1999:421) called it '*creative diffusion*' or Brezis et al. (1993, in; Boschma & Lambooy (1999:421)'s '*spatial leapfrogging*' in which follower regions not only catch up but actually take the lead after some period. So, we could agree that richer countries may form one "convergence club", as Martin & Sunley noted (1998:203), the developing countries another, and the underdeveloped yet another. As Barro & Sala-i-Martin, 1995, in: Martin & Sunley, 1998:204) viewed, the regions share a common central government and therefore have similar institutional set-ups and legal systems. So, this could mean that absolute convergence is more likely to apply across regions within countries than across countries. Obviously, regional convergence is now a basic principle of regional policy of EU[1] (Eckey & Türck, 2007). But, as Ascani, Crescenzi & Iammarino (2012:6) noted, the success of host regions in capturing the advantages of knowledge diffusion through global networks crucially relies on fundamental and structural characteristics ranging from local knowledge-base and absorptive capacity to social and institutional infrastructure - but we must consider that existence of a system of innovation at the local level represents a crucial element. Also, indicators to measure political lock-ins might be the number of subsidies spent to support the industry, the number of lobbying organizations and, more importantly, their impact, long-term stability of institutions involved in supporting the industry and the weak support of new industries (Hassink, 2005).

Table 2. Empirical results and implied policy measures by Eckey & Türck (2007)

Empirical result	Situation	Implied regional policy
a) Absolute convergence but no conditional convergence	All regions converge to the same steady state	No reason for a regional cohesion policy
b) Absolute convergence and conditional convergence	Regions converge to different stead states, which do not strongly deviate from each other	Funding of peripheral regions with equilibrium values below average
c) No absolute convergence, but conditional convergence	Regions converge to different equilibriums	Underdeveloped regions must receive funding
d) No absolute and conditional convergence	Regions do not converge	Only a great funding may diminish the different economic conditions

Source: Ecey & Türck, 2007: 22

[1] For more methods which are used from many researchers who examine European convergence, see scientific paper of Eckey & Türck, 2007.

In accordance with the Act on Regional Development of the Republic of Croatia, the Ministry has prepared the Strategy of Regional Development of the Republic of Croatian for the period until the end of 2020 (hereinafter: The Strategy) and its submission to adoption procedure by the Croatian Parliament is currently in progress. The process of drafting the Strategy was of significant participatory character. Based on the collected data and prepared analytical background as well as a series of participatory workshops held with the participation of representatives of various levels of management, three strategic objectives have been identified, which are intended to be achieved by the Strategy: 1) increasing the quality of life by promoting a sustainable territorial development; 2) increasing the competitiveness of the regional economy and employment; 3) systematic management of regional development. Objectives are multidimensional, integrative and consider the principles of sustainable development. Priorities had been defined for each of the strategic objectives, which were then developed in a series of appropriate measures. Synergy of various aspects of social development, space and environment, is expected within the first strategic objective. The proposed measures of this objective include a range of activities, projects and programs related to the improvement of regional and local development capacities in the fields of education and sport, furthermore, raising the level of knowledge and skills for improvement of quality of life, while part of activities is aimed at supporting the affirmation of cultural identity and development of civil society. In addition, through activities, projects and programs, within the framework of foreseen measures, it is envisioned to develop local and regional infrastructure in line with the needs of society and to sustainably use and evaluate the cultural and natural heritage. A special set of activities is aimed at supporting the implementation of environmental protection measures and energy efficiency at local and regional level which are harmonized with national policies. Assisted areas and areas with development specifics continue to have a special place in the new Strategy, therefore with this objective the appropriate measures relating to such areas are covered. A series of activities, projects and programs are aimed at supporting the development of assisted areas, sustainable island development and the development of hilly and mountainous areas. In addition to these areas, a significant number of activities, projects and programs is proposed, aimed at alleviating the negative effects of uncontrolled expansion of urban areas on quality of life and at creating favorable living conditions in border areas, as areas with development particularities.

The second strategic objective supports the development of regional and local economy. Planned measures include defining and implementing clear criteria for establishing and financing of entrepreneurial zones. Likewise, a series of activities, projects and programs aimed at activating state assets on local and regional level and application of new knowledge skills and development of financial instruments for maintenance programs for old city centers and cultural heritage facilities. This objective is also focused on creating a stimulating business environment at regional and local level, therefore certain measures relate to strengthening of local and regional entrepreneurial support institutions (*institutional support* for *entrepreneurship* development) to develop local and regional economy, providing continuous support to new business entities and new forms of business entity associations. Some of the activities, projects and programs are specially focused on supporting active entrepreneurs in assisted areas and areas with development specifics. One of the priorities of this objective is the strengthening of human resources and education related to the needs of economy at regional and local level. It is planned, through series of envisioned activities, projects and programs to provide support to increase the quality of labor force at regional and local level and encourage migration to areas with labor force shortages to equalize supply and demand in the labor market. The third strategic objective contains various forms of regional development management aimed at providing the appropriate institutional framework and support to the development of these thematic areas.

Along with the Strategy, an accompanying Action Plan was prepared for the period from 2017 to 2019 as its implementation document. The action plan is an elaboration of measures through defining specific activities, programs and projects, and is made for a three-year period in accordance with the State Budget. In the evaluation of the previous Strategy, among other shortcomings, the absence of the Action Plan was identified as its biggest disadvantage. In fact, indicators for monitoring of achievement of the set goals (achievements) have not been foreseen without the Action Plan. In the absence of interconnection of objectives with indicators it is difficult to determine their efficiency and effectiveness. Due to the absence of the Action Plan, implementation of the previous Strategy was partial. Hence, in drafting the new Strategy, it was intended to address to the observed deficiencies. The total estimated value of the financial framework of the Strategy is more than HRK 60 billion, however, according to the received comments, the correction of Action Plan and financial framework is in progress so the exact amount will be known in the upcoming days. Monitoring of the effects of the Strategy is planned at the level of strategic objectives and at the level of measures, and by supervising the implementation of specific activities, programs and projects included in the Action Plan. The process of reporting on the implementation of regional development policy as well as the Strategy is determined by the provisions of the Act on Regional Development of the Republic of Croatia.

The Act on Regional Development of the Republic of Croatia emphasized the already_recognized importance of regional coordinator roles in the design and implementation of regional development policies at regional level and their role as a key link between the central decision-making level and lower levels of development management. For effective coordination and stimulation of regional development of regional self-government units, the Act establishes regional development agency as a public institution or a company, i.e. establishes the governing body. The Act prescribes activities of general economic interest which regional coordinators conduct for the regional self-government units. Regional coordinators, performing the activities of general economic interest, aid in the preparation and implementation of development projects to the local self-government units and other public bodies in the county. This is particularly emphasized in the preparation and implementation of the projects eligible for funding from the European structural and investment funds. The accreditation of regional coordinators is foreseen for the purpose of strengthening the role and visibility of regional coordinators as providers of activities of general economic interest, i.e. as centers of expertise and knowledge who will with direct action in their surroundings improve planning and implementation of regional strategies and projects and for the purpose of their gradual introduction to the system of management and control of the use of European structural and investment funds through the decentralization of the system. Ordinance on Procedures for Accreditation of Regional Coordinators stipulates the criteria for assessing the ability and manner of conducting the procedure for determining the abilities of regional coordinators for conducting activities of general economic interest. The accreditation process should contribute to the capacity building, the improvement of human resources and their gradual introduction the system of management and control of the use of European structural and investment funds.

To strengthen the capacity of regional coordinators, in March 2016 the Ministry published a targeted *Call for expression of interest to regional coordinators for* *the grant of Priority axis 10 - Technical Assistance within the Operational Program 'Competitiveness and Cohesion 2014 - 2020'.* The projects co-financed under this Call should contribute to strengthening of general capacities necessary for successful preparation and implementation of projects from European structural and investment funds and to provide direct support for the preparation of concrete projects for financing from these funds. Regional coordinators over time should become the main information and professional points in the County / City of Zagreb regarding the financing of projects from European structural and investment funds, which requires continuous training of regional coordinators. 21 Grant Contracts have been concluded, and the total notional amount of these contracts was HRK 29.6 million, of which the amount of non-refundable funds is HRK 25.2 million. These funds should help regional coordinators, who are the extended arm of the Ministry on the ground, to provide timely assistance and support to all potential applicants of EU projects to realize as many projects and withdraw as much funds as available. So far, grant funds in the total amount of HRK 2.372.146,60 have been disbursed to regional coordinators (beneficiaries) based on approved Requests for advance payment (14) and approved Requests for reimbursement (11), which represents 9,4% of the total allocated grants. Hence, the planned amendments to the Act on Regional Development of the Republic of Croatia are foreseen to facilitate the allocation of funds to regional coordinators, and to strengthen their role which they have in regional development, as well as for conducting activities of general economic interest.

4. FRAMEWORK FOR REGIONAL DEVELOPMENT POLICY: MEASURES AND CHALLENGES

Manufactures production will tend to concentrate where there is a large market, but the market will be large where manufactures production is concentrated – this is Arthur's "positive feedback" (1990, in: Krugman, 1991:4) and it is in common like Hirschman's "backward and forward linkage" (Krugman, 1991:4). So, conceptualization of the institutions supporting the process of economic development provide economic agents with context-specific arrangements of collective organization, problem-solving, improved predictability about market behavior and learning and absorptive competencies (Ascani, Crescenzi & Iammarino, 2012:8). The interest in regional innovation systems and learning regions certainly served to foreground the role and importance of regional institutions (Gertler, 2010:5). Boschma & Lambooy (1999:427) addresses important thought: "if we intend to treat regions as spatial entities that determine, select or influence the innovative capacities of firms, we need to be more specific on questions like: *what criteria should be employed*, *what should be the basic unit of analysis*, and *what is eventually being selected and reproduced*" as it is noted by Schamp (1996), but also we must consider problems with questions how to define selection and how to specify fitness (according to Dosi & Nelson, 1994). Naturally, to answer this, we need to know what kind of (measurable) indicators could be of relevance to determine the degree of discontinuity (or fitness) of a new technology with respect to the local selection environment (Boschma & Lambooy, 1999:427). The Ministry started activities on drafting the Act on Amendments to the Act on Regional Development of the Republic of Croatia, the Act on Areas of Special State Care and to the Islands Act. According to the Plan of legislative activities for 2017, submitting proposals of the abovementioned acts to adoption procedure is foreseen in the III and IV quarter of 2017. During this year, the Ministry is planning the adoption of the Act on Amendments to the Act on reconstruction and development of City of Vukovar and to the Act on Hilly and Mountainous Areas. Institutional proximity refers to the mechanisms of coordination of the economy, ranging from the legal and regulatory system to informal cultural norms and habits. In this respect, successful innovation and economic performance is facilitated by solid institutional arrangements and common cultural norms which crucially lubricate market mechanisms (Ascani, Crescenzi & Iammarino, 2012:7). Farole, Rodríguez-Pose & Storper (2011:1093) explained, due so many studies, that institutional weaknesses, stemming from lack of knowledge, capacity or the protection of existing rents, may result in political coalitions holding back appropriate institutional development, and policies inappropriate for sustaining innovation and growth given their position relative to different types of frontiers (i.e. institutional, educational and the world technological frontier). It is urgent, as Farole, Rodríguez-Pose & Storper (2011:1097) noted that Europe get a more precise handle on the potential trade-offs involved in pursuing goals of growth and innovation and those of convergence and equity. There is likely an analogy to the models used to assess the overall benefits of regional integration in a world economy: if convergence is pursued via policies attempting to spread existing economic activity, there will be a complex set of 'creation' benefits (linkages of poorer to richer regions, with positive effects on output and income), there will be trade 'diversion' costs (costs of de-agglomeration and loss of comparative advantage optimization) and there will be complex dynamic, endogenous feedbacks of the two (terms of trade effects as poorer regions enter the economy, especially, which may actually favors the richer regions in the end) (for more, see: Farole, Rodríguez-Pose & Storper, 2011). McCann (2015:78) argued that in terms of criticisms of the existing EU Cohesion Policy (known as Barca report) there was currently: 1) a lack of focus of the policy and explicitly a failure to distinguish between the policy goals related to promoting efficiency and those goals related to promoting social cohesion and reducing social exclusion; 2) a lack of information or data provision; 3) a failure to use the data available to analyze the impacts of the policy at the local level; 4) a deficit in strategic planning and a lack of any real territorial perspective; 5) a lack of consideration of the broader issues relating to wellbeing; 6) an absence of the needed contractual relationships required for ensuring institutional changes appropriate to the locality. The multi-level governance approach to the local differentiation of policies very much reflects a key component of the modern place based approach to regional development policy which has been advocated for a long time by the OECD (see for more: McCann, 2015).

Planned Act on Amendments to the Act on Regional Development of the Republic of Croatia (hereinafter: The Act) should at minimum include provisions concerning the assessment and classification of the units of local and regional self-government according to the level of development, i.e. changes in development index of the units of local and regional self-government including shortening of the period in which the classification of the units of local and regional self-government is performed into development groups. The Act plans to change the provisions relating to regional coordinators, to strengthen their role as agents of development in the counties territories as well as certain provisions relating to the procedure of their accreditation (see Table 3.). In order for place-based, multi-level governance and results-oriented policies to be effective, the intended thematic priorities as well as the specific goals of the policy must be specified clearly in advance (McCann, 2015:87).

Table 3. Balanced regional development policies – instruments*

Balanced regional development policies		Policy instruments	Planed results
1.	*Fund for co-financing implementation of EU projects at regional and local level*	• The Fund resources are provided in accordance with Article 45 of the Act on the Financing of Units of Local and Regional Self-Government of revenues derived from income tax in the amount of 1,5% which are paid to the state budget from 1 January 2015.[2] • The procedures for disbursement of funds is simplified so the resources of the Fund will be paid in three parts, of which the first part in the amount of 50% of the total approved amount will be transferred to the beneficiary by the conclusion of the Contract.	Contribution in field of strengthening of the competitiveness of regions and balanced regional development. Increasing the absorption of funds from the European Structural and Investment Funds.
2.	*Exercising tax relief for business activities in City of Vukovar (but also other areas in Vukovar-Srijem County)*	• The right-on tax relief of income tax and profit tax will be available to taxpayers who conduct activities in the City of Vukovar and in local self-government units which are classified in the group I of the level of development.	Increasing requests for tax relief and increasing investment in selected units classified in group I and II according to the level of development. [3]
3.	*Integrated program of physical, economic and social regeneration of pilot areas of small towns in the war-affected areas[4]*	• The objectives of the program will be achieved through the integrated use of funds of the European Regional Development Fund intended for building social, communal and economic infrastructure, and funds from European Social Fund aimed at providing social, educational, economic services and services related to employment.[5]	Reduction of social inequalities, exclusion and poverty, Improvement of infrastructure, Increasing the attractiveness of living and potential investment, Strengthening the active participation of the inhabitants of these areas in economic and social life.[6]

[2] 245 requests for the allocation of the Fund resources were received within the 1st and 2nd Public call for applying for resources from the Fund for co-financing the implementation of EU projects at regional and local level published in 2015 and 2016. Out of the 245 requests, there were 180 positive Decisions on funds allocation for co-financing of the implementation of EU projects in the amount of HRK 57,914,786.39.

[3] 779 requests were received in 2016, and 722 certificates of eligibility for tax relief were issued. Likewise, during this year it is expected that the number of received requests will be higher than 700.

[4] In it's pilot phase this program is activated in five small cities in the war-affected areas: BeliManastir, Benkovac, Knin, Petrinja and Vukovar.

[5] Towards the end of last year, the Ministry concluded a tripartite Agreement on the implementation of the Intervention plan of the city of Knin with the Ministry of Labor and Pension System and the City of Knin. Now, it follows the signing of an agreement on the implementation of intervention plans with other pilot areas and issuing calls for allocation of funds.

[6] Due to Operational Programs "Competitiveness and Cohesion 2014 – 2020" and "Efficient Human Resources 2014 – 2020"

4.	*Sustainable urban development*	• Activities that can be implemented in the cities through the ITI mechanism contribute to the following thematic areas: 1) Cities as engines of economic development; 2) Clean cities, i.e., cities in the fight against climate change; 3) Inclusive cities, i.e., cities in the fight against poverty.	Developing strategies for urban areas, monitoring implementation and evaluation, Integration of infrastructure projects and soft activities through ITI mechanism. Developing integrated measures for coping with economic, environmental, climate, demographic and social challenges.

* See Appendix 1.
Source: authors

Modern regional policy adds strategic importance to industrial restructuring, finding of own strengths in the form of smart specializations and other structural adjustments in regions, especially those which are lagging (Drvenkar, 2016). Informal institutions in lagging regions are often dysfunctional, resulting in low levels of trust and declining associative capacity, and restricting the potential for effective collective action (especially because of problems with institutional sclerosis, clientelism, corruption and pervasive rent-seeking by durable local elites who block innovation). In such an environment where institutions are 'inappropriate', a region is likely to fail to break out of low growth and low productivity traps (Farole, Rodríguez-Pose & Storper, 2011:1098). In terms of "tick-the-box" type approaches to policy design and policy compliance, the key problem is that what takes place 'on the ground' is very different to what appears on paper (McCann, 2015:2019). For correcting the development index of local and regional self-government to remove its perceived deficiencies, the information system of indicators and data needed for evaluation of the existing and creation of the new development index has been developed in 2016. The information system has been established with the purpose of evaluation as well as modelling and testing of different variations of the model which should ultimately result in a new model for calculating the development index.

5. CONCLUSION

Since the reform of the Structural Funds in 1989, the EU has made the principle of cohesion – of reducing disparities in economic outcome and opportunity among European regions – one of its key policies. In the context of rapidly changing economic, demographic and political realities in the EU, cohesion policy has become an ever-larger component of the EU budget (Farole, Rodríguez-Pose & Storper, 2011:1090). To further boost the entrepreneurship and business climate, strategic priorities are focused on creating an encouraging business environment on regional and local level. Therefore, certain measures refer to strengthening local and regional entrepreneurship supporting institutions for development of local and regional economy, giving continuous support to new business entities and new forms of business associations, supporting the increase in quality workforce on regional and local level and stimulating migration to areas which lack workforce with a purpose of equalizing the supply and demand on the labor market. All measures of the regional development policy that are being implemented, as well as those that are planned, have a goal of boosting economy in assisted areas and areas with development particularities which should ultimately result in a population influx. Strengthening of competitiveness of regional and local economy is planned for other areas of the Republic Croatia as well. The system should simultaneously provide a simpler and more efficient identification and monitoring of preparation of development projects, facilitate future programming and monitor the implementation of the planned indicators of impacts of interventions financed from the structural and investment EU funds.

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APPENDIX

Table 1. A Typology of "New" Growth Theories

Type of Growth Theory	"Engine of Growth" Convergence?
Augmented neoclassical	Physical and human capital, exogenous technical progress universally available. Slow and conditional convergence within clubs of countries with similar socioeconomic structures.
Endogenous broad capital	Capital investment, constant returns through knowledge spillovers. Cumulative divergence, but shaped by government spending and taxation.
Intentional human capital	Spillovers from education and training investments by individual agents. Convergence dependent on returns to investment, public policy, and patterns of industrial and trade specialization.
Schumpeterian endogenous innovation	Technological innovation by oligopolistic producers, with technological diffusion, transfer, and imitation. Multiple steady states and persistent divergence likely. Possible club convergence and catch-up.

Source: Martin & Sunley, 1998:209

THE ROLE OF MANAGEMENT IN DIRECTING KEY PARTNERS IN SPORTS ORGANISATIONS

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Abstract

The key role in achieving excellent results in a company is held by the management, that is, the managers, since every enterprise requires efficient and powerful managing. This is especially evident in sports organisations, both in amateur and professional clubs, associations or sports facilities. Today, sport is the most money-spinning industry on the planet, which is exactly where all the skills of a competent manager come to light. It has become very difficult to be able to successfully sell a player, a club, a sports venue or a sports requisite, since everything is so easily accessible on the market at the moment. This means it takes superhuman abilities for a manager to present, and in the end sell, his or her product successfully. The managers' role defines the well-being of a sport or a sports organisation; it influences all aspects of sport, from professional to amateur, operating from its infrastructure to its development. Managerial positions in sport are very dynamic and comprise numerous activities directed towards reaching the goals set by a sports organisation. The activities consist of the basic elements of management, including forecasting, planning, organizing, commanding, coordinating and controlling.

The aim of this paper is to discuss the functional role of management, that is, the role of managers as bearers of this function in various sports organisations. One of the most important roles a manager has, among everything else, is convincing their key partners to remain precisely that: key partners. Naturally, this responsibility extends to other stakeholders, whose interests are integrated into the interests of the sports manager.

Keywords: *management, sport, sports organisations, key partners.*

JEL classification: M00, M12

1. MANAGEMENT AND SPORT

The English word "management" comes from the Italian *maneggiare* (to handle), which derives from the Latin expression *manum agere*, which also means to handle something. Furthermore, management is considered an exclusively American expression, since the term was coined as a result of the American practice and theory of organisation and direction. Today, management is everything. As defined by Weihrich and Koontz (1994) management is the process of designing and maintaining an environment in which individuals, working together in groups, efficiently accomplish the selected aims. This is just one of the many definitions of management. The more recent ones describe management as "each activity in an organization which connects people of different knowledge and skills in order to achieve specific business goals" (Bartoluci, 2009: 133). We can say that the basic characteristics of management are working with others and with the help of others, reaching the set goals, achieving efficiency and effectiveness, achieving results with limited resources and operating in a the ever changing environment (Belak, 2014:2).

As a concept or a business philosophy, management was developed in the mid twentieth century, and since then it has continually been studied and improved all around the world. In fact, it represents one of the market concepts of managing and handling an organisation, which, in place of production orientation, introduced market orientation inside an organisation's entire business policy. This also includes the principle that every significant business decision has to be made through the prism of its reflection to customer behaviour.

Most contemporary authors (Buble, 1993; Bahtijarević-Šiber, 2004; Covell, Walker, Siciliano, Hess, 2002; Drucker, 2006) have studied and discussed the four basic management functions: planning, organizing, commanding and controlling. These functions are directed towards human resources, finances, assets and IT within an organisation, with the aim of realising organisational goals in the most efficient way possible.

The important characteristics which every manager should have, including the main ones, are surely the following: being able to work with others and with the help of others, achieving the company's set goals easily, being efficient and able to adapt quickly to the constant change of the conditions and environment, sometimes also with limited resources. Any manager possessing these qualities, along with the primary ones, will certainly prove himself or herself as one of the top managers in their business. According to a research conducted in Croatia's fifty leading companies, the five characteristics essential for a quality manager are the following: determination, honesty, professionalism, objectivity and independence (Sikavica, Bahtijarević-Šiber, 2004). In reference to managerial levels in general, there are three: top-level, middle-level and first-level (Sikavica, Bahtijarević-Šiber, 2004).

Since this article is more inclined to discussing sports management, it has to be pointed out that sports management, as a part of general management, deals with specific problems concerning organisation and management in sports, or within a sports organisation, while using its limited resources rationally (Bartoluci, Škorić, 2009). Sports management is the result of the demands posed by the rapid development of sport in the last twenty years and its task, according to the same above mentioned authors, is to analyse problems in sports, define the causes of the conditions and find various alternative solutions. It has been increasingly discussed in the academic literature (Andrew et al., 2011, Masteralexis, et al., 2011, Pedersen, and Thibault, 2014).

Professional sports have become a broad area in social life which is incorporated into all the elements of social structure (especially the economy). This is why there is such a need for studying this phenomenon. The relationships between professional sports, economy and contemporary society are extremely varied, reciprocal and changeable, especially in the time we live in.

From the point of view of sports organisations, management is a social process through which individuals and societies realise what they need and want by applying the management concept in all areas of sport. This is realised directly on the market, through a group of activities used for the exchange of sports goods and services. Therefore, managing these activities within sports organisations requires an efficient combination of elements, such as a product or a result, a price, distribution, and, finally, promotion. The given elements have to be a part of the whole offer given by sports organisations to the entire sports public and for-profit organisations.

The development of the theory of sports management considerably contributed to training sports organisations' managers into qualified experts, who have the ability to plan, organize and control, or in other words, into people who know how to successfully organise their company's future sports-related activities (Skorić, 2014).

In professional sports today, management is a scientific discipline, as it uses scientific methods while making decisions and managing all the segments of professional sport. Its main operative goal is to promote and further develop professional sports and professional athletes. In every contemporary sports organisation, the most important operative function, according to its role and level of importance, belongs to marketing. Terms such as sports marketplace, a sports product and sponsorship, in their economic sense, have to be perfectly understood in order to comprehend the importance of professional sport for a nation's budget. This is especially true today, in the aftermath of the global financial crisis.

2. KEY PARTNERS

Not all clients are the same. Over the last few decades, the dominating trend has been to determine the key customers from the point of view of doing business with other business subjects (B2B/ business-to-business), as well as the necessity to develop key customer relationship management, in order to meet their needs in a satisfying manner (Hoye, 2015). The trends which have had the most influence on key customer relationship management are the following: internationalisation, the growth of numerous sports events, enhancing the partners' negotiation powers, etc. Due to a general internationalisation of many clubs, a large number of key partners and managers are now cooperating on the international level, thus achieving the effect of economy of scale, becoming fully adapted to each other and optimizing the business processes which occur between them. Professional sports is an independent area in developed societies, mostly in the economic sense, since the extensive sports market represents an ideal space for the placement of capital and making profit. Due to the conditions created by the high level of socio-economic development, the demand for studying the economic dimensions of professional sports is gaining an increasingly larger meaning. Sports activities in Croatia are carried out by sports clubs and various unions, sports communities, and the Croatian Olympic Committee as their umbrella body. All the above mentioned organisations are public, non-governmental organisations. Their common characteristic is that they are non-profit, and this primarily refers to the sports facilities which can be the property of a municipality, city or county, while a few are state-owned. Accordingly, rent for such properties has to be paid from some kind of source. Sports obtain some of their income through membership fees, donations or sponsorships, some unions earn from registration fees, but considering the Croatian social and economic situation this is inadequate for the kind of sports culture we are trying to create. Therefore, all ambitious sports projects, from the local to the national level, are connected to their key partners. It is often the case in Croatian sports that partnerships are closely linked with renting the sports ground or venue, so the key partners of the most successful local clubs are commonly government-owned companies.

Today, sports management represents a large and rapidly growing industry in which contracts are signed worth millions of euros. There are many examples of this but the most lucrative and well known are surely the ones in football. For example, Real Madrid C.F. receives 31 million euros from Adidas AG just for wearing their sports apparel, and FC Bayern Munich gets 8 million euros from Allianz SE for the name of their stadium, 33 million euros from Deutsche Telekom AG for their name on the football shirt, while Adidas pays them 25 million euros for wearing the shirts they produced. Starting next season, the German sportswear manufacturer will be paying up to 54 million euros for this kind of marketing. However, the absolute record is held by FC Barcelona, who did not allow sponsored football shirts until 2009, but now gets the most profitable contracts. While Nike, Inc. pays FC Barcelona 30 million euros for using their sporting goods, the Qatar Investment Authority pays 32 million euros for the name of the Qatar Airways Company to be printed on their shirts. Furthermore, Beko, a Turkish consumer electronics brand, sponsors the club with 10 million euros for their brand to be represented on the shirt's sleeves, while Intel Corporation has to pay 5 million euros for the privilege of having their logo inside FC Barcelona's shirt, which is a unique case.[1]

The sports industry has experienced an unbelievable growth in a very short period of time. Although sports and recreational activities, as well as sporting events and sport business, has existed for quite a while now, their growth has never been as rapid as in the last thirty years or so. Management, meaning empowering managers and their competencies, is going through a huge transformation from mass to individual management, where a skilled individual is placed at the forefront in order to attract as many clients as possible.

[1] Source of data: http://www.goal.com/hr/news/7168/galerije/2015/06/05/12379722/najveći-sponzorski-ugovori-ronaldo-zarađuje-i-od-šampona-pet/athletic-barcelona-copa-del-rey/19#photo (accessed 20th March 2017).

As already mentioned, large global companies are setting aside tens of millions of euros or dollars for sport sponsorships, whether they are paying for their logos on the jerseys or have clubs and leagues named after them, or even sports venues. Nevertheless, the key requirement for partners is to always be present and visible, and at the same time reap the financial benefits. In Croatia, the companies which sponsor sports not only invest in top sports but also fund many clubs and individuals who would otherwise not be able to survive. Sport is in general a good platform for strengthening a company's image and creating a positive perception about it among customers. Sponsorship is an element of this communication mix and is growing in popularity as a communication means, which a company uses to offer financial support to either individual, an organisation or a group.

Excellent sports results have turned Croatian sports into one of the country's best exports, as its quality has been confirmed multiple times in the demanding global market of top achievements, so partnership with one of the successful clubs is highly desirable. Preferably, the sponsorship should be of a representative team, since all Croatian representative teams achieve high results in European and world-wide competitions, as well as the Olympic Games. Besides increasing their recognition, being very useful in marketing, and even earning money on sport sponsorships in Croatia, it is important for Croatian companies that the environment in which they are doing business profits from their work. The role of big sponsors in football, basketball and handball clubs is indisputable. However, many other athletes, who belong to the, so to say, unattractive clubs would not have a chance to do the sports they do without those key partners. Moreover, the role of their sports in the community would become meaningless, especially in educating young people. Sport in Croatia is on all its levels expected to be the engine of the whole society, as well as an incentive to develop healthy lifestyles, leading to achievements which help people explore their potential and abilities, and boost the unlimited development of every individual.

Since there are three basic management levels, top-level, middle-level and first-level, how large a partner is will determine which level of management will take part in the business. Considering how much sport business is spread in Croatia, the partners are usually the largest Croatian companies, owned either by the state, the city or have private owners. It is often the case that a company's manager is at the same time on the key position in a club's or a sports union's supervisory board or steering committee, so the company would at least in some way be able to secure its investments.

3. THE MANAGERS' ROLE IN SPORTS ORGANISATIONS

Before defining management, the term "sports organisation" needs to be explained. An organisation is "a conscious association of people whose aim is to complete certain tasks in any segment of social life while using the appropriate means and making the least possible effort" (Sikavica, Novak, 1999: 13).

Just like any other collective, sports organisations have a clear hierarchy which has to be respected, first of all because of the sports results, but also because of the amount of money used to run these organisations. This primarily refers to the sports organisations which operate as sports clubs, unions, associations, etc. Since all the managerial levels are responsible for the business as a whole, a strict hierarchy is indispensable for the existence of all the stakeholders within the sports system. Such a hierarchy is also present in the Croatian sports system. The umbrella organisation of Croatian sport is the Croatian Olympic Committee, comprising national sports teams, which include various sports clubs and unions.

All decisions within such a system are reached and carried out starting with the top managers and ending with organisers, and those on the lower organisational levels who carry out the decisions made by the top managers.

A sports manager can also be described as an organiser, a director of a sport-business organisation, whose aim is achieving sports and business results. Sports management is a process, a specific discipline and a group of business activities which are directed towards realising the set goals in accordance with the planned mission and vision, and which are based on the concept of sports marketing. Management is used to direct and manage the capital, people, means, information and various programmes, whose primary and basic product is connected with sports, sports activities and the sports industry as a whole (Novak, 2006).

The contemporary trends in the theory and practice of management are developing rapidly, while the demands are getting higher and higher. The functioning of today's management is characterised by the rapid development of computer and communications technology, a larger percentage of wealthier but also more demanding clients, the business globalisation and the growth of the competition, as well as abrupt changes in the business conditions. Due to these factors, managers are today under a lot of pressure due to competition, on top of their work being extremely stressful in general. The competition is very strong and fast-growing, so an organisation has to keep investing efforts to advance its own competitiveness in order to secure its position on the market (Belak, 2014). Therefore, it is clear that managing sports, sports organisations and everything that has to do with sports plays the key role in the business. We can observe it as one of the main, and highly required, strategic directions in realising the sports organisations' aims, programmes and tasks. Constant and rapid changes in our environment, especially the sports environment, lead to constant improvements and advancements of all the functions, with the aim of surviving on the market and realising the set goals. If neither such a dynamic environment nor the constant demands and requirements for improvement existed, managing an organisation would be a routine and management per se would lose its meaning.

Furthermore, numerous sports events are becoming mass media manifestations of the highest order and millions of people follow such events live or on TV, which means they are more and more often the means of communication between the performers and the huge mass of fans, that is, consumers. The question here is why a manager should even have to be highly skilled, when sport practically sells itself. The modern way of life poses daily challenges for consumers, there is always something new on offer, which is of course presented as the best one has ever seen, experienced or bought. The challenge for a manager lies precisely in keeping the key partners, in keeping the honour of sponsoring a specific sport, club or union, so that the partners' focus remains on them, and does not switch to something which is in one moment marketed as the trending product. This enables the establishment of numerous psychological and sociological relationships, and especially the relationships with a marketing character. Sport has become a social phenomenon of global proportions, whose roots are spreading into the lives of both young people and adults, either through work or fun, as a profession or a kind of education. Today, sport is everything but an individual's leisurely desire for relaxation.

4. CONCLUDING REMARKS

This paper aims to present and explain the functioning of sports organisations and managers who run them. In conclusion, first of all, we can say that managers have to be experts and they have to possess the required knowledge about sports and how it is organised. Each business has to put people first. Likewise, in sports, including all the partners connected to it, it is the people who play the most important role. A successful manager should without a doubt possess the know-how and the skills to manage their own team, and have good relationships with others, so as to attract quality partners and secure good business deals in their sports organisation, regardless of which organisations they are running, umbrella sports organisations or small local clubs. Each manager has to prove himself or herself in his or her business frame. Today, sports management is indisputably the most developed industry in the world. It is an industry in which managements deal with enormous amounts of money, and where mistakes have a high cost. In order to minimise the chance of making a mistake, all aspects of quality management are applied, and quality management starts with a quality manager. Finally, managers are the key to successful business in sports organisations and the only key which opens the door to all the key partners.

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INFLUENCE OF THE NEW STANDARDS ISO 9001:2015 AND ISO 9001:2015 ON HUMAN RESOURCE MANAGEMENT IN ORGANIZATION

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Abstract

The old versions of standards ISO[1] 9001:2008 and ISO 14001:2004 defines requirements about resources that are necessary and required to an organization. Human resources inside the organization as well as their knowledge and competency are one of the most important resources. For the successful reach of the organizational goals, it is necessary to employ and keep the best features but also manage their competencies. In organizations that have implemented quality and environmental management system according to standard ISO 9001:2008 and ISO 14001:2004 controlling human resources is described in one or a sequence of written working procedures depending on complexity and size of the organization. In common knowledge, career management has to establish unequivocally and document only in those organizations which have implemented quality management system according to demands of in-

[1] ISO – International Organization for Standardization

ternational standard ISO 9001. International organizations for standardization – ISO by the end of 2015. has issued a new version of standards ISO 9001:2015 and ISO 14001:2015. The purpose of this work is to show how the new version of standards ISO 9001:2015 and ISO 14001:2015 affects on career management compared to the previous version.

Keywords: *Quality management, Environmental management, ISO 9001:2015, ISO 14001:2015*

JEL classification: H24, O15

1. INTRODUCTION

The previous versions of standards ISO 9001:2008 and ISO 14001:2004 defines requirements related to resources that are necessary to an organization. Human resources inside an organization, and their knowledge and competencies are definitely one the most important resources. People, as the new most significant resource on the market, are becoming a lever for making profit and with that they are holders of differentiation of business subjects (Fitzenz, 2000:1). All organizations asset, except people, is Inertial and requires human application in order to create extra value. From previously stated it's possible to conclude that the basic objective of any modern organization is to hire and keep the best personnel which is ensured through Human Resources Management System which are part of the Quality and Environmental Management Systems (in further text QEMS) in an organization with an implemented ISO 9001:2008 and ISO 14001:2004 Standards. Human resources as a term, within the organization marks individuals and their capabilities, but parallel with that term also marks the organizations activity which deals with hiring, firing, training and other actions related to the staff.

Globalization caries big and quick changes that greatly influence on changing the nature of the business and point out on the Career Management in order to constantly improve human resources, and by that all of the competitors on the market. QEMS are based on controlling and improving processes and on effective use of suitable resources. In the context of resources, QEMS point the attention of the organization to Human Resources Management and all with the goal to increase efficiency and competitiveness of the organization on the global market. From the previously stated a link is visible between Human Resources Management and QEMS in organizations, however, the question is, can the QEMS be used as a tool for Management and development of Human Resources in organizations (Blažević and others, 2013:2). QEMS according to standard ISO 9001 and ISO 14001 defines requirements related to Human Resources Management.

The goal of the research is to show that standard ISO 9001:2008 and ISO 14001:2004 defines requirements on the structure of Human Resources Management process and gives additional importance to Career Management System inside of that process, how for development of employees motivation like that for optimization of investments in career development and business successfulness of the organization. Also the goals is to show that the new version of the standards ISO 9001:2015 and ISO 14001:2015 has increased requirements on the Human Resources Management System. The basic hypothesis of this paper is that the QEMS according to standard ISO 9001:2015 and ISO 14001:2015 has a greater influence on the Human Resources Management process than the standards ISO 9001:2008 and ISO 14001:2004. Which allows career planning with more quality, better organization of Career Management, making of a more quality plan of career development based on facts and a better and simpler control of Human Resources Management System process.

2. METHODOLOGY

Qualitative research methodology was used in the paper while the data was collected combined from primary and secondary sources. Chosen method was considered appropriate because data processed and compared in the paper are available in the literature of the processed area. In chapter four results of comparative analysis of content were processed while in the third chapter they were presented. Chosen method of comparative analysis of content was chosen because authors had access to different limited and unlimited sources of information like international ISO standards and other relevant sources of data.

3. RESULTS

By comparative analysis, basic hypothesis is confirmed, that is, that the new standards ISO 9001:2015 and ISO 14001:2015 has a greater influence on the process of Human Resources Management than the currently valid but now the previous versions of standards ISO 9001:2008 and ISO 14001:2004 which is explained in detail in the paper. Also, both set goals have been achieved, it is determined that standards ISO 9001:2008 and ISO 14001:2004 defines requirements on the structure of process of Human Resources Management and gives additional importance to the Career Management Systems inside that process. It is also shown in the paper that the proposition of new version of standards ISO 9001 and ISO 14001 has increased requirements on the Human Resources Management System.

4. COMPARATIVE ANALYSIS OF CONTENT

In further lines of the paper comparative analysis of content is shown, where in the first part theoretical review is given on the development of Human Resources and development of QEMS. In the second part of the comparative analysis of content, comparison of the previous version of Standards ISO 9001:2008 and ISO 14001:2004 and new version of Standards ISO 9001:2015 and ISO 14001:2015 is shown.

4.1. Theoretical review on the development of Human Resources

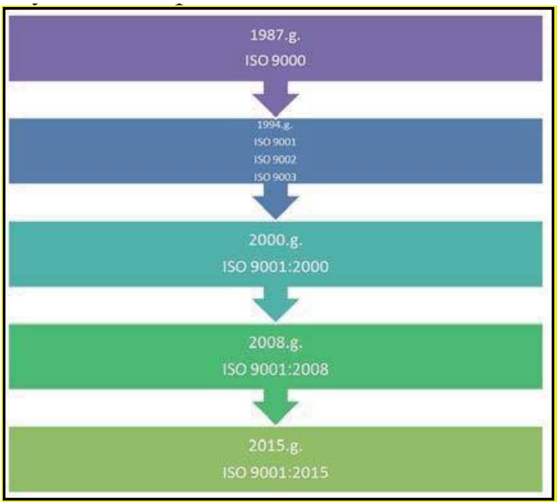
Human factor in economic development gains more and more on importance, which was the basic motive to scientist and researchers in clarifying issues and approaching them to managers of Human Resources with the purpose of gaining better results. The meaning of Human Resources stands out in the first half of the 20. Century, when importance of motivation, informal relationship, leadership style and similar was realized, and official literature from that period starts with significant analysis of this theme. Many authors, in the early phases, have pointed out the importance of constant investment into employees, and so in the 18. Century Adam Smith, in his works pointed out the importance of education of individuals for society in a whole. In the 19. Century Karl Marx, in analysis of factor productivity in the first place puts expertise and capabilities of a worker. In the 20. Century researches become focused on proving connection between education and economic successfulness, which highlights the importance of the role "Human Capital" and investments in it while achieving goals of economic development (Bahtijarević-Šiber, 1998:121). From the previous description it can be concluded that education and development of employees is connected with almost all aspects of Human Resources Management. Their assignment is to help create a structure of communication systems inside a company, which will help while using potential and knowledge of employees with the purpose of making business progress. In return, company needs to enable education and development in order to develop their potentials and establish necessary educational and development processes inside a company (Blažević i dr., 2013:3).

4.2. Development of a Quality and Environmental Management System and conceptual definition

Term Quality is extremely hard to define because every individual has his perception of quality. Because of that, there is a number of different definitions for quality. In 2009 Lazibat defined quality as a measure or indicator of volume, that is, amount of use value of some product or service for satisfying exactly defined needs on a certain place in a certain moment, that is, when that product and that service, in a social process of exchange are confirmed as merchandise. In 2008 Funda defined quality as a "level to which a group of existing characteristics meet the requirements", that is the totality of characteristics of products or services on which their capability is based to satisfy expected requirements.

Control of Quality intensively started to apply and develop in 1910 when Ford organization introduced the practice of production of automotive industry principles of organization F. W. Taylor. Function of the control was that the procedure of separation of bad products from the good ones became independent, that is, when it was separated from the production. First statistics quality control for monitoring production was made by an American W. A. Sherwart in 1924. By accepting philosophy of experts like Sherwart, Deming and Juran, quality of Japanese products rises, and west competitors start to fall behind. Japanese expert Kaoru Ishikawa finds that quality control assumes the quality of all employees and requires that all employees must be trained to be their own controllers. Standard ISO 9001:2008 is currently the most accepted standard on the market, that is the most commonly applicable model of Quality Management System. Standard was issued by the ISO organization and by present day had 4 revisions (1994., 2000., 2008. and 2015.g.). Picture NO.1 shows the development of ISO 9001 standard through history.

Picture 1: Display of development of standard ISO 9001 through history



Source: Made by authors

4.3. Elements of Standard ISO 9001:2008 and ISO 14001:2004 as a Human Resources Management tool

Standards ISO 9001:2008 and ISO 14001:2004, which will still be in use by the 10th month of 2018, is consisted of series of requirements, so-called. clauses in which obligations of organizations are defined in term of meeting the requirements of the stated standard. Clauses of standard ISO 9001:2008 are: 1) Area of application; 2) Connection with other standards; 3) Names, definitions and abbreviation; 4) Quality Management System; 5) Management responsibility; 6) Resources Management; 7) Product realization; 8) Measurement, analysis and improvement (ISO, ISO 9001:2008). When standard ISO 9001 is analysed in the context of Human Resources Management it is necessary to single out certain points of the standard in which the standard can be referred to Human Resources Management.

In the standards clause "Requirements on the documentation" sub-clauses are listed: Policy and goals, Quality Manual, procedures, other documents and records. QEMS Policy according to standards ISO 9001 and ISO 14001 strictly requests that the organization commits to constantly work on improvement and education of human resources. For an example of Quality and Environmental Policy, Management Policy of a consultancy company Top Consult Grupa d.o.o. has been processed. Top Consult Grupa, have stated on their quality policy that their success is based on achieving maximum satisfaction of their users by providing high quality services through engagement, control and rewarding professional and highly motivated consultants and strategic partners. From the previously stated, there is a clear link of Standard ISO 9001 and ISO 14001 with Human Resources Management. In sub-clause "Procedures" standard states 6 basic procedures, which organization must establish. Procedures like Control of documents, control of records or conduction of internal audits are actually clear instructions how to execute a certain job, what at the end makes business easier to companies in cases like sick leave, vacation, and when there are significant staff turnovers. Standard clause 6.2. "Human resources", gives specific requirements to the organization related to Human Resources. Standard requires that the organization defines the plan for education, archives and analyses records of staff training. Through analysis of stated clauses of standard and through example of Management Policy it's obvious that one of the foundations of standard ISO 9001:2008 is function of Human Resources. That's the reason why with the revision of standard in 2008, regarding to other changes, a bigger highlight was given to Human Resources Management

4.4. New elements of standards ISO 9001:2015 and ISO 14001:2015 as a Human Resources Management tool

Basic moto of Standards ISO 9001 and ISO 14001 is the increasing of users satisfaction through operative consistency and continuous improvements (ISO, ISO 9001). There are several reasons for new revision of standards ISO 9001 and ISO 14001. First reason is, since the previous revision of ISO 9001 which was in 2008 and ISO 14001 in 2004, there has been significant global changes. One of the significant changes is that organizations more often deliver services and not physical products. Also it's very important that the standard itself remains guarantee that organizations that have implemented the standard, offer products and/or services which fulfil buyers requirements. Also, standard needs to create foundation for Quality Management for the next 25 years. Emergence of constant requirements for connecting larger number of standards inside the same organization into one integrated system is also one of the reason for compliance with other ISO Standards (BSI[2], 2013.).

[2] BSI - The British Standards Institution (www.bsigroup.com)

In table 1 general display is given about standard ISO 9001 and ISO 14001 changes according to clauses of the standard. Theme of the paper are Human resources and that is the reason why the Clause 7 is highlighted, Resources Management and Knowledge Management.

Table 1: Review of changes in the blueprint of the standard ISO 9001:2015 and ISO 14001:2015

Clause	Clause description	Change description
1	Scope	Significant changes
2	Opening guidelines	-
3	Terms and definitions	-
4	Organizational context	New requirement
5	Leadership and management of the organization	Increased requirements
6	Control of risk Changes Management	Significant changes Increased requirements
7	Resources Management Knowledge Management	Increased requirements New requirement
8	Design and development Outsourcing After-sales services	Simplified requirements Increased requirements Increased requirements
9	Pointers of successfulness	New requirement
10	Continuous improvement	Developed more detail approach

Source: Made by authors

Most significant changes related to Human Resources Management occurred in clause 7, requirements for Resources Management have been increased. On the existing requirements for Resources Management, requirement has been added that organization will define and gather resources necessary for implementation, maintenance and constant management of the Quality Management System.

A completely new requirement in clause 7 is Knowledge Management. New version of standard ISO 9001 defines Knowledge Management in way that seeks from the organization constant management with competencies, awareness and communication and for everything stated requires documented records which wasn't the case previously. More detail description of new requirements related to Human Resources is defined in table 2.

Table 2: Display of new requirements of standard ISO 9001:2015 on the Human Resources Management System

7.2. Competencies	Organization needs to determine competencies of employees that affect the quality of performance of work tasks.
	Organization needs to ensure education and training to employees in order to achieve defined competencies.
	Where it's applicable, organization needs to take actions for acquisition of necessary competencies and evaluate the efficiency of those measures.
	Organization needs to archive and save data and records of capabilities.
7.3. Awareness	Persons who operate under the control of organization need to be aware of: Policy Quality, Relevant Quality goals, Own contribution to improvement of efficiency of the Quality Management System, Nonconformities and deviations from the requirements of the Quality Management System.
7.4. Communication	Organization needs to define own necessary requirements related to internal and external communication in a way that they will define what will they communicate, when and with whom.
7.5. Documentation and records	General requirements – Quality Management Systems must include: documented data that has been defined and required by this standard, documented data that are important for efficiency of the Qualitxy Management System. Scope of the documentation depends on the size and complexity of the organization.
	Creating and updating documentation - Organization must define: standardized way of marking documentation, documentation format, media, procedure for review and approval of suitability and adequacy of the documentation.
	Organization is responsible to control the documentation and records in order to ensure that the documentation is: available and adequate for use, where and when it's necessary, secured from loss, inappropriate use and similar.

Source: Made by Authors according to ISO 9001:2015

5. CONCLUSION

By analysis of the literature of standards ISO 9001:2008 and ISO 14001:2004 and a new version standards ISO 9001:2015 and ISO 14001:2015 a significant connection can be noticed with function of Human Resources. With comparative analysis of standard ISO 9001:2008 and ISO 14001:2004 and new version

ISO 9001:2015 and ISO 14001:2015 it is determined indisputably that the requirements defined in the new version 2015 are more extensive, detailed and more demanding from the previous version of standard. In the new version of ISO 9001 and ISO 14001 structure of process of Human Resources Management points to logical sequence unfolding of process steps, from input requirements of users for competent workers to Career Management and final actions in process, requirements on those processes have been significantly increased. Analysis points that QEMS is a significant process step and without that there isn't Human resources Management. Like that, an organization with an implemented standard ISO 9001 and ISO 14001 has the possibility to use requirements of the standard, and the experience of the consultants during the implementation of the system, with the goal of establishing Human Resources Management System. Results of the research have confirmed the basic hypothesis, that is, that the new version of standards ISO 9001:2015 and ISO 14001:2015 has a greater influence on the process of Human Resources Management than the previous version ISO 9001:2008 and ISO 14001:2004. With this paper authors have achieved both set goals, that is they have determined that standard ISO 9001:2008 and ISO 14001:2004 defines requirements on the structure of process of Human Resources Management, and adds additional importance to Career Management System inside that process. Also, the authors have determined that the new version of standards ISO 9001 and ISO 14001 has increased requirements on the Human Resources Management System.

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