Varazdin Development and Entrepreneurship Agency
in cooperation with
Victoria University, Melbourne Australia
University North, Croatia
Faculty of Management University of Warsaw, Poland

Economic and Social Development

19th International Scientific Conference on Economic and Social Development

Editors:
Goran Kozina, Laura Juznik Rotar, Daniel Tomic

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CONTENTS

Ajit Upadhyaya, Rajeev K Shukla, Anadi Upadhyaya ■ GENDER EFFECT ON CONSUMER SUSCEPTIBILITY TO REFERENCE GROUP INFLUENCE 1

Fawad Khan ■ GLOBAL LEADERSHIP STUDY IN EMERGING MARKET - SURVEY OF BUSINESS LEADERS OF PAKISTAN 9

Robert Svetlacic, Dinko Primorac, Goran Kozina ■ SUSTAINABLE DEVELOPMENT - NEW RESOURCE FOR ENTREPRENEURSHIP IN THE GLOBAL MARKET 14

Fransiskus X. Lara Aba ■ EFFECT OF INCOME, POPULATION, GOVERNMENT SPENDING, EXPORT GOODS AND SERVICES OF REGIONAL ECONOMIC SECTOR IN INDONESIA 27

Ines Medic ■ SIGNIFICANCE OF MANDATORY RULES IN INTERNATIONAL COMMERCIAL ARBITRATION 38

Koorosh Gharehbaghi, Christina Scott-Young, Amrit Sagoo ■ INVENTIVE HIGHER EDUCATION: A BLENDING PASSAGE 47

Miroslaw Przygoda ■ THE ROLE AND IMPORTANCE OF AUSTRALIA IN THE SOUTH PACIFIC REGION 54

Samson Davoyan, Ashot Davoyan, Arpine Sargsyan ■ THE CONCEPT OF THE RULE OF LAW AND ITS ASSESSMENT THROUGH INTEGRAL INDEX 65

Martina Sopta, Anamaria Komin ■ OPERATIONAL ANALYSIS OF COMPANY COSTS 74

Oto Hudec ■ SMART COMMUNITIES AND SOCIAL INNOVATORS 94

Anona F. Armstrong, Ronald D. Francis, Heath S. Grow ■ ETHICAL ISSUES IN THE EMPLOYMENT OF EXPATRIATE LEADERS IN CORPORATIONS 95

Natasa Urbancikova ■ CROSS BORDER CLUSTER INITIATIVES FOR ECONOMIC DEVELOPMENT SUPPORT 104

Baburam Niraula ■ EFFECT OF EMIGRATION ON WAGE EARNINGS IN NEPAL 105

Bitra Suyatno, Anona F. Armstrong, Keith Thomas ■ BARRIERS TO WHISTLEBLOWING INTENTIONS AND REPORTING CHANNEL PREFERENCES 115

Petar Kurecic, Goran Kozina, Filip Kokotovic ■ REVISITING THE DEFINITION OF SMALL STATE THROUGH THE USE OF RELATIONAL AND QUANTITATIVE CRITERIA 129

Martina Sopta, Ivana Tonkovic ■ MANAGEMENT APPROACH TO THE ANALYSIS AND THE FORECASTING OF DEMAND IN THE HOME SAVINGS 143

Zahra Khodaee ■ THE IMPACT OF INFORMATION TECHNOLOGY (IT) IN HUMAN RESOURCE MANAGEMENT 165

Hong-Bae Kim ■ THE PORTFOLIO MANAGEMENT WITH ISLAM EQUITY IN KOREA STOCK MARKET 171

Alexandra Mittelman, Boris Mucha, Tomas Peracek ■ SECURITIES AND ITS THEORETIC – LEGAL FORMULATION NOT ONLY IN THE CONDITIONS OF THE SLOVAK REPUBLIC 182

Matija Blace, Anita Grubisic ■ CROWDFUNDING IN CHINA – DEVELOPMENT PERSPECTIVES 188

Bodo Herzog ■ MODELLING OF THE POLITICAL BUDGET CYCLE AND THE IMPACT OF TRANSPARENCY 197

Martina Sopta, Ante Slavica ■ IMPORTANCE OF COST FUNCTION IN BUSINESS DECISION MAKING 208

Ogbuagu Matthew Ikechukwu ■ BOUND-TESTING ANALYSIS OF THE TRADE-OFF BETWEEN UNEMPLOYMENT AND ECONOMIC GROWTH IN NIGERIA (1970-2014) 226

Melita Kozina ■ QUALITY IMPROVEMENT IN PRACTICE OF IT SERVICE MANAGEMENT 231

Christy Ann Jose ■ EFFECT OF INTRODUCTION OF RELIANCE JIO ON THE COMPETITION ENVIRONMENT IN THE TELECOMMUNICATION BUSINESS IN INDIA 241

Dora Naletina, Eva Perkov ■ THE ECONOMIC IMPORTANCE OF MARITIME SHIPPING WITH SPECIAL REFERENCE ON CROATIA 248

Violeta Vidacek-Hains, Ana Marija Staba ■ EDUCATION AND EMPLOYMENT FOR STUDENTS FROM UNDER-REPRESENTED GROUPS SUPPORTED WITH INFORMATION AND COMMUNICATION TECHNOLOGY 258

Natalia Nehrebecka, Aneta Dzik-Walczak ■ COLLATERAL AND BANK CREDIT – A PUZZLE 268

Blanka Simundic ■ THE SOCIO-ECONOMIC DETERMINANTS OF TOURISM DEMAND: THE CASE OF PUSH FACTORS IN AN EMITIVE REGION 291

Tihana Poljak, Ruben Picek ■ MANAGING EMPLOYEES WORK EFFICIENCY WITHIN ERP SYSTEM IN CROATIAN COMPANIES 301

Dimity Peter, Gillian Macnaughton ■ SOCIAL INCLUSION: A KEY TO EFFECTIVE AND EQUITABLE SOCIAL DEVELOPMENT 311

Meghna Thapar, Arjun Sharma ■ CORPORATE GOVERNANCE IN INDIA: AN ANALYSIS 312

Ching-Yuan Huang, Rhay-Hung Weng ■ NEGATIVE MENTORING EXPERIENCE QUESTIONNAIRE DESIGN AND TESTING 318

Doureige Jurdi, Hayat Khan, Rabie Said ■ FINANCIAL LIBERALIZATION AND STOCK MARKET DEVELOPMENT IN THE MENA REGION 325

Vlatka Bilas, Mile Bosnjak, Ivan Novak ■ MERCHANDISE EXPORTS AND RELATIVE LABOUR PRODUCTIVITY IN THE REPUBLIC OF CROATIA 326

Kumudini Heenetigala, Anona F. Armstrong ■ CREDIBILITY OF SUSTAINABILITY REPORTS OF MINING SECTOR COMPANIES IN AUSTRALIA: AN INVESTIGATION OF EXTERNAL ASSURANCE 335

Karim Mh (Karim Koshteh), Karim Mohammad Elyas, Shakeri Fakher Samira, Arabi Hossein (Adib) ■ STRATEGIC PLANNING FOR SUSTAINABLE TOURISM DEVELOPMENT IN CENTRAL ZAGROS MOUNTAINS 351

Petar Kurecic, Marin Milkovic, Filip Kokotovic ■ AN INTRODUCTION TO EMPIRIC APPROACH TO THE RESOURCE CURSE PHENOMENON IN SMALL ISLAND DEVELOPING STATES (SIDS) 362

Tomasz Ochinowski ■ CHARACTER STRENGTHS AS A TOOL OF RESILIENCE-ORIENTED VOCATIONAL TRAINING FOR MANAGERIAL STAFF IN A LIFE-LONG LEARNING PERSPECTIVE 371

Chittawan Chanagul ■ FACTORS DETERMINING SUICIDE RATES IN THAILAND 378

Mohd Syuhaidi Bin Abu Bakar, Jusang Bin Bolong ■ MEDIATING ROLES OF GRATIFICATION TOWARDS RELATIONSHIPS BETWEEN EXPECTATION AND CONTINUANCE INTENTION TO USE YOUTUBE TO WATCH MOVIES 384

Alexandra Mittelman, Boris Mucha, Tomas Peracek ■ SECURITIES AND ITS CHARACTERS AS THE PART OF THE CAPITAL MARKET OF THE SLOVAK REPUBLIC 393

Jasmina Grzinic, Zdravko Sergo, Tamara Floricic ■ MODELLING WEALTH EFFECT AND DEMAND FOR TOURISM DEPARTURE IN EUROPE: A PANEL DATA APPROACH 399

Hoda Zobeiri, Narges Akbarpour Roshan, Milad Shahrazi ■ CAPITAL FLIGHT AND ECONOMIC GROWTH IN IRAN 409

Vivek Panwar, Ganesh Kumar Nidugala ■ INDIAN STOCK MARKET REACTION TO INTEREST RATE AND INFLATION ANNOUNCEMENTS 424

Randa I. Sharafeddine ■ GOOD GOVERNANCE AND ECONOMIC REFORMS FOR ENTREPRENEURIAL ACTIVITY 435

GENDER EFFECT ON CONSUMER SUSCEPTIBILITY TO REFERENCE GROUP INFLUENCE

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ABSTRACT

Male and female working professional consumers significantly differ in their responses as far as information influence is considered in their susceptibility to reference groups. But they were of similar opinion on that they seek information from an association of professional or independent group of experts. Male and female working professionals' consumers were not significantly different in their responses as far as utilitarian influence was considered in their susceptibility to reference groups. Only significant difference of opinion found in whether brand purchase influenced by fellow work associate preferences. Male and female working professionals' consumers were significantly different in their responses as far as Value Expressive Influence was considered.

Keywords: *Consumer Susceptibility, Reference Group, Information Influence, Utility Influence and Value Expressive Influence*

1. INTRODUCTION

The reference group effects will be stronger for individuals with different characteristics by their susceptibility to interpersonal influence (McGuire, 1968). Merton and Rossi (1949) described about reference groups and its definitions are also found in review (Park andLessig, 1977; Escalas and Bettman, 2005; Zamborainet al, 2007). Though reference groups influence upon product purchase and brand decisions for different stages and classes available abundantly (Bearden and Etzel, 1982; Childers and Rao, 1992; Elliott and Leonard, 2004). Park and Lessig (1977) defined reference group as "an actual or imaginary individual or group conceived of having significant relevance upon an individual's evaluations, aspirations, or behavior". Hyman (1942) was the first author to write about the concept of reference groups

Bearden et al (1989) pointed about the need for enhancing image in others' opinion by acquiring and using products and brands in conformance to the others' expectations regarding purchase decisions, and by learning tendency about products and services by observation and information seeking. Roccas and Brewer (2002) pertained susceptibility to information to individual values like conservatism, universalism, openness and power. Some researchers also discussed consumer susceptibility to normative influence (Batra, 2001) and individual values (Kahle, 1996). In society many people are influenced by others (e.g. Merton & Rossi; 1949). In a consumer behavior point of view, the influence up on an individual's consumer decision making

behavior by groups that consist of friends, relatives, family, colleagues and seniors is known as reference group (Bearden & Etzel, 1982; Childers & Rao, 1992; Yang & Allenby, 2003). Students financial conditions are relatively weak in society (Kidwell &Turrisi, 2004), and they are strongly susceptible to reference group influence (Park &Lessig, 1977).

In literature different subtypes also figured like positive and negative reference groups (White & Dahl, 2006). A positive reference group i.e. also known as associative reference group is further classified as member groups and aspiration groups. Member group is that group, to which an individual belonged presently and aspiration groups, where an individual aspires to belong to (Turner, 1991; White & Dahl, 2006). A negative reference group is also known as dissociative reference group (Turner, 1991; Englis & Solomon, 1995 and White & Dahl, 2006).

Childers & Rao(1992) suggested the existence of other sub types of reference groups - comparative groups and normative groups. Comparative reference groups relate to standards for self-assessment, and normative groups relate to personal values, norms and attitudes (Bearden & Etzel, 1982). Informational influence first conceptualized by Deutsch and Gerard (1955) and Park and Lessig (1977). Deutsch and Gerard (1955) discussed utilitarian influence as compliance with the expectations and preferences of another individual or group. Persons also found the utility relevance to meet the expectations of other important groups (Park & Lessig, 1977; Bearden & Etzel, 1982). Individuals have a motive to support and enhance their self-concept by associating with positive referents and dissociating with negative referents (Kelman, 1961, Park &Lessig, 1977). Consistency between self-expression and the psychological image to be obtained and related to reference groups should exist (Park &Lessig, 1977; Bearden &Etzel, 1982). So conformance to the expectations of others for a desired image is important and do not conflict with self-expression (Bearden, Netemeyer & Teel, 1989; Clark & Goldsmith, 2006). Students developed a strong self-identity versus brand relationship (Escalas & Bettman, 2003). Age, inexperience and social contacts make students more susceptible and responsive to reference group (Deutsch & Gerard, 1955; Hochbaum, 1954; Park &Lessig, 1977).

2. OBJECTIVE OF THE STUDY

1) To study consumers susceptibility to reference group influence with special reference to working professionals.

3. RESEARCH METHODOLOGY

The Study : The study is descriptive in nature and based on primary data.

Sample : The sample size targeted was 250. After data collection 42 questionnaires were found not adequately filled out by respondents therefore 208 respondents considered for study. The sample was collected using non probabilistic convenience sampling method. The male and female working professionals of Indore city was taken as sample unit.

Tools for data collection: Structured and Tested Marketing Scale of Park and Lessing (1977) used for Data Collection. The scale was on Consumer Susceptibility to reference Group Influence. Questionnaire was used to collect data on four points scale (1= Not relevant, 2= Low relevant, 3= Medium relevant and 4= high relevant).

Tools for data analysis: The collected data was analyzed using Independents Sample t-test, means and standard deviation.

4. HYPOTHESES

$H_{0(1)}$:- There is no significant difference in male and female working professionals Consumers susceptibility for Information Influence of reference group.

$H_{0(1.1)}$ There is no significant difference in male and female working professionals Consumers susceptibility towards Information influence of group of experts

$H_{0(1.2)}$ There is no significant difference in male and female working professionals Consumers susceptibility towards Information influence of brand professional executives.

$H_{0(1.3)}$ There is no significant difference in male and female working professionals Consumers susceptibility towards Information influence of neighbors, friends and relatives

$H_{0(1.4)}$ There is no significant difference in male and female working professionals Consumers susceptibility towards Information and approval influence of independent testing agencies

$H_{0(1.5)}$ There is no significant difference in male and female working professionals Consumers susceptibility towards Personal observational influence

$H_{0(2)}$:- There is no significant difference in male and female working professionals Consumers susceptibility for Utilitarian Influence of reference group.

$H_{0(2.1)}$ There is no significant difference in male and female working professionals Consumers susceptibility towards Influence of fellow associates expectations

$H_{0(2.2)}$ There is no significant difference in male and female working professionals Consumers susceptibility towards Influence of social interaction

$H_{0(2.3)}$ There is no significant difference in male and female working professionals Consumers susceptibility for Family influence

$H_{0(2.4)}$ There is no significant difference in male and female working professionals Consumers susceptibility towards Influence of desire to satisfy others expectations

$H_{0(3)}$:- There is no significant difference in male and female working professionals Consumers susceptibility for Value expressive Influence of reference group.

$H_{0(3.1)}$ There is no significant difference in male and female working professionals Consumers susceptibility towards Image enhancement influence

$H_{0(3.2)}$ There is no significant difference in male and female working professionals Consumers susceptibility towards Influence of desired characteristics

$H_{0(3.3)}$ There is no significant difference in male and female working professionals Consumers susceptibility towards Influence of feeling with a character shown in the advertisements

$H_{0(3.4)}$ There is no significant difference in male and female working professionals Consumers susceptibility towards Social approval influence

$H_{0(3.5)}$ There is no significant difference in male and female working professionals Consumers susceptibility towards self projection influence

5. RESULTS AND DISCUSSION

Reliability of scale was tested. Alpha value was found 0.86.

It is exhibited in Table 2 that male and female working professionals' consumers susceptibility did not differ significantly towards Information influence of group of experts. Hypothesis $H_{0(1.1)}$ not rejected. However, female working professionals were more susceptible towards information influence of group of experts.

The study further revealed significant difference in male and female working professionals' consumers susceptibility towards information influence of brand professional executives, information influence of neighbors, friends and relatives and approval influence of independent testing agencies. Hypotheses $H_{0(1.2)}$, $H_{0(1.3)}$ and $H_{0(1.4)}$ were rejected. It is shown in Table 1 that male working professionals consumers were more susceptible towards information influence of brand professional executives. Whereas, female working professionals consumers were more susceptible towards information influence of neighbors, friends and relatives and approval influence of independent testing agencies. It was also observed that male and female working professionals consumers susceptibility had no significant influence of personal observation and Hypothesis $H_{0(1.5)}$ not rejected. Deutsch and Gerard (1955) and Park and Lessig (1977) were also observed similar consumer susceptibility towards information influence of reference groups.

Male and female working professionals consumers' susceptibility differ significantly towards influence of fellow associates expectations in brand purchase. Hypothesis $H_{0(2.1)}$ rejected (Table 4). male working professionals consumers were more susceptible than female working professionals consumers towards influence of fellow associates expectations in brand purchase (Table 3). Moreover, there was no significant difference found in male and female working professionals consumers susceptibility towards influence of social interaction, family and desire to satisfy others expectations. Hypotheses $H_{0(2.2)}$, $H_{0(2.3)}$ and $H_{0(2.4)}$ were not rejected.Findings of the present study in relation to consumer susceptibility towards utilitarian influence were medium relevant. Whereas, Deutsch and Gerard (1955) found utilitarian influence as compliance with the expectations and preferences of another individual or group. Park & Lessig, (1977), Bearden & Etzel (1982) also found the utility relevance to meet the expectations of other important groups.

Significant difference found in male and female working professionals consumers' susceptibility towards influence of Image enhancement, Social approval and Self projection. Hypotheses $H_{0(3.1)}$, $H_{0(3.4)}$ and $H_{0(3.5)}$ were rejected (Table 6). Whereas, no significant difference found in male and female working professionals consumers' susceptibility towards influence of desired characteristics and feeling with a character shown in the advertisements. Hypotheses $H_{0(3.2)}$, and $H_{0(3.3)}$ were not rejected. Female working professionals' students were more susceptible to image value they related to their brand purchase. However, male working professionals consumers were more susceptible to influence of social approval and self projection (Table5).

Escalas and Bettman (2003) also found that students developed a strong self-identity versus brand relationship. This is also confirmed by the present study. Bearden et al. (1989) and Clark & Goldsmith, (2006) observed conformance to the expectations of others for a desired image is important and do not conflict with self-expression. But in present study female working professionals were more susceptible to image value and under-graduate consumers towards self projection.

6. CONCLUSION

Male and female working professionals consumers significantly differ in their responses as far as information influence is considered in their susceptibility to reference groups. But they were of similar opinion on that they seek information from an association of professional or independent group of experts. This findings also confirmed Informational influence as a major reference group dimension as also figured in the previous study of Deutsch and Gerard (1955) and Park and Lessig (1977). Female working professionals' consumers were more susceptibility to reference groups as far as information influence is considered.

Male and female working professionals consumers were not significantly different in their responses as far as utilitarian influence was considered in their susceptibility to reference

groups. Only significant difference of opinion found in whether brand purchase influenced by fellow work associate preferences. This findings also confirmed the previous findings that colleagues and seniors have a strong reference group influence (Bearden & Etzel, 1982; Childers & Rao, 1992; Yang & Allenby, 2003) and here male working professionals were more susceptible than female working professionals.

Male and female working professionals consumers were significantly different in their responses as far as Value Expressive Influence was considered. The result were contrary to the previous impact of aspirational group belonging (Escalas & Bettman, 2003; White & Dahl, 2006).

LITERATURE:

1. Batra, R., & Homer, &Kahle, L.R. (2001). Values, Susceptibility to Normative Influence, and Attribute Importance Weights: A Nomological Analysis. *Journal of ConsumerPsychology*, 11(2), 115-128.
2. Bearden, W. O., &Etzel, M. J. (1982). Reference group influence on product and brand purchase decisions. *Journal of Consumer Research*, Vol. 9, 183-194.
3. Bearden, W. O., Netemeyer, R. G., & Teel, J. E. (1989). Measurement of consumer susceptibility to interpersonal influence. *Journal of Consumer Research*, Vol. 15, 473-481.
4. Bearden,Netemeyer, R.G., & Teel, J.E. (1989). Measurement of Consumer Susceptibility toInterpersonal Influence. *Journal of Consumer Research*, 15, 473-481.
5. Childers, T. L., & Rao, A. R. (1992). The influence of familial and peer-based reference groups on consumer decisions. *Journal of Consumer Research*, Vol. 19, 198-211.
6. Clark, R. A., & Goldsmith, R. E. (2006). Global innovativeness and consumer susceptibility to interpersonal influence. *Journal of Marketing Theory and Practice*, Vol. 14, 275-285.
7. Deutsch, M., & Gerard, H. B. (1955). A study of normative and informational social influences upon individual judgment. *Journal of Abnormal and Social Psychology*, Vol. 51, 624-636.
8. Elliott, R., & Leonard, C. (2004). Peer pressure and poverty: Exploring fashion brands and consumption symbolism among children of the „British Poor‟. *Journal of Consumer Behavior*, Vol. 3, 347-359.
9. Escalas, J.E., &Bettman, J. R. (2003). You are what they eat: The influence of reference groups on consumers‟ connections to brands. *Journal of Consumer Psychology*, Vol. 13, 339–348.
10. Hochbaum, G. M. (1954). The relation between group members' self-confidence and their reactions to group pressures to uniformity. *American Sociological Review*, Vol. 19, 678-687.
11. Hyman, H. H. (1942). The psychology of status. *Archives of Psychology*, Vol. 269, 5-91.
12. Hyman, H. H. (1942). The psychology of status. *Archives of Psychology*, Vol. 269, 5-91.
13. Kahle, L.R. (1996). Social Values and Consumer Behavior: Research from the List of Values. In
14. Kelman, H. C. (1961). Processes of opinion change. *Public Opinion Quarterly*, Vol. 25, 57-78.
15. Kelman, H. C. (1961). Processes of opinion change. *Public Opinion Quarterly*, Vol. 25, 57-78.
16. Kidwell, B., &Turrisi, R. (2004). An examination of college student money management tendencies. *Journal of Economic Psychology*, Vol. 25, 601-616.
17. Kidwell, B., &Turrisi, R. (2004). An examination of college student money management tendencies. *Journal of Economic Psychology*, Vol. 25, 601-616.

18. McGuire, W.J. (1968). Personality and Susceptibility to Social Influence. in *Handbook ofPersonality Theory and Research*, Eds. Borgetta, E.F., & Lambert, W.W. , RandMcNally, 1130-1187, Chicago.
19. Merton, R. K., & Rossi, A. K. (1949). Contributions to the theory of reference group behavior. *Social Theory and Social Structure*, New York: Free Press, 225-275.
20. Park, C. W., &Lessig, V. P. (1977). Students and housewives: Differences in susceptibility to reference group influence. *Journal of Consumer Research*, Vol. 4, 102-110.
21. Roccas, S., & Brewer, M.B. (2002). Social Identity Complexity. *Personality and SocialPsychology Review*, 6(2), 88-106.
22. Seligman, C., Olson, J.M., &Zanna, M.P. (Eds), *The Psychology of Values: The Ontario*
23. *Symposium*, Vol.8, Mahwah, NJ, Lawrence Erlbaum Associates, 135-151.
24. Turner, J. C. (1991). *Social influence.* Buckingham, UK: Open University Press.
25. White, K., & Dahl, D. W. (2006). To be or not be? The influence of dissociative reference groups on consumer preferences. *Journal of Consumer Psychology*, Vol. 16, 404-414.
26. Yang, S., & Allenby, G. M.(2003). Modeling interdependent consumer preferences. *Journal of Marketing Research*, Vol. 40, 282–294.
27. Zemborain, M. R., & VenkataramaniJohar, G. (2007). Attitudinal ambivalence and openness to persuasion: A framework for interpersonal influence. *Journal of Consumer Research*, Vol. 33, 506-514.

APPENDIX

Table : 01 Mean and Standard Deviation for information influence

	VARIABLES	N	Mean	Std. Deviation
VAR00001	Male	140	2.90	.843
	Female	168	3.04	.748
VAR00002	Male	140	3.41	.671
	Female	168	2.69	.902
VAR00003	Male	140	2.69	.738
	Female	168	3.09	.858
VAR00004	Male	140	2.45	.887
	Female	168	2.79	.842
VAR00005	Male	140	2.78	.740
	Female	168	2.97	.916

Table:02 Independent Samples T Test for Information Influence

	t	df	Sig. (2-tailed)
VAR00001	-1.471	304	.142
VAR00002	6.997	304	.000
VAR00003	-3.900	304	.000
VAR00004	-3.236	304	.001
VAR00005	-1.848	304	.056

Table : 3 Mean and Standard for Utilitarian Influence

	VARIBLES	N	Mean	Std. Deviation
VAR00006	Male	140	3.1800	.65721
	Female	168	2.9223	.67988
VAR00007	Male	140	2.6600	.97670
	Female	168	2.7864	.92289
VAR00008	Male	140	2.4000	.80403
	Female	168	2.4757	1.03448
VAR00009	Male	140	2.5000	1.19342
	Female	168	2.5825	.86700

Table:04 Independent Samples T Test for Utilitarian Influence

	t	df	Sig. (2-tailed)
VAR00006	3.143	304	.002
VAR00007	-1.102	304	.271
VAR00008	-.644	304	.520
VAR00009	-.687	304	.492

Table : 5 Mean and Standard for Value Expressive Influence

VARIABLES		N	Mean	Std. Deviation
VAR00010	Male	140	2.8800	.81995
	Female	168	3.1058	.88921
VAR00011	Male	140	2.7400	.74698
	Female	168	2.7212	.97759
VAR00012	Male	140	2.4600	1.12295
	Female	168	2.4808	.90068
VAR00013	Male	140	3.1000	.75879
	Female	168	2.6923	.92289
VAR00014	Male	140	3.0400	.92025
	Female	168	2.5481	1.09350

Table: 06 Independent Samples T Test for Value Expressive Influence

	t	df	Sig. (2-tailed)
VAR00010	-2.139	306	.033
VAR00011	.170	306	.865
VAR00012	-.174	306	.862
VAR00013	3.837	306	.000
VAR00014	3.885	306	.000

GLOBAL LEADERSHIP STUDY IN EMERGING MARKET - SURVEY OF BUSINESS LEADERS OF PAKISTAN

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Abstract
The purpose of this exploratory research is to survey senior executives to explore the strategic issues and leadership challenges facing international organizations. This topic has rarely been addressed by the academicians and researchers in Pakistan. Detailed open ended interview were conducted with several business leaders and multinational companies' senior managers in Karachi, Pakistan. The aim of this research was to present challenges faced by leaders and also to share advice they would give to other regional leaders in the world. The result suggested that successful leadership qualities are vision, change and recognition identified by leaders in Pakistan.
Keywords: *Vision, Mindset, Global Leadership, Change Management*

1. INTRODUCTION

By far, the global leadership studies are primarily carried in developed countries, with a focus on how leaders of multinational companies from developed countries run their business successfully globally. As the world economic growth shifts towards the emerging markets, it is important to understand how leaders from these markets take their business globally and what global leadership means for them. Such understanding would not only benefit the growth of business from emerging markets, but also developed markets, and hence the recovery and prosperity of the world economy. This study will provide a detailed discussion on the topic of Global leadership, its impact on the organizations and governments in the emerging markets and also insights from leaders in the emerging markets (Osland, et al., 2014).

2. LITERATURE REVIEW

Global Leadership is a key issue and has been identified more than any other option as a key factor for global success. It is important to see that growing number of people and organizations value they need more understanding about this area. Despite encouraging growth, the field of global leadership still suffers from a degree of confusion and lack of clarity (Osland, et al., 2014). As early as 2001, Adler tackled this issue by distinguishing global leadership from both domestic leadership and comparative leadership: Global leaders, unlike domestic leaders, address people worldwide. Global leadership theory, unlike its domestic counterpart is concerned with the interaction of people and ideas among cultures rather than with either the efficacy of particular leadership styles within the leader's home country or with the comparison of leadership approaches among leaders from various countries. A fundamental distinction is that global leadership is neither domestic nor multi domestic (Adler, 2001).

Global leaders are effective if they and their followers both interact and adapt, according to the dictates of the context and the organizational culture (Osland, et al., 2014). In order to be an effective global leader, expatriate experience is still viewed as one of the best ways to develop global leadership competencies (Black, Morrison, & Gregersen, 1999; Caligiuri & Tarique, 2012; McCall & Hollenbeck, 2002). This definition is applicable to those people who are involved in bringing change by interacting with people from several cultures and also involved

in a very complex job. It is important to develop a theoretical model for performance and outcome measure for effective global leader. Also, develop key concepts and devise an assessment instrument for selection and recruitment of global leader.

Global leaders' integrity and how they should treat people is important as part of ethics. A proven methodology for developing socially responsible global leaders is explained in Maak, Pless, and Borecka´ (2014). There is an ongoing, critical need to distinguish between the roles and behaviors of global managers and global leaders and to distinguish between domestic leaders and global leaders. This would allow the field to generate a cumulative and focused body of knowledge across different studies and avoid possible fragmentation in a rapidly growing literature (Reiche, Bird, Mendenhall, & Osland, 2014). To date, however, there have been few behavioral studies in global leadership research and no observational studies of global leaders in action. Research on the global leadership effectiveness is extremely limited and requires more foundational research to identify background, performance measures, and events that impact performance (Osland, et al., 2014).

Common characteristics taught in traditional educational environments are insufficient for global leader, but more importantly, it is important for a global leader to be of sound character (Brownell, & Goldsmith, (2006). Creating opportunities and solving them requires intelligence and a global mindset in order for companies to be successful and organizations are run by leaders, so they need to be prepared to have a global mindset (Gupta, & Govindarajan, 2002). In a cross cultural environment leader must face and overcome challenges by developing a verbal and non-verbal effective communication in a cross cultural environment (Lobel, 1990). Besides the knowledge and skills that global leaders need they can learn to be effective as part of a global team by developing the process of mapping, bridging and integrating (Maznevski, & Distefano, 2000). An effective global leadership competency model includes that a leader must be stable, knowledgeable, relevantly named and must fit with the local conditions in terms of culture and affiliation because they will have an impact and affect global leader (Morrison, 2000). It has also been proposed that for the development of global leadership skills, executives must take international business travel for the development of global mindset (Oddou, Mendenhall, & Ritchie, 2000). Another interesting development that has taken place involved sending selected participants in developing countries to increase their international learning experience while abroad and it was found that participants learning were increased in six areas comprising: responsible mindset, global mindset, cultural intelligence, self-development and community building (Pless, Maak, & Stahl, 2011).

Themes of Leadership

1. Openness and Networking
2. Developing relationships with clients
3. Flexible communication skills and Listening
4. Patience

3. METHODOLOGY AND ANALYSIS

Methods: Interviews were conducted with selective business leaders of trading, export and corporate business leaders in Karachi, Pakistan. There were 25 male and 5 female leaders in total. 83% were male leaders and almost all associated leadership with male leader. Interviews were semi structured to allow open ended responses. 60% of interviews were conducted face-to-face while the remaining conducted on the phone. All the interviews were conducted in English which is the official business language in Pakistan. Questions included currents trends in leadership, challenges and mindset required by leaders in emerging economies. The result provides informative data for further improvement in the field of global leadership.

Question 1: What are the three most essential aspects of successful leadership?
The business leaders who participated in this survey pointed that setting direction for the team in the organization is the most essential aspect for successful leadership followed by setting focus for people, meaning guiding them to individual and organizational success. The other important aspect mentioned by the executives was to be flexible in decisions and not being selfish.

Question 2: What are the most significant leadership challenges in your industry, in Pakistan, today?
The biggest challenge is finding the talent with leadership qualities, followed by Human Resource development and leadership grooming challenges faced by the industry in Pakistan. Future is Pakistan is not bright and this creates a gloomy prospect for finding the right leaders to make a meaningful difference in industrial setup in Pakistan.

Question 3: What are the biggest leadership limitations in your part of the organization?
A lot of blocking factors have been identified as limitations. First, it takes a lot of time to develop as a leader in a bureaucratic setup system in Pakistan. Second, is the mindset of people with a less risky approach in implementing things, which could be attributed to culture of Pakistan. People are not groomed properly, leaving a black hole in the field of leadership at the top level.

Question 4: To what extent are you personally involved in leadership development in your part of the organization?
Almost 90% responded that they are involved in leadership development in their organization. The biggest challenge is to understand the individual capability and direction for future.

Question 5: Most essential aspects of successful leadership
The most essential aspect for successful leadership is to lead in times of difficulty and complexity and Pakistani market is the perfect place to train and develop leadership talent, which was surprising to hear.

Question 6: What will be of most importance for good leadership in your part of the world in the next 3–5 years?
According to respondents, it is important for the leader to be strategic in his or her leadership skills by taking into account global trends and strengths. Second, he must be capable in building quality team culture and be innovative.

Question 7: What are the most impactful development activities in your country?
The leaders identified challenging projects and assignments as the most impactful development activity in Pakistan.

Question 8: What leadership development in your part of the world has been the least satisfactory?
The result from the market leaders identified that lecture based training is the least satisfactory form of development recognized by professionals in Pakistan. The second was classroom based teaching as it might be too intimidating or embarrassing for the professionals to attend.

Question 9: What is the level of demand for global leaders in your organization?
Without any reservation from the leaders, all have agreed that there is a great demand for global leaders in their respective organizations.

Question 10: What are the most difficult challenges for leaders with global assignments?
Pay has been the biggest challenge for leaders with global assignment because they are highly skilled and valued and expect extraordinary remuneration related to their position and role.

4. CONCLUSION

The combination of the feedback given by business executives, heads of Human Resources, Educational Institutes and experienced practitioners of multinational organisations operating in Pakistan, the respondents' contribution in this study will form a significant contribution in understanding current problems in global leadership and also some of the challenges facing global organisations and most importantly the mind-set required by leaders in emerging economies. In the end the present research is intended to make contribution on global leadership in emerging economies.

LITERATURE:

1. Allen, D., & Young, M. (1997), "From tour guide to teacher: Deepening cross-cultural competence through international experience-based education", *Journal of Management Education, 21*: 168-189.
2. Barzantny, C. (2013), "Global Leadership: Research, Practice, and Development", *Academy of Management Learning & Education, 12*: 530-532.
3. Brennan, R. (2014), "Reflecting on experiential learning in marketing education", *Marketing Review, 14*: 97-108.
4. Brownell, J., & Goldsmith, M. (2006), "Meeting the competency needs of global leaders: A partnership approach Commentary on meeting the competency needs of global leaders: A partnership approach: An executive coach's perspective", *Human Resource Management, 45*: 309-336.
5. Caligiuri, P. (2006), "Developing global leaders", *Human Resource Management Review, 16*: 219-228.
6. Caligiuri, P., & Santo, V. D. (2001), ''Global competence: What is it, and can it be developed through global assignments?", *Human Resource Planning, 24*: 27-35.
7. Caligiuri, P., & Tarique, I. (2012), "Dynamic cross-cultural competencies and global leadership effectiveness", *Journal of World Business, 47*: 612-622.
8. Dorfman, P., Javidan, M., Hanges, P., Dastmalchian, A., & House, R. (2012), "GLOBE: A twenty year journey into the intriguing world of culture and leadership", *Journal of World Business, 47*: 504-518.
9. Furnham, A., G. Dissou, et al. (2007). "Personality and Intelligence in Business People: A Study of Two Personality and Two Intelligence Measures", Journal of business and Psychology **22**(1): 99-109.
10. Gupta, A. K., & Govindarajan, V. (2002), "Cultivating a global mindset", *Academy of Management Executive, 16*: 116-126.
11. Javidan, M., Dorfman, P. W., De Luque, M. S., & House, R. J. (2006), ''In the Eye of the Beholder: Cross Cultural Lessons in Leadership from Project GLOBE", *Academy of Management Perspectives, 20*: 67-90.
12. Joy, S., & Kolb, D. A. (2009), "Are there cultural differences in learning style?", *International Journal of Intercultural Relations, 33*: 69-85.
13. Kolb, A. Y., & Kolb, D. A. (2005), "Learning styles and learning spaces: Enhancing experiential learning in higher education", *Academy of Management Learning & Education, 4*: 193-212.
14. Kolb, D. A. (1984), "*Experiential learning: Experience as the resource of learning and development*", Englewood Cliffs, NJ: Prentice Hall.

15. Li, M., Mobley, W. H., & Kelly, A. (2013), "When do global leaders learn best to develop cultural intelligence? An investigation of the moderating role of experiential learning style", *Academy of Management Learning & Education, 12*: 32-50.
16. Lobel, S. A. (1990), "Global Leadership Competencies: Managing to a Different Drumbeat", *Human Resource Management, 29*: 39-47.
17. Mack, N. et al. (2005), "Qualitative research methods: a data collector's field guide", Family Health International. 120p.
18. Maznevski, M. L., & Distefano, J. J. (2000), "Global leaders are team players: Developing global leaders through membership on global teams", *Human Resource Management, 39*: 195-208.
19. McCall, J. M. W., & Hollenbeck, G. P. (2002), "*Developing Global Executives - The Lessons of International Experience*", Boston, MA: Harvard Business School Press.
20. Mendenhall, M. E., Reiche, B. S., Bird, A., & Osland, J. S. (2012), "Defining the "global" in global leadership", *Journal of World Business, 47*: 493-503.
21. Morrison, A. J. (2000), "Developing a global leadership model", *Human Resource Management, 39*: 117-131.
22. Moyer, P. S. (2001), "Are we having fun yet? How teachers use manipulation to teach mathematics", Educational Studies in Mathematics, 47(2), 175-197.
23. Myers, Michael. (1997), "Qualitative Research in Information Systems", *MIS Quarterly*, (21: 2).
24. Oddou, G., Mendenhall, M. E., & Ritchie, J. B. (2000), "Leveraging travel as a tool for global leadership development", *Human Resource Management, 39*: 159-162.
25. Osland, J. S., Li, M., & Wang, Y. (2014), "Introduction: The state of global leadership research", In J. S. Osland, M. Li, & Y. Wang (Eds.), Advances in global leadership (Vol. 8, pp. xvii_xxxii). Bingley, UK: Emerald.
26. Osland, A. Bird, G. R. Oddou, M. L. Maznevski, M. J.Stevens, & G. K. Stahl. (2014), "Global leadership: Research, practice, and development", (2nd ed., pp. 260_268). New York, NY: Routledge.
27. Ozer, D. J. and V. Benet-Martinez (2006), "Personality and the prediction of consequential outcomes", Annual Review of Psychology **57**(1): 401-421.
28. Pless, N. M., Maak, T., & Stahl, G. ú. K. (2011), "Developing Responsible Global Leaders Through International Service-Learning Programs: The Ulysses Experience", *Academy of Management Learning & Education, 10*: 237-260.
29. Sims, R. R. (1983), "Kolb's Experiential Learning Theory: A Framework for Assessing Person-Job Interaction", *The Academy of Management Review, 8*: p. 501 (508 pages)
30. Steers, R. M., Sanchez-Runde, C., & Nardon, L. (2012), "Leadership in a global context: New directions in research and theory development", *Journal of World Business, 47*: 479-482.
31. Stumpf, S. A., & Freedman, R. D. (1981), "The Learning Style Inventory: Still Less than Meets the Eye", *Academy of Management Review, 6*: 297-299.
32. Suutari, V. (2002), "Global leader development: An emerging research agenda", *Career Development International, 7*: 218.
33. Turesky, E. F., & Gallagher, D. (2011), "Know thyself: Coaching for leadership using Kolb's Experiential Learning Theory", *Coaching Psychologist, 7*: 5-14.
34. Youssef, C. M., & Luthans, F. (2012), "Positive global leadership", *Journal of World Business, 47*: 539-547.

SUSTAINABLE DEVELOPMENT - NEW RESOURCE FOR ENTREPRENEURSHIP IN THE GLOBAL MARKET

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ABSTRACT
Pollution and environmental neglect have become fundamental problems and threats in today's society and sustainable development is very important in all aspects of life. Nature has left a lot of useful resources in heritage to previous and current generations, but people exploit these resources, because of their greed and desire for the highest possible profit ignoring and not thinking of the future generations. But as it always happens in life, the reckless desire to maximize profits has backfired, and it was and numerous social and economic problems have occured. More than ever before there are climate changes, and there has never been so much disparity between rich and poor. Throughout history there were always three classes: lower, middle and higher and today the middle class is getting smaller and smaller because the unequal distribution of natural resources has led to the situation where today we distinguish only between rich and poor, and the difference between them is enormous.
Keywords: *Sustainable development, Tourism, Business*

1. INTRODUCTION

Sustainable development denotes a proper distribution of natural resources and respect for the environment. It allows us to exploit all natural resources that are available to us, but to a limited extent, because since the generations before us left enough resources to meet our needs, it is our duty to think of the future generations and provide them at least as much resources to meet their needs, as we inherited. Sustainable development should represent a healthy relationship society, ecology and economy which will tend to preserve the natural resources of the planet for future generations. This relates to long-term maintenance and renewal of the stock of biological resources and productivity agricultural systems and their diversity (European Commission, 2010, p. 17). We can say that this term includes social responsibility and economic success, while at the same time protecting the natural and human resources.

This paper will discuss the sustainable development as a new resource for entrepreneurship in the global market. First, we will define the very concept of sustainable development and to what and to whom it actually applies. Then the role of entrepreneurship in the application of the concept of sustainable development will be shown, and what it means to manage the company in accordance with the requirements of sustainable development.

2. THEORETICAL AND CONCEPTUAL ASPECTS OF THE TERM DETERMINATION OF SUSTAINABLE DEVELOPMENT

2.1 Definition of sustainable development

The concept of sustainable development originates from forestry and implies a measure of afforestation area and cutting of woods whose ratio was interdependent and should not have disturbed biological restoration of forests. During the process of understanding the term "sustainability" and "sustainable development ", except the environmental dimension, people increasingly began to talk about the economic security and social justice as the elements of sustainable development. The concept of sustainable development was introduced in the 70-ies of the last century. In this period, emphasis was placed to renewable resources such as fossil fuels, ores, cleaner air and water, and were pointed out as free goods. In the 80s of the 20th century, after the UN presented the world strategy of preserving natural resources coherent with the general aim of achieving sustainable development, sustainability becomes important part of the international community (Črnjar, Črnjar, 2009, p. 79). This happened at the World Conference on Environment and Development in Rio de Janeiro. The conference adopted the concept of sustainable development as the only known solution to the problem of development and the environment. Since then, the concept of sustainable development was involved in political and legal framework of some countries with varying degrees of success (Perko, Radenkovic, 2008, p. 37). The first serious and more scientific understanding of sustainable development was presented in the so-called Bruntland report by the World Chamber for the environment UN published under the title "Our Common Future" in 1987. According to this study, sustainable development is defined as "development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs". From that moment on, sustainable development, environmental quality and economic development, have become incompatible activities. Črnjar points out, with which we can all agree, how environmental protection can not be achieved at the expense of restricting economic development, and that the whole debate about environmental problems should focus on achieving sustainable development (Črnjar, Črnjar, 2009, p. 79). The scientific and political consensus on the meaning of the term "sustainable development" still doesn't exist and the concept of sustainability is used in a different context. Thus, in the literature we can find the formulation: sustainable success, sustainable tourism, sustainable growth, sustainable production, sustainable excellence, and others. All of these terms describe the phenomena to which the philosophy of sustainable development is applied (Drljača, 2012, p. 6).
A concern for the environment is expressed since the beginning of the 60s of the 20th century, when the world started concerning for the environment, and which culminated in a new national awareness of environmental quality (Drljača, 2012, p. 1).

Figure following on the next page

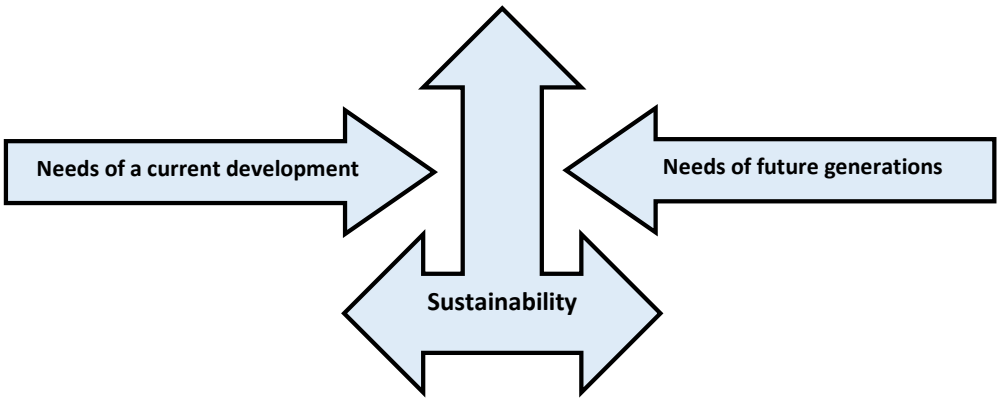


Figure 1. concept of sustainability as a possible solution of the conflict
(Drljača, 2012, p. 5)

Miroslav Drljača presented The concept of sustainability (Figure 1), as a possible solution to this global conflict. Mesarovic and Pestel (1978) point out that it is "a widening gap between man and nature, as well as his physical isolation and mental separation from nature, which is only a logical consequence of the traditional concept of progress: for progress in global development has led to a process of undifferentiated growth, which is based on the man's wrong belief that the system of the maintenance of nature is inexhaustible ... it is obvious that we can not purify the air by terminating the entire industry (because this would cause other types of crisis), but it is also a fact that modern man has abilities and knows how to apply them" (Mesarovic, Pestel, 1978, according to Drljača, 2012, p. 5). At the already mentioned World Conference of Environment and Development, held under the patronage of of the UN in Rio de Janeiro, in 1992, a number of important documents were adopted. The concept of sustainable development was definitely supported then as a development concept and as a strategy of designing development policy and environmental policy. Thus, the concept of sustainable development is based on economic and environmental standpoints and principles whereby some authors put more emphasis on the principle of sustainable development, and the second principle of environmental sustainability (Črnjar, Črnjar, 2009, p. 79). While the sustainability implies the principle which indicates permanent existence of natural resources, the development denotes the concept within social sciences related to the order of the human resources. If the two terms are observed together, sustainable development can be defined as the ratio between the dynamic economic system that develops man, and large dynamic ecological systems that change slowly and which have to be in ecological balance (Črnjar, Črnjar, 2009, p. 81). The requirement of sustainability of renewable energy sources (eg, forests, water, soil) is that their use does not exceed their degree of recovery. This is an extremely important process which must cover aspects of the environment, politics, economy, but also the local community and heritage. The concept of a sustainable society implies a society which maintains the quality of ecosystems with a high degree of local autonomy. Kim believes that a sustainable society is possible only in the planetary scope and assumes a level of living standards that is possible for all mankind, not just for its minor part (Kim, 2000, p. 243). Drljača claims that regardless of the adoption of numerous documents of the global character of the goals and measures for environmental protection, a problem arises in the implementation phase. Due to different interests (mainly the interests of big business), the implementation of measures in these documents meets resistance. This is because their implementation would mean the beginning of the growth balancing, ie. would undermine one of the fundamental postulates of the neoliberal concept of capitalism - maximization of profit (Drljača, 2012, p. 9).

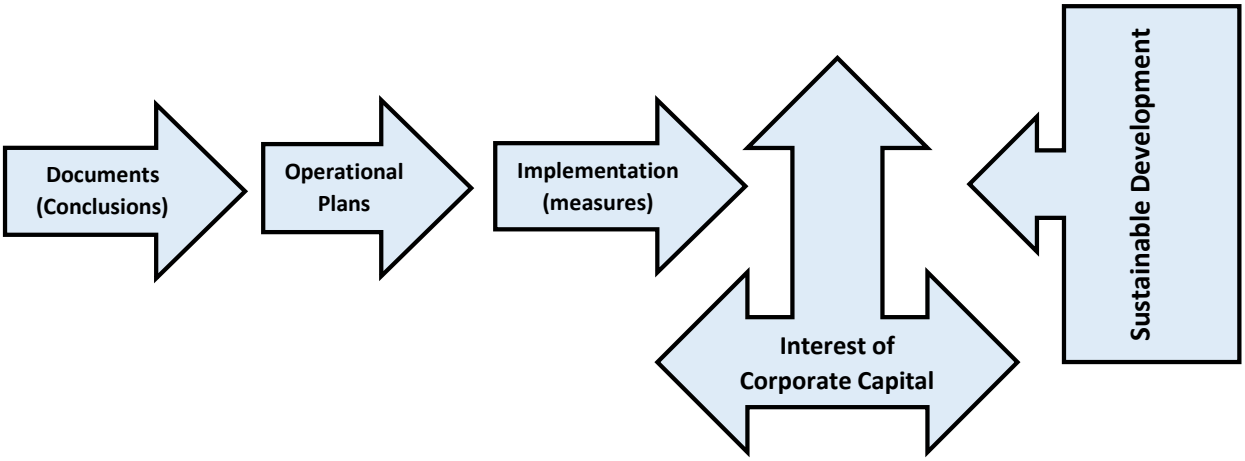


Figure 2. Display of inconsistent implementation of measures for sustainable development (Drljača, 2012, p. 9)

2.2 Characteristics of sustainable development

What characterizes sustainable development is that it includes all these mentioned dimensions, assuming the creation of conditions for economic well-being balanced with the capacity of the natural environment, the technological use of non-renewable natural resources, which do not degrade or reduce their usefulness for future generations. In doing so, said Dragicevic, sustainable development implies "the political system which ensures human rights, freedom, the effective participation of citizens in decision-making, social welfare, the possibility of developing cultural self-identity and diversity and ethical system which respects shared social responsibility for achieving sustainable responsibility" (Dragicevic , 1997, p. 377). It is also important to point out that sustainable development encompasses three dimensions of sustainability, and those are (Črnjar, Črnjar, 2009, p. 89):

Social sustainability which allows self-control and its own policy of natural resource management. Natural resources should be used to increase equality and social justice and reducing social disorders. Economic sustainability refers to the maintenance of a stock (capital). In the economic system the value of natural capital must be included in order to ensure sustainable development of the economy. Environmental sustainability (sustainability of quality of the environment) improves the well-being of people by protecting sources of raw materials used for human needs. It ensures that the natural capacity are not exceeded as a waste container. The above mentioned can be reduced to maintaining the level of emission of waste materials within the assimilation capacity of the environment, without violating the state in nature and maintaining the level of exploitation of renewable resources within the limits of renewal. Characteristics of sustainable development according to Kirnu make excellent psychological and value substitute for the traditional economic exponential growth. The idea of sustainable development, considers Kirn, is acceptable in politics, as well as for the business, the economic sphere and for all people who want to have development without pollution and danger of exhausting or degrading natural resources. Although frequently taken as synonyms, sustainable development is not a permanent solution if it involves sustainable growth. Many think that the unlimited possibilities of ecological modernization technologies ensure sustainable growth. However, sustainable growth is not possible on a finite planet with exhaustion and non-renewable and limited capacity of the ecosystem to receive and neutralize the pollution. These limits can be moved by means of science and technology, but they can not be removed (Kim, 2000, p. 244).

Sustainable development requires (Črnjar, 2002, p. 189):

- conservation of natural resources;
- greater equity in the distribution of resources and wealth;
- introduction and application of new technologies;
- distinguishing the concept of growth and development concept;
- giving up activities that could jeopardize the interests of future generations;
- acceptance of sustainable development as a philosophical approach and pragmatic action.

Social and economic development up to today unfortunately does not show that it has an innate sustainability. It follows that the sustainable development is a normative category, something that man has yet to launch and support. The aim of this launching is not a state to be achieved in the future, but sustainability of the development process. Črnjar and Črnjar point out that the problem is not that it is a an isolated ecological, economic or social category, but the category that integrates all three together, and which has not yet been formulated theoretically. Without integrative theoretical embodiment there is no scientific basis, and without it there is no method nor planning nor action. Therefore, sustainable development remains a political phrase that guarantees fickleness and short term value (Črnjar, Črnjar, 2009, p. 82).

2.3 Application of the concept of sustainable development at the global level

Cifrić believes that environmental issues have become part of the decision-making process of all state institutions, all enterprises and all people in general. Sustainable development requires much more than prevention of pollution and changing environmental regulations. With regard to the environment ordinary people make decions every day - consumers, business people, farmers - political and economic systems must be based on the effective participation of all members of society in making decisions. To ensure a high level of international cooperation, particularly in making and implementation of agreements on the protection of common goods as the atmosphere and oceans (Cifrić, 1989, p. 345). Sustainable development requires resetting of the rules in order to replace wasteful consumption and pollution with the savings and conservation. The foundation stone sustainable development is a system of open, competitive markets where prices include the environmental costs, not only the costs of other resources. Črnjar and Črnjar point out that the management of sustainable development presumes different knowledge and skills acquired by studying social sciences (economics, environmental economics, strategic management) and various fields of natural science (ecology, biology, technology, etc.) (Črnjar., Črnjar, 2009 p. 81). Critics of sustainable development believe that it was just a cover for exponential economic growth, which is the aim of all economic policies. According to these critics, sustainable development marks the beginning of a new round of growth, but now with the changed rules of the game which is allowed by the revolution of effective use of materials and energy and the associated reduction in pollution. T hey also claim that the sustainable development is made primarily for the conservation of development, rather than on the conservation of nature. However, defenders of sustainable development say that sustainability is not possible without development nor development without sustainability. The increasingly powerful network of social, economic and technological interdependences shows us that a sustainable society is possible only at the global level (Kim, 2000, p. 245).

UN Conference on Environment which we have already mentioned, resulted in a the beginning of the global standardization in the field of environmental management. It appeared in the first series of ISO 14000ff, which represents a significant global contribution to the development of consciousness at the micro level, about the need tof he incorporation of environmental concerns in the organization's management system (Drljača, 2012, p. 9).

Table 1. Number of ISO 14001 certificates in the world from 1999 to 2010

(Drljača, 2012, p. 9)

World	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Number	13994	22847	36464	49440	64996	90554	111163	128211	154572	188815	223149	250972

From the given data it is clear that in the period from 1999 to 2010. the number of ISO 14001 certificates grew. The above mentioned actually shows how the environmental management system is accepted as business philosophy and pragmatic approach and that organizations around the world have integrated it into its management system.

Table 2. The top 10 countries by number of ISO 14001 certificates in 2010

(Drljača, 2012, p. 9)

No.	**Country**	**No. of certificates**
1.	China	69784
2.	Japan	35016
3.	Spain	18347
4.	Italy	17064
5.	Great Britain	14346
6.	Republic of Korea	9681
7.	Romania	7418
8.	Czech republic	6629
9.	Germany	6001
10.	Sweden	4622

As can be seen from Table 2, the most implemented environmental management system in management system have China, Japan and Spain. China is currently the fastest growing economy in the world with major environmental problems, but still with a developed trade with all regions of the world, and it is understandable that in this way China is trying to send signals to its partners to contribute to solving this problem. In 2010, China also had the largest increase in the number of certificates in the world compared to the previous year, 14,468 (Drljača, 2012, p. 10).

3. SUSTAINABLE DEVELOPMENT AND ENTREPRENEURSHIP

3.1 The management of the company in accordance with the requirements of sustainable development

The first global movement for the implementation of responsible practices towards the environment in the world of business and industry, was inaugurated in April 1991. Then, Du Pont, Kodak, BASF, Ciba-Geigy and others at the conference WICEM II (World Industry Conference on Environmental Management) made a decision about the development of strategies for the protection of the human environment and resources of land, signing a memorandum "Business Charter for Sustainable Development" . The charter emphasizes that "environmental protection must be among the highest priorities of every business." That was a new idea of "sustainable development" and sustainable growth, which has ever since been common in international business terminology (Perko, Radenkovic, 2008, p. 38).

Global level provides the economic and political framework and creates the institutional prerequisites for the realization of sustainable development. The implementation in terms of materialization of institutional conditions, ie, practical action, starts at the micro level, ie in organizations, particularly the production. In this context, the role of business is of particular importance (Drljača, 2012, p. 112). For the purposes of micro-level concept, sustainable development can be defined "... as a process in which less and less resources are being spent in order to meet the needs of consumers and in which the environment is less polluted." One of the significant contribution to the concept of sustainable development at the micro level is the implementation of an environmental management system in accordance with the requirements of international standard ISO 14001: 2004 in management system. Organizations that make such a decision, usually reached a decision on the construction of an integrated management system. As part of the engagement in environmental protection company is directed to the following (Drljača, 2012, p. 113):

- Production and product planning;
- Application of new technological procedures in production;
- Investment in environmental protection;
- Forming a special service or the appointment of the person responsible for environmental protection;
- Evaluation of the attitude of the administration towards the environment.

Renko (2010) believes that entrepreneurship is the "process of creating benefits by uniting unique combination of resources in order to exploit opportunities. It includes all activities aimed at investments and mix of inputs expansion into new markets, creating new products, new customers and new technologies, and it is regarding the crucial time, the conditions of

uncertainty, crisis and changes in the environment "(Renko, 2010, according to Bakovic, Ledić-Puric, 2010, 33). Entrepreneurship is considered a pillar of the overall economy of a country, ie. The economy. In fact, a key element for increasing the competitiveness of companies is through generating growth and creation of new jobs. The importance and complexity of the enterprise is reflected in the numerous factors that affect it, economic, technological up to the sociological and social. Entrepreneurship should be incorporated in the overall economic and social system to ensure its effective functionality and development, as well as assumptions of economic development and social welfare. The permanent challenge of entrepreneurship is to remain competitive, and how to deal with the new technology and the pace of growth in competing countries. However, successful overcoming of this challenge is necessary to create new jobs, greater prosperity, and ultimately for sustainable development (Kutnjak, 2010, p. 81). Sustainable development for businesses involves the adjustment of business strategies and activities in ways that meet the needs of businesses today, and protection of, human and natural resources that will be needed for future generations. In the language of entrepreneurs sustainable development means life from Earth income rather than its capital. The introduction of business changes is necessary to ensure success in the uncertain future. It is quite clear that human activity is the main reasons of harmful natural disturbances and climate change, such as global warming, the ozone hole, the algae on the seabed and the phenomenon of the mucilage. Considerate and sustainable growth is the growth that generally determines the growth and changes in the structure of production and consumption are acceptable, if they are not reducing the overall quality and usability of natural resources (Perko, Radenkovic, 2008, p. 33).

Entrepreneurs who care about the implementation of sustainable development are the people who care more about helping others than to making a profit. The main paradigm of socially responsible businesses is a voluntary social engagement. They launch various initiatives for the benefit of society, such as sports, personal development, job creation, voluntary groups, raising funds to help others, helping the socially disadvantaged and various other initiatives and activities. Such social enterprises speak up for solving social and environmental problems, making a profit is not their primary goal, but the satisfaction of social needs (Osmanagic-Bedenik, Labas, 2011, p. 146). Behavior and management organization is largely determined by the conditions and manner of management in the region. In particular, this applies to organizations which are majority-owned by the state. However, the micro level is the optimal framework for the materialization of the principle of sustainable development, process management, communication with the public, developing a new system of values, in which the relationship with the environment has a significant place (Drljača, 2012, p. 13). Entrepreneurs need to be seekers for problems, and to solve them with the holistic approach. Extension of the current situation and its design in the future by itself, is no longer enough, but the company must redirect those predictions that imply real identification of what happened and spotting tomorrow's market needs (Perko, Radenkovic, 2008, p. 31).

3.2 The role of entrepreneurship in the implementation of sustainable development

Drljača highlights how important is the role of entrepreneurship in the implementation of sustainable development. An assessmentof attitude of the company to the concept of sustainable development is possible through the answers to the following questions (Drljača, 2012, p. 13):

- What makes the company act in accordance with environmental standards?
- Does the company apply environmental standards when operating?
- Do the economic goals have absolute priority in relation to environmental?
- How to invest in environmental protection and how to monitor the environmental costs?
- How to monitor and analyze the impact of environmental policies on the business?

Companies that do not recognize the importance of environmental protection and productivity of using resources as one of the main routes in building competitive advantages, do not have long-term vision for the survival of the enterprise market (Golja, 2009, p. 9). Every company should be sensitive to the needs of its stakeholders in business activities. According to Matesic, responsibility of a company is closely related with the principles of sustainable development in that it suggests that the company commit to make decisions, not just on the basis of financial / economic factors, but also on the basis of social and environmental consequences of their activities.

1) Responsibilities of the company are:

1. To increase the productivity and production of useful goods and services
2. To ensure a fair distribution of goods
3. Securing employment, new investments and distribution of goods
4. Ensuring innovation and development of new technologies
5. By raising awareness of the gaps in the consumption of resources, accountability has grown into securing useful goods without excessive damage to the environment. [2]

Socially responsible entrepreneurship means commitment to the business world to sustainable economic development which will contribute by working with employees, their families, local communities and society as a whole, to improve their quality of life. For more information visit:

http://web.efzg.hr/dok/OIM/momazic/dop%20-%202012/20121206%20-%20Odrzivi%20razvoj%20

2) In order to fulfill its role in achieving sustainable development concept, company would have to be oriented towards the future and do the following (Drljača, 2012, p. 13):

Consider the possibility of sustainable development in all areas;

Restore public confidence;

Develop a detailed environmental program (emphasis on education);

Analyze their own production processes;

Be actively involved in the public environmental protection.

[2] Ibid

Figure 3 shows the classical model of company facing the society and the environment as subordinate to their economic interests. Development of business principles puts an emphasis on environmental protection together with social needs. These companies believe that the use of the economic aspects is of vital importance for the implementation of sustainable development and the environment (Senge, 2008, according to Osmanagic-Bedenik, Labas, 2011, p. 147).

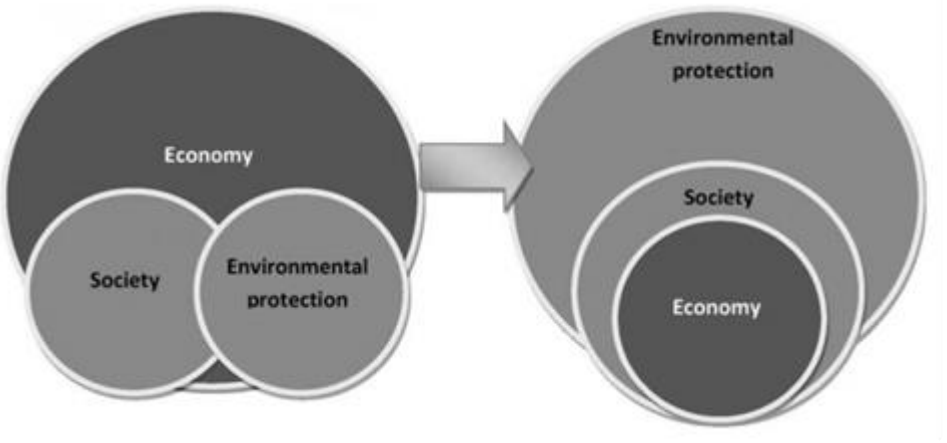
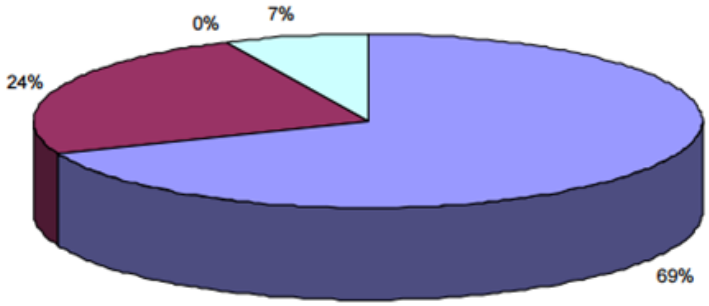


Figure 3. Display of business priorities
(Senge, 2008, according to Osmanagic-Bedenik, Labas, 2011, p. 147).

Holcim[3] study on "the impact of responsible business behavior of customers"researched, among other things, consumer familiarity with the concepts of sustainable development and corporate social responsibility and the importance of perception of relations of the company to the natural environment. The obtained data were surprising, and we can say disturbing, because according to them, only 4% of people had heard of the term "sustainable development", while the term "socially responsible corporate behavior" was better known to consumers and 67% of respondents had heard of it (Perkov, Radenkovic, 2008, p. 40). In another study on sustainable development and the obstacles to such operations by Perko and Radenkovic conducted on Croatian managers, who were supposed to express their own degree of agreement with the possibility that their company can continue to grow and still comply with the principles of sustainable development.

[3] Reputable industry Holcim from the Puls agency ordered a study entitled "The impact of responsible business behavior of customers." The survey was conducted by telephone between 27 6 and 30. 6. 2007, on a random, nationally representative, two phases-stratified sample of 1,000 Croatian citizens, aged 25-55 years (Perko, Radenkovic, 2008, p. 40) .

Figure 4. The attitude of managers to the possibility that the company is growing while respecting the principles of sustainable development (Perkov, Radenkovic, 2008, p. 42)
Results are desribed below the Figure



The obtained data indicated that most Croatian managers agreed with the statement they are already doing business that way (69%), a total of 24% of them agreed that the continuous growth of the company in the which they work is possible, although they are still not operating that way, and only two managers are of the opinion that the growth of the company impossible if they have to respect the principles of sustainable development. According to these data, the question is whether sustainable development implies necessarily increase the cost of a company or has a business achievements that can be quantified (Perko, Radenkovic, 2008, p. 42).

The concept of corporate social responsibility was implemented in the 1950s. socially responsible business imply "all activities of a certain company that serve to better the community, and above the interests of company, shareholders and legal requirements" (McWilliams., Siegel, 2001, according to Golja, 2009, p. 4). It is generally accepted that the application of the concept of sustainable development in business practice operates starting from the ecological and socio-cultural dimensions of sustainability, while achieving economic growth because "production can and should grow, but should not endanger human health, plant and animal species, natural flows, etc. . "(Črnjar, 1997, according to Golja, 2009, p. 4).

A joint initiative of the Croatian Chamber of Economy (HGK) and of HR PSOR is the reward index CSR (corporate social responsibility Entrepreneurship), which aims to highlight Croatian companies that understand and to practice socially responsible entrepreneurship ie. the business. While researching these enterprises, orientation of companies on the economic viability is being judged, as well as the integration of corporate social responsibility and sustainable development in the business strategy, responsible policies and practices in the work environment and responsible policies and practices of environmental management. [4]

The first social sustainability report in Croatia was prepared by Coca-Cola Beverages Croatia ltd, in 2003 and in 2005 they also prepared a report on sustainability as a public document on the environmental, social and economic effects in the previous year. After Coca-Cola, INA, PLIVA Croatia and Podravka presented their first Social Report in 2004. These are all large companies, which are aware of the importance of reporting on CSR in the overall presentation of their business and at the same time control the resources necessary to prepare such elaborate reports (Bagić, Škrabalo, Narančić, 2006, p. 53).

[4]Hrvatski poslovni savjet za održivi razvoj -HR PSOR, available at : http://hrpsor.hr/indeks-dop-a-2-452.html [15.12.2014.]

Research of Osmanagić-Bedenik and Labaš from 2010, indicates the state and the level of implementation of corporate social responsibility in Croatia. According to respondents of the study, corporate social responsibility is reflected in the continuous investment in development, motivation, training and employee satisfaction (59%). About 30% of companies surveyed estimated the impact of their business decisions on the environment and society, and fully-fledged program of corporate social responsibility have 21% of companies. It is worrying that 70% of companies do not assess social and environmental consequences of their business decisions (of Osmanagić-Badenik, Labaš, 2012, p. 157).

Inevitable and indisputable fact is that corporate social responsibility, business which is focused on sustainable development, has a positive effect on the efficiency of enterprises, but it is harder to quantify it scientifically. T here are studies that have confirmed the impact of social responsibility to the reputation and image of the company, and it is very likely that this is reflected in the financial result and the overall efficiency of enterprises. The company, a key factor in the economy, is social entity which should seek to meet the demands of the environment. But that of course requires a change in management and business policy of the company. This approach is necessary for the development of the concept of social responsibility, which is a moral obligation of the company management with the harmonization of economic growth with the needs of the environment (Vitezić, 2011, p. 427).

4. CONCLUSION

The purpose and goal of sustainable development are environmental concerns, and consequently the concern for humanity as a whole. Sustainable development requires long-term maintenance of a stock of biological resources and productivity. The emphasis is on promoting greener economy and efficient use of resources. We have investigated the sustainable development of the enterprise and we have seen how it is regarded as something that has only now emerged. The evidence for this data arises from the study according to which many respondents did not even hear of the term "sustainable development", and if they are not familiar with the term, then how can we expect from them to meet its norms. But, on the other hand, in the work we have also presented data that some leading companies are slowly beginning to realize the importance of implementation of the concept of sustainable development and management of their company in a socially responsible manner.

The survey was conducted on 900 members of the Croatian Employers' Association (HUP)

LITERATURE:

1. Bagić, A, Škrabalo, M, Narančić, L. (2006). *Pregled društvene odgovornosti poduzeća u Hrvatskoj*. Zagreb: Kratis.
2. Baković, T, Ledić-Purić, D. (2011). Uloga inovacija u poslovanju malih i srednjih poduzeća. *Poslovna izvrsnost Zagreb*. Vol. V (1): 27-42.
3. Cifrić, I. (1989). *Socijalna ekologija*. Zagreb: Nakladni zavod Globus.
4. Črnjar, M, Črnjar K. (2009). *Menadžment održivog razvoja. Ekonomija – ekologija – zaštita okoliša*. Zagreb: AKD.
5. Črnjar, M. (2002). *Ekonomika i politika zaštite okoliša.* Rijeka: Ekonomski fakultet Sveučilišta u Rijeci.
6. Dragičević, M. (1997). Održivi razvoj- koncepcija gospodarskog razvoja Hrvatske. *Društvena istraživanja.* Vol. 6 (2-3): 373-381.
7. Drljača, M. (2012). Koncept održivog razvoja i sustav upravljanja. *Međunarodni skup Nedelja kvaliteta, Kvalitet i izvrsnost*. Vol. 1 (1-2): 1-15.
8. Golja, T. (2009). Percepcija menadžera o važnosti implementacije načela održivog razvoja u poslovne strategije hotelskih poduzeća - slučaj velikih hotelskih poduzeća u istri. *Ekonomska*

misao i praksa. Vol. XVIII (1): 3-15
9. Kirn, A. (2000). Održivi razvoj i enviromentalističke vrijednosti. U: Cifrić, I. (ur.) *Znanost i društvene promjene.* Zagreb: Hrvatsko sociološko društvo i Zavod za sociologiju Filozofskog fakulteta.
10. Kutnjak, G. (2010) Europska unija u funkciji poticanja i razvoja malog i srednjeg poduzetništva. *Poslovna izvrsnost Zagreb.* Vol. IV (2): 79-91.
11. Osmanagić-Bedenik, N, Labaš, D. (2012). Društveno odgovorno poslovanje i održivi razvoj: stanje u hrvatskim poduzećima. *Market-Tržište*. Vol. 23 (2): 143-164.
12. Perkov, D, Radenković, A. (2008). *Upravljanje promjenama uz održivi rast hrvatskih poduzeća*. Zagreb: Libertas.
13. Vitezić, N. (2011) Correlation between social responsibility and efficient performance in Croatian enterprises. *Zbornik radova ekonomskog fakulteta Rijeka*. Vol. 29 (2): 423-442.

Internet Sources:
1. Europska komisija, (2010). Priopćenje komisije. Europa 2020. Strategija za pametan, održiv i uključiv rast. Bruxelles. Available at: http://www.strukturnifondovi.hr/UserDocsImages/kako_do_fondova/korak1/uvjeti/eu_hr.pdf
2. Hrvatski poslovni savjet za održivi razvoj -HR PSOR, available at: http://hrpsor.hr/indeks-dop-a-2-452.html [15.12.2014.]
3. http://web.efzg.hr/dok/OIM/momazic/dop%20-%202012/20121206%20-%20Odrzivi%20razvoj%20i%20DOP.pdf

EFFECT OF INCOME, POPULATION, GOVERNMENT SPENDING, EXPORT GOODS AND SERVICES OF REGIONAL ECONOMIC SECTOR IN INDONESIA

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ABSTRACT

The results of data analysis for 25 years from 1991 to 2015 using regression models) showed that the value added of each economic sector in the State of East Indonesia was determined to be individually or by changes in per capita income. Thus according to the title Effect income, population, government spending, exports of goods and services to the primary sector of regional economic in East Nusa Tenggara Indonesia, a study was done to see the impact of per capita income, population, production empire and exports of goods and services to a core sector growth in East Nusa Tenggara Indonesia for development planning in the region? The objective of this study was to review and analyze the growth sectors of economy East Nusa Tenggara Indonesia to national economic growth, and effect of income per capita GDP, the total population of the government spending, exports of goods and services to growth in the primary sector, East Nusa Tenggara Indonesia. Analysis of growth and elasticity the display size of a correlation value added output of economic sectors due to changes in population and per capita income in region. The results of this analysis can be used to develop projections of economic growth rates and changes or shifts in economic structure in East Nusa Tenggara Indonesia. Emphasizes that GDP grew in the 1950s and 1960s Rostow (1960) and Karlan et al, (2013) theory of economic growth can be achieved through capital investment or investment in large quantities in the industrial sector.

Keywords: *Growth,Regional Economic,Elasticity, Planning, Economic Base*

1. INTRODUCTION

Size growth elasticity analysis is one Form of analysis to show a relationship between gross added value due to changes in the economic sector of the population and income (Gross Domestic Product / GDP) per capita in the region. This analysis can then be used to develop projections of economic growth and structural change or shift in the economy of a region. Regression analysis was used to determine the effect of per capita income, government spending and exports to value added sector economic. The results of the regression analysis, either individually (t> t table) or together (F> Table F), per capita income and government spending has a significant impact on gross added value of agriculture and the service sector.

Thus, it can be concluded that the export activity is not much to encourage the growth of the primary sector in East Nusa Tenggara Indonesia. This is because there are still many problems, such as overlapping regulations due to high transaction costs, thus reducing the competitiveness of businesses that have been running or even reduce the attractiveness of investments.

2. LITERATURE REVIEW

GDP showed only the economy of a region. It should not be used to assess the level of prosperity of the population in an area. Thus, income per capita, which is the average income divided by the total population of the region East Nusa Tenggara Indonesia is deemed appropriate indicators to assess the level of prosperity the population.

Networking between regions is becoming increasingly important in economic development, as it is able to control complex transactions as well as cooperation among firms in different region. Different studies show positive effects of networks between regions in the fields of activity, performance, and innovation (Powell, 2002; Chellappa and Neuroscience, 2010). Empirical study on trade facilitation is driven by the importance of economic relations (Krugman, 1981; Ayres, Raseman, Shih, 2013). According to Anderson and Wever (2003) described the lack of economic and trade relations in region, especially low-income countries as a hidden transaction costs, which can be associated with the exchange between nations. Transaction costs that are hidden in low income countries due to corruption, lax enforcement and crime.

Stimson, Stough and Roberts (2006) and the theory of economic integration such as Romer (1986, 1990), Barro (1990), Rebelo (1991), Grossman and Helpman (1991) and Arthur (1994) describe the technical progress as the effect of endogenous instead receiver neoclassical view. Thomas (1975), and Erickson (1994), describes technological changes related to competitiveness of the territory. Norton and Rees (1979); Erickson and Leinbach (1979) and Stango and Zinman (2014) describes the product cycle, which can give a different effect on region through three stages, namely: level of innovation, growth and the level of standardization. Stillwell (1992) described the region as the economy macroeconomic model, Y = C + I + G + (X - M); The gross national product is equal to the expenditure for consumption, investment, government and net exports.

3. THE METHODOLOGY AND MODEL

Descriptive research methods used to get the facts about the study. Regional studies East Nusa Tenggara Indonesia's economic growth is measured by the increase in GDP in the first three months of 2014 experienced a contraction of -5.64 % compared with the fourth quarter of 2013 (q-to-q) and when compared with the three months the same in 2013 grew by 5.02 % (y-on-y). Household consumption expenditure hands on the first three months of 2014 compared with the fourth quarter of 2013 (qon q) decreased by -1.92 % correct; government consumption expenditure declined by -25.88 % fixed capital formation declined by -17.99 %; exports of goods and services declined by -15.13 %; and the import of goods and services declined by -26.17 %.

The data used in this study includes qualitative data and quantitative data. The qualitative data is obtained in the form of data is not a number, such as data on economic sectors and non-basic, condition and location of communities to climate studies. Meanwhile, quantitative data obtained in the form of numbers, such as GDP data, the result of government spending and other data in connection with the implementation of the study. Both types of data derived from primary data and secondary data.The primary data used to assess the views and information from stakeholders that have to do with policy planning and program implementation border area development program. Sources of primary data obtained through the respondents involved in this study. Primary data are descriptive, in the form of a table, documents and court records.

Meanwhile, secondary data include certain documents relevant to policy planning and implementation of program development program frontier region. Secondary data were used as a source in this study consisted of data resident, estimates and state income, GDP data, the Gross National Product (GNP) data on GDP per capita, GDP data central government spending data the government with its utilization and data exports of goods and services in use. East Nusa Tenggara Indonesia for a series of time is 25 years, then the data collected for period 1991 - 2015.

Model analysis of this study covers macro-economic problems East Nusa Tenggara Indonesia including:

3.1. Model Analysis of Structure and Regional Economic Growth in GDP

Regional economic structure is analyzed based on the contribution of each sector relative to total GDP in East Nusa Tenggara Indonesia. While economic growth in the GDP for 25 years (1991-2015) is calculated based on the equation of an exponential trend. Form the equation is as follows:

Yt = aeb(t-1) or Yt = aebx .....(1),
e = *2,71828*
t = variable Time
x = *Variable Time* - in the middle of the period under review
b = rate of change of the variables Yt per year

a and *b* are the values of the coefficient is sought from time series data with data pairs (X, Y). The a and b are obtained by using the properties of logarithms to help explain the preparation of an exponential trend equation.
To see GDP in the future with an important sector in the GDP estimate for next five or ten years into the future is to use multiple regression analysis with the following equation:

Yt = a + biXi + b2X2+ b3X3.....(2),
Xi = the value of the projected sector i in year t
a = constant coefficient in t
b = regression coefficient of variable X
X1 = GNP
X2 = variable dummy 0 = before the crisis, and 1 for a period of economic crisis
X3 = labor

3.2. Regression Analysis Model

This analysis is an analysis of the relationship of gross value added of an economic sector as a result of changes in population and income per capita.
Form equation is:
Ln Xi = α + βLn Y / cap + λ Ln Pop .... (3),
α = constant
β = elasticity of growth i, means a coefficient expressing the percentage of Gross Value Added i
Sector due to the per capita income of 1 % ;
λ = Elasticity magnification sector i, means a coefficient expressing the percentage of Gross Value Added East Nusa Tenggra Indonesia sector i as a result of population increase by 1%;
Xi = sector i;
Y / cap = Income per capita;
Pop = Total population;
From the regression equation sharing displacement shift share and growth can be concluded that: (1). Elasticity growth is the percentage change in GDP per capita leads to a certain sector or a change in the value added per capita GDP increase of 1 percent, which resulted in certain changes in the value added sector of X.; (2). Elasticity enlargement is the percentage change in the number of people who cause change certain sector or 1 percent population increase which resulted in certain changes in the value added sector of X.

Understanding growth and scale: (1). When the elasticity is equal to 1 (one), it is known as unitary elasticity, *ie* when the total population or 1 % of per capita income that result in changes in the value added of a particular sector also 1 percent. ; (2). When the elasticity is less than 1 (one), it is known as inflexibility (inelasticity), ie when the change of population or per capita income by 1 per cent change in the value added which resulted in certain sectors also less than 1 %.

1 % change in the value added which resulted in certain sectors more than 1 %.

3.3. Regression Analysis Model sector Base

Regression analysis was used to look at the basic sectors of per capita income, government spending and exports of goods and services on the growth of the primary sector in East Nusa Tenggara Indonesia. The equation for the regression of the primary sector can be summarized as follows:

$LnYi = \beta 0 + \beta 1LnX1 + \beta 2LnX2 + \beta 3LnX3$ .....(4),

LnYi = Value Added Gross Basis sector i;
X1 = Income per capita;
X2 = Government Spending;
X3 = Exports of Goods and Services;
βo = Constant (Intercept);
β1 = elasticity of growth i due to changes in the primary sector budget allocation of 1 %
β2 = Elasticity growth due to changes in primary sector i per capita income growth of 1 %
β3 = Elasticity growth due to changes in the primary sector i Nefai export growth by 1 %

When the elasticity of more than 1 (one), it is known as elasticity (Elasticity), ie when changes in population or per capita income by 1 %.

3.4. Regional Economic Growth Model

Model Based Export
In this model, the GDP income can be expressed as follows:

$Y = C + MI\text{-}MO$ .....(5),

Y = income regions (GDP),
C = Consumption,
MI = Flow of money coming in because their exports
MO = Flow of money out because of their imports.
For convenience, use is considered linear function, so it can be written as:

$C = A + b\ Y$ .....(6),

A = minimum usage
b = MPC (Marginal Propensity to Consumer).
Given the lack of entrepreneurs in developed countries that invest abroad and the results brought to the region, the export is the only source of foreign currency income, which can be formulated as follows:

$MI = Eo$ .....(7),

EO is export fluctuations are determined by external factors (exogenous), as the prices in the international market. As most foreign investment is limited, then the only source of money out of imports, which could be formulated as follows:

$MO = i Y$ .....(8),

By combining equations (5) - (8), we get the following equation:

$Y = A + bY + EO – iY$

Or $Y = [1/(1- b + i)] (A + EO)$ .....(9),

Because the debate is related to growth, then the equation (9) can be formulated in the form of change (Δ) as follows:

$\Delta Y = [1/(1 – (b – i)] \Delta Eo$

Or $\Delta Y= k \Delta Eo$.....(10),

Here k = [1(1- (b - i)] is the multiplier that reflect the multiplier effect of the change in exports to the regional economy.

3.5. Economic Base Model

Export base model can also be formulated as Economic Base Model. In this case, the economy of a region (Y) can be divided into two main sectors, namely Sector Basic (B) and Non Basic Sector (S), and can be summarized as:

$Y = B + S$ .....(11),

Activities supporting the sector would largely depend on development of primary sector, which allows it formulated as:

$S = ao + a1Y$ .....(12),

Here, ao and a1 are constants. When the equation (12) is inserted into the equation (11), obtained the relationship between the sector and supporting basic sectors as follows:

$Y = [ao / (1-a1)] + [1 / (1-a1)] B$ .....(13),

and $Y = [a0 / (1-a1)] + [B / (1-a1)]$ .....(14),

Because equation (14) is linear, the coefficient multiplier must be calculated in the form of regional economic growth equation as follows:

$\Delta Y = [a0 (1 -a1)] + [1 / (1 -a1)] \Delta B$ .....(15),

Here, ΔY is the increase in GDP and ΔB is the increase in the basic sectors. This equation gives the conclusion that the economic growth of a region is determined by the development of sector and the large base of small effect are determined by the coefficient multiplier [1 / (1 + ao)]. Thus, based on this model, it can be hypothesized that the economic growth of a region is positively associated with increased exports.

4. ANALYSIS OF THE PLANNING AND GROWTH ELASTICITY

In economic field, this concept can be used to understand the impact of such a policy. In addition, it can also be used to analyze the impact of revenue increase of production areas. Analytical tool to assist policy makers in deciding priorities and alternative development plans that provide the greatest benefits for regional development. This analysis can then be used to

develop projections of economic growth and structural change or shift in the economy of a region. Table 4 below shows the results of regression analysis the effect of per capita GDP and population to value added economic sectors East Nusa Tenggara Indonesia during 1991-2015.

Table 4: Regression Analysis of the Effect of GDP Per Capita and Population the Economic Value Added Sector East Nusa Tenggara Indonesia in the period 1991-2015

Sector	Regression Analysis			
	Table t = 1.72 Count t		Table F = 3.44 Count F	R^2
	GDP Per Capita	Population		
Agriculture	5.89	1.65	273.56	0.9613
Mining and Quarrying	4.38	-0.24	84.58	0.8849
Manufacturing	4.35	0.22	102.08	0.9027
Electricity, Gas and Water Supply	2.97	0.86	70.51	0.8650
Building / Construction	4.57	-0.26	91.75	0.8929
Trade, Hotel and Restaurant	5.96	2.90	375.14	0.9715
Transport and Communications	3.84	1.68	146.17	0.9300
Finance, Leasing and Services Company	3.39	1.47	113.49	0.9116
Services	5.05	2.40	265.67	0.9602

Based on Table 4 above, analysis found that the value added sector of economy of East Nusa Tenggara Indonesia is influenced by variables GDP per capita. This situation is reflected in the value of the count variable t GDP per capita greater than the value t table (1.72) for every sector of the economy. The results of data analysis for 25 years from 1991 to 2015 by using economic regression model (Appendix 1) showed that the value added of each economic sector in East Nusa Tenggara Indonesia was determined to be individually or by changes in per capita income. It is stamped on t test results, the table t, a 95 percent and 22 independent degrees smaller than the count value t, the variable income per capita. The variables for the total population only have an effect on value added trade, hotels and restaurants and service sector.

Generally, it was found that variables GDP per capita and the number of individual influence on value-added trade, hotels and restaurants, as well the services sector. T count value for each variable is GDP per capita and population in the two sectors is greater than the value t table. For the trade, hotels and restaurants, the count value t variables GDP per capita is 5.96 and variables total population is 2.90. For services sector, the count value t variables GDP per capita is 5.05 and variables total population is 2.40.

The analysis results of study showed that variables of population individually have no effect on the value-added agriculture, mining and quarrying, manufacturing, electricity, gas and water supplay, construction, transport and communications sector and the financial sector, leasing and service company. T count the variables total population of the seven sectors showed a smaller value than the value t table (1.72).

According to Table 4, variables GDP per capita and population variables jointly affect the value added of all economic sectors. F count value for all sectors of the economy exceeds the schedule

F (3:44). Thus, it can be concluded that the contribution of variables GDP per capita and a variable number of the value added of all economic sectors showed considerable and variable. This is evident based on the value of R2 = 0.9613 agricultural sector, which means that the contribution of variables GDP per capita and a variable number of the value added agricultural sector is 96.13 %.

On the other hand, the balance of 3.87 % is another variable contribution to value added of the agricultural sector. R2 = 0.8849 for the mining and quarrying sector means that contribution of the variables GDP per capita and a variable number the value added of this sector amounted to 88.49%. Rather, balance of 11:51 % is another variable contribution to value added mining and quarrying sector. The high value of R2 for every sector of the economy showed that in variables GDP per capita and a variable number of the population has a very large contribution to value added economic sectors of East Nusa Tenggara Indonesia.

5. REGRESSION ANALYSIS SECTOR PLANNING BASICS

Characteristics of region refer to the problems and potentials of region. Development plans aimed at managing human resources so as to support the economic development of the region East Nusa Tenggara Indonesia, based on regression analysis of the basic sectors like below.

Table 5: Regression Analysis Effect Per Capita GDP, Government Spending and Exports of Goods and Services for Value Added Sector of Region East Nusa Tenggara Indonesia Basic Economic the Period 19991-2015

Sector	Regression Analysis Table t α 0.05 = 1.72 GDP Per Capita	Count t Spending Government	Export Goods and Services	Table F α 0.05 = 3.47 Count F	R^2
Agriculture	12.01801	-2.037500	1.239599	116.2941	0.943
Services	8.80934	-1.169107	1.704240	72.17347	0.911

According to Table 5 show that GDP per capita variables have an influence on the value-added agriculture and services sectors. This is evident based on the count value t variables GDP per capita for each sector (2.12 and 8.81) greater than the value t table (1.72). While government expenditure variables individually have no effect on the value-added agriculture and services sector, the value of the count variable t government spending for each sector (-2.04 and -1.17) is smaller than the value t table (1.72). Similarly, the variable expenditure of government, the variable export of goods and services, which has no effect on the value added of the agricultural sector and the services sector, which the count value t variable export of goods and services for each sector (1.24 and 1.70) is smaller than the value t table (1.72). However, the variables affecting the export of goods and services to value added services sector as the count variable t exports of goods and services (1.70) approaches the table t (1.72).

The regression analysis of the principles as set out in Table 4 above shows that all variables GDP per capita, the variable expenditure of government and the variable export of goods and services have a significant impact on the value added agriculture and value added services sector, as shown on the count value F (116.2941 and 72.17347) is greater than the F table (3.47). Please note that the results show the variables GDP per capita government expenditure variables and variables exports of goods and services have contributed substantially to the value added agriculture and services sectors. R2 = 0.9432 means that the variable contribution per capita

GDP, government spending variables and variable export goods and services to the agricultural sector is 94.32 per cent. While the value of R2 = 0.9116 means that the variable contribution per capita GDP, government spending variables and variable export goods and services to the services sector was 91.16 per cent.

Regression analysis showed that the economy, individual (t count> t table) or together (F> F table), per capita income and government spending has a significant impact on gross added value of agriculture and the service sector. However, individually, variable export items have no effect on gross added value of the agricultural sector and the services sector (t <t table). On the other hand, when jointly, variable per capita income and government spending has a significant effect on gross value added of the agricultural sector and the services sector (F> Table F). The study also found that the contribution of these three variables on the base of the gross value added is R2, the gross value added of agricultural sector which is 96.67 %, and the gross value added of the services sector was 96.96 % (Appendix 1).

Thus, it can be concluded that the export activity is not much to encourage the growth of the primary sector in East Nusa Tenggara Indonesia. This is because there are still many problems, such as overlapping regulations due to high transaction costs, thus reducing the competitiveness of businesses that have been running or even reduce the attractiveness of investments.

5. DISCUSSION

Also found that individual changes in a population of less influence on the gross value added sectors of the economy, on the other hand, effects of changes in population and per capita income is very significant to the gross value added economic sectors East Nusa Tenggara Indonesia. This can be seen by the F value for each sector of the economy is greater than the F table.

This is reinforced by the contribution (R2) of income per capita and total population of the gross value added of the economic sector, which is worth 80 %. Based on the analysis concluded elasticity of growth, income per capita or population has the potential to be developed in connection with economic growth of East Nusa Tenggara Indonesia.

Therefore, the results of focus group discussions and in-depth interviews found that the basic management of regional economic development plan created by the discussion of all the samples. In addition, specific policies are also sourced to the government office of the regional development planning. These policies include:

1. The investment policy associated with superior products, incentives, and promotions;
2. Basis of regional development, through the identification of determinants and strategies appropriate support;
3. Trade Policy, which trade between regions and sectors, as well as reduce its resistance;
4. Policy development and physical infrastructure, namely human resources;
5. Basic institutional development, including in government decision making mechanism, the creation of regulation, and social and cultural community.

6. CONCLUSION

One of the indicators of economic development of a region is the GDP. Economic growth in the aggregate may be calculated based on GDP per sector. When a sector has a major contribution and growth is very slow, then it can economic growth in the aggregate. Conversely, when a sector has a relatively large contribution to the economy as a whole, the sector has a high growth rate and thus will be able to benefit economic growth. Regression analysis was used to determine the basic sectors of economy as one the indicators human resources generated

by the region. The successful implementation of economic development plans in region East Nusa Tenggara Indonesia is closely related to the quality of regional development planning. It is implemented based on the identification and characteristics of the area.

It was found also that the economy of East Nusa Tenggara Indonesia theoretically elasticity nature of the changes in per capita income. When there is a change in per capita income by 1%, the change in the gross value added per economic sector is more than 1%. Meanwhile, from the angle of the total population, it was found that the economic sector is elasticity is the agricultural sector, trade, hotels and restaurants, transport and communications, finance, service companies, as well as the services sector.

While four other economic sectors is not elasticity, which means when there is a change of 1 % of the population will lead to changes in gross value added in the four sectors that less than 1 %. These sectors are mining and quarrying, manufacturing industry, the electricity, gas and water supply, and construction sector.

LITERATURE:

1. Aba, F.X.L., Yussof, O.M., Saidatulakmal, B.M. (2015). Analysis of Economic Structure in Poverty Eradication in the Province Of East Nusa Tenggara Indonesia', *Journal Procedia – Social and Behavioral Sciences Volume 211, 25 November 2015, Pages 81–88*
2. Anderson A, Wever E. (2003). Borders, Border Regions and Economic Integration: One World, Ready or Not'. *Journal of Borderlands Studies 18(1): 27–38.*
3. Arthur, W.B. (1994). *Increasing Returns and Path Dependency in the Economy'*, Ann Arbor: University of Michigan Press.
4. Ayres, I., Raseman, S., Shih, A. (2013). '*Evidence fromTwo Large Field Experiments that Peer Comparison Feedback Can Reduce Residential Energy Usage'*. J. Law Econ. Org. 29 (5), 992–1022.
5. Center Board of Government Statistic. (2006 until 2015). *East Nusa Tenggara Indonesia in Figures'*
6. Barro, R.J. (1990). Government Spending in a Simple Model of Endogenous Growth', *Journal of Political Economy, 98, S103–S125.*
7. Chellappa, R., and N. Saraf. (2010). A Study of Alliances and Firm Performance in Enterprise Systems Software Markets: A Social Network Approach', *Information Systems Research, 21:4.*
8. Erickson, R.A. (1994). *Technology, Industrial Restructuring and Regional Development, Growth and Change', 25, 353–379*
9. Erickson, R.A., Leinbach, T. (1979). *Characteristics of Branch Plants Attracted to Non metropolitan Areas*' In: Lonsdale, R., Seyter, H.L. (Eds.): Non metropolitan Industrialisation, Winston, Washington, DC.
10. Grossman, G.M., Helpman, E. (1991). *Innovation and Growth in the Global Economy'*, MIT Press, Cambridge, MA.
11. Karlan, D., Morten, M., Zinman, J. (2013). *A personal touch: Text messaging for loan repayment'*. Working paper.
12. Krugman, P. 1981, 'Trade, accumulation, and uneven growth', *Journal of International Economics 8, 149– 161.*
13. Norton, R.D., Rees, J. (1979). The Product Cycle and the Decentralization of North American Manufacturing', *Regional Studies*.
14. Powell, Walter W., K. W. Koput, J. I. Bowie, and L. Smith-Doerr. (2002). The Spatial Clustering of Science and Capital: Accounting for Biotech Firm-Venture Capital Relationships', *Regional Studies 36 (3): 291–306.*

15. Rebelo, S. (1991). Long Run Policy Analysis and Long Run Growth', *Journal of Political Economy, 98, S71–S102*
16. Romer, P.M. (1986). Increasing returns and long-run growth', *Journal of PoliticalEconomy, 94(5) pp.1002-1037.*
17. Rostow, W.W. (1960). *The Stages of Economic Growth*: A Non-Communist Manifesto', Cambridge.
18. Stango, V., Zinman, J. (2014). Limited and Varying Consumer Attention Evidence from Shocks to the Salience of Bank Overdraft Fees', *Rev. Finance. Stud. 27 (4), 990–1030.*
19. Stillwell, F. (1992). *Understanding Cities and Regions'*, NSW, Pluto Press.
20. Stimson, R. J., R. R. Stough, B. H. Roberts. (2006). *Regional Economic Development: Analysis and Planning Strategy',* Revised Edition., Berlin, Springer.
21. Thomas, M.D. (1975). Growth Pole Theory, Technological Change and Regional Economic Growth', *Papers of the Regional Science Association, 34, 3–25.*

Appendix : 1 Regression Analysis Of Growth And *Size Elasticity*

Size growth elasticity analysis is to show a relationship between gross value added due to changes in the economic sector of population and income (GDP) per capita in region. This analysis can then be used to develop projections of economic growth and change or shift in the economic structure of a region. The analysis of data for 25 years (1991 until 2015) using the regression model shows that the value added of each sector the economy in East Nusa Tenggara Indonesia is very much determined or altered individually by changes in income per capita. This is demonstrated by the results of the t test, where the value t table with a 95% confidence level and degrees of freedom 22 is smaller than the value of variable t per capita income. While variable population of only affect the value added trade, hotels and restaurants and the services sector.

Sector-Sector	Regression Analysis						
	Coefficient			t table = 1.72 t Count		F table = 3.44 F Cont	R^2
	Constants	GDP Per Capita	Population	GDP Per Capita	Population		
Agriculture	5.848375	0.777859	1.536080	5.89	1.65	273.56	0.9613
Mining and Quarrying	14.20394	1.318433	-0.507349	4.38	-0.24	84.58	0.8849
Manufacturing	8.573674	0.859644	0.309209	4.35	0.22	102.08	0.9027
Electricity, Gas and Water Supply	4.014999	0.622962	1.275340	2.97	0.86	70.51	0.8650
Building and Construction	16.44823	1.274414	-0.507220	4.57	-0.26	91.75	0.8929
Trade, Hotel and Restaurant	25.75564	0.801353	2.757583	5.96	2.90	375.14	0.9715
Transport and Communications	12.90887	0.650754	2.011752	3.84	1.68	146.17	0.9300
Finance, Leasing and Services Company	18.94901	0.740063	2.273835	3.39	1.47	113.49	0.9116
Services	24.08356	0.798226	2.676961	5.05	2.40	265.67	0.9602

Appendix: 2 Gross Value Added And GNP Indonesia At Constant Prices 1997–2013, In The Years 1992–2015 (Billions of Indonesia Rupiah / IDR) Information :

No	Years	Gross Value Added									GNP
		Sector 1	Sector 2	Sector 3	Sector 4	Sector 5	Sector 6	Sector 7	Sector 8	Sector 9	
1	1990	20,223.50	16,365.50	16,235.30	494.60	4,802.90	14,356.20	4,938.50	6,313.20	10,788.20	94,517.90
2	1991	21,213.70	15,892.90	18,182.30	548.90	5,259.10	15,656.90	5,211.50	7,514.40	11,501.70	100,981.40
3	1992	21,917.80	16,663.80	19,855.70	615.60	5,878.00	17,338.10	5,811.50	2,877.70	12,187.70	103,145.90
4	1993	22,356.90	17,531.70	22,336.90	725.70	6,672.90	18,568.60	6,367.90	7,892.60	12,764.10	115,217.30
5	1994	22,657.20	19,341.40	24,481.60	842.80	7,475.00	19,572.80	6,869.40	8,680.70	13,243.90	123,164.80
6	1995	24,003.70	19,064.50	26,856.10	928.20	8,171.00	21,029.70	7,595.00	9,507.10	13,753.50	130,908.80
7	1996	58,963.40	31,497.30	73,556.30	3,290.20	22,512.90	55,297.60	23,248.90	28,047.80	33,361.40	329,775.80
8	1997	59,291.20	33,261.60	82,649.00	3,702.70	25,857.50	59,504.10	25,065.80	30,901.00	34,285.10	354,518.00
9	1998	61,885.20	35,502.20	91,637.10	4,291.90	29,197.80	64,230.10	27,328.60	34,313.00	35,405.70	383,791.60
10	1999	63,742.60	37,568.60	102,259.70	4,840.50	32,923.70	69,372.00	29,701.10	37,400.60	36,610.20	414,419.00
11	2000	64,468.00	38,538.20	107,629.70	5,479.90	35,346.40	73,523.80	31,782.50	38,543.00	37,934.50	433,246.00
12	2001	63,609.50	37,474.00	95,320.60	5,646.10	22,465.30	60,130.70	26,975.10	28,278.70	36,475.00	376,375.00
13	2002	65,339.10	36,571.80	98,949.40	6,112.90	22,285.50	60,195.10	26,772.10	26,147.90	37,184.00	379,557.80
14	2003	66,431.50	37,423.20	105,085.10	6,649.50	23,788.80	23,788.80	29,284.00	27,373.50	38,009.60	357,834.00
15	2004	225,685.70	168,244.30	398,323.90	9,058.30	80,080.40	234,273.00	70,276.10	123,085.50	133,957.40	1,442,984.60
16	2005	232,973.40	169,932.00	419,388.10	9,868.20	84,469.80	243,409.30	76,173.20	130,928.10	138,982.30	1,506,124.40
17	2006	243,076.10	168,426.70	441,754.70	10,448.10	90,103.40	256,299.50	84,979.00	140,117.30	144,354.20	1,579,559.00
18	2007	252,952.90	160,655.20	469,118.20	11,066.10	97,466.60	271,176.70	95,772.10	150,935.80	151,435.10	1,660,578.70
19	2008	253,881.70	165,222.60	491,561.40	11,584.10	103,598.40	293,654.00	109,261.50	161,252.20	160,799.30	1,750,815.20
20	2009	262,402.80	168,031.70	514,100.30	12,251.00	112,133.60	312,518.70	124,808.90	170,074.30	170,705.40	1,847,026.70
21	2010	271,401.20	171,422.10	538,084.60	13,517.10	121,901.00	338,807.20	142,327.20	183,659.30	181,972.10	1,963,091.80
22	2011	284,337.80	172,300.00	557,765.60	14,993.70	130,815.70	363,314.00	166,076.80	198,799.60	193,700.50	2,082,103.70
23	2012	295,883.80	180,200.50	570,102.50	17,136.80	140,267.80	368,463.00	192,198.80	209,163.00	205,434.20	2,178,850.40
24	2013	304,777.10	187,152.50	597,134.90	18,050.20	150,022.40	400,474.90	217,980.40	221,024.20	217,842.20	2,314,458.80
25	2014	315,036.80	189,761.40	633,781.90	18,921.00	159,993.40	437,199.70	241,298.00	236,146.60	232,537.70	2,464,676.50
26	2015	327,549.70	192,585.40	670,109.00	20,131.40	171,996.60	472,646.20	265,378.40	253,022.70	244,719.80	2,618,139.20

Sector 1 : Agriculture; Sector 2 : Mining and Quarrying; Sector 3 : Manufacturing ; Sector 4 : Electricity, Gas and Water Supply; Sector 5 : Building and Construction; Sector 6 : Trade, Hotel and Restaurant; Sector 7 : Transport and Communications; Sector 8 : Finance, Leasing and Services ; Sector 9 : Services

SIGNIFICANCE OF MANDATORY RULES IN INTERNATIONAL COMMERCIAL ARBITRATION

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ABSTRACT

One of the main features of the modern world is the „unprecedented transnational mobility "of people and businesses. Besides its obvious advantages from the point of view of economic growth, clash of cultures, legal and societal, it often leads to conflicts.

Generally speaking, there are two different groups of conflicts. First is dominated by state interests and the state itself has an interest in the outcome of such cases. Traditionally, they were whithin the exclusive domain of courts. However, it is beyond doubt that some of them are arbitral today.

The other group is dominated by private interests so, consequently, private parties are allowed to decide who is going to resolve their conflict and how. With regard to „who", arbitration has undoubtedly become the preferred dispute settlement method.

There are some indications that almost 90% of international commercial contracts include an arbitration clause. With regard to „how", party autonomy represents a cornerstone in cross-border commercial transactions. Thus, parties are also allowed to designate the applicable law in the case of a dispute. Sometimes, the parties will even opt for a tandem (combination of choice of law and choice of (arbitral) forum).

Since the incentive for opting for arbitration may be, and sometimes is, the parties' interest to avoid the application of certain mandatory rules, question is to whom should the arbitrator give priority, to the state and its interests or the parties and their expectations? Is it an arbitrator's duty to apply mandatory rules? What are the consequences of their ignorance?

The intention of this paper is to present the complexity of arguments and offer some conclusions.

Keywords: *arbitration, party autonomy, mandatory rules, internationally (overriding) mandatory rules*

1. INTRODUCTION

One of the main features of the modern world us the „unprecedented transnational mobility" of people and businesses (Muir Watt, 2003, p. 1). Besides its obvious advantages from the point of view of economic growth, clash of cultures, legal and societal, it often leads to conflicts.

Generally speaking, there are two groups of conflicts. First is dominated by state interests and the state itself has an interest in the outcome of such cases. Traditionally they are within the exclusive domain of the state courts. For a long time state courts were holding the primacy in conflict resolution but slow, rigid and expensive adjudication process seems to be less and less attractive (Triva/Uzelac, 2007, p. XXIII). Still, despite their preferences, parties of this type of disputes cannot deviate from state judiciary. The other group is dominated by private interests so, consequently, private parties are allowed to decide who is going to resolve their conflict and how. With regard to „who", arbitration has undoubtedly become the prefered alternative dispute settlement method. There are some indications that almost 90% of international comercial contracts include an arbitration clause (Guzman, 2000, p. 1281). There are multiple reasons in favour of arbitration, like discretion, speedy proceedings, arbitrators' expertise, lower costs, final and binding character of the award, facilitated international enforcement, etc. (Giunio, 2006, p. 772).

Its attractiveness in international cases was additionally enhanced by the appearance of universally accepted rules which subsequently formed a common core of contemporary arbitration laws in many countries. First such regime was introduced in 1958, by the New York Convention on the recognition and enforcement of foreign arbitral awards, which harmonised the procedure for recognition and enforcement of foreign arbitral awards. There are also UNCITRAL Arbitration Rules from 1966 (last revised in 2010) and UNCITRAL Model Law on Interational Commercial Arbitration form 1986 last revised in 2006), which provided the standards for management of arbitration proceedings, which are generaly accepted in majority of arbitration laws in the world (Melis, 2010, p. 39). Although very helpfull, unfortunatelly it did not eliminate all the differences in national legal systems. Namely, besides these comon rules there are still many country specific features of arbitration proceedings in different countries and even the rules which are substantially identical do not necessarily lead to the same response in different countries (Triva/Uzelac, 2007, p. XXV).

With regard to "how", party autonomy represents a cornerstone in cross-border commmercial transactions. Thus, parties are also allowed to designate the applicable law in the case of dispute. Sometimes, the parties will even opt for a tandem (combination of choice of law and choice of forum (Berends, 2014, p. 77)). Since the incentive for opting for arbitration may be, and sometimes is, the parties' interest to avoid the application of certain mandatory rules, question is to whom should the arbitrator give priority, to the state and its interests or the parties and their expectations? Is an arbitrator's duty to apply mandatory rules? If the answer is yes, what are the relevant mandatory rules? What are the consequences of their ignorance?

The answer to these questions depends on several factors. In this article, which is primarily focused on the relationship of arbitration and internationally (overriding) mandatory rules, the Author will briefly present the most important questions like: the underlaying nature of arbitration (Part 2), the nature of the rules itself (internally and/or overriding mandatory rules) (Part 3), whether there is (or should be) a duty of an arbitrator to apply mandatory rules (Part 4) and possible consequences of their ignorance (Part 5). Finally, in Part 6 the Author shall atempt to outline her views.

2. LEGAL NATURE OF ARBITRATION

There are significant theoretical differences in understanding the legal nature of arbitration (Lew/Mistelis/Kröll, 2003, pp. 72, 81). Unfortunatelly, these differences may influence the arbitrators' attitude with regard to their rights and responsibilities towards the application of mandatory rules. There are alltogether four theories – jurisdictional, contractual, hybrid and autonomous (Samuel, 1989, p. 33; Yu, 2008), but only the first three are considered relevant. Advocates of the older *jurisdictional theory* take that arbitration has public (judicial) nature and that "every activity occuring within the territory of a state is necessarily subject to its jurisdiction" (Mann, 1967, pp. 157, 162.). Within this theory there are three branches: the judgment theory, the delegation theory and the municipal law theory (Samuel, 1989, pp. 51-60). According to the judgment theory, parties' arbitration agreement is only a tool to invoke arbitrators' adjudicative function. In this regard, arbitrators are given a status of quasi-judges and their award is given a status comparable with the state court judgement (Yu/Sauzier, 2000). According to the delegation theory, arbitrators perform their function not under the parties' agreement but as delegates of the legal systems of different states. Thus, arbitration is dependent on the level of flexibility provided by the relevant local (state) authority and the award may be subject to certain local restrictions (Motulski, 1974, p. 14). According to the municipal law theory, all aspects of arbitration are regulated by the law of the seat of arbitration ("*lex facit arbitri*").

This law is a basis for the arbitrators' authority and also dictates the arbitrator's competeneces. In that regard, arbitrator's duty to respect the parties will does not emerge from the arbitration agreement but from the *lex arbitri*. In any case, due to their special status granted by the state, which resembles to the one of the state judge, an arbitrator is also required to follow the law and observe the mandatory rules and the public policy of the *lex fori* to settle the disputes between the parties (Yu, 2008, pp. 261-262). With regard to possible application of foreign mandatory rules decision should be reached through the conflict of law rules of the *lex fori*. Non compliance with these norms is to be considered as an infringement of that state's sovereignity (Mann, 1967, pp. 164-166).

On the other hand, advocates of the *contractual theory* refer exclusively to the consensual character of arbitration. They argue that arbitration is based on the agreement of the parties, so the parties have the freedom to decide all the relevant issues with regard to arbitration proceedings and their freedom should not be interfered with the powers of the state (Lew/Mistelis/Kröll, 2003, p. 57; Yu, 2008, p. 265). In this case, the key to determining the validity of the arbitration process lies in parties' agreement and does not depend on the *lex loci arbitri*. Thus, everything from setting up the tribunal, to the arbitrator's powers and the binding effect of the award depends on the parties' agreement (Grigera Naón, 1992, p. 15). Advocates of this theory believe that the arbitration should not be influenced by the power of any states and that "the concept of *pacta sunt servanda* should prevail, binding the parties to perform the arbitration agreement without the pressure of the state" (Yu, 2008, pp. 265-266).

In line with this theory, arbitrators do not perform any public function, but there is no consensus on their role. In that regard, this theory can also be divided into two branches. First is usually referred to as the classical contractual theory (represented by Merlin, Foelix and Lainé) and "underlines the linkages between the arbitration agreement and the contractual character of arbitral awards, as well as the authority of arbitrators" (Warwas, 2017, p. 121). Thus, the power of arbitrators arises exclusively from an arbitration agreement and their subsequent acts are considered as the continuation of such agreement. Arbitrators are agents of the parties and their authority does not require any kind of public support. Acting as agents of the parties they can only decide on the matters authorised by their principals (Yu, 2008, p. 269). Second branch is referred to as modern contractual theory (represented by Bernard and Klein) and entirely rejects the agency theory with respect to arbitrators. It claims that the process of making an arbitral award represents "a network of contractual acts and not an exclusive authority of a single, initial contract that determines the outcome of the arbitration process" (Warwas, 2017, p. 122). In additon to it, arbitrators are appointed to resolve the dispute in an impartial manner which conflicts with the role of an agent and they have the power to perform functions which are not available to the parties (Yu, 2008, p. 270). In any case, this theory is focused primarily on the party autonomy and rather hostile towards the application of mandatory rules (Barraclough/Waincymer, 2005, p. 208). The exception refers only to the mandatory rules of *lex contractus* or mandatory rules that prove the invalidity or illegality of the agreement. The biggest flaw of this theory lies in its lack of adequate response to the situations where the parties have not made an express choice of the applicable substantive and procedural law or where there is a general choice of law clause without any reference on the potentially applicable mandatory rules.

Also, even under the contractual theory, arbitration is not totally exempt from the influence of the state. Namely, if one party reneges on their obligation under the arbitration agreement the state may be called to intervene in order to enforce the parties' agreement (Lew, 1978, p. 59; Barraclough/Waincymer, 2005, p. 209). Thus, despite its efforts, arbitration can never be "truly independent" of the *lex loci arbitri*.

Unlike the previous theories, the third one is not exclusive. It is a *hybrid theory* and incorporates different aspects of both jurisdictional and contractual theory, and is nowadays most accepted (Grigera Naón, 1992, p. 17; van Houtte, 1995, p. 384). As represented, *inter alia* by Surville and Sauser-Hall, it emphasises the dual character of international commmercial arbitration. While contractual character of arbitration is represented in its origin in a private contract which gives the parties power of choice, its jurisdictional element is represented in its link with the legal regime of *lex fori*, since the number of issue related to arbitral proceedings needs to be subject to the mandatory rules and public policy of *lex fori* or, in case of recognition and enforcement, of the country in which the recognition and enforcement is sought (Yu, 2008, pp. 274-275).

Under this theory, the relationship between the arbitrators and the parties is contractual in nature but the extent of the arbitrator's power is subject to the scrutiny of the mandatory rules and public policy of *lex fori* or of the country in which the recognition and enforcement is sought. It places the arbitral award on a half way between a judgment and a contract (Surville, 1990, p. 148). With regard to the applicable law, arbitrators are obliged to apply the law expressly chosen by the parties but in cases where there is no express choice of law they must resort to the conflict of law rules of the place of arbitration (Lew, 1978, p. 58).

Despite its obvious advantages in comparison with the other two, there are some flaws in this model also. Namely, there is a long line between these two extremes, and the model itself does not provide an answer to the question whether the primacy should be given to the contractual or to the jurisdictional aspect.

3. THE NATURE OF THE RULES

Besides being approved by national laws, principle of party autonomy is also approved by international arbitral institutions and organizations (Redfern/Hunter, 2004, p. 315). At the same time, the application of party autonomy has its limitations since most states require a respect for, at least, some minimum standards imposed by mandatory rules and public policy (Born, 2001, p. 436; Baniassadi, 1992, p. 63).

When speaking of mandatory rules in an international (commercial) context, it is necessary to distinguish between internally („rules which cannot be derogated from by agreement") and internationally mandatory rules („overriding mandatory rules"). Internally mandatory rules are those rules that cannot be excluded by the parties' choice in the domestic context, but are subject to conflict of law rules. They apply *a priori* and restrict the application of a chosen law (Medić, 2015, p. 45). They do not prevail in international matters.

On the contrary, overriding mandatory rules can be applied regardles of a choice of law made by the parties or even the objectively applicable law. Art. 9(1) of the Rome I Regulation provides the elements for clear identification of overriding mandatory rules, reffering to „provisions the respect for which is regarded as a crucial by a country for safeguarding its public interests, such as political, social or economic organisation, to such an extent that they are applicable to any situation falling within their scope, irrespective of the law otherwise applicable to the contract under this Regulation". Their "purelly effects-oriented character" requires protecting them against any contractual construction that could undermine the legislator's intended result (Kleinheisterkamp, 2009, p. 9).With regard to their application, there are no restrictions in the application of the overriding mandatory rules of the forum (Art. 9(2)) but there are restrictions with regard to application of foreign overriding mandatory rules. They may be applied only if it is „the law of the country were the obligations arising out of contract have to be or have been performed" (Art. 9(3)).

4. IS THERE A DUTY OF AN ARBITRATOR TO APPLY MANDATORY RULES?

The role of mandatory rules in arbitration is, without a doubt, one of the most controversial topics in international arbitration (Mayer, 1986; Posner, 1999; Guzman, 2000). At the heart of this controversy lies an endless struggle between respecting the parties' original intentions to arbitrate and their legislator's intention to protect public interests (Kleinheisterkamp, 2009, p. 1). Before the U.S. Supreme Court Mitsubishi decision (*Mistubishi Motors Corp. v. Soler Chrysler-Plymouth, Inc.*, 437 U.S. 416 (1985)) and the CJEU Eco Swiss decision (C-126/97 *Eco Swiss China Time Ltd v. Beneton International NV* [1999] ECR I-2055) arbitral tribunals were not considered as an appropriate forum to give effect to mandatory rules, since many of these rules are part of public law. In the meantime, the concept of arbitrability has expanded and many claims arising under mandatory rules are nowadays arbitrable (Pitta e Cunha, 2016, p. 34). The „public law taboo" is gradually being defeated (Baumbax, 2007, p. 25; Muir Watt, 2003, p. 2).

Since arbitrators do not have a forum, they are not bound by the conflict of law rules binding judges (Hochstrasser, 1994, p. 58; Kleinheisterkamp, 2009, p. 13). Thus, it is of no surprise that most modern arbitration laws recognise as the arbitrator's primary duty an obligation "to respect the intention of the parties as regards the determination of the applicable rules of law and that, where the parties have remained silent, they enjoy great freedom in such determination" (Gaillard, 2010, p. 111).

Whether an arbitrator should take into consideration mandatory rules that are relevant but not chosen by the parties? If there is no express exclusion of mandatory laws from the arbitrators' mandate, they may apply mandatory rules of a law other than that chosen by the parties to govern their agreement (Pitta e Cunha, 2016, p. 31). Moreover, application of certain mandatory rules is generally considered uncontroversial – *force majeure*, transnational public policy, mandatory rules of the *lex contractus* and rules of the seat (Barraclough/Waincymer, 2005, p. 217-224). Despite their formal detachment from the state and the fact that the choice of the seat of arbitration is most often inspired only by the idea of neutrality and convenience (Born, 2012, p. 2705), arbitrators should take account of the mandatory rules of that state. Namely, according to Art. 35 of the ICC Rules of Arbitration, tribunal "shall make every effort to make sure that the award is enforcable". Since the law of the state of the seat of arbitration often exercises a supervisory role over the arbitral proceedings, respecting the mandatory rules of that state prevents the risk of having the award set asside in the "country of origin" and, consequently, refusal of enforcement in a foreign country (based on Art. V(1) of the New York Convention) (Pitta e Cunha, 2016, p. 31). Further to it, the same Convention also provides that a foreign court may refuse to recognise and enforce an award if it would be contrary to its public policy which leads to conclusion that, in order to make sure that the award is enforcable, arbitrator should also take into an account mandatory rules of all countries in which the parties may seek an enforcement (Paulsson, 2013, p. 133; Born, 2012, p. 2705). Application of these, as well as other possible categories of mandatory rules, is more contentious (Barraclough/Waincymer, 2005, pp. 224-227).

Is there a duty of an arbitrator to apply mandatory rules? There is no straigtforward answer. Although some suggest that there is a "duty" of an arbitrator to apply overriding mandatory rules (Radicati di Brozolo, 2011, p. 3), others claim that the incentive for an arbitrator to apply mandatory rules may only be based on the interest of the parties (Voser, 1996, p. 347). For arbitrators, all mandatory rules are foreign. Since they are not organs of the state, they are not bound by any rules but those chosen by the parties. Thus, their incentive to apply certain mandatory rules may be the interests of the parties or their willingness to ensure the enforcablity

of the award or, but not likely, "legitimising arbitration as an effective dispute resolution mechanism" (Pitta e Cunha, 2016, p. 31-32). Question is, is there anything else that may justify "the duty" of an arbitrator to apply mandatory rules? Although some court decisions, at least in Europe, show that European courts imply that the arbitrators are under legal obligation to apply mandatory rules (*Eco Swiss* and C-168/05 *Elisa María Mostaza Claro v Centro Móvil Milenium SL* [2006] ECR I-7879), such implication may seem exaggerated. Namely, due to Art. 9 of the Rome I Regulation and Art. 25 of the Brussels I bis Regulation, there is a big risk of circumventing mandatory provisions of a certain state in cross-border litigation also. Comparing the status of the two, it seems that the expectations towards the arbitration are sometimes higher than towards the national courts (Wautelet, 2012, p. 217, 228).

5. POSSIBLE CONSEQUENCES OF THEIR IGNORANCE

As has already been mentioned, despite the existence of some widely accepted international instruments, this area of interest is still under the great influence of national states. Thus, the possible consequences of ignorance of mandatory rules may differ from state to state.

Generally speaking, there are two types of situations in which national court has to take into consideration an application of mandatory rules in international commercial arbitration. First includes situations in which the forum state decides on the impact of its mandatory rules on the effectiveness of arbitration agreement, while second includes situations in which the state of enforcement decides on the impact of its mandatory rules on the effectiveness of the award (Kleinheisterkamp, 2009).

With regard to giving an effect to the arbitration agreement national practice may vary significantly, e.g. refusing the effectiveness of arbitration clause due to the fact that "it seemed clear from the negotiations that the foreign party had inserted arbitration clause in order to avoid the application of *lex fori*" or "because it cannot be reasonably expected that the overriding mandatory rules of the *lex fori* will be applied" or "where there is a "likely danger" that the foreign tribunal will not apply the mandatory provisions of *lex fori*" (Kleinheisterkamp, 2009, p. 6-10; Girsberger, 2011, p. 358-360). Also, the courts may also be prone to deprive a tandem of its effectiveness if there is a danger that the foreign tribunal would not apply mandatory rules of the *lex fori* (Kleinheisterkamp, 2009, p. 10). Such an approach, in a European context, may be in contradiction with the principle of proportionality, especially if the assesment of the protection given by the foreign law is lacking.

Some of these approaches are often seen as too restrictive (Rühl, 2007, p. 902; Quinke, 2007, p. 252). Or, in words of some authors, "parochial or discriminatory national laws cannot be the measure of how the validity of international arbitration agreements is determined." (Born/Koepp, 2007, p. 73). Question is, whether the different approach – e.g. giving more respect to the parties' free choice to submit to arbitration and the postponment of judicial control (with regard to overriding mandatory rules) to the stage of recognition and enforcement, as deployed in U.S. Supreme Court Mitsubishi Judgment (*Mistubishi Motors Corp. v. Soler Chrysler-Plymouth, Inc.*, 437 U.S. 416 (1985)) (so called "second look" doctrine), would be a better solution? Some would answer "no", since it runs counter the procedural economy and advances "orderlines and predictability", at the expense of the protection of fundmental interests (Kleinheisterkamp, 2009, p. 14-18). In our view, answer may differ depending on the interpretation of the nature of arbitration or, in a European context, on the test of proportionality (Rühl, 2007, p. 903).

With regard to recognition and enforcement of the award, if he does not apply an overriding mandatory rule an arbitrator risks his award being pronounced void. Namely, the limit to

recognition and enforcement of an award is the same as the one of a foreign judgment, i. e. public policy (Girsberger, 2011, p. 355). As an exception, it shuld be invoked restrictively (Suarez Anzorena, 2008, p. 615). However, different national practices show that states case law differs on that question and that it is sometimes used to invoke review of the merrits of the award (Hanotiau/Caprasse, 2008, p. 815). Hence, the success of contemporary international commercial arbitration directly relates to the state's willingnes to cede control over the substantive outcomes of such disputes in favour of enforcement of arbitral agreement or award (Rogers, 2003, p. 1). An argument in favour of such approach may be found in Arts. V(1)(d) and V(1)(e) of the New York Convention. While former allows setting aside an award for public policy reasons (thus, overriding mandatory rules included (Becker, 1996, p. 705 *et seq*.) the later allows an enforcement of an award, already set aside in the state in which it was made, in the court of another state provided that it is in line with its public policy.

6. CONCLUSION

As an alternative dispute resolution method, arbitration will always be attractive to the parties. In most cases, not in order to avoid application of certain mandatory rules. It is flexibility, speed, discretion and easy enforcement abroad that is attractive to the parties. Thus, in most cases arbitrators will have enough room for exercising their discretion with regard to mandatory rules. Which is good. Despite different theories on the nature of arbitration, it is doubtless that arbitration cannot exist in vacuum. It is always dependent (in one way or another) on certain legal system(s).

It does not mean a departure from the contractual bases of arbitration. First and foremost arbitrator's duty is to respect the intention of the parties as regards the determination of the applicable rules of law. If there is no express exclusion of mandatory laws from the arbitrators' mandate, they may apply mandatory rules of a law other than that chosen by the parties to govern their agreement. Whether they will is up to their discretion. The purely effects-oriented character of overriding mandatory rules would require protecting them against any contractual construction that could undermine the legislator's intended result" (Kleinheisterkamp, 2009, p. 9). Arbitral refusal to apply mandatory rules is as inadequate as arbitral overreaching, i.e. applying laws not authorised by the parties' agreement. Both can have an impact on the prospect for enforcement of an award. Although, it will greatly differ from country to country. The degree of hesitation on behalf of a state to recognize and enforce an award is, *inter alia*, related to its interpretation of relevant articles of respective legal instrument (e.g. New York Convention).

Thus, is there a duty of an arbitrator to apply mandatory rules? We think "no". But it would be advisable to consider the appropriateness of their application. In words of Pomier, "an award without an enforcement is a mere scrap of paper." (Pomier, 1992, p. 341).

LITERATURE:

1. Baniassadi, M.R. (1992), *Do Mandatory Rules of Public Law Limit Choice of Law in International Commercial Arbitration?*, International Tax & Business Lawyer,1992 (Vol. 10, No. 1), pp. 59-84.
2. Barraclough, A./Waincymer, J. (2005), *Mandatory Rules of Law in International Commercail Arbitration*, Melbourne Journal of International Law, 2005 (Vol. 6, No. 2), pp. 205-244.
3. Becker, M. (1996), *Zwingendes Eingriffsrecht in der Urteilsannerkennung*, Rabels Zeitschrift für ausländisches und internationales Privatrecht, 1996 (Vol. 60, No. 4), pp. 691-737.

4. Berends, A.J. (2014), *Why overriding mandatory provisions that protect financial stability deserve special treatment*, Netherlands International Law Review, 2014 (Vol. 61, No. 1), pp. 69.-106.
5. Born, G.B. (2001), *International Commercial Arbitration: Commentary and Materials*, Kluwer Law International.
6. Born, G.B. (2012), *International Arbitration: Law and Practice*, Kluwer Law International.
7. Born, G.B./Koepp, J. (2007), *Towards a uniform standard of validity of International Arbitration Agreements Under the New York Convention*. In Bachmann *et al.* (eds.), Grenzüberschreitungen – Festschrift für Peter Schlosser zum 70. Geburtsdag, Tübingen: Mohr Siebeck.
8. Buxbaum, H.L. (2008), *Mandatory Rules in Civil Litigation: Status of the Doctrine Post-Globalization*, Articles by Maurer Faculty, Paper 292. Retrieved 23. 5. 2016. from http://www.repository.law.indiana.edu/facpub/292 .
9. Gaillard, E. (2010), *Legal Theory of International Arbitration*, Martinus Nijhoff Publishers.
10. Giunio, M. A. (2006), *Mogućnosti napadanja arbitražne odluke*, Zbornik Pravnog fakulteta u Zagrebu, 2006 (Vol. 56, No. 1-2), pp. 771-799.
11. Girsberger, D. (2011), *The law applicable to the assignment of claims subject to an arbitration agreement*. In Ferrari, F./Kröll, S. (eds.), Conflict of Laws in International Arbitration, Munich: Sellier, European law publishers GmbH, pp. 379-408.
12. Grigera Naón, H. (1992), *Choice-of-Law Problems in International Commercial Arbitration*, Tübingen: Mohr.
13. Guzman, A. T. (2000), *Arbitrator liability: Reconciling arbitration and mandatory rules*, Duke Law Journal, 2000 (Vol. 49, No. 5), pp. 1279-1334.
14. Hanotiau, B./Caprasse, O. (2008), Public policy in International Commercial Arbitration. In Gaillard, E./Di Pietro, D. (eds.), Enforcement of Arbitration Agreements and International Arbitral Awards: The New York Convention in Practice, UK: Cameron May Ltd.
15. Hochstrasser, D. (1994), *Choice of Law and "Foreign" Mandatory Rules in International Arbitration*, Journal of International Arbitration, 1994 (Vol. 11, No. 1), pp. 57-86.
16. Kleinheisterkamp, J. (2009), *The Impact of Internationally Mandatory Laws on the Enforceability of Arbitration Agreements*, LSE Law, Society and Economy Working papers 22/2009. Retrieved 21. 09. 2016. from http://ssrn.com/abstract=1496923 .
17. Lew, J. (1978), *Applicable Law in International Commercial Arbitration: A Study in Commercial Arbitral Awards*, New York: Oceana Publications.
18. Lew, J./Mistelis, L./Kröll, S. (2003), *Comparative International Commercial Arbitration*, Kluwer Law International.
19. Mann, F.A. (1967), *"Lex Facit Arbitrum"*. In Sanders, P. (ed.), International Arbitration: Liber Amicorum for Martin Domke, The Hague, Martinus Nijhoff, pp. 157-183.
20. Mayer, P. (1986), *Mandatory Rules of Law in International Arbitration*, Arbitration International, 1986 (Vol. 2, No. 4), pp. 274-293.
21. Medić, I. (2015), *Lex contractus and overriding mandatory rules. What can we learn from the CJEU case-law?*, Book of proceedings, 16th International Scientific Conference on Economic and Social Development – "The Legal Challenge of mOdern World", pp. 43-52. Retrieved 12. 10. 2016. from www.esd-conference.com/index.php?page=past-conferences
22. Melis, W. (2010), *Multiparty Arbitration as Defined in different Arbitration Rules*. In Sikirić, H. (ed.), Croatian Arbitration Yearbook, 2010 (Vol. 17).
23. Muir Watt, H. (2003): *Choice of law in integrated and interconnected markets: A Matter of Political Economy*, Electronic Journal of Comparative Law, 2003 (Vol. 7, No. 3). Retrieved 15. 4. 2016. from http://www.ejcl.org/ejcl/73/art73-4.html .
24. Paulsson, J. (2013), *The Idea of Arbitration*, Oxford University Press.

25. Pitta e Cunha, C. (2016), *Arbitrators and Courts Compared: The long path towards an arbitrators' duty to apply internationally mandatory rules*, Young Arbitration Review, April 2016, pp. 26-38.
26. Pomier, J.-C. (1992), *Principe d'autonomie et loi du contrat en droit international privé conventionnel*, Economica: Collection Droit Civil.
27. Posner, E.A. (1999), *Arbitration and the Harmonisation of International Commercial law: A Defense of Mitsubishi*, Virgina Journal of International Law (Vol. 39, No. 3), pp. 647-670.
28. Quinke, D. (2007), *Schiedsvereinbarungen und Eingriffsnormen*, SchiedsVZ, 2007, pp. 246-254.
29. Radicati di Brozolo, L.G. (2011), *Arbitration and competition Law: The Position of the Courts and of Arbitrators*, Arbitration Inernational, 2011 (Vol. 27, No. 1), pp. 1-26.
30. Redfern, A./Hunter M. (2004), *Law and Practice of International Commercial Arbitration*, London: Sweet & Maxwell.
31. Rogers, C.A. (2003), *Context and Institutional Structure in Attorney Regulation: Constructing an Enforcement, Regime for Interational Arbitration*, Stanford Journal of International Law, 2003 (Vol. 39, No. 1), p. 1.
32. Rühl, G. (2007), *Extending Ingmar to Jurisdiction and Arbitration Clauses: The End of Party Autonomy in Contracts with Commercial Agents?*, European Review of Private Law, 2007 (Vol. 6), pp. 891-903.
33. Samuel, A. (1989), *Jurisdictional problems in International Commercial Arbitration: A Study of Belgian, Dutch, English, French, Swedish, Swiss, U.S. and West Germany*, Zurich: Schulthess polygraphischer Verlag.
34. Suarez Anzorena, I. (2008), *The Incapacity Defence under the New York Convention*. In Gaillard, E./Di Pietro, D. (eds.), Enforcement of Arbitration Agreements and International Arbitral Awards: The New York Convention in Practice, UK: Cameron May Ltd.
35. Surville, F. (1990), *Jurispridence Française en Matière de Droit International*, Revue Critique de Legislation et de Jurisprudence, 1990 (Vol. 29), p. 129.
36. Triva, S./Uzelac, A. (2007), *Hrvatsko arbitražno pravo*, Zagreb, Narodne novine.
37. Van Houtte, H. (1995), *The Law of International Trade*, London: Sweet & Maxwell.
38. Voser, N. (1996), *Mandatory Rules of Law Applicable in International Commercial Arbitration*, American Review of Intrnational Arbitration (Vol. 7, No. 3/4), pp. 319-357.
39. Warwas, B. A. (2017), *The Liability of Arbitral Institutions: Legitimacy Challenges and Functional Responses*, The Hague: T.M.C. Asser Press.
40. Wautelet, P. (2012), *Arbitration of Distribution Disputes Revisited: A Comment on Sebastian International Inc v. Common Market Cosmetics NV'*. In Wautelet, P./Kruger, T./Copens, G. (eds.), The Pracice of Arbitration: Essays in Honour of Hans van Houtee, Hart Publishing, pp. 217-232.
41. Yu, H. (2008), *A Theoretical Overview of the Foundations of International Commercial Arbitration*, Contempary Asia Arbitration Journal, 2008 (Vol. 1, No. 2), pp. 255-286.
42. Yu, H. /Sauzier, E. (2000), *From arbitrator's immunity to the fifth theory of international commercial arbitration*, International Arbitration Law Review, 2000 (Vol. 3, No. 3), pp. 114-121.

INVENTIVE HIGHER EDUCATION: A BLENDING PASSAGE

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ABSTRACT

The massification of education has led to the perception in some disciplines that an undergraduate degree no longer provides sufficient competitive advantage in employment. While undergraduate degrees deliver sufficient professional and expertise substance for entry level positions, ultimately it is the postgraduate qualification which sets students apart and in turn assists with rapid career advancement. In ensuring that graduate students exceed the desired entry level of professional skills, the education institution needs to provide a linking passage between undergraduate and postgraduates studies. This blending passage offers a significant opportunity for students to further develop their overall expertise and skill set. Moreover, this blending passage needs to closely align with the specific professional requirements together with the potential for the graduate to seek possible career progression and advancements. Accordingly, postgraduate studies need to align with these specific professional requirements. The blending passage is an innovative approach which maximizes non-traditional learning and provides incentives to further augment the student's career. This rapprochement will be aligned with the relevant professional bodies that will also carefully consider the students' professional competencies. This paper will investigate three prominent Australian universities and their Engineering undergraduates' belief in the importance of further education and their desire to further develop their specialist expertise through postgraduate study. Minitab will be utilized as a statistical tool to analyze survey data and the findings and their implications for the provision of a blended passage to postgraduate study will be discussed.

Keywords: *Career Advancements, Engineering degrees, Postgraduate studies, Professional and Expertise substance*

1. INTRODUCTION

In Australia, the higher education participation and enrolment has increased significantly over the past couple of decades and particularly since 1980's. This ongoing growth of higher education creates plentiful challenges and confrontations. One of these challenges includes the perception in some disciplines that an undergraduate degree no longer provides sufficient competitive advantage in employment (Ribeiro and Lubbers, 2015). It is also correct to consider the Undergraduate programs as more general in nature. Generally, the Undergraduate programs provide general education courses in a wide variety of subjects and content which are not parts of postgraduate education (Bonaccorsi, 2014). Accordingly, there are many differences between undergraduate and postgraduate education including:-

1. Although Undergraduate programs are exceptionally similar for the same field of study (regardless where they are taught), postgraduate courses allow more flexibility based on each institution's own strategic plan.
2. Where Undergraduate is mostly taught at the substance level, postgraduate courses require individuals to conduct detailed research and accordingly use their own initiatives and ingenuity.
3. While Undergraduate programs are generally less individualized, postgraduate courses are substantially Technical, Specific and much more highly developed.

More importantly, while the undergraduate degrees deliver sufficient and necessary professional and expertise substance for the entry level positions; ultimately it is the postgraduate qualification which sets students apart and in turn assists with rapid career advancement (Gharehbaghi, 2015). Furthermore, it is also the postgraduate qualification which conveys more innovative and specialized knowledge and in doing so, position students apart and in turn assists with rapid career advancement. Moreover, in the advanced economies, postgraduate qualification is highly desirable if not compulsory for further career advancement (Welpe et al, 2014).

2. EDUCATIONAL ASPIRATIONS AND CAREER ADVANCEMENT

Educational aspiration is defined as an individual's educational goals which are shaped by two classes of factors: student-related background and educational institution characteristics (Hanson, Paulsen and Pascarella, 2016). Internal student influences like personal motivation and career ambition interact with external environmental factors like parental education, race, socio-economic status and income, family and peer group attitudes, past school experience, and scholastic achievement (Buchmann and Dalton, 2002) to influence aspirations to attend graduate school. While studies have extensively explored the individual student characteristics which motivate graduate studies (Buchmann and Dalton, 2002; Hanson et al., 2016), less is known about the second class of factors: the impact of institutional characteristics.

Furthermore, students from highly selective, elite universities are more likely to pursue graduate studies than those from less selective and lesser ranked universities (Mattern and Radunzel, 2015). Aspiration for graduate education is also influenced by field of study: disciplines with a pure theoretical focus like the biological, social, and physical sciences have higher graduate enrolment rates than disciplines with a more practical application focus, like engineering (Nevill and Chen, 2007). Careers like engineering are highly paid, and so continuing on to graduate education carries an opportunity cost (Mattern and Radunzel, 2015).

Length of the undergraduate degree also impacts graduate aspirations: those who complete a four-year undergraduate degree in a timely fashion are more likely to pursue Master's degree studies (Mattern and Radunzel, 2015). Students' satisfaction with their undergraduate experience is another important factor which fosters a positive perception of graduate school (Vance, 2015).

Positive and engaging relationships with faculty and effective pedagogical practices also increase the likelihood of students pursuing graduate studies (Hanson et al., 2016). Moreover, research shows that institutional prestige impacts the future career opportunities, economic prospects and earning capacity of graduates (Brennan and Naidoo, 2008). On the other hand, Graduate employability and career advancements are some of the most important concerns in Higher education (Hoffman and Välimaa, 2015).

Responding to these concerns requires the optimization of the graduates skill sets. Generally, structural unemployment issues are concerning because the graduates skill sets possessed do not comprehensively match the skills required (Stewart, 2012). The Graduate employability and career advancements association need to encompass fundamental issues including the Graduate's skills set, and employability as the key focus of the higher education implementation (Hunter, 2012). As Wankel and Blessinger (2013) correctly discussed, "*a proven way to advance in Graduate's career is to be continually acquiring new knowledge. Doing so ensures that the Graduates stay on top of trends or developments in their fields*". In addition Turner (2011) pointed out that when graduate seek to advance their career, they should never be afraid to think outside the box and put their professional shrewdness to work. Thus it is clear a prominent way for career advancement is to keep learning.

In addition, as Bonaccorsi (2014) correctly argued *"since career advancements are not a simple improvement, employers now want to barter performance for training, learning and further development that keep their employees viable"*. As it can be noticed this further validates the importance of learning and training to develop the individuals aptitude and their skills set. This development of the skills set would in-turn further improve the career advancements of the individuals.

Graduate education is increasingly perceived as an aspirational pathway to enhance comparative advantage in employment opportunities and stimulate rapid career advancement in the competitive globalized labor market (Lin, 2011; Mattern and Radunzel, 2015). An undergraduate degree is no longer considered the pinnacle of educational aspiration. Given the increasing importance of developing a highly qualified and knowledgeable workforce to improve business productivity (Kim and Otts, 2010), and the impact of graduate study upon an individual's employability and career progress (Gerber and Shaefer, 2004), self-esteem and long-term earning capacity (Mattern and Radunzel, 2015), it is important to explore the factors which prompt engineering students to pursue advanced study in graduate engineering programs.

3. RESULTS AND DISCUSSION

This section consists of the data examination and analysis of the conducted survey. This survey (total of 150 Undergraduate student responses) was conducted in early 2012 and was based on "satisfaction of Undergraduate generic skills" synopsis. This survey commenced with age group, study load (full-time/part-time), local or international based students, and the institution (selected from three prominent Australian universities) questions. In addition to these multiple choice queries, there were also twelve short and long answer questions. The general data analysis techniques consisted of Statistical analysis (using Cross Tabulation and Frequency testing development via Minitab), together with the Factor Analysis and measurements.

For the purpose of data analysis, the responses for the twelve questions were entered either as 1 (for yes), or 0 (for no) values. The important questions which required significant measurement (Factor Analysis) were:

- Question 5. Are you satisfied with the Professional and Expertise substance of your degree [*General Knowledge Satisfaction*].
- Question 6. Are you satisfied with the development of your overall expertise skills [*Specialize Skills Satisfaction*].
- Question 9. How important do you see Postgraduate studies to further develop your expertise skills [*Grad Studies to Further Skills*].
- Question 10. How important do you see Postgraduate studies to further augment your career [*Grad Studies for career Progress*].

These four questions were specifically targeted to provide the correlation between the actual survey and the scope of the research (Inventive Higher Education: A Blending Passage). Table 1 below provides the overall data demographic.

Table1: Data demographic

Who wants to do post graduate studies	N (Percentile)
• Degrees	
o Computer Engineering	35 (23.33)
o Civil Engineering	31 (20.66)
o Mechanical Engineering	29 (19.33)
o Electrical Engineering	22 (14.66)
o Chemical Engineering	19 (12.66)
o Aerospace Engineering	10 (6.66)
o Other	4 (2.66)
• Age group	
o <25	75 (50)
o <30	41 (27.33)
o <35	17 (11.33)
o <40	12 (8)
o >40	5 (3.33)
• Local/overseas	
o Australian Students	98 (65.33)
o International Student	52 (34.66)
• Study load	
o Full-time Student	131 (87.33)
o Part-time Student	19 (12.66)

As it can be noticed, Computer Engineering has the highest response followed by Civil Engineering. In addition, while most respondents were below the age of 25, they were also local students who were majority full-time Undergraduates. Table 2 (below) also provides a basic statistical analysis of the survey.

Table2: Statistical Analysis

Sample Standard Deviation (S) - [all questions]	0.7937
Variance (sample standard) (S^2) - [all questions]	0.63
Standard Deviation (б)- [all questions]	**0.648**
Variance (population standard) ($б^2$) - [all questions]	0.42
99% Confidence level - [all questions]	6.455

As it can be noticed, the б is at 0.648 while the 99% confidence level was also at 6.455. Although both of these values represent low assertion of the data, further analyses were required to determine any correlations. Further analyses not only examined the association within the data set, but also determined any dynamics found. Accordingly, to further scrutinize specific correlation within the data set, Factor Analysis examination was carried out.

3.1 Factor analysis

As already discussed, four questions (Questions 5, 6, 9, and 10) were selected to form the basis for the Factor Analysis examination. In addition, these four questions were then grouped into two relevant categories. While questions 5 (X^1) and 6 (X^2) were grouped as Undergraduate Degree Satisfaction (*Factor 1*); questions 9 (X^3) and 10 (X^4) were grouped as Career Advancement (*Factor 2*). The overall results are provided in Table 3 below.

Table3: Comparison of the three universities

Questions	A		B		C		
	Yes Y^1	No Y^2	Yes Y^3	No Y^4	Yes Y^5	No Y^6	
X^1	***44 (88%)***	6 (12%)	*31 (62%)*	19 (38%)	***42 (84%)***	8 (16%)	F1
X^2	*39 (76%)*	11 (22%)	*33 (66%)*	17 (34%)	*41 (82%)*	9 (18%)	
X^3	*29 (56%)*	21 (42%)	***31 (62%)***	19 (38%)	*25 (50%)*	25 (50%)	F2
X^4	*31 (62%)*	19 (38%)	***33 (66%)***	17 (34%)	*28 (56%)*	22 (44%)	

As it can be noticed Table 3 includes the four questions (X^n) together with the three (A, B, C) Universities surveyed. While Universities A and B were from Group of Eight (Go8), University C was an Australian Technological academe. Using the Minitab software, the questions were then tested based on Yes and No inputs. Furthermore, for each University, independent Yes and No (Y^n) value were observed. To further investigate these results, comparison of X-axis (X^n) and Y-axis (Y^n) were carried out (Figure 1).

Figure 1: Response comparison.

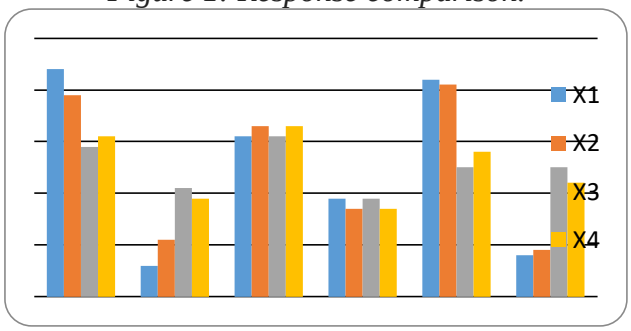
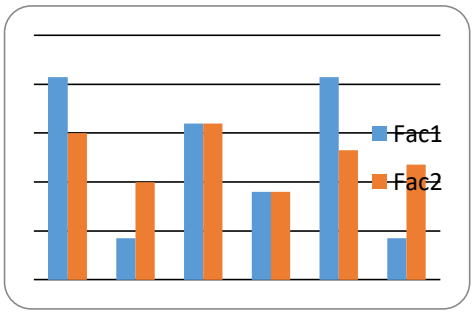


Figure 1, represents Yes and No responses of the Questions 5 (X^1), 6 (X^2), 9 (X^3) and 10 (X^4). As it can be noticed, in general the Yes values are much higher than No responses, with Y^1 (University A - yes) and Y^5 (University C - Yes) have the most positive values (indicating factors). Generally stating, while University C is producing an even flatter association, while University A has the highest *General Knowledge Satisfaction*. On the other hand, University C has the lowest but linear correlation between all factors. To further examine the correlations between the two factors, specific analysis of all the three Universities is carried out and produced below.

Table 4: Factor Analysis and Testing.

Yes Y^1	No Y^2	Yes Y^3	No Y^4	Yes Y^5	No Y^6	
44 (88%)	6 (12%)	*31 (62%)*	19 (38%)	***42 (84%)***	8 (16%)	F1
39 (76%)	11 (22%)	*33 (66%)*	17 (34%)	*41 (82%)*	9 (18%)	
29 (56%)	21 (42%)	***31 (62%)***	19 (38%)	*25 (50%)*	25 (50%)	F2
31 (62%)	19 (38%)	***33 (66%)***	17 (34%)	*28 (56%)*	22 (44%)	

Figure 2:Factor 1 and 2 comparison.



Noting that all the three Universities have excellent Engineering schools, their overall comparison produces interesting findings. As it can be noticed, across all three Universities (overall) *Factor 1* (Undergraduate Degree Satisfaction) is much more influenced value than *Factor 2* (Career Advancement). This could possibly indicate that all Universities (in-particular A and C) overall were fulfilled with their course substance including specialized content. Although University B possesses lower correlation across the board, it is more static.

In addition the positive values Y^1, Y^3 and Y^5 are the strongest sub-factor indicators. These sub-factor indicators are key pointers in determining the overall need to pursue postgraduate studies. Once again, although across all three Universities *Factor 2* (Career Advancement), seem to be within expected range; University B, has higher rate. Comparing Factors 1 and 2, it can be determined that University B not only has smallest Undergraduate Degree Satisfaction rate but also lowest need for the Career Advancement. Therefore, the final summary from this factor analysis denotes that the students which were surveyed from University B, overall were more positive in considering postgraduate studies as a way to advance their careers. This could also be linked back to their lower Factor 1 Results. This produces an interesting summary that the lower rate of Undergraduate Degree Satisfaction (Factor 1), the higher need to undertake postgraduate studies for career advancement (Factor 2).

4. CONCLUSION

The blending passage is an innovative approach which maximizes non-traditional learning and provides incentives to further augment the student's career. This rapprochement will be aligned with the relevant professional bodies that will also carefully consider the students' professional competencies. This paper has investigated three prominent Australian universities and their Engineering undergraduates' belief in the importance of further education and their desire to further develop their specialist expertise through postgraduate study. Minitab was utilized as a statistical tool to analyze survey data and the findings and their implications for the provision of a blended passage to postgraduate study will be discussed.

The result indicated that there was a strong correlation between how surveyed students perceived their postgraduate studies as a way to advance their careers. This produced an interesting summary that the lower rate of Undergraduate Degree Satisfaction, the higher need to undertake postgraduate studies for career advancement. Finally, as this paper demonstrated institutional prestige influences the future career advancements, prospects and capacity of graduates.

LITERATURE:

1. Ball, David; Gleason, William; and Peterson, Nancy. (2015). From All Sides: Rethinking Professionalization in a Changing Job Market. Journal of Pedagogy (Critical Approaches to Teaching Literature, Language, Composition, and Culture), Volume 15, issue 1, pages 103-118, Duke University Press.
2. Barrett, Terry, and Moore, Sarah. (2011). New Approaches to Problem-based Learning: Revitalising Your Practice in Higher Education. Hoboken: Taylor and Francis.
3. Bonaccorsi, A. (2014). Knowledge, Diversity and Performance in European Higher Education: A Changing Landscape. Cheltenham : Edward Elgar Publishing.
4. Brennan, J., and Naidoo, R. (2008). Higher Education and the Achievement (and/or Prevention) of Equity and Social Justice. Higher Education, Volume 56, issue 3, pages 287–302.

5. Buchmann, C. and Dalton, B. (2002). Interpersonal Influences and Educational Aspirations in 12 Countries: The Importance of Institutional Context. Sociology of Education, Volume 75, pages 99–122.
6. Burke, Penny Jane. (2012). The Right to Higher Education: Beyond widening participation. Hoboken: Taylor and Francis.
7. Gerber, T.P., and Schaefer, D.R. (2004). Horizontal Stratification of Higher Education in Russia: Trends, Gender Differences, and Labour Market Outcomes. Sociology of Education, Volume 77, issue 1, pages 32–59.
8. Gharehbaghi, Koorosh. (2014) The Importance of Industry links in Teaching Pedagogy: A Higher Education Prospective. American International Journal of Contemporary Research, Volume 5, Issue 1.
9. Hager, Paul, Lee. Alison and Reich, Ann. (2012). Practice, Learning and Change: Practice-Theory Perspectives on Professional Learning. Springer Netherlands, Dordrecht.
10. Hanson, J., Paulsen, M., and Pascarella, E. (2016). Understanding Graduate School Aspirations: The Effect of Good Teaching Practices. Higher Education, Volume 71, issue 5, pages 735–752.
11. Hoffman, David; Välimaa, Jussi. (2015). RE-BECOMING UNIVERSITIES?: Higher Education Institutions. Networked Knowledge Societies. Dordrecht : Springer Netherlands.
12. Hunter, Gina. (2012). Students Study Up the University: Perspectives Gained in Student Research on the University as Institution. Journal of Pedagogy (Critical Approaches to Teaching Literature, Language, Composition, and Culture), Volume 12, issue 1, pages 19-43, Duke University Press.
13. Irvine, Colin. (2012). Taking on "Best Practices": A Novel Response to Managerialism in Higher Education. Journal of Pedagogy (Critical Approaches to Teaching Literature, Language, Composition, and Culture), Volume 12, issue 3, pages 389-404, Duke University Press.
14. Kim, D., and Otts, C. (2010). The Effect of Loans on Time to Doctorate Degree: Differences by Race/Ethnicity, Field of Study, and Institutional Characteristics. The Journal of Higher Education, Volume 81, issue1, pages 1–32.
15. Lin, M. (2011). Women's Aspirations for Graduate Education in Taiwan. International Journal of Educational Development, Volume 31, pages 515-523.
16. Mattern, K., and Radunzel, J. (2015). Who Goes to Graduate School? Tracking 2003 ACT-Tested High School Graduates for More Than a Decade. ACT Research Report Series.
17. Nevill, S. C., and Chen, X. (2007). The Path Through Graduate School: A Longitudinal Examination 10 Years after Bachelor's Degree. (NCES 2007-162). US Department of Education. Washington, DC: National Center for Education Statistics.
18. Ribeiro, Filipa ; Lubbers, Miranda. (2015). Funds of Knowledge and Epistemic Authority in Higher Education. New Voices in Higher Education Research and Scholarship. Chapter 3, pp.38-69.
19. Vance, C.D. (2015). Decision-making Considerations for Mid-career Army Officers to Pursue Master's Degrees. Adult Learning, Volume 26, issue 3, pages 109-115.
20. Welpe, Isabell M ;Wollersheim, Jutta ; Ringelhan, Stefanie ; Osterloh, Margit. (2014). Incentives and Performance: Governance of Research Organizations. Cham: Springer International Publishing.

THE ROLE AND IMPORTANCE OF AUSTRALIA IN THE SOUTH PACIFIC REGION

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ABSTRACT

Australia is a country comprising the mainland of the Australian continent and the island of Tasmania. The country also includes numerous smaller islands in the Pacific and Indian Ocean. Australia is the sixth-largest country in the world by total area. It also has the world's 12th-largest economy and fifth-highest per capita income. On 1 January 1901, a federation of six separate British self-governing states was formed after a decade of planning, consultation and voting. This established the Commonwealth of Australia as a dominion of the British Empire. In 1931 the status of the dominions was made equal to that of Great Britain, which is considered the symbolic date of Australia gaining full independence. Before World War II and in the course of it, the Commonwealth of Australia was closely tied to the government in London. However, the fall of the British Empire in the Asia Pacific made Australian authorities rethink their existence in the new reality. In the late 80s, Australia's formal ties with London were further loosened, as planned. Since that time the role and significance of the continent has been growing. A vibrant economy and favourable location drive the country's growing importance, which the government in Canberra strongly focuses on. Economic success and effective policies have made Australia become one of the crucial elements of sustainable balance in the South Pacific region. However, the country's political and economic influence goes far beyond its borders. Australia's importance to and influence on neighbouring countries is clearly visible across East and Southeast Asia, the Indian Ocean basin, and the Antarctic. Therefore it is worth to take a closer look at the drivers of the huge success of this unique country and its inhabitants.

Keywords: *Asia, Australia, Pacific, region, success*

1. INTRODUCTION

Looking at a world map from a certain perspective, we immediately notice Asia, i.e. the largest continent in terms of total area. The continent covers 44,580,000 km^2, which accounts for 29.8% of all land on Earth. By comparison, Europe, with its 10,180,000 km^2 accounting for merely 7.1% of all land on Earth, resembles a large peninsula on the western borders of Asia. Australia, on the other hand, covers only 7,741,220 km^2 (not including Oceania). This accounts for nearly 5.2% of all land on Earth. The smallest continent looks like a huge island, closing the southern gateway to New Zealand and the Antarctic for the entire East and Southeast Asia. However, Australia is, to some extent, linked with the latter region through thousands of smaller and bigger islands and islets, serving as a "bridge". They stretch on the seas which, in geographical terms, belong to the western part of the Pacific Ocean basin. A peripheral country for many centuries, since relatively recently Australia has clearly had more luck. Thanks to fast growing countries such as Japan, South Korea (Wehrfritz, 2002), Taiwan and Singapore, but, most of all, due to the recently robust economic growth of the People's Republic of China, there has been a shift in political and economic powerhouse in favour of East Asia (Cukiernik, 2015). For Australia, a country located "at the end of the world", this has created an excellent opportunity to take part in the new world order, which has been more favourable to Australia's interests than the previous one.

Now the smallest of all continents has become a bridge between Asia and the Americas, including on its way New Zealand and other smaller islands of Oceania. With that new perspective, we can see that Australia has started to play a new and significant role in the entire South Pacific region.

2. EARLY SETTLEMENT

Before Europeans came to Australia, it had already been inhabited by the Aborigines. Even today the origins of Australia's oldest inhabitants have not been fully explained. The official version says that the people came from Southeast Asia. The settlement process was supposedly enabled by a land connection, which had existed for some time between Asia and Australia. The Aboriginal people came to the continent in three independent waves around 40-60 thousand years ago. This resulted in quite a diverse population in anthropological terms. Before white settlers arrived, the indigenous people had inhabited various parts of the continent. They pursued a nomadic way of life, on a very low civilization level, by hunting and gathering, and on the coast also by fishing. The first Europeans who arrived in Australia were likely Portuguese in the 16th century. During that time they were setting up their trading posts in India, China and Southeast Asia. Since they perceived Australia as uninhabited and with unfavourable natural and weather conditions, they decided not to settle it. After the Portuguese, Asia Pacific started to be explored by the Dutch. The first Dutchman to reach the coast of Australia in 1606 was Willem Janszoon (1579-1630) on the *Duyfken* ship. This is where the continent's first name, i.e. New Holland, came from. The very same year Australia was also discovered by a Spanish sailor Luis Vaez de Torres (1560 - 1613). A bit later, in the years 1642-1644, a Dutchman Abel Tasman (1603 – 1659) sailed along the coast of Australia and discovered an island subsequently named after him. He was the first European who reached Tasmania and New Zealand during a trip organised by the Dutch East India Company in the years 1642 - 1643. In 1770 the south coast of Australia was reached by James Cook, the famous British explorer. He made detailed maps and described the flora of the region. As an explorer, he gave the area the name New South Wales while proclaiming it a dominion of the British Empire. The Brits began colonising the continent from the south coast (New South Wales) only after losing some of their dominions in North America. In 1788 a fleet with the first group of British convicts arrived in the area of today's Sydney. For nearly 80 years thereafter prisoners and criminals would be sent there. The last transport of them came by sea in 1868 to Western Australia. Gradually, though, also voluntary settlers began to flow into the area, driven by the possibility to obtain arable land. Also, more and more people came to breed sheep and cattle, which was seen as a way to get rich fast. Taking up new land for pastures in the interior accelerated the settling of the continent and an influx of colonists also from other European countries. Increased food production allowed for becoming independent from food supplies from the metropolis. The newcomers took over the Aborigines' land and exterminated them ruthlessly. As the settlement advanced, new colonies emerged: Western Australia in 1829, South Australia in 1834 and, isolated from New South Wales: Tasmania in 1825, Victoria in 1851, and Queensland in 1859. Their autonomy was also gradually extended. The wave of immigrants increased dramatically as a result of "gold rush", when in 1851 gold deposits were discovered first in Victoria and New South Wales and then in Queensland and Western Australia. All sorts of explorers and wranglers came in masses, and the settlements they established gradually turned into cities which continue to exist today. Fast growth of agricultural production allowed for becoming independent from food supplies the metropolis. However, the development of agriculture and demand for new land gradually eliminated the Aborigines and pushed them into areas least fit for living. The discovery of iron ore and non-ferrous metals in the late 20th century triggered the dynamic growth of the industry, mainly mining and processing. This resulted in the emergence of rail transport, public roads, and

telegraphy. The development of industrial infrastructure generated the demand for workforce. This caused the influx of immigrants from Great Britain, other European countries, the USA, and Asia. Each of the existing colonies functioned as a separate entity with different laws and regulations. Such situation made everyday life and cooperation very hard. For example, in every colony the railway tracks had different spacing. In many cases, also different legal regulations existed. This really hampered the country's economic growth. In the 90s of the 19th century, the strive for establishing a federation of colonies increased. In large part, this was due to the emergence of the feeling of national identity among the continent's inhabitants. On 1 January 1901, after Great Britain had adopted the *Australian Commonwealth Act*, a dominion of the Commonwealth of Australia was established, with its own constitution, government, and parliament. The former colonies have gained the status of states. Also, a decision was taken to establish the capital of the Federation. With joint efforts, Canberra was built.

3. AUSTRALIA IN THE 20TH CENTURY

In the very beginning of the 20th century, Australia constituted a single, unified country, forming part of the British Empire. For the whole time until the outbreak of World War I, it maintained close ties with the metropolis. By taking advantage of the legal regulations in place, which favoured British products in foreign trade, Australia profited from existing privileges. This ensured continuous demand for products of sheep and cattle breeding and for the sale of excess agricultural produce at preferential rates. This policy contributed to the country's further dynamic growth, visibly improving the standards of living for the white population. Under the legal system taken over from the British, progressive political and social ideas were quickly adopted. Very soon women were granted voting rights. Nationwide it took place in 1902, but in South Australia eight years earlier. A modern tax system was introduced, along with pensions, social insurance, and other social benefits. Australia became a poster child of a welfare state, a situation which to a large extent has continued until today. During the Second Boer War (1899-1902), Australia took the British side. During the conflict, it sent its troops to support London's intervention in South Africa. During World War I, Australian soldiers fought on many fronts hand in hand with other nations of the Empire. A great deal of Australians lost their lives during the Turkish campaign on Gallipoli Peninsula, heavily defended by the Ottoman army. In total, more than 28,000 Australian soldiers died or were injured during the campaign (Chwalba A., 2014). Anzac Day, 25 April, is today one of Australia's most important national remembrance days. It marks the anniversary of the first major military action fought by Australian and New Zealand forces during the First World War on Gallipoli Peninsula. ANZAC stands for Australian and New Zealand Army Corps. The soldiers in those forces became known as Anzacs, and the pride they took in that name endures to this day.

As a political consequence of World War I, the autonomy of British dominions was extended. Australia attended the Paris Peace Conference in 1919, which ended the global armed conflict, as independent subject of international law. This was enabled by Australia's joining, as one of the founding states, the League of Nations in 1920. At the Imperial Conference in 1926, transforming the British Empire into a Commonwealth of Nations was proclaimed. This was confirmed by the British parliament in 1931 in the so called *Statute of Westminster*. Under the document, the dominions were made equal in their status with Great Britain. The international community acknowledged the independence of the individual states belonging to the Commonwealth. What still binds them together is the recognition of the British monarch as the head of state. Today Australia continues to be bound in a personal union with Great Britain, which means that every new king or queen on the British throne is simultaneously the head of Australia. The monarch is the formal head of state and commander-in-chief, and also heads the executive branch (Bozyk S., 2001). Since most of the time the British monarch resides outside

Australia, all the tasks at the federal level are performed by the governor general. The period of economic growth which began after World War I triggered the dynamic development of the country and made its white citizens increasingly wealthy. However, repercussions of the Great Depression of the 30s did not spare the continent. Price drops on international markets and a lack of demand for meat, wool, crops and industrial products badly hit Australia's economy. There was a collapse, mainly in exports. High unemployment followed and poverty emerged. In many areas the effects of the Great Depression were visible even towards the end of the decade. The then existing conditions in the world did not help in fighting them either. The growing military threat from the Empire of Japan and the diminishing influence of London in the region only made the situation worse. After the outbreak of World War II, Australians traditionally sided with Great Britain to fight common enemies. They defended the ideals of the Commonwealth of Nations and showed their bravery at the front as well as attachment to the king. However, in the conflict, Canberra's land forces did not play such a significant role as in World War I. It was mainly the Royal Australian Navy (RAN) and Royal Australian Air Force (RAAF) which marked their participation in the conflict. As early as in 1940 the joint staff of Japan's Army and Navy reached a consensus on the direction of the expansion. This was to include Southeast Asia, with countries such as French Indochina, the Philippines, Dutch East Indies, as well as Thailand and Myanmar, situated in the same area. Seizing these areas would enable the Empire of Japan to gain access to very abundant natural resources needed to run the war. In this context, Australia became the strategic goal of the conquest. For the allies, the country was a key place in the South Pacific region. If it had been captured, Japan's domination over the entire area would have lasted much longer than two years. The conflict would have claimed a lot more lives, introduced fundamental changes in the theatre of war, and surely prolonged the war for a few years. The fall of the Malays and Singapore in 1942 made Australians realise the scale of danger from Tokyo (Jackson R., 2008). The British, Australian, Indian and Malayan troops failed to withstand the attack of the Imperial Japanese Army. No help from London was also noticeable. This made John Curtin (1885-1945), the Prime Minister leading two consecutive cabinets, revise his policy and enter into close cooperation with the USA (Crowley F. K., 1973). As a result, Australia became one of the most important permanent American bases in southwest part of the Pacific Ocean and America's close ally in the region. The war directly affected Australia's territory. In the years 1942-1943 Japan's air forces launched more than 100 airstrikes in the north of the country. The two largest ones, i.e. on Darwin, the capital of Northern Territory, were conducted on 19 February 1942. The port and the city were more heavily bombed than the O'ahu island in the Hawaii on 7 December 1941. For this reason, in historiography, the Darwin attack started to be referred to as the "Australian Pearl Harbor", despite a lot fewer losses suffered by Americans (Kaczmarek R. M., 2004). During World War II, the Japanese correctly assessed Australia's location and resources, which were key for their strategy and success of the entire Asian campaign. Therefore, almost until the end of military actions in the region, the Japanese undertook efforts to prepare conditions for their invasion. This can be found in accounts of contacts between Imperial Army's scouts and the Aborigines in the northern part of the continent and the existence of secret Japanese bush airfields in Australia during WW2. However, these accounts have never been confirmed. Also, the issue of special Occupation Money, i.e. a version of currency to be used in Australia, was being prepared. After the war, Australia enjoyed an economic boom. This resulted from the huge global demand for food, wool, and industrial goods, brought about in part by further strengthening of political, economic and military cooperation between Australia and United States. In 1951, the ANZUS security treaty was signed. The *Australia, New Zealand, United States Security Treaty* (*ANZUS or ANZUS Treaty*) is the 1951 collective security agreement which binds Australia and New Zealand and, separately, Australia and the United States, to co-operate on military matters in the Pacific Ocean region, although today the treaty is taken to

relate to conflicts worldwide. It provides that an armed attack on any of the three parties would be dangerous to the others, and that each should act to meet the common threat (ANZUS, 2016). As part of the United Nations deployment, Australia had earlier fought alongside the United States in the Korean War (1951-1953). A decade later, based on the ANZUS treaty, Australian troops took part in the Vietnam War in the years 1964-1973. In 1987 the United States announced that the treaty ceased to apply in relations with Wellington. The reason was that the government of New Zealand declared that its country had become a nuclear-weapons-free-zone. However, Australia, which has strong historical, cultural and emotional ties with New Zealand, continues to regard the country as a full-fledged member of the treaty. Despite considerable pressure from the US, the Australian government relentlessly continues its own policy in this respect.

As far as the economy is concerned, in 1989, at Australia's initiative, it was decided to establish *APEC* **(***Asia-Pacific Economic Co-operation*). Initially, its members included: Australia, Brunei, Canada, Indonesia, Japan, South Korea, Malaysia, New Zealand the Philippines, Singapore, Thailand, and the United States. In later years they were joined by China, Hong Kong, Taiwan, Mexico, Papua New Guinea, Chile, Peru, Russia, and Vietnam, followed by India, Bangladesh, Guam, Fiji, Pakistan, Sri Lanka, Macau, Mongolia, Laos, Cambodia, Costa Rica, Colombia, Panama, and Ecuador, which were among a dozen other economies that have applied for membership in this organisation. *The Asia-Pacific Economic Cooperation* is a regional economic forum established to leverage the growing interdependence of the Asia-Pacific and Australasia. APEC's 21 members aim to create greater prosperity for the people of the region. Their intension is to achieve spectacular results by promoting balanced, inclusive, sustainable, innovative and secure growth and by accelerating regional economic integration. APEC ensures that goods, services, investment and people move easily across borders. Members facilitate this trade through faster customs procedures at borders, more favourable business climates and aligning regulations and standards across the region (APEC, 2016). Today APEC forms the world's most robust and fastest growing economic area.

4. MODERN AUSTRALIA

In the second decade of the 21st century Australia is a modern and developed country, whose economic potential by nominal GDP makes it the 12th largest economy in the world. Australia has the fifth-highest per capita income in the world. The Australian economy is dominated by its service sector, comprising 68% of GDP. The mining sector represents 7% (Value, 2012) of GDP; including services to mining, the total value of the mining industry in 2009-10 was 8.4% of GDP (Mining Industry, 2012). Economic growth is largely dependent on the mining sector and agricultural sector (12% of GDP) with the products to be exported mainly to the East Asian market (Farm Facts, 2012). Table 1 features Australia's economic situation in the years 2011-2015.

Table following on the next page

Table 1: Australia Economy Data (2011 - 2015)
(http://www.focus-economics.com/countries/australia)

No.	Subject	2011	2012	2013	2014	2015
1.	**Population** (*million*)	22.5	22.9	23.3	23.6	23.9
2.	**GDP per capita** (*USD*)	66,807	68,020	64,615	61,203	51,320
3.	**GDP** (*USD bn*)	1,504	1,559	1,506	1,444	1,225
4.	**Economic Growth** (*GDP, annual variation in %*)	2.7	3.6	2.0	2.7	2.4
5.	**Consumption** (*annual variation in %*)	3.2	2.3	1.7	2.8	2.8
6.	**Investment** (*annual variation in %)*	7.0	9.2	-1.8	-1.9	-3.9
7.	**Exports** (*Goods and Services, annual variation in %*)	0.1	5.8	5.9	6.7	6.0
8.	**Imports** (*G&S, annual variation in %*)	11.1	6.1	-1.8	-1.7	1.7
9.	**Industrial Production** (*annual variation in %)*	1.2	3.3	2.1	4.5	1.6
10.	**Unemployment Rate**	5.1	5.2	5.7	6.1	6.1
11.	**Public Debt** (*% of GDP*)	24.2	27.8	30.8	34.1	36.8
12.	**Exchange Rate** (*vs. USD*)	1.02	1.04	0.89	0.82	0.73
13.	**Infation Rate** (*CPI-consumer price index, annual variation in %*)	3.3	1.8	2.5	2.5	1.5
14.	Stock Market (*annual variation in %*)	-15.2	13.5	14.8	0.7	- 0.8
15.	**Trade Balance** (*USD billion*)	35.9	6.2	20.5	12.2	-11.9

The Australian economy has been plunging since 2013 and did not overcome the downward trend in 2014 or 2015. Conservative forecasts suggest poor economic figures for 2016, too. The international situation, in particular the slowdown in the People's Republic of China, i.e. Australia's largest trade partner, is mostly to blame for the biggest recession in 50 years (Australian economy, 2015). Expanding credit and dependence on China make Australia vulnerable to global shocks. Poor economic performance of Canberra's other important partners, namely the USA, Japan, and the European Union, have also had a negative impact on the results. The drop in prices of products traditionally exported by Australia, such as coal, iron ore, aluminium, bauxites, meat, wool, wheat and barley, has further worsened the already bad situation. It seems that the country in the Antipodes is experiencing the biggest economic downturn in its contemporary history. A few years ago nothing indicated this, as luckily none of the three waves of the global financial crisis of 2008 reached Australia. One can only hope that the current government, led by Malcolm Turnbull, an experienced politician aware of the country's difficult situation, will be able to address these problems.

5. AUSTRALIA'S POLITICAL AND ECONOMIC IMPORTANCE IN THE REGION

Australia is a developed country. The country's economy is characterised by technologically advanced, highly-concentrated production and centralisation of capital. The world's smallest continent has enormous natural resources. Australia is a leader in mining bauxites, iron ore, lead, and gold. It also has silver, uranium, zinc, copper, and nickel. Mining and processing of oil and natural gas are conducted on a large industrial scale. There are also abundant deposits of precious stones, including sapphire and opals. After discovering abundant diamond deposits

in 1979, Australia caught up with South Africa in their production. There is a diversified industrial sector, in which 25% of the working population works. The sector accounts for around 27% of gross domestic product. Mostly food and tobacco products are produced, but the machine and high-tech industries are also highly developed. Recently Australia's showcases in this respect include computers, chemicals, and car manufacturing. There are even local car manufacturers, for example Holden (part of General Motors) or Ford Australia. However, in this field it is not easy to match strong foreign competition. Japanese carmakers, such as Mitsubishi, Nissan and Toyota, also have their factories on the continent. Production of huge trucks, which form the so called "road trains" passing through the Australian interior, has been dominated by America's Mack Trucks, Inc. from North Carolina (Mack Trucks, 2016).

Agriculture is one of the main sectors of Australia's economy. Farming land covers in total ca. 385 mln ha (3,850,000 km). This accounts for nearly half of the country's total area. Agricultural production is concentrated primarily in the eastern part of the country, mostly in Queensland, New South Wales, and Victoria. Arable land accounts for only around 5% of the total area, whereas meadows and pastures constitute ca. 57% of the country's farming land (Moldawa T., 1992). The country is the world's top producer and exporter of wool. It also exports meat, primarily lamb and beef, dairy products, and crops. Even sugarcane, bananas and pineapples are grown in the subequatorial and tropical climate. In the subtropical climate, wheat (53% of all crops), barley, oat, cotton, citruses, and grapes of which excellent Australian wines are made, are grown. However, Australia's economy in large part depends on the world's economic situation and prices on the global market. Around 70% of its export accounts for natural resources and agricultural produce.

The Australian dollar is the currency of the Commonwealth of Australia and its territories, including Christmas Island, Cocos (Keeling) Islands, and Norfolk Island. It is also the official currency of the independent Pacific Island nations of Kiribati, Nauru and Tuvalu. Australia is a member of the APEC, G20, OECD, Pacific Islands Forum and WTO. The country has also entered into free trade agreements with ASEAN, Canada, Chile, China, Korea, Malaysia, New Zealand, Japan, Singapore, Thailand and the United States (Free Trade, 2016). The ANZCERTA agreement with New Zealand has greatly increased integration with the economy of New Zealand and in 2011 there was a plan to form an Australasian Single Economic Market (ANZCERTA, 2016).

Also very important is the Australia – United States Free Trade Agreement (AUSFTA). It is a preferential trade agreement between Australia and the United States modelled on the North American Free Trade Agreement (NAFTA). The AUSFTA was signed on 18 May 2004 and came into effect on 1 January 2005. Special tariff rate quotas are part of the agriculture section of the agreement. These quotas allow Australian producers to export increasing amounts of these products free of duty to the United States during the tariff elimination period. The following agricultural products are designated: beef, dairy, tobacco, cotton, peanuts, avocados (Armstrong S., 2015). Nonetheless, the regional economic cooperation with Beijing is most important for Australia's economy. The relations between Australia and China are characterised by strong trade bonds. China is Australia's largest trading partner, while Australia is a leading source of resources for China. More recent trends show that Australian exports are now expanding well beyond the resource sector. In recent years, new life has been breathed into negotiations for a free trade agreement between the two countries. During the then Prime Minister Tony Abbott's April 2014 visit to Beijing, there were encouraging signs that an agreement could be reached before the end of 2014, and in the wake of the Brisbane G20 Summit in November 2014 the deal's draft details were released.

The deal (known as ChAFTA) was formally signed in June 2015, and in October 2015 Opposition Leader Bill Shorten announced that Labour would back the deal after reaching a compromise with the Government on elements of the agreement, giving the deal bipartisan support (Relations, 2016). The two-way trade between Australia and the world is presented in Table 2.

Table 2: Australia's top two-way trading partners in 2014
(goods & servces trade in $ billion)
(http://dfat.gov.au/trade/resources/trade-at-a-glance/pages/default.aspx)

Rank	Country	Exports	Imports	Total trade
1.	China	98.210	54.258	152.468
2.	Japan	50.247	19.971	70.218
3.	United States	18.510	41.932	60.442
4.	Republic of Korea	22.017	12.609	34.626
5.	Singapore	12.085	18.102	30.187
6.	New Zealand	12.125	11.343	23.468
7.	Malaysia	7.923	12.873	20.796
8.	United Kingdom	8.319	12.469	20.788
9.	Thailand	6.105	12.873	18.978
10.	Germany	2.867	13.859	16.725

When analysing Table 2, one can notice that Australia has a trade surplus with China, Japan, Republic of Korea, and New Zealand, whereas it imported more goods and services from other countries from the top ten list, namely the United States, Singapore, Malaysia, United Kingdom, Thailand, and Germany. Also, it can be clearly seen that the majority of Australia's trade is with East and Southeast Asia. One exception here is the United States. For United Kingdom and New Zealand, the relatively high level of two-way trade is due to historical conditions.
In 2015 there was a fundamental change in the second and third place among the top two-way trading partners. China was still Australia's largest individual two-way goods and services trading partner, accounting for 23.2% (USD 155.5 billion) of total trade. But the United States was the second largest trading partner accounting for 10.5% (USD 70.2 billion) followed by Japan, accounting for 9.7% (USD 65.1 billion). China was Australia's largest export market, accounting for 28.8% (USD 91.3 billion) of total exports in 2015, a drop of 7.0%. Japan was Australia's second largest export market (USD 42.4 billion), a drop of 15.7%. The United States of America was Australia's third largest export market (USD 22.1 billion), up by 19.3%. China was Australia's largest import source, accounting for 18.2% (USD 64.2 billion) of total imports in 2015, up by 18.3%. The United States was Australia's second largest import source (USD 48.1 billion), up by 14.3%, and Japan was Australia's third largest import source (USD 22.7 billion), up by 14.4% (Composition of trade, 2016). The considerable economic slowdown in China, Japan and the United States badly hit Australia's trade figures in 2015. According to initial estimates, 2016 did not bring any significant improvement either. Nonetheless, Australia is one of the most important trade player in East Asia and, in a broader sense, in the entire Pacific Ocean basin. The country's political activity and membership in many international organisations of local and global importance improve stability of the whole region.

6. CONCLUSION

Australia's economy relies heavily on exports. Considering Australia's small internal market, the potential limitation of the ability to sell goods and services to foreign countries would threaten the country's economic existence. Among the top trading partners there are basically only three that matter, i.e. China, the United States, and Japan. The other ones would not be

able to absorb the continent's exports. However, all the three economic powers, i.e. China, the USA, and Japan, are not dependent on trade with Australia and do not have to rely on resources from that country. China is strengthening its resources cooperation with Russia. Recently Tokyo has been taking steps to break the deadlock in contacts with Moscow (Putin in Japan, 2016). The United States have their own resources and, as part of NAFTA, also access to the resources of its northern neighbour Canada. Therefore, the direction of Canberra's foreign trade policy seems adequate in today's situation. Seeking a fine balance with the three main partners while diversifying trade contacts with smaller market players to the largest extent possible is a reasonable and currently probably the only solution. However, a question should be asked:
Could Australia become an economic power and single-handedly drive the economic situation in the region?
Unfortunately, the answer to this question is no. Currently Australia does not have the right amount of human capital to achieve such position. The continent's population was and continues to be a few times too small to handle the challenge of dominating the South Pacific and East Asia. It is obvious that in today's world it is mainly the countries with a population of more than 100 million that matter. Table 3 shows a few examples confirming the trend.

Table 3: List of countries by population
(https://en.wikipedia.org/wiki/List_of_countries_and_dependencies_by_population)

Rank	Country	Population	Date	% of world population
1.	China	1,380,530,000	21 December 2016	18.5%
2.	India	1,309,510,000	21 December 2016	17.5%
3.	United States	325,192,000	21 December 2016	4.35%
4.	Indonesia	260,581,000	1 July 2016	3.49%
5.	Brazil	206,856,000	21 December 2016	2.77%
9.	Russia	146,727,405	1 September 2016	1.96%
10.	Japan	126,920,000	21 December 2016	1.7%
11.	Mexico	122,273,000	1 July 2016	1.69%
12.	Philippines	101,953,000	21 December 2016	1.39%
53.	**Australia**	**24,468,057**	**23 December 2016**	**0.33%**

With its population of slightly more than 24 million, Australia is far down the list, in the 53rd place. Although Australia's population is continuously growing, in recent years this has been due to hundreds of thousands of immigrants rather than the birth rate of its own citizens. Today's immigrants are essentially people coming from all over the world. This complicates and diversifies ethnic relations in the continent. However, already in the 60s of the last century, the government in Canberra abandoned the idea of a "white Australia". Today, in addition to immigrants from English-speaking countries, such as Great Britain, New Zealand, the United States, South Africa, Ireland, and Canada, more and more people come from East Asia and Central Asia, from countries such as China, India, the Philippines, Vietnam, Malaysia, Sri Lanka, South Korea, Hong Kong, Indonesia, Iraq, Thailand, Nepal, Bangladesh, Afghanistan, Uzbekistan, Taiwan, or Pakistan. In 2014-15, net overseas migration reflected an annual gain of 168,200 persons, down by 9.8% from 2013-14. An estimated 339,000 people moved interstate in 2014-15, down by 2.9% from the previous year. As at 30 June 2015, 28.2% of Australia's estimated resident population (6.7 million people) was born overseas (Migration, 2016). The current population of Australia is 24,468,057 as of Wednesday, 21 December 2016, based on the latest United Nations' estimates. Australia's population accounts for 0.33% of the total world population. Australia ranks number 53 in the list of countries (and dependencies) by population. The population density in Australia is 3 per km^2 (8 people per

mi^2). 89.3 **%** of the population is urban (21,692,663 people in 2016). The median age in Australia is 37.6 years (Population of Australia, 2016**)**.

To sum up, it should be said that in addition to positive factors, such as a shift of the world's political and economic powerhouse to East Asia and inclusion of Australia, or successful trade cooperation between Canberra and Beijing, there are conditions which are not conducive to the dynamic growth of the world's smallest continent. These conditions include the uncertainty around the future policy of the United States under the new president Donald Trump and the People's Republic of China's dangerous territorial expansion southwards. Therefore, possible scenarios include the further strengthening of political, economic and military cooperation with New Zealand, i.e. Australia's traditional ally in the region. The post-Brexit Great Britain also gives some hope of developing cooperation and renewing old ties. However, it seems that the most important factor will be the return of strong economic growth in the Asia Pacific. It should be assumed that with joint efforts, the growth will return within the next few years, a situation which is desired and anticipated by all countries of East Asia and the South Pacific basin.

LITERATURE:

1. Armstrong S., (2015), *The costs of Australia's free trade agreement with America*, Inside Story, National Affairs, retrieved 20.12.2016 from http://insidestory.org.au/the-costs-of-australias-free-trade-agreement-with-america
2. Bozyk S., (2001), *System konstytucyjny Australii*, Published by: Wydawnictwo Sejmowe, pp. 25 - 28, Warsaw.
3. Cukiernik T., (2015), Opracowanie pod tytulem: *Azjatyckie tygrysy*, from http://tomaszcukiernik.pl/artykuly/artykuly-wolnorynkowe/azjatyckie-tygrysy/
4. Chwalba A., (2014), *Samobojstwo Europy, Wielka Wojna 1914 - 1918*, Wydawnictwo Literackie, pp. 165-174, Krakow.
5. Crowley F. K., (1973), *Modern Australia in Documents: 1939 - 1970, A Documentary History of Australia*, series; 1, Published by: Wren Publishing, pp. 10-36, Melbourne.
6. Jackson R., (2008), *The Malayan emergency*, Published by: Pen & Sword Aviation, pp. 10-24. London.
7. Kaczmarek F.M., (2004), *Australijski Pearl Harbor*, Morza, Statki i Okręty, No. 3/2004, Published by: Magnum X, pp. 33-41, Warsaw.
8. Moldawa T, (1992), *Australia, Związek Australijski. Państwa Świata, Słownik szkolny*, Wydawnictwo szkolne i Pedagogiczne, pp. 23 – 25, Warsaw.
9. Wehrfritz G., *Koreanska lekcja ekonomii*, Biznes, Newsweek Polska, 13.10.2002, No. 42, p. 42, 2002, Warsaw.
10. *ANZCERTA*, (2016), Australia New Zealand Closer Economic Agreement, Australia unlimited, Retrieved 20.12.2016 from http://www.austrade.gov.au/Australian/Export/Free-Trade-Agreements/ANZCERTA
11. *ANZUS*, (2016), Retrieved 17.12.2016 from https://en.wikipedia.org/wiki/ANZUS this page was last modified on 19 November 2016, at 02:12.
12. *APEC, Asia – Pacific Economic Cooperation* (2016), Retrieved 18.12.2016 from https://en.wikipedia.org/wiki/Asia-Pacific_Economic_Cooperation this page was modified on 16 December 2016, at 01:19.
13. *Australian economy*, (2015), Australia's economy has slowed to a crawl, prompting fears we may be slipping into a recession, APP, Retrieved 17.12.2016 from http://www.news.com.au/finance/economy/australian-economy/australias-economy-has-slowed-to-a-crawl-prompting-fears-we-may-be-slipping-into-a-recession/news-story/877e9c872aff5380a906f0cde912624f

14. *Composition of trade*, (2016), *Composition of trade, Australia 2015*, Economic Diplomacy, Trade Advocacy & Statistics Section Department of Foreign Affairs & Trade, Australia unlimited, Retrieved 21.12.2016 from http://dfat.gov.au/about-us/publications/Documents/cot-cy-2015.pdf
15. *Economy Data*, (2016), Australia Economy Data, Focus Economics, Retrieved 19.12.2016 from http://www.focus-economics.com/countries/australia
16. *Farm Facts*, (2012), National Farmer's Federation, Retrieved 19.12.2016 from http://www.nff.org.au/farm-facts.html
17. *Free Trade*, (2016), Free Trade Agreements, Australia unlimited, Retrieved 20.12.2016 from http://www.austrade.gov.au/Australian/Export/free-trade-agreements
18. *Mack Trucks*, (2016), *Mack Missin/Origin/Trademark, Mack Trucks Webside*, Retrieved 21.12.2016 from http://www.macktrucks.com/about-mack/
19. *Migration*, (2016), 3412.0 - Migration, Australia, 2014 - 15, Australian Bureau of Statistic, Latest Issue, Released at 11:30 AM (CANBERRA TIME) 30/03/2016 Retrieved 22.12.2016 from http://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/3412.0
20. *Mining Industry - Economic Contribution*, (2012), 1301.0 - Year Book Australia 2012, Australian Bureau of Statistic. Retrieved 18.12.2016 from http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1301.0~2012~Main%20Features~Mining%20Industry~150
21. *Population of Australia*, (2016), Australia Population, worldometers, Retrieved 22.12.2016, from http://www.worldometers.info/world-population/australia-population/
22. *Putin in Japan*, (2016), Putin w Japonii, Czy przelamie wieloletnia atmosfere nieufnosci?, Retrieved 22.12.2016 from http://www.tvp.info/28231153/putin-w-japonii-czy-przelamie-wieloletnia-atmosfere-nieufnosci
23. *Relations*, (2016), China - Australia relations, Lowy Institute for International Policy, Asia / Australia in the World, Overview Retrieved 20.12.2016 from https://www.lowyinstitute.org/issues/china-australia-relations
24. *Trading partners*, (2015), Australia's top two-way trading partners in 2014, Australia's trade at glance, Australian Govn., Department of Foreign Affairs and Trade, Retrieved 21.12.2016 from http://dfat.gov.au/trade/resources/trade-at-a-glance/pages/default.aspx
25. *Value of goods and services produced by Australian industry*, (2012), 1301.0 - Year Book Australia 2012, Australian Bureau of Statistic, Retrieved 18.12.2016 from http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1301.0~2012~Main%20Features~Value%20of%20goods%20and%20services%20produced%20by%20Australian%20Industry~240

THE CONCEPT OF THE RULE OF LAW AND ITS ASSESSMENT THROUGH INTEGRAL INDEX

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ABSTRACT

The principle of Rule of law is considered to be one of the fundamentals of a modern legal state, taking into account this importance of the adoption and practical implementation of vital human needs by the relevant normative-legal system of the state, which, in turn, is due to the level of the constitutionality. The rule of law is one of the most important factors necessary for sustained economic development, the protection of human rights, implementation of legitimacy and democracy, etc. Due to the acquisition of this importance of the rule of law, various national and international organizations, individual researchers and research centers are trying to analyze the rule of law and its basis. These approaches aim to reveal factors positively influencing on the rule of law, or to identify all the factors, which can undermine its basis. The final goal of our research is to define basic elements of maintaining the level of constitutionality and the rule of law, that can be applied in the social and economic policy of the state. The main objective of this research is to develop new methodology that will include as many areas and indicators of the rule of law in a particular country as possible. For this purpose, we have used the method of Factor analysis. The basis of this new methodology is the development of the new integral index, which will represent the levels of the rule of law in observed countries, as well as its change over time. As a result, the integral index of the Rule of law was calculated for 141 countries for 2011-2015. Then we have extended the scope of our research by comparing index's results for Armenia, Azerbaijan and Georgia, that helps to conclude in which directions these countries have policies, that are more effective compared to others and in which directions they have failed. Our research results can be applied in the process of policymaking. One of the most distinguishing features of our new methodology is that it allows us to add more indicators to existing ones and make our research broader - depending on the purposes and given circumstances.

Keywords: *Rule of law, method, pillar, rank, comparative, index, weighted average, policy*

1. INTRODUCTION

Laws are made for the welfare of the people to maintain equity in society, which, in turn, is applicable due to maintaining law and order in a society and developing a peaceful environment for the people. In this regard, the concept of the Rule of Law plays an important role in this process. The rule of law is a widely used principle that plays an important role in maintaining law and order in society and developing a peaceful environment for the progress of a state and people. This is an overarching principle which ensures that that the people should be ruled by the law and obey it and that the law should be such that the citizens of a country will be able /willing to be guided by it. It requires that the laws are administered and followed justly and

fairly. In many cases, the term rule of law is used to describe an ideal situation, that all democratic nations strive to achieve, but "...sometimes fail to live up to"[1]. The question of observing and maintaining the rule of law in a country is a worthy ideal and must be preserved. Yet, there is not a single definition of the term “the rule of law”. The principle of the rule of law is controversial: it is not concerned with whether a law is good or bad, but only with whether the law is applied equally to all. The rule of law requires that both the rule of law and human rights standards should be respected, observed and protected.

Given this importance of the principle of the rule of law various International, non-government organizations (i.e. Freedom House, World Justice Project, World bank, Bertelsmann foundation, etc.) have created many methodological and research tools, that assess the level of the rule of law in different areas and scopes. Our new methodology and integral index aims to assess the rule of law in all possible areas that could be observed and contains many of the above-mentioned indexes, thus is considered more useful.

2. LITERATURE REVIEW

The term “Rule of Law" in its modern sense[2], was introduced in 1885 by Albert Venn Dicey[3]**.** The term is derived from the French phrase *'La Principe de Legality'* (the principle of legality) which refers to a government based on principles of law. Rule of Law reflects the idea, that law is supreme and is above every individual. No one whether if he/she is rich, poor etc., is above law and he/she should obey it. The principle of the Rule of Law is intended to be a safeguard against arbitrary actions of the government authorities and discrimination against certain groups for self-interested authorities. Rule of Law is a dynamic concept. Many scientists, politicians, jurists, economists and other theorists have created various concepts of the meaning, scope and evaluation of the Rule of law. Greater impacts on the development of this term have had A.V. Dicey (who has introduced formal definition of this term), Joseph Raz (inspired by Friedrich Hayek, who has defined key components of the rule of law), Trever Allan (tried to evaluate the scope), Devis, Ivor Jennings, etc. The Rule of Law has become a "universal principle of mankind“. It refers to the recognition of the inherent rights and protection of liberties among the people. Given this importance of the principle of the Rule of law, Constitutions have adopted this principle. Thus, the meaning of the term has transformed and now refers to the constitutional government instead of democratic government. For these reasons, the rule of law is a principle, which has a special interest for governments, constitutional courts, politicians, international organizations, etc. Many analyses were conducted by United Nations[4] (the scope includes police, judiciary and prisons), the World Bank, the Venice Commission[5] (the Rule of Law checklist), Vera Institute of Justice[6] (Rule of Law Indicator Instruments), the World Justice Project NGO (the rule of law index). The principle is observed by many other organizations, institutions and individual theorists as the rule by a democratic law; a law which is passed in a democratically elected parliament after adequate debate and discussion, as an existence of law and order, elimination of discretion, fixed rules, fairness, etc. The president of the Constitutional Court of Armenia, one of the members of the Venice commission G.G. Harutyunyan is one of

[1] American Bar Association’s World, Division for Public Education, https://www.americanbar.org/content/dam/aba/migrated/publiced/features/Part1DialogueROL.authcheckdam.pdf

[2] Here we mention “modern sense” of the Rule of Law, because an English barrister, judge and, politician Edward Coke is said to be the originator of concept of Rule of Law when he said that the king must be under God and law and thus vindicated the supremacy of law over the pretensions of the executives.

[3] Albert Venn Dicey describes the rule of law as acting in three ways: the predominance of regular law as opposed to the influence of arbitrary power; equality before the law; and, that constitutional laws are not the source but the consequence of the rights of individuals

[4] http://www.un.org/en/events/peacekeepersday/2011/publications/un_rule_of_law_indicators.pdf

[5] http://www.concourt.am/armenian/news/doc/CDL-AD(2016)007-e.pdf

[6]http://archive.vera.org/sites/default/files/resources/downloads/Developing_Indicators_to_Measure_the_Rule_of_Law_Online_version2.pdf

the outstanding specialists in research of the level of the rule of law[7]. Meanwhile, there are still problems concerning not only quantitative, but also qualitative and comparative analysis of the level of the Rule of Law in a given country. For the purpose of solving these problems, we have created a new index, which makes comprehensive analyses possible.

3. STATISTICAL REVIEW

According to our methodology, the level of the Rule of Law was calculated through the integral index, which contains statistical data from above mentioned data-sources, which, according to the Venice commission[8], are represented as core principles of the rule of law and constitutionality. As the main source of our database, we have observed indicators included in the World Bank's "Worldwide Governance indicators"[9] and assessed as the measures of "The Rule of Law". Thus, the integral index includes 8 components (pillars), which are described in the Table 1.

Table 1. - The 8 pillars included in the Rule of Law index
(Continues on the next two [2] pages)

#	**Data Sources (Pillars)**	**Indicators**
1	Economist Intelligence Unit (EIU)	Violent crime
		Organized crime
		Fairness of judicial process
		Enforceability of contracts
		Speediness of judicial process
		Confiscation/expropriation
		Intellectual property rights protection
		Private property protection
2	Global Competitiveness Report (GCS)	Business Cost of Crime and Violence
		Cost of Organized Crime
		Reliability of Police Services
		Judicial Indepdendence
		Efficiency of Legal Framework for Challenging Regulations
		IPR protection
		Property Rights
		Informal Sector
3	Gallup World Poll (GWP)	Confidence in the police force
		Confidence in judicial system
		Have you had money property stolen from you or another household member?
		Have you been assaulted or mugged?
4	Heritage Foundation Index of Economic Freedom (HER)	Property Rights
5	Institutional Profiles Database (IPD)	Degree of security of goods and persons by criminal organizations (drug trafficking, weapons, prostitution...)
		Degree of judicial independence vis-à-vis the State

[7] Components Of Constitutionalism: Rule Of Law, Sustainable Development, G. Harutyunyan (in Armenian, in Russian, Summary in English), http://www.concourt.am/armenian/structure/president/articles/vestnik52.pdf
[8] Rule of Law Indicators, World Bank's World Governance Indicators
http://www.venice.coe.int/webforms/documents/?pdf=CDL-AD(2016)007-e , p. 35
[9] World bank, "Worldwide governance indicators"
http://info.worldbank.org/governance/wgi/index.aspx#doc

#	Data Sources (Pillars)	Indicators
		Degree of enforcement of court orders
		Timeliness of judicial decisions
		Equal treatment of foreigners before the law (compared to nationals)
		Practical ability of the administration to limit tax evasion
		Efficiency of the legal means to protect property rights in the event of conflict between private stakeholders?
		Generally speaking, does the State exercise arbitrary pressure on private property (e.g. red tape...)?
		Does the State pay compensation equal to the loss in cases of expropration (by law or fact) when the expropriation concerns land ownership?
		Does the State pay compensation equal to the loss in cases of expropration (by law or fact) when the expropriation concerns production means?
		Degree of observance of contractual terms between national private stakeholders
		Degree of observance of contractual terms between national and foreign private stakeholders
		In the past 3 years, has the State withdrawn from contracts without paying the corresponding compensation... vis-à-vis national stakeholders?
		In the past 3 years, has the State withdrawn from contracts without paying the corresponding compensation... vis-à-vis foreign stakeholders?
		Respect for intellectual property rights relating to… trade secrets and industrial patents
		Respect for intellectual property rights relating to… industrial counterfeiting
		Does the State recognize formally the diversity of land tenure system?
6	Political Risk Services International Country Risk Guide (PRS)	Law and order
7	US State Department Trafficking in People report (TPR)	Trafficking in People
8	Global Insight Business Condition and Risk Indicators (WMO)	*Judicial Independence* An assessment of how far the state and other outside actors can influence and distort the legal system. This will determine the level of legal impartiality investors can expect.
		Crime How much of a threat businesses face from crime such as kidnapping, extortion, street violence, burglary and so on. These problems can cause major inconvenience for foreign investors and require them to take expensive security precautions.
		Expropriation. The risk that the state or other sovereign political authority will deprive, expropriate, nationalise, or confiscate the assets of private businesses, whether domestic or foreign.

#	Data Sources (Pillars)	Indicators
		State contract alteration. The risk that a government or state body alters the terms of, cancels outright, or frustrates (usually through delay) contracts it has with private parties without due process.
		Contract enforcement. The risk that the judicial system will not enforce contractual agreements between private-sector entities, whether domestic or foreign, due to inefficiency, corruption, bias, or an inability to enforce rulings promptly and firmly.

4. METHODOLOGICAL APPROACH

The Integral index of the Rule of Law has been calculated by the following steps.

A. *Creating a database for all 141 countries 2011-2015, including the scores of 8 pillars*. We have normalized the score of each index to bring them to the same (0,1) interval and make them more comparable.

B. *Calculating the scores of individual pillars as the simple average of its component indicators (table 1),*

C. *Calculating weighting coefficients for 8 pillars (Coefficients are presented in the Table 2):* Coefficients have been calculated with the help of SPSS program, using tools and results of factor analyses. These weighting coefficients represent the comparative importance of a given pillar in formatting the overall index (in maintaining the rule of law).

Table 2: The 8 pillars included in the Rule of Law index.

Pillar	2011	2012	2013	2014	2015
EIU	0,82	0,828	0,816	0,826	0,842
GCR	0,756	0,733	0,748	0,73	0,733
GWP	0,982	0,93	0,979	0,988	0,919
HER	0,424	0,42	0,401	0,398	0,432
IPD	0,339	0,417	0,65	0,749	0,779
PRS	0,725	0,725	0,729	0,708	0,7
TPR	0,464	0,437	0,496	0,458	0,643
WMO	0,808	0,832	0,835	0,834	0,769

D. *Combinig the scores of the 8 pillars in a single-integral index by using the followong formula.*

$$H^{j}_{\text{int}.index} = \sum_{i=1}^{8} \alpha_i^j N_i^j$$

$H^{j}_{\text{int}.index}$ - the Integral Index of the Rule of Law,
i = 1,2,….8 – 8 pillars.
j=1, 2,....141 - observed countries
α_i^j - the weighting coefficient of each pillar,
N_i^j - the score of the j country by i pillar.

According to this methodology, we measure the integral index of the Rule of Law for 141 countries considering the change of rank and score, adjusted with weighting coefficients for 2011-2015. The results witness, that the levels of the Rule of Law for 2011-2015 were higher in the following countries.

Table 3: The top 10 countries according to the Rule of Law index for 2011-2015.

COUNTRY		2011		2012		2013		2014		2015
	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Denmark	7	0,87	3	0,8	7	0,85	4	0,87	1	0,94
Finland	6	0,88	4	0,87	3	0,86	3	0,89	2	0,93
Sweden	1	0,93	1	0,92	1	0,92	1	0,91	3	0,90
Austria	2	0,91	2	0,90	2	0,89	2	0,89	4	0,90
United Kingdom	3	0,9	9	0,86	4	0,86	5	0,87	5	0,88
Canada	5	0,88	6	0,87	9	0,85	10	0,85	6	0,88
Iceland	10	0,86	8	0,86	8	0,85	8	0,85	7	0,88
Germany	11	0,86	12	0,84	10	0,85	11	0,84	8	0,87
Norway	18	0,81	17	0,82	17	0,81	18	0,81	9	0,87
Ireland	4	0,8	7	0,87	5	0,86	6	0,85	10	0,86

a. The Top 10 was choosen by observing the results of 2015.

5. COUNTRIES' COMPARISONS

The Results of the Integral index of The Rule of Law can be applied in any country and show all advantages and disafvantages of policies in those countries, which will help their governments make effective decisions and apply them in practice, thus increasing the level of the rule of law, improving the welfare of citizens.

As an example, we have conducted comparative analysis for Armenia, Azerbaijan and Georgia. The results for these countries are presented below, in the Figure 1.

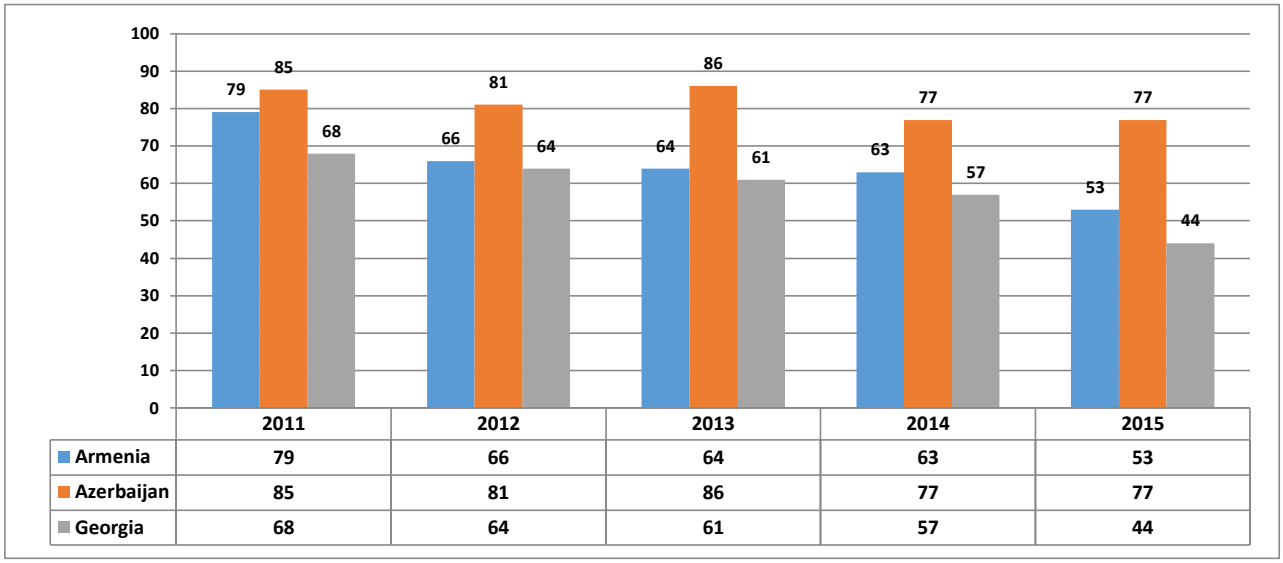

Fig. 1: Comparative results for Armenia, Azerbaijan and Georgia in 2011-2015.

The results of the Rule of Law index witness, that Georgia is the leader among the three countries, Armenia is the second and can be described as a country with a middle level of the Rule of Law. The comparative results of Armenia, Georgia and Azerbaijan can be reflected by examining these countries' results due to the individual pillars, as shown in the Figure 2;

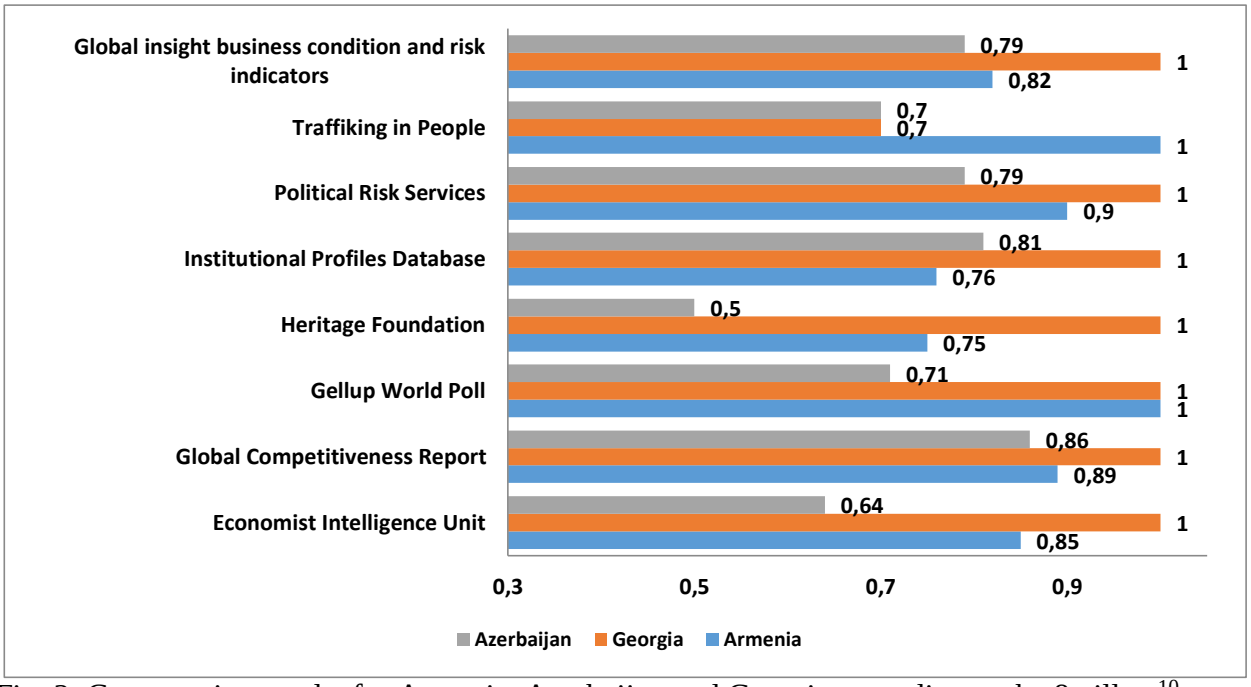

Fig. 2: Comparative results for Armenia, Azerbaijan and Georgia according to the 8 pillars[10].

According to the results of the Rule of Law index (Figure 2), the relative advantages of Armenia are Effiency of legal framework, Personal safety and security, Law and order, private property protection, Equal treatment before the law. These indicators have had a positive influence on the level of the Rule of Law in Armenia during 2011-2015. Indicators, that had negative impact on the level of the Rule of Law in Armenia were Fairness and speediness of judical process, Judical independence, informal sector, intellectual property rights protection.

Georgia's advantages are Judicial system independence, its fairness and speediness, Reliability of Police services, etc., which are to be maintained in the future in order to keep this country's leading position. Georgia's policy lacks in the fight with trafficking, costs of crime and violence, personal safety.

As the research shows, the indicators which had positively impacted on the level of the Rule of Law in Azerbaijan are the fight with trafficking, efficiency of legal framework for challenging regulations, costs of crime and violence, fairness of judicial decisions. On the other hand, the indicators of Law and order, Personal safety and security, private property protection, organized crime, Equal treatment before the law have caused a decline in the level of the Rule of law in this country.

As a consequence, it can be inferred from the research, that Armenia needs serious reforms in the judicial system, Georgia needs improvements in ensuring its citizens' personal safety and security and implementing property protection reforms is an imperative for Azerbaijan. These are final and the most important results of our research and the new methodology, thus it can become a very useful tool for policymakers.

6. CONCLUSION

As can be seen, the idea of creating an integral index of the Rule of Law reflects that the soundness of legislature the protection and implementation of laws are of a vital importance in ensuring high living standards and legal guarantees for a country's citizens.

[10] Pillars' scores are normalized in (0,1) interval.

In this regard, the relevance of the Rule of Law is demonstrated by application of the following principles in practice.

- ✓ The law is applied equally and fairly and no one is above the law.
- ✓ The law is made in an open and transparent way.
- ✓ The law and its administration is subject to open and free criticism by the people.
- ✓ The separation of powers between the legislature, the executive and the judiciary.
- ✓ People can assemble without fear.
- ✓ The judicial system is impartial, independent, transparent, it provides a fair and prompt trial.
- ✓ No one can be prosecuted,
- ✓ No one can bee seen as a subject to any torture.
- ✓ People are presumed to be innocent until proven otherwise and are entitled to remain silent, they are not required to incriminate themselves (presumption of innocence), etc.

To sum up, based on the scientific and empiric results of our research, we can make the following conclusions:

- ✓ The Integral Index of the Rule of Law will be the guidance for many authorities to reveal which directions of reforms were implemented more effectively and also the areas of reforms with less efficiency for 2011-2015, to strengten all advantages and eliminate disadvantages.
- ✓ The results of our research on the Integral Index of the level of the Rule of Law and the assessment of comparative analysis give an opportunity to conclude that this index can be very useful in analysis in different fields, and we have more important theoretical, methodological and empirical issue to include more indexes and indicators that partially reveal quantitative assessment of the rule of law in some areas. Thus the synergy effect of those indicators will help to reveal constitutionality and the rule of law with more integrity.
- ✓ Furthermore, this methodology can be applied in both economics and other social sciences (sociology, statistics, etc.).

LITERATURE:

1. Alesina, Alberto, Torsten Persson, Guido Tabellini. 2006. Reply to Blankart and Koester's Political Economics versus Public Choice: Two Views of Political Economy in Competition. Kyklos. International Review for Social Science 59(2): 201– 208.
2. Ashenfelter, Orley C., and Stanley Kelley Jr. 1975. Determinants of Participation in Presidential Elections, Journal of Law and Economics 18 (3): 695–733
3. Barber, Nicholas W. Constitutionalism: Negative and Positive, Oxford Legal Studies Research Paper № 7/2015, 2015
4. Bingham, T., *The Rule of Law*, Allen Lane, 2010.
5. Bailey, M.J.: Constitution for a Future Country, Basingstoke et al. 2001.
6. Castle, T. (ed.), *Speeches of a Chief Justice: James Spigelman 1998-2008*, CS2N Publishing, 2008 (Chapter II: The Rule of Law).
7. Ferejohn, John and Pasquale Pasquino. “Rule of Democracy and Rule of Law.” In José Maria Maravall and Adam Przeworski, eds. Democracy and the Rule of Law. Cambridge: Cambridge University Press, 2003.
8. Finn, John E. “The Rule of Law and Judicial Independence in Newly Democratic Regimes.” The Good Society, Volume 13, No. 3, 2004.
9. Gowder, Paul A. *The* Rule of Law *in the Real World*. New York: Cambridge University Press, 2016.

10. Krygier, M., 'Chapter 10: The Rule of Law' *Oxford Handbook of Comparative Constitutional Law*, eds. M. Rosenfeld, A., Sajo, (Oxford University Press, 2010), pp.233-249.
11. Raz, Joseph. "The Rule of Law and Its Virtue." The Law Quarterly Review. London: Volume 93
12. Rigobon, Roberto and Dani Rodrik. "Rule of Law, Democracy, Openness, and Income: Estimating the Interrelationships." Economics of Transition. Vol. 13, No. 3, July 2005.
13. Saunders, C. and Le Roy, K. (eds.), *The Rule of Law*, The Federation Press, 2003.
14. Tamanaha, B., *On the Rule of Law: History, Politics, Theory*, Cambridge University Press, 2004.
15. Walker, G., The Rule of Law: Foundation of a Constitutional Democracy, Melbourne University Press, 1988.
16. J. P. Wilkinson, "Nonlinear resonant circuit devices," U.S. Patent 3 624 12, July 16, 1990.
17. Zurn, Michael; Nollkaemper, Andre; Peerenboom, Randy, eds. (2012). Rule of Law Dynamics: In an Era of International and Transnational Governance. Cambridge University Press. pp. 116–7. ISBN 9781139510974.

OPERATIONAL ANALYSIS OF COMPANY COSTS

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ABSTRACT

One of the biggest challenges that companies are exposed to are managing its costs. The main aim of this thesis is to briefly explain the term of company, how it functions and which its main goals are. One of the main concerns that will be dealt with in this thesis is profit. The question is whether profit is the main aim of most enterprises or are there also other aims which are also important as profit. Further on we will show the importance of human resources as individuals who are in charge of success with its knowledge and additional efforts that they bring into company. In the first part of the thesis we will be dealing with operational analysis of company costs and its methods. Operational analysis is focused on present and current work, production and business process. These processes are regulated on the operational decision-making level, so it is evident that this analysis is ment to operational decision making. As we know, Croatia is still in a period of crisis, so we are going to show its effects on the company costs. Furthermore, we are going to deal with fixed, variable and opportunity costs and costs of employees - how their costs can effect business results of companies. Also, this is why we are going to describe how we can measure results and contibution of individuals and how their work is supposed to be rewarded and to establish such a compensation system that will make them stay in their organization and encourage them to try even more.

Keywords*: company, costs, operational anaysis, fixed, variable costs, crisis*

1. OPERATIONAL ANALYSIS OF COSTS

1.1. Introduction to operational analysis of costs

Operational analysis is a part of business analysis designed as a support function of the operational management of any company. Operational analysis of the costs deals with analysis of operational costs under the period of one year and it is oriented on operational usage of the potential effect. The subject of operational analysis is a deviation from optimum combination of costs. Most importantly the aims of the operational analysis are:

1.) To discover the signals of the latent crisis and the risk of crisis in the future

2.) To create conditions for the best, rational management and usage of available potential.[1]

An important characteristic of the operational anaysis is that it is implemented as well as the ongoing processes in the company and that is the reason it is also called current analysis. Some of the characteristics of the operational analysis are:

[1] Tintor, J. Operativna analiza troškova, page 1.

- The subject of the analysis are specific parts of the organization or of the process,
- The time aggregates and the subject of the analysis are not only the data on a daily basis, but also the data by shifts,
- It is oriented on the data from primary data and the observation of ongoing processes,
- Apart from the numerical data, it also uses the naturally expressed data.[2]

The basis of the operational analysis is the planned costs which are used for comparison with real costs. So, the main aim of this analysis is to locate the deviation from the planned aims and results by the place of costs and by the cause, it quantifies them, and searches for solutions such as measures which are necessary to take in order to eliminate differences in future business and to prevent the deviation in future. So this is the basis for the quality operational decision making and operational management in the company. Every deviation from the planned costs is used as a process of learning for the company as an organization and the whole process gets better. To conclude, the final aim of every company is to prevent the deviation from the planned results. Of course, some of the reasons of the deviations cannot be planned and it is impossible to remedy the difficulties without negative consequences for the company. That is the reason to prevent the negative consequences on time with the so called early signals. In order to reaches it aims, the operational analysis uses the methods of comparison, analysis and extraction/elimination. The most important types of operational analysis are the operational analysis of profit and costs. Without them operational decision making and management of the company is impossible.[3] Total costs, as well as total profit of the company, are shown in the profit and loss statement which is used as a basis for this analysis. [4]

1. 2. The basis and instruments of the operational analysis

1. 2. 1. The basis of the operational analysis of costs

To be able to understand any company and the phenomena in its business it is important to know every department of the company and its processes. So we can devide the structure of the company into:

1.) Basic economic system or transformation system,
2.) Management system and
3.) Information system.

When we analyse the costs and when operational analysis of the costs is being made, the most important part of the company is information system. It serves to ensure all important information in order to provide the most relevant information. In order to do the anaysis of company costs, first we need to create a budget of the costs. There are two ways of planning the budget and controling the costs:

1.) Nonelastic budget and
2.) Elastic budget of planned costs.

[2] Batarelo, A. Ž. (2002). Vrste poslovne analize. Poslovna analiza i upravljanje. 7 (10/12), page 21.

[3] Batarelo, A. Ž. (2002). Operativna analiza troškova poduzeća. Poslovna analiza i upravljanje. 7 (1), page 30.
[4] Batarelo, A. Ž.: op. cit., page 31.

The nonelastic budget of costs assumes a permanent level of the capacity that can be used in production. So, all the production that is planned, all the planned materials and the plan for sale is permanent, without any change. The same goes for the costs. In a nonelastic budget they are fixed and it is impossible to separate them on fixed and variable costs. It is only possible to calculate planned costs by planned amount of production. Of course, this restricts and disables explanation whether it comes to any change in capacity. To conclude, the nonelastic planning of costs is aplicable only when the amount of production is fixed, without any changes.[5] For a nonelastic budget it is required to take an assumed result and adequate total costs by type and planned amount of an impact, and to assign it to the cost center. By multipliying the unit cost with the achieved performance we get the planned cost for the cost center. From the above mentioned characteristic of a nonelastic budget - the assumption of a fixed amount of capacity for the production, and the inability to separate the fixed and variable costs, results in the main disadvantage of a nonelastic budget - the planned costs cannot be used as comparative cost, as the basis for determining the deviation of real and planned costs. As the operational analysis does not make sense without finding the cause of deviation and analysing the deviation of planned and real costs, this method of budget planning is being abandoned and the method of elastic planning of costs is being used instead.[6] The elastic budget of costs, unlike the nonelastic, can appear in two forms - based on total cost and based on marginal cost. In both forms it is possible to change the level of capacity that is used in production. The only difference that occurs is when the importance of fixed and variable cost is defined. Elastic planning of cost based on total cost considers the fixed and variable component of costs that is required for production of a specific product. If it comes to any change of levels in the production, it consequently reflects on the level of cost. It is important to note that the amount of costs changes disproportionally according to the coefficient of reagibility. It is measured by a variator, like the rate of variable and total cost for specific amount of production. The main advantage of elastic planning is the fact that that it is possible to explain the deviation in cost. If it comes to deviation in elastic planning, the reason can be found in imprecise calculation of the fixed costs on the cost drivers. So, it is also possible that wrong decisions can be made because of the reason mentioned. In that case a different process of planning, calculating and controlling of the costs is required. Elastic planning based on marginal cost, unlike the elastic planning based on total cost assumes the separation of fixed and variable component of cost on suitable cost center and cost drivers and its analysis. Variable costs are taken as proportional, with the coefficient of reagibility 1, meaning that the variable costs by unit are equal to the marginal cost. Variable costs are calculated only on the cost drivers and fixed costs are all covered from the profit of the company. Because the variable costs are treated as a combination of different factors, it is possible to separate their impact and separate their deviation by types and explain their cause.[7] Here it is only required to separate the variable cost, as the fixed costs are equal to the marginal cost. The mentioned advantages and disadvantages of all the methods that are used to analyse the deviation are shown in the following table.

Table following on the next page

[5] Tintor, J.: op. cit., page 1-2.
[6] Batarelo, A. Ž.: op. cit., page 32-33.
[7] Batarelo, A. Ž.: op. cit., page 32-34.

Table 1. Characteristics of methods for planning the budget

Criterion	Nonelastic cost planning	Elastic planning of total cost	Elastic planning of marginal cost
Budget accuracy of the planned value for the planned amount	yes	Yes	yes
Annual adjustment of changed size	yes	Yes	yes
Adjustment to the planned amount if it comes to change in factor cost	no	Yes	yes
Separation of FC and VC on the level of cost centre	no	Yes	yes
Budgeting the deviation in consumption of cost factor	no	Yes	yes
Budgeting the deviation in employment	no	Yes	no
Possibility to control the costs	no	Yes	very good
Separation of FC and VC on cost drivers	no	No	yes
Transfer of FC on cost drivers	yes	Yes	no
Suitability for short term and long term decision making	no	No	yes

Source: Tintor, J. Operational analysis of costs, page 6.

This table shows an overview of different types of budgeting the costs and different possibilities of contolling and analysing the real from the planned amount. Unlike the elastic budgeting, with nonelastic budgeting it is possible to see the limited possibility of explaning the reasons of deviation in the costs. Elastic budgeting based on total costs provides only partly the explanation for the deviation and elastic budgeting based on marginal cost respects the deviation in fixed and variable costs and assumes its total separation. To conclude, when it comes to costs, the best option for decision making is the elastic budgeting based on marginal cost.

1. 2. 2. The methods of operational analysing the costs

To demonstrate the operational analysis of costs is used the Coenenberg's clasification of deviation in total costs (dUT) on:

- Deviation of direct costs (dVTd)
  - Deviation in price of an input (dc)
    - Deviation of consumption (efficiency) (dq)
    - Deviation of the mix of inputs (daq)
    - Other deviation (diq)
  - Deviation in common cost (dOT)
    - Deviation of general variable costs (dVOT)
    - Deviation of general variable costs of production (dOVTi)
    - Deviation of common variable costs (dOVTz)
- Deviation of fixed costs (dFT)
  - Fixed costs of standing (FTj)
  - Utilized fixed costs (FTi)

Additionally, it is also possible to use the method of budgeting based on marginal costs where total costs are analyzed by the scope of effects on:

- Direct variable costs which are directly assigned to cost drivers or the effect and the coefficient of reagibility is Kr 1 and on:

- Indirect costs those are devided into fixed and variable.

As it was mentioned before, budgeting based on marginal costs is the best method for explainig the deviation of real costs from planned costs. For deviation of costs it is also important to perceive the structure of observed costs. If the costs are perceived as the combination of costs, the possibility od deviation by influence of any part of combination is assumed.

If we write the costs of combination as:

1. Planned: $T_p = (c_{pk}, q_{pk}, iq_{pk}, aq_{pk})$ and

2. Real: $T_s = (c_{sk}, q_{sk}, iq_{sk}, aq_{sk})$

Where it is:

c- price of each element, input

q- quality of input per unit

iq- usage of the unit of consumption

aq- combination of input

p- planned size designation

s- real size designation

If we put the real and the planned costs into the above formulas, we can get the „comparative costs“ T_u. Total deviation of real costs from planned costs can be separated by the influence of different elements of costs and consequently focus the analysis on a more profound search of the causes of the deviation.[8] If we look at table 2 and the planned quality, we can see that the real amounts are bigger, so it comes to an increase of quality of realized production. Furthermore, the realized total costs and the direct variable costs are exceeded, in total and per unit. The total costs are lower than the planned. Variable costs are lower and the fixed are permanent, in accordance to the planned. To conclude, in this example it has come to a decline of cost-effectiveness and efficiency. It is required to make further analysis to check and to take required measures.

Table 2. Planned and reached costs

Description	Plan (p)	Real (s)	Deviation (d)
1. Quality of production Q	110,000	120,000	+10,000
2. Total costs (UT)	400,000	500,000	+100,000
3. Dir. var. costs (VTd)	330,000	431,200	+101,200
4. Common costs (OT)	70,000	68,800	-1,200
5. Variable part (OVT)	25,000	23,800	-1,200
Fixed part (FT)	45,000	45,000	0
6. Total cost per unit. (ut)	3.636	4.167	+0.531
7. Dir. var. Cost per unit (vt)	3.000	3.593	+0.593

Source: Batarelo, A. Ž. (2002). Operational analysis of the company costs. Business analysis and management. 7 (1), page. 35.

As the deviation of real and the direct planned variable costs is 101,200, this is the subject of further analysis. We are starting from the comparative costs of increase quality in production of 10,000 (120,000 -110,000).

$T_u = (T_p * Q_s) / Q_p =$

$= (330{,}000 * 120{,}000) / 110{,}000 = 360{,}000$

[8] Tintor, J.: op. cit., page. 1-8.

Comparative costs are 30,000 (360,000 – 330,000) bigger than planned, which means that if we follow the planned terms these costs will increase for the mentioned amount. So, we are left with the deviation of 71,200 (431,200-330,000-30,000) for further analysis. The mentioned deviation is the effect of the change in price per input (dc) and the change in its processing. (dq). If we assume that for the planned quality of 110,000 of units of product is required, the mix of products that have unite price:

- F- 5
- G- 3
- H- 2

In table 3. we can see which are the planned and which are the real quality of inputs. Also, if we look at the prices, we can see the deviation in planned and real unit prices.

Table 3. Planned and real quality and prices

Input	Quality		Unit prices	
	Planned	Reached	Planned	Reached
F	550,000	542,800	0.3	0.40
G	330,000	377,600	0.4	0.35
H	220,000	259,600	0.15	0.20

Source: Batarelo, A. Ž. (2002). Operational analysis of company costs. Business analysis and management. 7 (1), page. 35.

To determine the deviation in prices we use the following procedure:

$$qs * cs - qp * cp = (4)$$

$$qs * cs - qs * cp + qs * cp - qp * cp = (4a)$$

$$\underbrace{(cs - cp) * qs}_{\text{Deviation of prices (dc)}} + \underbrace{(qs - qp) * cp}_{\text{Deviation in processing of inputs (dq)}} = (4b)$$

If we put the numbers from table 3. into this formula, we get the following:

- Real costs (q_{sk} * c_{sk})

F: 542,800 * 0.40 = 217,120

G: 377,600 *0.35 = 132,160

H: 259,600 * 0.20 = 51,920

Total = 401,200

- Comparative costs (q_{sk} * c_{pk})

F: 542,800 * 0.30 = 162,840

G: 377,600 * 0.40 = 151,040

H: 259,600 * 0.15 = 38,940

Total = 352,820

- Planned costs (q_{pk} * c_{pk})

F: 550,000 * 0.30 = 165,000

G: 330,000 * 0.40 = 132,000

H: 220,000 * 0.15 = 33,000

Total = 330,000

The difference from real 401,200 and comparative costs 352,820 is 48,380 and it shows the deviation by the influence of prices. The difference of comparative 352,820 and planned costs of 330,000 is 22,820 and it shows the deviation by the influence of processing the quality, in total (48,380 + 22,820) 71,200.

Each such deviation is required for further analysis.

1.) Analysing the deviation in price (dc)

Analysis of deviation in prices is measured by comparative costs in multiplying the planned process and real costs in the following way:

$$dc = q_s * c_s - q_s - c_p = \quad (5)$$

$$= (c_s - c_p) * q_s \quad (5a)$$

$$= \Delta c * (q_p + \Delta q) \quad (5b)$$

$$= \Delta c * q_p + \Delta c * D_q \quad (5c)$$

Expression (5a) can additionally be transformed into:

$$dc = \sum_{k=1} (c_{sk} - c_{pk}) * Q_{sk} \quad (5d)$$

and it is the base for the table 4.

Table 4. The influence of deviation in unit price

Price				Real quality q	Influence of deviation in price
	Real price	Planned price	Difference	*	
F	0.40	0.30	+0.10	* 542,800 =	+ 54,280
G	0.35	0.40	-0.05	* 377,600 =	- 18,880
H	0.20	0.15	+0.05	* 259,600 =	+ 12,980
Total					+ 48,380

Source: Batarelo, A. Ž. (2002). Operationa analysis of company costs. Business analysis and management. 7 (1), page. 36.

It is evident from table 4 that the input F shows the influence on increase of profit, whereas the other input shows the increase of costs and decrease of profit.

2.) Analysing the deviation in costs of processing input (dq)

To analyse the deviation in costs of processiong input it is required to define the cost centre, cost drivers and the cause of deviation.

$$dq = q_s * c_p - q_p * c_p = \quad (6)$$

$$(q_s - q_p) * c_p = \quad (6a)$$

whereas for multiple and for different inputs we use the following:

$$dq = \sum_{k=1}^{m} (q_{sk} - q_{pk}) * c_{pk} = \quad (6b)$$

Inserting the numbers in the formulas above it is possible to locate the cost for specific input and to get the deviation. The mentioned is shown in a table 5.

Table 5. Locating the deviation in cost of inputs

	(Real quality. –Planned quality)	*	Planned price	= Total deviation of costs (dq)
F	(542,800 – 550,000)	*	0.30	= -2,160
G	(377,600 – 330,000)	*	0.40	= +19,040
H	(259,600 – 222,000)	*	0.15	= + 5,940
	Total			+22,820

Source: Batarelo, A. Ž. (2002). Operational analysis of company costs. Business analysis and management. 7 (1), page. 37.

Total deviation of costs is interpreted as nonefficient combining of inputs i.e. it leads to the question of efficiency in operational management. The rest of the deviation is required to be looked upon in production and the technical part and in its efficiency. For the deviation under the influence in the mix of input (daq), i.e. deviation of product assortment in contrary to planned quality, we use a formula for weighted average planned price (c) of all the inputs:

$$daq = [(aq_{sk} - aq_{pk}) * qs\ ] * (c_{pk} - Q_{cp}) \quad (7)$$

So the weighted average planned price (c) is calculated as:

$$Øc_p = I\ (5 * 0.3) + (\ 3 * 0.4) + (2 * 0.15)\ I\ /\ 10 = 0.3$$

The planned mix of consumption (aq) is calculated as:

$$F:\ aq_p = q_{pF} / \sum_{k=1}^{m} q_{pk} = 550{,}000 / 1{,}100{,}000 = 0.50$$

$$G:\ aq_p = q_{pG} / \sum_{k=1}^{m} q_{pk} = 330{,}000/1{,}100{,}000 = 0.30$$

$$H:\ aq_p = q_{pH} / \sum_{k=1}^{m} q_{pk} = 220{,}000/1{,}100{,}000 = 0.20$$

Realized mix of consumption:

$$F:\ aq_s = q_{sF} / \sum_{k=1}^{m} q_{sk} = 542{,}800/1{,}180{,}000 = 0.46$$

$$G:\ aq_s = q_{sG} / \sum_{k=1}^{m} q_{sk} = 377{,}600/1{,}180{,}000 = 0.32$$

$$H:\ aq_s = q_{sH} / \sum_{k=1}^{m} q_{sk} = 259{,}600/1{,}180{,}000 = 0.22$$

Using the term (7) the influence of mix in deviation of the real form planned costs is calculated:

F: [(0.46 – 0.50) * 1,180,000] * (0.30 – 0.30) = 0

G: [(0.32-0.20) * 1,180,000] * (0.40 – 0.30) = + 2,360

H: [(0.22-0.20) * 1,180,000] * (0.15- 0.30) = - 3,540

Total - 1,180

To conclude, thanks to the input H it comes to the change in mix of the inputs which is totaly negative and it results with the increase of profit. The mix of inputs is changed because of the

price of the input H which is lower than the average planned price, consequently it has come to an increase of share in total consumption for the unit of consumption. After we separate the influence of the mix, we are left with only the rest of the deviation which is considered as the consequence of nonefficiency in the functioning of the machinery.

Total deviation per input can be calculated as following:

$$diq = \sum_{k=1}^{m} (q_{sk} - q_{pk}) * Ø_{cp} \qquad (8)$$

If we put the afore-mentioned quality and prices into this formula, we get table 6.

Table 6. Locating the total deviation per input

	(q - q) * c = dq
F	(542,800 – 550,000) * 0.30 = -2,160
G	(377,600 – 330,000) * 0.30 = + 14,280
H	(259,600 – 200,000) * 0.30 = + 11,880
Total	+ 24,000

Source: Batarelo, A. Ž. (2002). Operational analysis of the company costs. Business analysis and management. 7 (1), page. 37.

In this table we can see the increase of costs in all the inputs and the decrease of efficiency in all the inputs, except in input F. Following analysis is required to discover the increase of the costs in other inputs. Since we are dealing here with the analysis that it is used for operational decision making that are connected with the managing of the company, in this case a direct control of deviation and analysis of direct insight into operations would be more suitable or the control of daily orders. It would be more suitable because it provides taking corrective measures automatically in the exact place where the processing take place of one inputs, whereas the whole analysis is more used in cases when it is impossible to eliminate the differences without recombination. If we look at table 2 again we can see that it has left us only with the deviation from common planned costs. An important characteristic of these costs is that they react differently on the amount of capacity that we use in production, so called the level of employment. They consist of a variable and a fixed part. The variable part of the cost refers to the costs of product that change more slowly than the amount of utilized capacity. They are classified by type and conrolled by planned budget and features. They are managed by cost drivers of cost centre that they belong to. The fixed part of costs does not react to the amount of utilized capacity. Common costs are the lowest by maximum level of usage of its fixed part. However, until it does not reach the maximum of usage, unused fixed costs appear. The main aim of analysing the deviation of real from common planned costs is to find the measures which

can help increase the amount of utilized capacity or to find the way to restructure the production of the products with a higher contibution rate of covering the costs. To calculate the rate of unused (FTj) and used (Fti) fixed costs we use the following formulas:

$FTj = FT * [1- (q_s / q_m)]$

$Fti = FT * (q_s / q_m)$

Where are:

FTj – unused part of FC

Fti – used part of FC

FT – total fixed costs

q – effect, actual or planned

q_m-possible effect by total use of capacity

If we assume that the possible effect is 140,000 units, the budget of planned fixed costs would be:

FTj = 45,000 * [1- (110,000 / 40,000)]

= 45,000 * [1 – 0.7857]

= 9,644

FTi = 45,000 * (110 / 140,000)

= 45,000 * 0.7857

= 35,356

Unlike the planned, the budget of real fixed costs is:

FTj = 45,000 * [1 – (120,000 / 140,000)]

= 45,000 * [1 – 0.857]

= 6,435

FTi = 45,000 * (120,000 / 140,000)

= 45,000 * 0.857

= 38,565

To conclude, by this method the difference of planned and real fixed costs of 3,209 is calculated.[9]

1.3. The effect of crisis on the costs of company

Crisis for some company means the condition that leads to danger of achieving its goals, profit and it brings into question the survival of the company.[10] So it is required to turn the crisis into a chance for improvement and finding new strategies.[11] Business crisis is reflected on the profit of the company and on the losses which leads to insolvency and to crisis of liquidity. If company operates with losses, it leads to a crisis of success. In the financial aspect, the characteristics of a crisis are:

1.) Loss of market share

2.) Reducing profitability

3.) Reducing cost-effectiveness (losses, insufficiently utilization of capacity...)

4.) Insolvency and

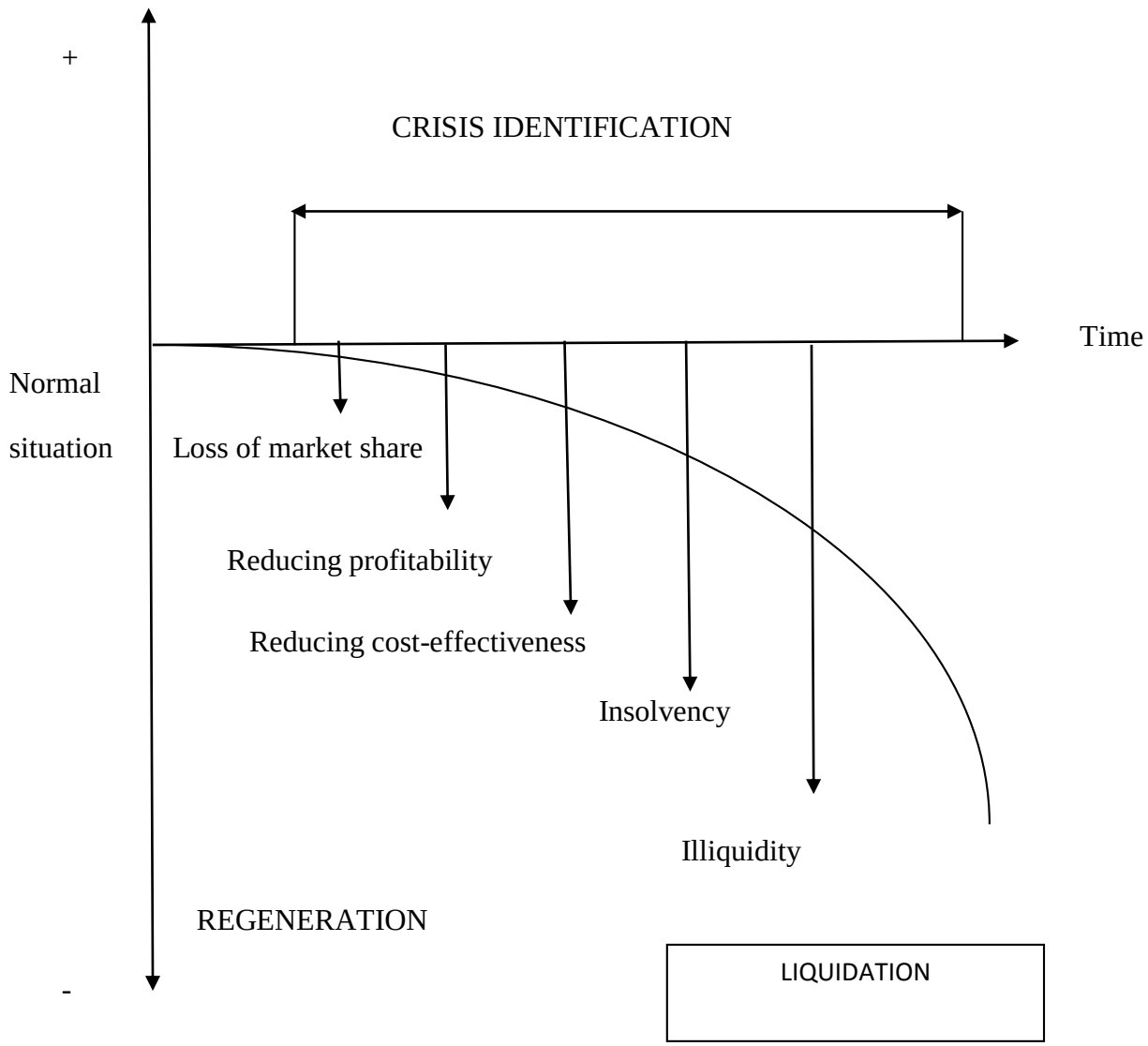
5.) Illiquidity [12]

Graph following on the next page

[9] Batarelo, A. Ž.: op. cit., page 30. -38.
[10] Osmanagić-Bedenik, N. (2003) Kriza kao šansa. Zagreb: školska knjiga, page 154.
[11] Novak, B. (2006) Krizno komuniciranje i upravljanje opasnostima, Marketing u praksi: časopis za tržišne komunikacije, 24, page 9.
[12] Osmanagić-Bedenik, N.: op. cit., page 154.

In the following graph are shown crisis symptoms.

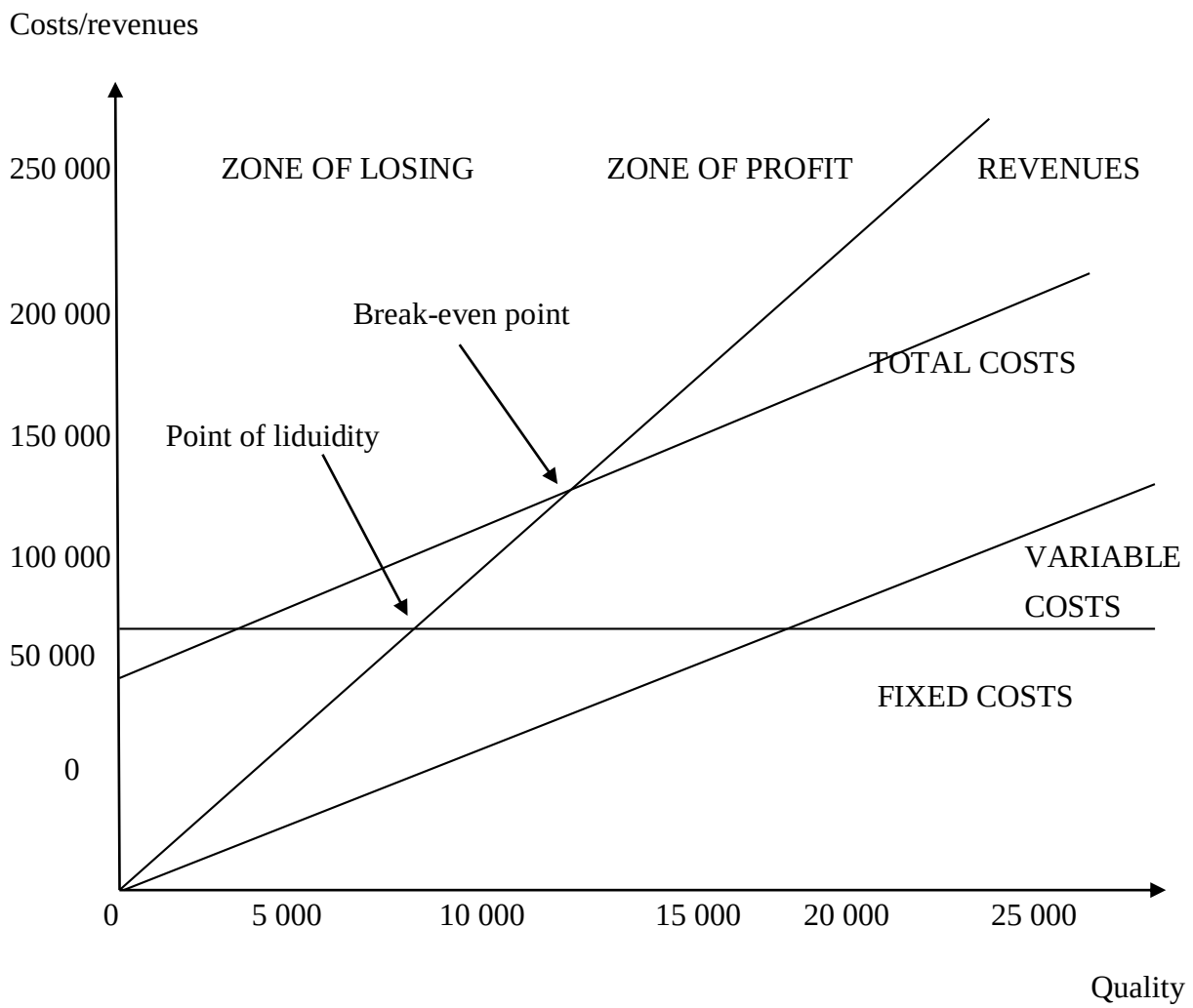
Graph 6. Procedure and symptoms of a crisis



Source: Osmanagić-Bedenik, N. (2003) Crisis like a chance. Zagreb: školska knjiga, page 154.

Crisis of sucess is also known as operational crisis. Relations between costs and profit can be displayed also in a graph.

Graph 7. Break-even point



Source: Osmanagić-Bedenik, N. (2003) Crisis like a chance. Zagreb: školska knjiga, page 155.

The graph shows how the decrease in sales and in profit reflects the profit in some company. If the sales in some company depend only on one product that it sells, the curve of income is a straight line that it is calculated multiplying the quality of product and its price. For its production different products are required like machines that are bought, regardless of the quantities sold, and they present the fixed cost of the company. Other inputs are bought only if the product can be sold and those are the variable costs that depend on the quality of produced products. The break-even point indicates the quality where the company achieves zero profit. A company that produces really close to the break-even point will come much sooner to the area of loss than a company that produces away from the break-even point, in the zone of profit. It is cruical that the management of the company sees the decline in sales and they react on time by lowering the amount of production in order to reduce the cost of accumulating the stock.[13] Today companies operate in an extremely turbulent and unpredictable environment. In order to maintain its market position and to be able to prosper and achieve their goals, it is cruical to make analysis of managing the risks that are potential for an industry in which the company is in order to make it as easier to defend it against potential crisis.[14] Preventive crisis management (anticipatory crisis management) is the best way to manage crisis and to solve problems of matching the company and the environment. Instruments for anticipative management of crisis

[13] Ibid., page 158.159.
[14] Udovičić, A., Kadlec, Ž., (2013) Analiza rizika upravljanja poduzećem, Praktični menadžment, 4 (1), page 50.

are risk management, credit worthiness of the company, policy of flexibility and an early warning system.[15] Effective system of risk management is one of the most important instruments of protecting the company from its competition and it enables the company to identify oportunities and in the meantime to react to changes.[16] There are different classifications of risks, so there are general risks that are related to the company as a whole and specific risks that refer to one specific part of business (e.g. purchasing, sales, research and development...) Also the risks can be devided according to the level of importance for the company:

1.) Small risks where it comes to change of resources of a company.
2.) Medium risks where it comes to change of goals and expectations,
3.) Big risks to catastrophic risks that can get the company into the question of its existence.

Companies that have developed a risk management system are trying to analyse potential risks to define security measures and a system of control over risks. A system of control can be established by building a specific system which is adjusted to risks in order to avoid a situation in which their survival would be in danger.[17] Many see crisis as a new start of doing business. If a company prepares, they can get out of crisis profitabily, of course, if they use correct strategy. In contrast, passive or restrictive measures such as firing the labor force and reducing the production capacity can be only successful in a short term.[18]

1.4. The impact of staff costs connected to business result of the company

In order to achieve its main goal - revenue as big as possible, it is required, apart from optimal cost control, to invest a considerable effort in the development of human resources. To achieve this goal, it is necessary to establish an optimal system of compensation management which invests into human resources by raising their motivation, skills, abilities and in that way they are achieving acceptable business results within the company.[19] Unlike such companies, those that have not have developed a strategy for motivation reward, reside in a bad business environment, responsibility and trust is missing, employees feel bad and it comes to stagnation and decline.[20] It is known that not all employees contribute the same proportion of success of business results. That is why the question is how to measure the results and contribute to the people and to reward their work and establish such a compensation system which will keep them in the organization and encourage greather contributions. In addition to the material, in a developed economic system intangible compensation are becoming more important. There are two basic types of financial compensation:

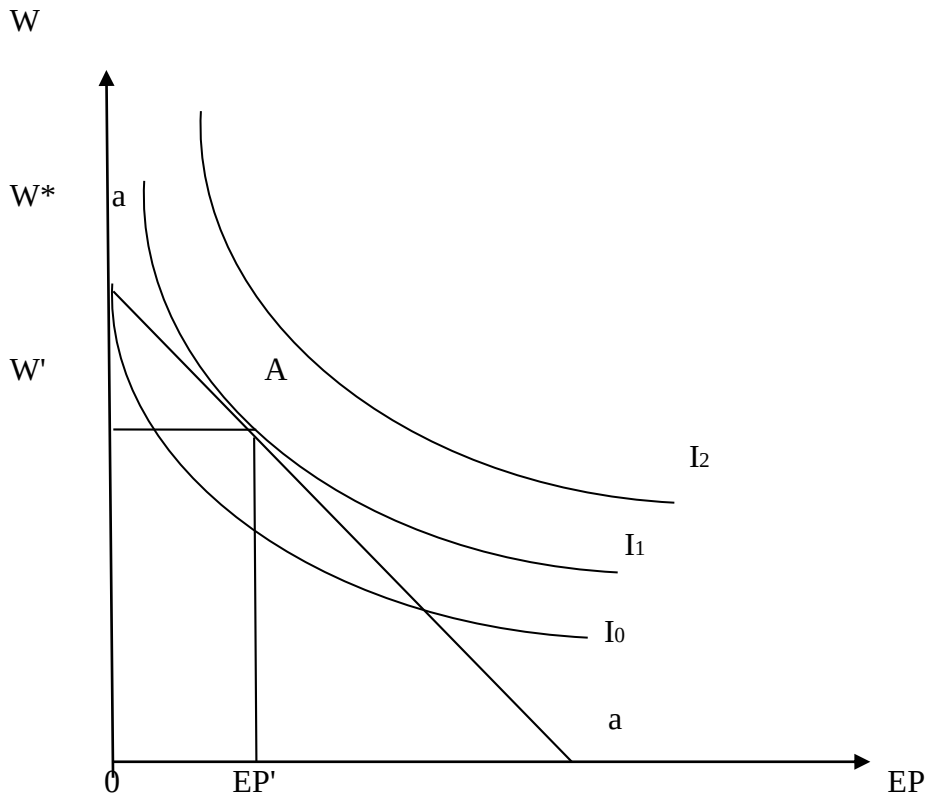
1.) Direct financial gains, money as award for outstanding achievements and
2.) Indirect material gains that are not related to money or getting a cash bonus. (e.g. training, insurance, social benefits)

Talking about motivation and commitment of employees the problem of how to ensure maximum commitment of workers arises. This problem is most frequently explained and linked to the example of conflicts in interests between workers, managers and employees in accordance with their abilities. Conflicts of interest between owners and employees, primarily

[15] Osmanagić-Bedenik, N.: op. cit., page 59.
[16] Udovičić, A., Kadlec, Ž.: op. cit., page 50.
[17] Osmanagić-Bedenik, N.: op. cit., page 68-69.
[18] Butigan R.; Rihtar, S.; Čengić, D. (2012) Poslovanje i utjecaj strategije marketinga na uspješnost poduzeća razdoblju gospodarske krize, Ekonomski pregled, 63 (1-2), page 67.
[19] Požega, Ž.; Crnković, B. (2010) Analiza utjecaja troškova zaposlenika na poslovne rezultate poduzeća, Ekonomski vjesnik, 23 (1), page 128.
[20] Buntak, K.; Drožđek, I.; Kovačić, R. (2013) Materijalna motivacija u funkciji upravljanja ljudskim potencijalima, Tehnički glasnik, 7 (1), page 56.

managers are called the principal-agent problem. This problem exists whenever the principal (owner) cannot completely control the work of an agent (employees, managers). Precisely because of this problem of conflict of interest, it is necessary to establish such a system of compensation or payment that will not only reduce, but completely eliminate the possibility of conflicts of interest. Conflicts of interest between a principal and an agent can be analyzed according to whether they appear in private or public companies. In large, private companies managers are the ones that regulate the operation of enterprises, because the shares of shareholders are generally very small and that consequently reduces the ability to get the information about the success of the work of managers. Because of this, managers in private companies can realize some of their personal goals as long as the owners are satisfied with the results of operations in the company. In addition to the above scenario, another option is possible where shareholders with the help of the supervisory board can depose of the existing management. In public companies managers can also try to achieve their personal goals. However, unlike private companies, in public companies it is possible to control the management labour over the law and authorized government agency. Also, managers in public companies are aware of the risk if procedures that are not in accordance with the law are found out about. In order to reduce fraud of managers, the supervisory board is the one that supervises rewards or punishes achievements of managers depending on their achievements. So, managers can in different ways increase the cost of companies above those that are set as minimum for a given amount of production (e.g, hiring more labor, spending more money on travel, entertainment, etc.). All this increases the utility for managers, but at the same time it reduces the profit of enterprises. The amount of the costs that are set above the minimum is called the tendency of cost or cost preferences of a manager. The choice between compensation and cost preferences can be presented on a graph.

Graph 8. The choice between compensation and cost preferences



Source: Benić, Đ. (2009) The problem of ensuring maximum commitment of workers. Economic thought and practice, 1, page. 23.

Let's assume that the supervisory board determines the level of wages or compensation of managers at the W * with the expectation of maximizing profits. If managers do not maximize profits, the supervisory board will reduce his compensation. Line *aa* indicates managerial budget restriction between compensation (W) and cost preferences (EP). The curves I_0, I_1 and I_2 indicate the indifference curves of managers that are noting their different levels of utility. A manager maximizes the utility in the point A where the indifference curve I_1 touches the budget line aa. We can conclude that in this case the manager prefers a combination of EP 'and W' of the W * which maximizes profit and reaches a higher level of utility ($I_1 > I_0$). A manager pays less compensation with a higher level of utility (W <W *).[21]

2. CONCLUSION

Fast and constant changes in today's world often reflect on the functioning of a company. The company has to constantly keep the pace with changes in lifestyle and development of technology as the smallest form of staying behind in the process of progress can be disastrous for the company itself. Changes in the activities of a company are crucial and are a *conditio sine qua non* for the existence of a company. So, in order to be able to speak of success and progress, it is necessary to invest in the main engine of progress in the company - human resources. Human knowledge is extremely important for the success of a company. The success of a company is based on the individuals and their knowledge that leads to success of the company. It is very important that companies recognize these individuals upon who the success of the company is based and to know who these individuals which are pushing the organization forward are. Related to this, it is an increasingly common practice to reward workers wether in the form of financial or non-financial gains. These are only efforts that companies want to emphasize in its competitive environment. Development of a good organizational structure where employees are satisfied and motivated is a tendency of every good manager. As the environment of companies becomes more and more dynamic, it is neccesary to establish a good system of controling cost that will track their movements on a daily basis. Even one small change compared to the planned production of costs can act as a signal of inefficiency and thus be faster and more effective in preventing negative consequences that could arise from this situation. Although at first, the crisis does not have such dramatic proportions; its negative impact on the image of the organization can be very big and can threaten the long-term survival of the company. Most businesses, as a response to the economic crisis, use restrictive measures such as firing employees and reducing salaries. We can conclude that these companies are not going out of a crisis stronger and more competitive, but just the opposite. They will need much more time to recover. The thing that has been proved to be successful in the situations of crisis is exactly the opposite – increasing of investments in new products create a positive spirit not only for employees, but also for other participants in the market, and most importantly, the production of the company achieves new additional revenues. But to increase the level of investments in new products, it is required that the companies know very well their structure of costs and their functioning. The importance of functioning of fixed and variable costs in relation to the amount of capacity that is used, is important not only to conduct in the long-term, but also for the current trade policy. To lead a successful long-term policy, it is important to know the required investment plan and the possibility of product placement in the form of additional resources for the company.

[21] Benić, Đ. (2009) Problem osiguranja maksimalnog zalaganja radnika. Ekonomska misao i praksa. 1. page 19-23.

LITERATURE:

1. Batarelo, A. Ž. (2002) Fiksni i varijabilni troškovi. Poslovna analiza i upravljanje. 5 (4/5), page 31-32.
2. Batarelo, A. Ž. (2002) Operativna analiza troškova poduzeća. Poslovna analiza i upravljanje. 7 (1), page 28-38.
3. Batarelo, A. Ž. (2002) Vrste poslovne analize. Poslovna analiza i upravljanje. 7 (10/12), page 15-22.
4. Benić, Đ. (2009) Problem osiguranja maksimalnog zalaganja radnika. Ekonomska misao i praksa, 1
5. Benić, Đ. (2012) MIKROEKONOMIJA menadžerski pristup. Zagreb: školska knjiga.
6. Buntak, K., Drožđek, I., Kovačić, R. (2013) Materijalna motivacija u funkciji upravljanja ljudskim potencijalima. Tehnički glasnik [online]. 7 (1). Available on: http://hrcak.srce.hr/search/?q=Materijalna+motivacija+u+funkciji+upravljanja+ljudskim+potencijalima. [15. April 2016.]
7. Butigan R., Rihtar, S., Čengić, D. (2012) Poslovanje i utjecaj strategije marketinga na uspješnost poduzeća u razdoblju gospodarske krize. Ekonomski pregled. [online]. 63 (1-2). Available on: http://hrcak.srce.hr/search/?q=Poslovanje+i+utjecaj+strategije+marketinga+na+uspje%C5%A1nost+poduze%C4%87a+u+razdoblju+gospodarske+krize [15. April 2016.]
8. Novak, B. (2006) Krizno komuniciranje i upravljanje opasnostima. Marketing u praksi : časopis za tržišne komunikacije [online]. 26. Available on: http://hrcak.srce.hr/search/?q=Krizno+komuniciranje+i+upravljanje+opasnostima [2. Mai 2016.]
9. Osmanagić-Bedenik, N. (2003) Kriza kao šansa. Zagreb: školska knjiga.
10. Požega, Ž.; Crnković, B. (2010) Analiza utjecaja troškova zaposlenika na poslovne rezultate poduzeća. Ekonomski vjesnik [online]. 23 (1). Available on: http://hrcak.srce.hr/search/?q=%29+Analiza+utjecaja+tro%C5%A1kova+zaposlenika+na+poslovne+rezultate+poduze%C4%87a [2. Mai 2016.]
11. Samuelson, P . i Nordhaus, W. (2005) Ekonomija. 18. izdanje. Zagreb: MATE.
12. Tintor, J. Operativna analiza troškova
13. Udovičić, A., Kadlec, Ž., (2013) Analiza rizika upravljanja poduzećem. Praktični menadžment [online]. 4 (1), Available on: http://hrcak.srce.hr/search/?q=Analiza+rizika+upravljanja+poduze%C4%87em [2. Mai 2016.]
14. Veselica, V. (2000) Razumijevanje poduzeća i njegovo financiranje. Ekonomski pregled [online]. 51 (3-4). Available on: http://hrcak.srce.hr/search/?q=Razumijevanje+poduze%C4%87a+i+njegovo+financiranje [9. April 2016.]

SMART COMMUNITIES AND SOCIAL INNOVATORS

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ABSTRACT

Smart cities are debated intensively and even ranked according to different indicators. There is no consensual definition of the notion yet, but surely the concept consists of smart communities and networks as related to human and social capital, innovative solutions in combining traditional transport/energy/social infrastructure with modern ICT communication tools, and social network and open data approaches supporting participatory governance. The interaction of three factors is believed to boost economic growth and to provide a high quality of life. New ideas require innovative technological solutions, but this is not possible without enablers and facilitators in the city society - social innovators. In the paper, the networks of social innovators are analyzed in the cities of Slovakia and particularly one the important smart communities within the cities – start-up ecosystems and their relationship to local universities. The main research question is which city factors are significant in process of creation, evolution and operation of start-up ecosystem and what attributes are specific for start-up ecosystems in post-communistic countries. The ecosystems are identified as firm-, institution- or personalities/networks-centric.

Keywords: *Social innovation, social innovator networks, start-up, spin-off, knowledge spill-overs*

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ETHICAL ISSUES IN THE EMPLOYMENT OF EXPATRIATE LEADERS IN CORPORATIONS

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ABSTRACT
This paper draws upon theories of leadership and ethics to add to the understanding of ethical and cultural factors that impact on expatriates' experiences. The paper discusses issues for expatriates, particularly relevant for those who are appointed as leaders of corporations in other countries. The paper addresses a wide range of cultural issues and how expatriates might manage the conflicts and risks emerging from different cultural values, attitudes and practices. Examples of the difficulties faced are given, as are consequences. The article concludes with some general observations, particularly relevant to those people employed as corporate expatriate managers.
Keywords: *ethical leadership, ethics, expatriates*

1. INTRODUCTION

As trade barriers fall, enterprises and their leaders are moving across boundaries to take advantage of the opportunities offered by global trade. At the same time, in response to the continuous disclosure of poor and unethical decision making and behaviour, society is demanding that our leaders respond by recognising the human rights of communities, employees and other stakeholders, are socially responsible and protect the environment.

In this context, the attributes, competencies and ethics of expatriates has become an important issue. While there are many papers about leadership, there are few which examine how culture and ethics influence leadership. The paper examines who are expatriates, the difficulties for individual, families, the cultural differences encountered, ethical issues and how the way they are addressed is influenced by individual personality, ethical stance and perceptions of the expectations of their followers. Examples of the difficulties faced are given, as are consequences. The article begins by defining who expatriates are.

2. WHO ARE EXPATRIATES?

An expatriate is a person temporarily or permanently residing, as an immigrant, in a country other than that of their citizenship. The word comes from the Latin terms *ex* (out) and *patria* (native land). In common usage, the term is often used in the context of professionals or skilled workers sent abroad by their companies. Unlike migrants, the intention of expatriates is to return to their home country at some stage. A distinction can be made between corporate expatriates sent overseas by their companies, and self-initiated expatriates who, rather than being sent overseas, are recruited by local companies.

Being a self-initiated expatriate (SIE) in general refers to expatriates who are hired individually on a contractual basis and are thus not transferred overseas by a parent organization (Andresen, Bergdolt & Margenfeld 2012). Selmer and Lauring (2010) define SIEs with regard to three specific characteristics, namely that they had acquired their current job independently (self-initiated), that their current job was a steady position (regular job) and that their nationality was different from that of their host country (expatriate). Among these are the employees who live in one country, but commute to another for work. Typically a worker will spend a week or two at the work location and return home at weekends. This is common for domestic employees in Asia, and in the mining companies of far Western Australia the miners will commute from Perth or another major city, i.e. fly in and fly out (FIFO) according to their work schedule. Many not-for-profit organisations, such as *Red Cross* and *Médecins Sans Frontières*, operate in this way, flying their staff expatriates into and out of disaster and war zones to provide assistance.

To these could be added a growing number of people who follow the sun, often backpackers, or retirees owning homes in both their birthplace and overseas. In some cities, the expatriate population outnumbers the locals. In Dubai, for example, expatriates from India, Pakistan, Bangladesh, Philippines and Western countries represent 80 per cent of the residents.

There are further distinctions between those who travel with no intention of remaining; those sent by their company to provide expertise or learn; those who choose to live elsewhere with the clear intention of returning home at some stage; and those who have a working holiday in order to further their experience.

Another category of people are students and academics, who go abroad temporarily for education purposes. Recently the OECD (2016) reported that six per cent of all tertiary students in the OECD (approximately 4.5 million students) were studying in a country other than that of their citizenship.

It would be a significant omission not to mention those who choose to retire abroad. The commonly given motivations of older expatriates are a lower cost of living, a less stressful lifestyle, and better weather (Eisenberg 2015). They certainly got the first and third, but doubtfully the second – lower stress. Among the several attractions are cheaper living, a warmer climate, the affordability of health care, and the attraction of fellow citizens abroad. Against that one must put the challenges from absence from family and friends, an alien language, and coping with a foreign culture.

That study, an American one of 389 expatriates living in South America, may or may not be generalisable. What was also found is that expatriate retirees did contemplate returning home. Eisenberg's (2015) study reported 85 per cent who were satisfied, but that necessarily excluded those who had returned home, and thus the dissatisfaction level may be much higher. According to the HSBC Bank (2017) survey of expatriates, Canada has the most retirees living abroad (31% compared to the global average of 11%).

Of the available definitions the one that seems to be most apt defines an expatriate as: 'a person temporarily or permanently residing, as an immigrant, in a country other than that of their citizenship'. This is distinct from that of migrants who intend to settle elsewhere and become permanent residents. The foreign-born are therefore a large class of people living beyond their place of birth, and expatriates are a part of that cohort. Here, the focus is upon expatriates rather than upon migrants and, in particular on those appointed to leadership positions in their temporary home.

The advantage to multi-national companies of appointing expatriates to lead their global subsidiaries is that they can transfer their knowledge and skills, expand into new markets and maintain on on-the-ground control of operations. This is of particular importance to maintaining the reputation and brand of the parent company. Local companies who employ expatriates can access the skills and experiences of their multi-national competitors and also fill gaps in a local employment market.

3. DIFFICULTIES ENCOUNTERED BY EXPATRIATES

Among the difficulties that expatriates may encounter are lack of support, leaving families behind, unwillingness of family and spouse to move, spouse employment, education options for children, lack of cross-cultural training, or rejection by the host community. Most of all is the appropriateness of responses to a different culture.

The problems arising from cultural insensitivity include such issues as attitude to time and punctuality, the importance of personal relationships, loyalty, gifting, and social responsibility. The ways in which theses are addressed can be a function of a person's personality.

Personality

During the process of selecting and training appropriate expatriates, numerous individual factors related to adjustment have been studied. Personality, personal skills, previous international experience, and family situation are among the most important factors influencing the expatriates' adjustment.

The personalities of people, including intelligence, a sense of adventurousness, a willingness to favour those less fortunate, and a readiness to deal with uncertainty and even endure sub-optimal conditions may be essential attributes for successfully coping with a new and especially a challenging environment.

While intelligence has a long and distinguished research history there recently was a development by Goleman (1996). His analysis involved what came to be called 'emotional intelligence', and involves being sensitive to emotions (Conte 2005). Misunderstandings can easily occur. For example, should an expatriate be stopped by police, their emotional responses in an unfamiliar manner may be misinterpreted as arrogant or insolent. Those from some cultures find the over-exercise of power by petty functionaries difficult to understand, and never to be admired. By way of contrast, there are cultures in which the firm exercise of bureaucratic function is seen as both normative and right (Francis 2014). Cultural intelligence is defined as the specific ability to adapt attitudes and behaviour to new cultures, see McNulty and Inkson (2013).

To these definitions of intelligence, can be added the concept of ethical intelligence. While emotional intelligence is related to understanding emotion: ethical intelligence, on the other hand, involves being concerned rather than just understanding. This becomes a major issue for people working in non-profit organisations who may find themselves negotiating with local power factions for resources or even gaining permission or protection to operate as has happened in times of environmental disasters or other crises such as the war in Syria. A balance here, in some contexts, is between becoming involved in local disputes and achieving humanitarian aims.

Personality represents an individual level of cultural analysis while more group and social perspectives have been applied to analysis of national and business cultures.

Culture

Culture is shared values, beliefs, customs, attitudes, ideas and ideals: it is the common frame of reference that allows people to cope with their daily lives. As such, culture is a metonym for a significant part of our identity.

Although values such as courtesy and honesty can be included among universal values, there are vast differences in how these are practiced. There is also a vast difference between cultures on beliefs and attitudes. Attitudes about women are an example. The range is from the requirement of total subjugation to the clear emancipation (and perhaps even elements of strident feminism). In Saudi Arabia, for example, there are strict rules that govern what women may or may not do. Women do not have the same rights as men in the matter of divorce, nor may they marry outside Islam. If a Saudi woman wants to go to hospital, she needs permission from a male relative, women must attend separate schools, and they are not allowed to drive.

Cultural values may collide on several issues. Among such are the notion of collective responsibility, attitudes to women, and judgments about body shape, animal rights, bribery, secret commissions, and loyalty-to-family versus loyalty-to-principle. Important themes in international dealings are those of the need to resolve issues of values in relation to different cultures, and to try to find principles that transcend culture. At a personal level one might make the same observation: people do not necessarily come in fixed packages, and not all people from one culture hold the same degree of value attachment to different objects, issues, and principles.

4. RESEARCH INTO BUSINESS CULTURES

Research into culture in organisation is extensive. Hofstede (2005), Trompenaars and Hampden-Turner (2002) and House et al (2004) have all defined various dimensions that describe international and business cultures. Hofstede (2005) categorised cultures along dimensions of power distance, uncertainty avoidance, individualism/collectivism, masculinity/feminism, long-term/short term outlook, and indulgence/restraint. Trompenaars' and Hampden-Turner's (2002) cultural dimensions were universalism/particularism, individualism/collectivism, specific/diffuse roles, achievement/ascription of social values, a past/future time perspective and relationship (control) with the environment. Nine cultural dimensions emerged from House et al's (2004) study of Global Leadership and Organisational Behaviour Effectiveness (the GLOBE study) adding two further dimensions (gender egalitarianism and performance orientation) to the above.

Steers, Sánchez-Runde and Nardon (2010) concluded that all these models have contributed to our understanding of global management and the world of business but that many of the dimensions overlapped. Their response was to draw the constructs together in a composite model of five core cultural dimensions that was applicable to a contemporary environment. These were: power distribution: hierarchical versus egalitarian; social relationships: individual versus collective; environmental relationships: mastery versus harmony; time and work patterns: monochromic versus polychromic (managing one thing at a time or everything at once); and uncertainty and social control: rules versus relationships based.

While the above studies were important in understanding culture, the relationships between culture and leadership have also been explored in studies with a focus on leadership models (Grow & Armstrong 2017; Muenjohn & Armstrong 2007).

5. LEADERSHIP AND CULTURE

Hofstede's cultural dimensions provided the framework for Muenjohn's and Armstrong's (2007) study of the differences in values between Western (Australian) and Asian (Thai) leaders. Individualism-collectivism described the Western tradition of self-reliance and entrepreneurial behaviour contrasted with the commitment to the good of the group seen in Asian cultures. Those who valued individualism were expected to be more self-oriented and interested in promoting their own interests. In contrast those who were collectivists put a higher value on the values of their social group, family and their corporation. Power distance described the relationships between people in a business hierarchy. Leaders in a high 'power distance' were respected because of their position and assumed much authority. In more egalitarian countries, leaders are often the 'one among equals' who must earn both personal authority and position power. Australian culture registers as comparatively 'low' on power distance, 'medium' on uncertainty avoidance, 'high' in individualism and comparatively 'high' in masculinity (Hofstede 2005).

The masculinity-femininity dimension suggests that strongly aggressive and competitive values dominate masculine type societies in contrast to the less competitive and more collaborative feminine style of leader. Uncertainty avoidance describes the need for structure, stability and certainty. Members of a community high in uncertainty avoidance are likely to be insecure, less tolerant of deviance and more aggressive in the workplace.

Two further scales Hofstede related to culture were *Short-terminism* and *Indulgent self-restraint.* Long-term vs short term was one of the two further scales. Hofstede found that leaders with a short-term orientation were more likely to look for quick results. In an *indulgen*t community people feel less restrained by peer group and cultural values and expectations.

The conclusions from Muenjohn's and Armstrong's (2007) study confirmed the collectiveness nature of the Thai society and the dislike of uncertainty in the workplace. Thai subordinates exhibited a high sense of group identity and respect for authority. They also expected a high degree of paternalism from their leaders. Leaders were expected to take an interest in their families, respond to personal problems and be active participants in social activities.

In their study of different national leadership styles Grow and Armstrong (2017) aimed to determine the preferred leadership style of Australian and Chinese leaders from the hospitality industry and the impact of cultural and socio-economic variables on their leadership styles.

The methodology was a survey of 500 hospitality industry employees from each country which collected data on demographics and leadership styles using the Multifactor Leadership Questionnaire and a structured questionnaire (Grow & Armstrong 2017). Research into the components of the Full Range Leadership Model has been extensive (see Muenjohn, Armstrong and Francis (2010) for a review). The validity of the model has been confirmed in numerous investigations of components of the model (Bass & Riggio 2006; Muenjohn & Armstrong 2008), cross-cultural research (Muenjohn & Armstrong 2007) applications in industry (Grow & Armstrong 2013, 2015) relationships with organisation performance (Krüger, Rowold, Borgmann, Staufenbiel & Heinitz 2011; Lam & O'Higgins 2012) and increased creativity in followers (Eisenbeiß & Boerner 2013).

The findings of Grow's and Armstrong's (2017) study confirmed that Australian and Chinese managers use both transformational and transactional leadership styles, but Australians prefer transformational leadership more so than their Chinese counterparts. Age, education, sex and ethnicity were all correlated with leadership style. Persons who were older and with higher levels of education were more likely to use transformational leadership and those who were younger (20-30) preferred transactional leadership styles. The less educated were more likely to use Laissez-Faire leadership. There was more similarities than differences between participants due to sex.

6. LEADERSHIP AND ETHICS

In their review, Muenjohn et al. (2010) described research into the model's three major factors, Laissez-Faire, Transactional and Transformational leadership. Laissez-Faire leadership represents a lack of leadership, in which case no transaction occurs between leaders and followers. Research into Laissez-Faire leadership found that followers would turn to other sources for guidance or attempt to usurp the role of the legitimate appointed leader (Avolio & Bass 1994). Transactional leaders are seen to be concerned with day-to-day management of a particular work group or department. Behaviour displayed by transactional leaders is strongly aligned with generic conceptions of 'management' rather than 'leadership'. Transactional leaders reward their followers for completion of tasks and punish them for non-compliance or poor performance (Grow 2014). While transactional leaders focus on day-to-day management, transformational leaders engage in a more strategic style of 'leadership' which communicates the organisation's long-term vision (Bass & Riggio 2006) while encouraging followers to increase their skillset and personal capacity to perform. While the Full Range Leadership model appears to present a binary view of leadership, and is often misinterpreted as 'transactional = bad and transformational = good', this is not the case.

An emerging body of leadership is gaining attention in academic circles is that of the 'corporate psycopath' (Grow & Armstrong 2015). Such leaders are thought to exhibit outwardly and publicly the characteristics of transactional leadership. Within the organisation, that is inwardly and privately, the same leaders pay scant regard to ethics, and display a toxic style of leadership wherein they bully their followers and encourage disruptive and counterproductive work practices while hindering organisational productivity to promote their own self interest (Boddy 2013). In the context of leadership style, Bass and Riggio (2006) described this as the concept of "Pseudo Leadership" which occurred when transformational leaders "use their abilities to inspire and lead followers to destructive, selfish and even evil ends" (p. 5). Several researchers following this notion have investigated the 'dark side of transformational leadership' – see Armstrong and Francis (2017) for a review.

In contrast, when a leader subjects their vision and its implementation to scrutiny to determine if it has a higher purpose, they are exhibiting ethical leadership. The terms ethics and morals are sometimes used interchangeably, although one can make distinctions (the word *ethics* is from Greek, whereas the word *morals* is from Latin). Ethics determine what is good or right for individuals and society, what goals people and society ought to pursue, and what actions they ought to perform. More commonly, the word *morals* refers to the standards held by the community, often in a form not explicitly articulated. Morality is therefore influenced by social norms and beliefs. As discussed above, leaders values and followers expectations are influenced by cultural norms. So what is seen as moral in one society may not be seen so in another. Similarly, acting according to one's conscience is not always acceptable action in another culture. Good corporate governance practices such as standards for whistleblowing

promote ethical behaviour (Francis & Armstrong 2011). In studies of whistleblowing (Armstrong & Francis 2009, 2016; Dussuyer, Smith & Armstrong 2016; Francis & Armstrong 2010) cultural norms and context play a major role in motivating employees to 'blow the whistle'. The expatriate who was appointed to be CEO of a leading Japanese technology company, blew the whistle on the fraud he uncovered only to find himself fleeing for his life. Whistleblowing studies also reveal the conflict between doing the right thing by disclosing corruption but being punished with 'exile' by their company culture.

According to Bass (1985) transformational leadership was a process in which leadership behaviour sought to increase awareness in followers of what was right and important for the organisation. This process was associated with motivating followers to perform beyond expectation their self-interest for the good of the group or organisation. Leaders influenced followers by their vision and putting followers and organisation needs ahead of their own, expressing high expectations and confidence in followers, seeking their participation in decisions, and treating and recognising followers as individuals rather than being one of a group. In turn, followers identified with the vision or aspirations of the leader, developed their skills and felt valued and important (Muenjohn et al. 2010).

Transformational leadership has been most successful in giving significant insight into how leaders can influence their followers. Leaders can advance strategies that influence followers in various ways. They are therefore well placed to take advantage of their followers' loyalty, to enhance the performance of followers and their organisations. Alternatively, because of their knowledge, they may also, perhaps, manipulate them in ways that are to the leaders' advantage, and not always to the advantage of their followers or their organisations.

Transactional leaders responded to followers' needs and desires as long as followers 'did the job' and achieved desired outcomes of transactional leaders. The most important factor here was a consistent strategy using contingent reinforcement (recognition, bonuses, or promotion). Transactional leadership, while it appears to lack the higher order values or aspirations of transformational leadership is very effective in some contexts such as sales and the hospitality industry (Grow & Armstrong 2013). The weakness in using this leadership style was the difficulty faced by leaders in identifying the needs of their followers, the appropriate rewards, and the difficulty for a leader who did not have the power or resources to give the awards. The latter is likely to occur in start-up ventures or in mature companies should they be impacted by rapid growth or market changes that reduce cash-flow.

7. CONCLUSION

Although the focus of the two studies described above differs. There are practical implications drawn from these two studies for expatriate leaders. The type of leaderships that will ensure success depends on:

- Knowing the industry context. Working in a competitive multinational financial firm in Dubai will require a different approach to that used in a non-profit charity such as Red Cross. This means that leaders must understand the context in which they work.
- Understanding cultural norms and expectations. Cultural dimensions external to the group reflect national values that affect both subordinates' and leader's values and behaviours. Active social participation requires an understanding of social mores and norms. Leaders and followers are influenced by national cultural values. Sensitivity to dress appropriately is a very basic requirement but not respecting local norm and traditions can be a disaster. Subordinates expecting transactional leadership, firm direction and clarity of financial arrangements with individuals will be equally as confused as those from a collectivist

transformational culture expecting team work and group participation. It is vital for leaders to be aware of these differences if leaders are to know what is expected of them and to also identify opportunities to lead and shape the expectations of followers.

- Acting in ways that engender trust and confidence. This requires a sound knowledge of the leader's own attitudes, biases and competencies. Acting consistently in ways that reduce uncertainty and build certainty, not slavishly following local practices but balancing expectations of leadership, with achieving the right outputs. What is 'right' is not always obvious and most ethical decisions require balancing the protection of individual rights and needs against and alongside of the rights and needs of others.

LITERATURE:

1. Andresen, M, Bergdolt, F & Margenfeld, J 2012, 'What distinguishes self-initiated expatriates from assigned expatriates and migrants? A literature-based definition and differentiation of terms', in M Andresen, A Al Ariss & M Walther (eds), *Organizations and self-initiated expatriation: individual, organizational, and national perspectives*, Taylor and Francis, New York, pp. 11–42.
2. Armstrong, A & Francis, RD 2009, 'Ethical dilemmas in the management of international humanitarian organisations', paper presented to 27th International Symposium on Economic Crime at Jesus College, University of Cambridge: The Enemy Within – internal threats to the stability and integrity of financial institutions, Cambridge, United Kingdom, 30 August–6 September 2009.
3. —— 2016, 'Migration and corruption: an empirical study in search of meaning', paper presented to 34th International Symposium on Economic Crime at Jesus College, University of Cambridge: Economic Crime – where does the buck stop? Who is responsible – facilitators, controllers and or their advisers?, Cambridge, United Kingdom, 4–11 September 2016.
4. —— 2017, 'The trouble with leadership: theories of good and troubled leadership and their ethical implications', in N Muenjohn & A McMurray (eds), *The Palgrave handbook of leadership in transforming Asia*, Palgrave Macmillan, London, p. Ch. 8 [*in press*].
5. Avolio, BJ & Bass, BM 1994, *Improving organizational effectiveness through transformational leadership*, SAGE, Thousand Oaks.
6. Bass, BM 1985, *Leadership and performance beyond expectations*, Free Press, New York.
7. Bass, BM & Riggio, RE 2006, *Transformational leadership*, 2nd edn, Lawrence Erlbaum Associates, Mahwah, NJ.
8. Boddy, CR 2013, 'Corporate psychopaths, conflict, employee affective well-being and counterproductive work behaviour', *Journal of Business Ethics*, vol. April 2013 (Online), pp. 1–15.
9. Conte, JM 2005, 'A review and critique of emotional intelligence measures', *Journal of Organizational Behavior*, vol. 26, no. 4, pp. 433-40.
10. Dussuyer, I, Smith, R & Armstrong, A 2016, 'What happens to whistleblowers after misconduct is reported?', paper presented to Governance and Law: across all borders, Melbourne, 28–29 April 2016.
11. Eisenbeiß, SA & Boerner, S 2013, 'A double-edged sword: transformational leadership and individual creativity', *British Journal of Management*, vol. 24, no. 1, pp. 54–68.
12. Eisenberg, R 2015, *Expat retirees reveal how life has turned out*, Next Avenue, viewed 17 January 2016, http://www.nextavenue.org/expat-retirees-reveal-how-life-has-turned-out/.
13. Francis, R & Armstrong, A 2010, 'Corruption and whistleblowing in international humanitarian agencies', paper presented to 28th International Symposium on Economic Crime at Jesus College, University of Cambridge: The New Deal – ensuring integrity, stability and survival, Cambridge, United Kingdom, 5–12 September 2010.

14. Francis, R & Armstrong, A 2011, 'Formal meetings as an aid to corruption prevention in international humanitarian aid agencies', paper presented to 29th International Symposium on Economic Crime at Jesus College, University of Cambridge: Responsibility for Risk, Cambridge, United Kingdom, 4–11 September 2011.
15. Francis, RD 2014, *Birthplace, migration and crime: the Australian experience*, Palgrave Macmillan, Basingstoke, United Kingdom.
16. Goleman, D 1996, *Emotional intelligence: why it can matter more than IQ*, Bloomsbury, London.
17. Grow, HS 2014, 'Praeesse in hospitio', Doctor of Philosophy thesis, Victoria University.
18. Grow, HS & Armstrong, A 2013, 'Melburnia: transforming the transaction', in JM Fountain & K Moore (eds), *Proceedings of CAUTHE 2013 Tourism and Global Change – on the edge of something big*, Lincoln University, Lincoln, New Zealand, pp. 251–67.
19. —— 2015, 'Academic leadership: a lost profession?', paper presented to Australasian Law Teachers Association 2015 Conference: Legal Education and Access to Justice, Melbourne, 16–18 July 2015.
20. —— 2017, 'Leadership, diversity and cross-cultural leadership in China and Australia', in N Muenjohn & A McMurray (eds), *The Palgrave handbook of leadership in transforming Asia*, Palgrave Macmillan, London, p. Ch.1 [*in press*].
21. Hofstede, GH 2005, *Culture's consequences: international differences in work-related values*, 20th (abridged) edn, SAGE, Newbury Park, Calif.
22. House, RJ & GLOBE Research Program 2004, *Culture, leadership, and organizations: the GLOBE study of 62 societies*, SAGE, Thousand Oaks.
23. HSBC Bank 2017, *Expat Explorer Survey – Findings*, HSBC Bank International Limited, viewed 18 January 2017, https://www.expatexplorer.hsbc.com/survey/findings.
24. Krüger, C, Rowold, J, Borgmann, L, Staufenbiel, K & Heinitz, K 2011, 'The discriminant validity of transformational and transactional leadership: a multitrait-multimethod analysis of and norms for the German Transformational Leadership Inventory (TLI)', *Journal of Personnel Psychology*, vol. 10, no. 2, pp. 49–60.
25. Lam, CS & O'Higgins, ERE 2012, 'Enhancing employee outcomes: the interrelated influences of managers' emotional intelligence and leadership style', *Leadership & Organization Development Journal*, vol. 33, no. 2, pp. 149–74.
26. McNulty, Y & Inkson, K 2013, *Managing expatriates: a return on investment approach*, Business Expert Press, New York.
27. Muenjohn, N & Armstrong, A 2007, 'Transformational leadership: the influence of culture on the leadership behaviours of expatriate managers', *International Journal of Business and Information*, vol. 2, no. 2, pp. 265–83.
28. —— 2008, 'Evaluating the structural validity of the Multifactor Leadership Questionnaire (MLQ), capturing the leadership factors of transformational-transactional leadership', *Contemporary Management Research*, vol. 4, no. 1, pp. 3–14.
29. Muenjohn, N, Armstrong, A & Francis, R 2010, *Leadership in Asia Pacific: readings and research*, Cengage Learning Australia, South Melbourne, Victoria.
30. OECD 2016, *Education at a glance 2016: OECD indicators*, OECD Publishing, Paris.
31. Selmer, J & Lauring, J 2010, 'Self-initiated academic expatriates: inherent demographics and reasons to expatriate', *European Management Review*, vol. 7, no. 3, pp. 169-79.
32. Steers, RM, Sánchez-Runde, C & Nardon, L 2010, *Management across cultures: challenges and strategies*, Cambridge University Press, Cambridge, United Kingdom.
33. Trompenaars, F & Hampden-Turner, C 2002, *Riding the waves of culture: understanding cultural diversity in business*, 2nd edn, Nicholas Brealey, London.

CROSS BORDER CLUSTER INITIATIVES FOR ECONOMIC DEVELOPMENT SUPPORT

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ABSTRACT

The growth of competitiveness of regions depends on their capacity to innovate. With increasing degree of understanding of clusters, clusters are becoming an important component of national and regional economic program. Peripheral regions are disadvantaged and because of their localization they have only few links with international networks in science, technology and innovation. Innovations are increasingly based upon a "Triple Helix" of university-industry-government interactions. The Triple helix approach depends on the building of partnerships between various regional, local governments, universities, private sector and NGOs and is a key issue at both national and regional level, although it is not easy to manage the process. There are the difficulties during the triple helix approach implementation in the former post-communist countries, including Slovakia and Ukraine. The paper is focused on two cross border peripheral regions (Košice Region in Slovakia and Zakarpatska region of Ukraine). These regions need to seek opportunities for economic development which are not based only on the foreign capital attraction. The innovative potential of two converging and cross-border regions is examined and possibilities of cross-border clusters and cluster initiatives creation discussed. The paper presents key factors for cross border cluster s and cluster initiatives enhancement and is based on the primary research undertaken for ICT and Food Industry sector in both targeted regions. The role of social capital for cluster initiatives support is discussed as well.

Keywords: *cluster, regional development, social capital*

Full paper has not been published, upon Author's request.

EFFECT OF EMIGRATION ON WAGE EARNINGS IN NEPAL

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ABSTRACT

*This paper examines the effect of emigration on wages of stayers (non-emigrants) in Nepal. For the last two decades, mass emigration from Nepal to other countries has only been growing. Despite the fact that a number of researches have been dedicated on the effects of immigration on native wages, a very few researches have attempted to investigate the impact emigration on the wage of source countries. Using migration network as an instrument, this research finds an overall positive effect of emigration on the wages of remaining workers at least in the short run. Sector wise, wages in non-agricultural saw a significant rise while the wages agriculture sector remains unaffected suggesting that the emigration rate for more skilled labors, generally employed in non-agriculture sector are emigrating from the country***.***

Keywords: *Emigration, Migration Network, Wages*

1. INTRODUCTION AND LITERATURE REVIEW

Despite the fact that a number of researches have been dedicated on the effects of immigration on native countries, a very few researches have been done on the effects emigration on the labor markets of sending countries. One of the possible reason for the handful of research on this field could be the scarcity of data on emigrants and their characteristics. Nevertheless, it is getting quite good attention from the researchers in recent years.

Hanson (2005) examines regions of high external and internal migration in Mexico and finds that earnings for males increased in high migration regions. Earnings increased by 6-9% in high-migration regions as compared with low migration region. Mishra (2007) ingeniously matches Mexican immigrants in both US and Mexican censuses and applies education-skill group approach proposed by Borjas (2003) to estimate the effect of emigration on the wage of stayers. She finds that 10% increase in emigration for an education- skill group increases wages by an average of 3.2 percent for similar groups in Mexico. Benjamin (2013) reinforces the findings for positive wage impact of emigration by analyzing data on the stayers in Lithuania. Chiquiar (2005) shows that Mexican states with larger trade and migration links benefit from increased faster wage growths and labor returns. Dutsmann (2015) investigate the impact of emigration on Polish wages for 10 years (1998-2007) and conclude that emigration increased wages of high and medium-skill but they suspect negative effects for those at the lower skill group.

There are two dominant theoretical foundations for labor migration; macro and micro models. The macro model migration of theories explain that the labor migration is a part of economic development. Due to differences in geography that results differences in supply and demand of labor migration occurs. This difference is mostly observed between rural the agricultural sector and the urban non-agricultural sector. One of the basic models (Lewis, 1954) assumes that a perfect labor market with a surplus labor in the traditional agricultural sector. The urban sector absorbs the surplus labor from the rural sector. The rural sector workers are attracted by the urban sector because of a positive wage differential.

Another strong macro model for the labor migration is dual market theory (Priore, 1979). The dual market theory explains that labor migration occurs from structural demand from developed countries, as the wage rates in the labor market in developed countries are high. The primary sectors provide jobs that are well paid. The secondary sector also attracts unskilled workers with higher wages than the labor markets in the countries of origin. Thus, emigration of labor to the developed countries takes place until the wage rates become the same in the two countries.

The micro models of migration emphasize the human capital approach where an individual is assumed to act independently in making decisions whether to migrate or to stay. The motivation for the decision comes from maximizing the personal utility. The traditional approach to micro models regard migration as an investment in human capital, an idea developed by Sjaastad (1962). According to this approach, migration decision is made not only because the income differences but also due to differences in returns to skills. The model predicts the migration patterns of less educated people from those regions with high income-inequality to the regions with low-income inequality. On the other hand, as migration improves their relative returns, educated people from low income-inequality regions migrate to high-income inequality-regions.

1.1 Labor Emigration from Nepal

The present wave of migration began The Labor Act of 1985 that paved the way for the recent migration trend of Nepali workers to foreign countries. The government of Nepal has recognized overseas employment opportunities as a means to reduce poverty and unemployment in the country. Promotion of foreign employment has been emphasized in the Ninth five-year-plan (1997-2002) and Tenth Five-year plan (2002-2007). These plans sought not only to reduce unemployment but also to reduce income, gender and ethnic disparities through foreign employment (Gurung, 2004).

Due to high demand for labor, the rapidly growing Gulf countries and Malaysia are the main destination for Nepalese migrant workers. Out of 384,665 people that left Nepal for employment in 22 different countries in 2012, Qatar and Malaysia attracted 105,681 and 98,367 respectively. An estimated 11.8 percentage of the populations live in foreign countries and 32.1% of the households have at least one member who migrated to foreign countries (CBS, 2012)

Poverty and unemployment can be attributed as the chief reasons for the migration of Nepalese workforce to foreign countries. Nepal is one of the poorest countries with $619.5 nominal GDP per capita (World Bank, 2012) as of 2012. A quarter of the population is bound to live below the poverty line with the unemployment rate at 46% in 2012 (CIA World Factbook, 2012). An estimated 11.8 percentage of the populations live in foreign countries and 32.1% of the households have at least one member who migrated to foreign countries (CBS, 2012)

Labor migration has clearly brought benefits to the Nepalese society. The poverty level has declined to 31% in 2004 from 42% in 1996 of which more than half of the decline has been linked to contribution of remittances by migrants (Adhikari, 2011). A further declined from 34% to 21% between 2004 and 2010 would have been impossible without remittance. It would have just declined to 27% in absence of remittance (Adhikari, 2011). However, the impact of emigration on the wage earnings of stayers remains unaccounted. Prior literature on this topic are mostly focused on wage effects on the source countries such as Mexico and some other EU

nations but almost no research exists for countries outside North America and Europe. A simple labour demand/labour supply theory predicts wage growth when emigration occurs via decrease in labour supply. The paper is based on this simple hypothesis. The rest of the paper proceeds as follows. Section 2 describes empirical strategy; section 3 describes data and descriptive statistics. Results of analysis and conclusion are presented in sections 4 and 5.

2. EMPIRICAL STRATEGY

A simple labor demand-supply model in a competitive market can easily explain the effect of emigration on wages of a source country. Increased emigration results in reduction on labor supply thereby increasing the wages of the non-migrants. As shown in Figure 1, equilibrium wage, W0 increases to W1 when labor supply shifts from S0 to S1 due to emigration.

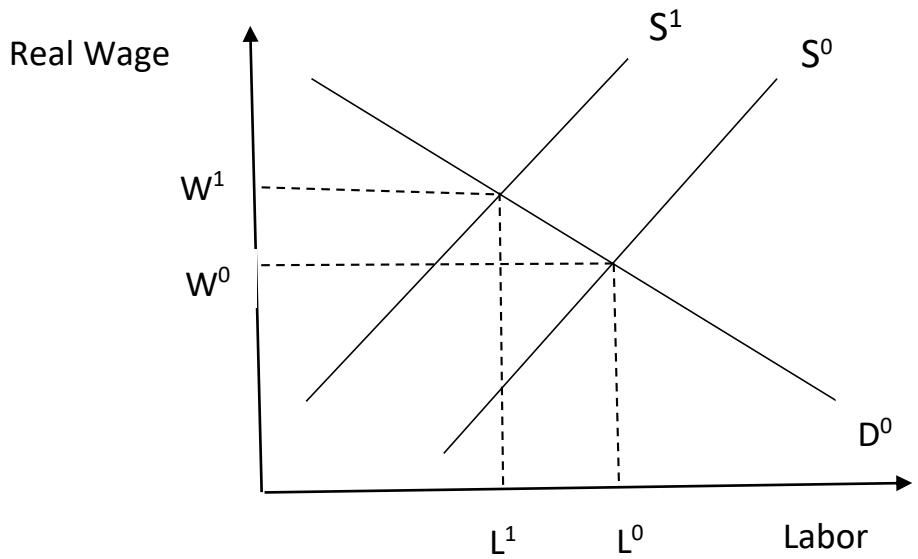

Figure 1: Effect of Emigration on the wages of a source country

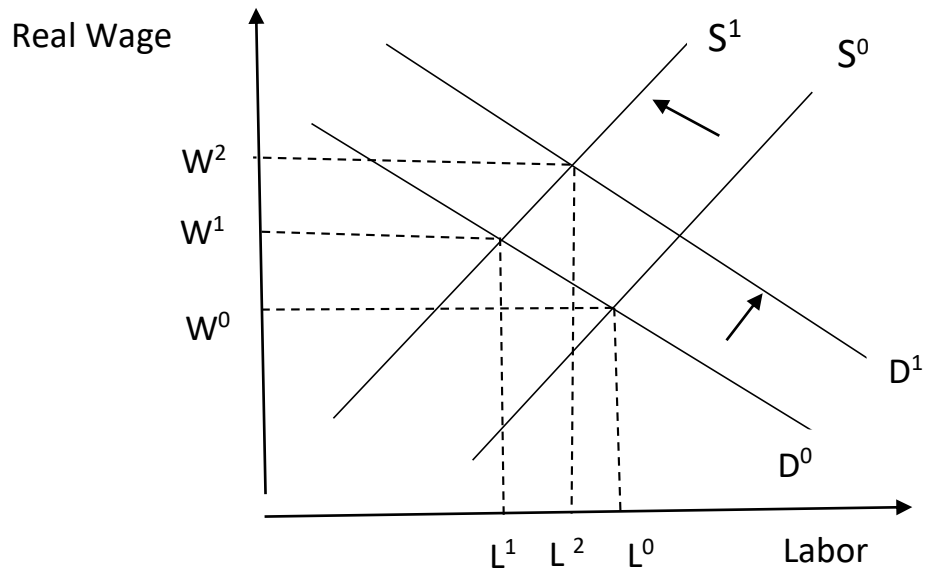

Figure 2: Effect of Emigration on the wages of a source country when labor demand is increasing

Similar effect could be predicted when the labor demand in a source country is increasing.

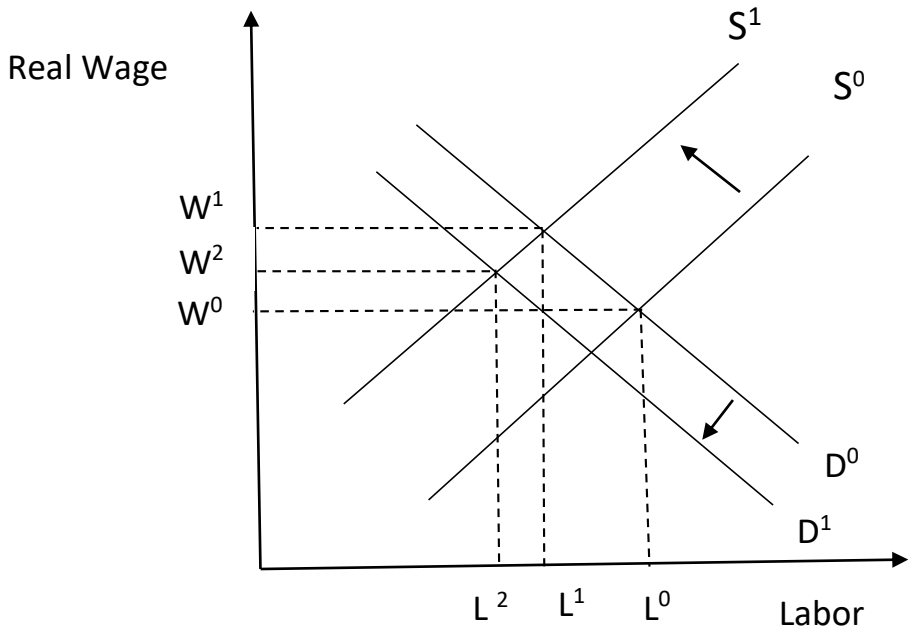

Figure 3. Effect of Emigration on the wages of a source country when the labor demand is falling

Labor demand in a source country could fall owing to various structural changes. Figure 3, shows one example on how emigration affects wages when labor demand falls in a source country. The equilibrium wage is determined depending upon the demand magnitudes of the emigration and reduction on demand. To capture the effect of emigration on wage of stayers, a simple starting point could be the estimation of the following model.

$$lwage_{ij} = \beta_0 + \beta_1 Emi_{j2011} + \beta_2 X_{ij} + \mu_{ij} \qquad (1)$$

Where, $lwage_{ij}$ is the log of real wage for an individual *i* (stayer) in a place *j;*
Emi_{j2011} is the ratio of emigrants (15-65 years of age) to the labour force (15-56 years of age) in the region *j* in the year 2011; X_{ij} is the vector of individual characteristics; education, experience, gender, etc. for a stayer *i* in region *j*, and μ_{ij} is an error term.
β_1, the coefficient of primary interest, cannot have causal interpretation as emigration (Emi_{j2011}) is potentially confounded with unobserved factors that indirectly affect wage via emigration. Numerous literatures (Zimmermann, 1997) (Rapoport, 2010) (Genicot, 210) (Espinosa, 1997) argue that migration network (a form of social capital) is an important driving force for migration. Migrants provide useful information, financial assistance, sense of security, etc. to other potential migrants in the country of their origin. Based on the idea that emigration triggers further emigration (migration network), this paper uses past emigration rate (Emigration rate in 2001) as an Instrumental Variable (IV) to estimate the effect on the present emigration rate (Emigration rate in 2011) so as to overcome the issue of endogeneity. The first and second stages of the two-stage least squares (2SLS) can therefore, be specified by equations (2) and (3) respectively as below:

$$\widehat{Emi}_{j2011} = \delta_0 + \delta_1 Emi_{j2001} + \delta_2 X_{ij} + \varepsilon_{ij} \qquad (2)$$

$$lwage_{ij} = \alpha_0 + \alpha_1 \widehat{Emi}_{j2011} + \alpha_2 X_{ij} + \eta_{ij} \qquad (3)$$

Where Emi_{j2001} is the emigration rate in 2001, X_{ij} is same as defined before and ε_{ij} and η_{ij} are the error terms. Equation (2) is estimated using an ordinary least squares (OLS) technique to generate the predicted value $\widehat{Emi}_{j2011}$. Finally, equation (3) involves estimating wage as a function of predicted level of emigrants, i.e. $\widehat{Emi}_{j2011}$ and other individual-level characteristics.

2.1 Data and Descriptive Statistics

The National Living Standard Survey (NLSS) is a nationally represented household level survey conducted by the Central Bureau of Statistics, Government of Nepal. NLSS is one of the most comprehensive surveys that includes data from representative households all over the country. The survey based on 7,020 households across the country covers more than 16,000 individuals. Detailed questions about family living conditions, education, income, etc., were asked. This paper uses a cross-section data from NLSS III conducted in 2010/2011. The survey covers all 75 districts in Nepal.

Further, I use Nepal Census 2011 data to compile number of emigrants and workforce for district level and calculate the ratio of emigrants to the total working population for the year 2011. Similarly, ratio of emigrant to work force for 2001 is calculated from Nepal Census 2001 data for each district level. The ratio of emigrant to work force for 2001 is used as an instrumental variable. The variable 'experience' is defined as age in 2011- No. of years of Schooling -6. Individuals working in their own enterprises are excluded from the sample. Wages are converted into hourly wage. Figure 4 shows the trend of emigration in the year 2001 and 2011 corresponding to each district. Broadly, it can be said that the pattern of emigration is similar for both the years albeit with different magnitudes reinforcing the theory of Migration Network. Mean and standard deviation of the variables used are presented in Table1.

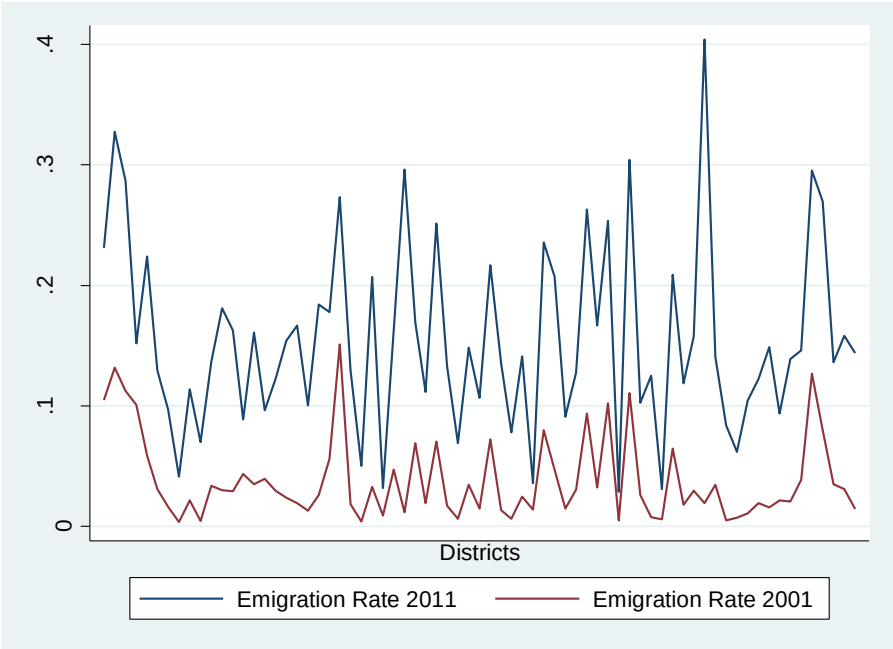

Figure 4: Labor Emigration rates (ratio of emigrants to remaining workforce) in the year 2001 and 2011

Table 1: Descriptive Statistics of the variables used in the Regression

Variable	Mean	Std. Dev.
lwage	3.576501	.6856176
Emi2011	7.332251	3.698489
Female	.5878678	.4922435
Educyears	6.898756	4.20427
Experience	20.25398	14.15469
Experiencesq	610.5472	658.3703
Mountain(base ural_terai)	.06842	.252478
Urban_hill	.1945788	.3958961
Rural_hill	.2916163	.4545295
Urban_terai	.1241435	.3297618
N=2,715		

3. RESULTS

The results of regression on for the full sample is presented in the Table 2. The results of OLS first stage and second-stage of 2SLS are significant at 1% level. The OLS estimate shows that 1 percentage point increase in emigrant increases the wage by 1.6 percentage. While the IV estimate predicts 2.3 percentage points rise in real wage for every percentage point increase in emigration.

Compared to OLS estimates, the IV estimates show a slightly larger effect on wages. It can be seen from columns (1) and (3) in Table 2 that the difference in OLS and IV estimates is 0.7 percentage points. The reason for the difference could be that OLS estimation could be downward-biased towards zero if unobservable factors reduce the probability of emigration. Suppose that if the economic growth or FDI inflow is high, the negative correlation between better employment opportunities at home country and emigration will bias the OLS results downward. As expected number of years of education, affects wage positively. As for the regions, wages in the urban hills saw the largest increment.

Table following on the next page

Table 2: Results of Regression for the full sample

Variables	(1) OLS Estimate	(2) First Stage	(3) IV Estimate
Emi2011	0.0162***		0.0231***
	(0.0060)		(0.00680)
Female	-0.0609	0.112***	-0.0646
	(0.0421)	(0.0418)	(0.0422)
Educyears	0.0532***	0.0144***	0.0532***
	(0.00538)	(0.00541)	(0.00538)
Experience	0.00746	0.00209	0.00789*
	(0.00477)	(0.00462)	(0.00477)
Experiencesq	-4.30e-05	-3.19e-05	-5.06e-05
	(0.000101)	(9.77e-05)	(0.000101)
Mountain	0.0459	-1.193***	0.0582
	(0.0841)	(0.0905)	(0.0842)
Urban_hill	0.202***	0.0236	0.203***
	(0.0600)	(0.0580)	(0.0600)
Rural_hill	0.164***	0.425***	0.147***
	(0.0563)	(0.0577)	(0.0568)
Urban_terai	0.195***	0.313***	0.195***
	(0.0752)	(0.0682)	(0.0751)
Wage_agri	-0.526***	-0.0120	-0.524***
(= 1 if agriculture)	(0.0714)	(0.103)	(0.0713)
Emi2001		1.091***	
		(0.00743)	
Constant	3.151***	3.476***	3.100***
	(0.0899)	(0.0804)	(0.0931)
Observations	2,715	6,351	2,715
R-squared	0.085	0.806	0.086

Robust Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Tables (3) and (4) display the results of wage regressions for individuals working in agricultural and non-agricultural sectors. In agricultural sector, the coefficients of emigration are small and negative but non-significant in both OLS and IV estimates Table 3 columns (1) and (3). However, in non-agricultural sector (Table 4) the both the estimates (column 1 & 3) are positively significant at 1% level. The IV slightly larger effect (1.2 percentage points)

Table following on the next page

Table 3: Results of Regression for agricultural wage

Variables	(1) OLS Estimate	(2) First Stage	(3) IV Estimate
Emi2011	-0.00171		-0.00616
	(0.00683)		(0.00797)
Female	-0.0765	0.112***	-0.0769
	(0.0498)	(0.0418)	(0.0497)
Educyears	0.0205***	0.0144***	0.0211***
	(0.00787)	(0.00541)	(0.00789)
Experience	0.00576	0.00209	0.00545
	(0.00593)	(0.00462)	(0.00594)
Experiencesq	-7.64e-05	-3.19e-05	-6.82e-05
	(0.000120)	(9.77e-05)	(0.000121)
Mountain	0.219**	-1.193***	0.215**
	(0.0923)	(0.0905)	(0.0925)
Urban_hill	0.395***	0.0236	0.400***
	(0.0881)	(0.0580)	(0.0881)
Rural_hill	0.190***	0.425***	0.202***
	(0.0611)	(0.0577)	(0.0618)
Urban_terai	0.109	0.313***	0.113
	(0.113)	(0.0682)	(0.113)
Emi2001		1.091***	
		(0.00743)	
Constant	3.384***	3.476***	3.412***
	(0.107)	(0.0804)	(0.111)
Observations	751	6,351	751
R-squared	0.085	0.806	0.085

Robust Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table following on the next page

Table 4: Results of Regression for non- agricultural wage

VARIABLES	(1) OLS Estimate	(2) First Stage Non-Agri Wage	(3) IV Estimate Non-Agri Wage
Emi2011	0.0251***		0.0373***
	(0.00806)		(0.00903)
Female	-0.0677	0.113***	-0.0770
	(0.0554)	(0.0418)	(0.0554)
Educyears	0.0638***	0.0145***	0.0640***
	(0.00674)	(0.00539)	(0.00673)
Experience	0.00915	0.00201	0.00967
	(0.00616)	(0.00462)	(0.00616)
Experiencesq	-3.88e-05	-3.06e-05	-4.52e-05
	(0.000132)	(9.77e-05)	(0.000132)
Mountain	0.00358	-1.191***	0.0229
	(0.114)	(0.0905)	(0.114)
Urban_hill	0.216***	0.0255	0.220***
	(0.0745)	(0.0578)	(0.0743)
Rural_hill	0.227***	0.426***	0.198**
	(0.0780)	(0.0577)	(0.0785)
Urban_terai	0.245***	0.316***	0.245***
	(0.0928)	(0.0681)	(0.0926)
Emi2011		1.091***	
		(0.00743)	
Constant	2.942***	3.472***	2.852***
	(0.116)	(0.0797)	(0.120)
Observations	1,964	6,344	1,964
R-squared	0.069	0.806	0.072

Robust Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

4. CONCLUSION

The research investigated the causal effects of emigration on wage on the stayers in Nepal using an instrumental variable approach. The paper finds evidence that emigration helped increase the wage of non-emigrants in Nepal. Overall, both OLS and IV estimates yielded significant positive results. Sector wise, wages in agriculture related jobs were not affected but non-agriculture sector saw significant wage increase. This could be because emigration rate is higher for skilled workers as non-agricultural sector generally employs more skilled workers than agricultural-sector or it could be due to a larger unemployment rate among non-skilled workers who are likely to work in agriculture sector. To investigate which effect is greater and whether these effects are sustained in a long run or not remains open for future research.

LITERATURE:

1. Addison., E. C. (1998). The Economic Returns to Lifelong Learning in OECD Countries. Education Economics, Taylor and Francis Journals, vol. 6(3), pages 253-307.
2. Adhikari. (2011). Migration and Remittance Economy. In Adhikari, Nepal Migration Handbook 2010 (p. 30). Kathmandu: Nepal Institute of Development Studies (NIDS).

3. Akee, R. K. (2007). Who Leaves and Who Returns? Deciphering Immigrant Self-Selection . IZA Discussion Papers No. 3268 (p. 19). Bonn: Study of Labor (IZA) in Bonn.
4. Becker, G. S. (1994). Human Capital A Theoretical and empirical analysis with specia reference to education. University of Chicago Press.
5. Benjamin, E. (2013). Does emigration benefit stayers? Evidence from EU enlargement. Journal of Population Economy, 26: 531-553.
6. Borjas, G. J. (2003). The Labor Demand Curve Is Downward Slopping: Reexamining the Impact of Immigration on the Labor Marke. Quarterly Journal of Economics, Vol.118, No.4 Ppp 1335-74.
7. CBS. (2012). NLSS III 2010/2011 Preliminary Report. Kathmandu: Central Bureau of Statistics(CBS), Nepal Government. Retrieved from http://cbs.gov.np/wp-content/uploads/2012/02/Statistical_Report_Vol1.pdf
8. CBS. (2012). NLSS III Preliminary Report 2012. Kathmandu: Nepal Government, Central Bureau of Statistics. Retrieved from Central Bureau of Statistics, Nepal Government: http://cbs.gov.np/wp-content/uploads/2012/02/Statistical_Report_Vol1.pdf
9. Central Bureau of Statistics Government of Nepal. (2008). Nepal Labour Survey Statistical Report.
10. Chiquiar D, &. H. (2005). International Migration, self-selection,and distribution of wages: evidences from Mexico and the United States. Journal of Political Economy, 113(2): 239-281.
11. CIA World Factbook. (2012). Nepal World Factbook. Retrieved 04 14, 2013, from CIA World Factbook: http://cia-world-fact-book.sciencedaily.com/q/935/7661/In-2012-what-is-was-Nepal-s-unemployment-rate
12. DoA. (2013). Department of Agriculture , Nepal Government. Retrieved 04 15, 2013, from http://www.doanepal.gov.np/
13. Dutsmann, C. T. (2015). The Effect of Emigration from Poland on Polish Wages. The Scandinavian Journal of Economics, 117(2), 522-564.
14. Gurung, G. (2004). An Overview of Foreign Employment in Nepal. Kathmandu, nepal: International Labour Organization. Retrieved from http://www.ilo.org/wcmsp5/groups/public/@asia/@ro-bangkok/@ilo-kathmandu/documents/publication/wcms_116815.pdf
15. Hanson, G. H. (2005). Emigration, Labor Supply, and Earnings in Mexico. NABER Working Paper, No. 11412.
16. Hungerford, T. a. (1987). Sheepskin Effects in the Returns to Education. Review of Economics and Staistics, vol. 69, 175-8.
17. Lemieux, T. (2006). Jacob Mincer A Pioneer of Modern Labor Economics. Springer US.
18. Lewis, W. (1954). Economic Development with Unlimited Supply of Labour. The Manchester School, 22(2), 139-191.
19. Mason. (2002). Graduate labour market :Graduate earnings, careers and destinations. Journal of Education and Work, 427-456.
20. Mincer, J. A. (1974). Schooling, Experience, and Earnings. National Bureau of Economic Research, 41-63.
21. Mishra, P. (2007). Emigration and wageas in source countries: Evidence from Mexico. Journal of Development Economics , 82(2007) 180-199.
22. Pieck, G. K. (June 2011). Interregional migration, self-selection and returns to education in Brazil. Annals of Regional Science, v. 46, iss. 3, pp. 707-32.
23. Priore, M. (1979). Birds of passage: migrant labor and industrial societies. Cambridge University Press.
24. Shrestha . (2011, 06 29). Half of Nepali households have member working abroad: Survey. Retrieved 03 30, 2013, from ekantipur.com: http://www.ekantipur.com/the-kathmandu-post/2011/06/28/money/half-of-nepali-households-have-member-working-abroad-survey/223411.html
25. Sjaastad, L. (1962). The cost and returns of human migration. J Polit Econ, 70(5): 80-93.
26. World Bank. (2012). World Development Indicators. Retrieved 04 13, 2013, from World Bank: http://search.worldbank.org/data?qterm=GDP%20per%20capita%20Nepal

BARRIERS TO WHISTLEBLOWING INTENTIONS AND REPORTING CHANNEL PREFERENCES

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ABSTRACT

This study examines cultural and structural barriers to disclosure in alleged bribery cases in the Indonesian Directorate General of Taxation (DGT) from an employees' perspective. Using primary data extracted from survey, open-ended questionnaires and online interviews, factors that discouraged DGT employees to disclose alleged bribery in their workplace are explored. This study focuses on the respondents who identified as not intending to report. It appears that this group, which comprises around 20% of the responses (total 131), reveals the influence of structural and cultural barriers to any intention to disclose alleged bribery in their workplace. Planned Behaviour Theory, especially subjective norms and Hofstede's cultural dimensions were used to analyse the findings. As a common understanding, an organization includes structure and culture. However, many Indonesian public institutions' strategies and policies improvement are focused at the organizational structure, without considering the culture embedded in the organization. This study identifies elements of the Indonesian national culture - "ewuh-pakewuh", "asal bapak senang", "jalan tengah" and "gotong royong". The effect of these cultural norms on individuals' intention to disclose alleged bribery is investigated. Findings also indicate that fear of retaliation and disbelief in the existing system are important structural barriers to individuals' intention to report alleged bribery, especially if the reporting channel does not assure anonymity. Overall, respondents value maintaining harmony and relationship over the task. Deeper explanations on the influence of subjective norms rooted in Indonesian culture are also elaborated.

Keywords: *Bribery, Barriers to Reporting, Cultural Dimensions, Planned Behaviour Theory, Schein's Six Mechanisms*

1. INTRODUCTION

Although studies in whistleblowing continues to increase, there is still an absence of a general theory of whistleblowing (Miceli & Near 1988; Park & Blenkinsopp 2009). This study uses Planned Behaviour Theory (PBT) (Ajzen 1991) as the main theoretical framework to examine an individual's intention to disclose misconduct. This paper reports a particular aspect of a data collected in a wider study on whistleblowing – those who did not intend to report. It appears that this group, which comprises around 20% of the responses (total 131), reveals the influence of structural and cultural barriers to any intention to disclose alleged bribery in their workplace. It is interesting because their responses point to subjective norms and perceived organization negative image that seems to reflect a gap between policy focused on structure and ignoring prevailing national culture.

The paper first reviews the Theory of Planned Behaviour, Schein's six organisational culture and leadership dimensions, Hofstede's cultural-dimensions and "*ewuh-pakewuh*" (a dominant Javanese cultural norm) as theoretical frameworks for predicting whistleblowing intentions not to report bribery. The paper then identifies the research method and hypotheses that placed an emphasis on barriers to whistleblowing intentions. Data analysis and study findings related to cultural and structural barriers are then discussed.

2. LITERATURE REVIEW

Whistle-blowing defines as a process of exposing of illegal, immoral, unethical, or wrongdoing practices under the control of employers, by former or existing organizational members to individuals or institutions that may be able to effect action (Near and Miceli 1985 cited in Bowden 2014). This study selected bribery as the type of wrongdoing to be investigated, as bribery in the DGT has attracted great public interest in Indonesia because it caused as one of predominant wrongdoings to make the country lose approximately 50 percent or around Rp521 trillion (US$55.9 billion) of its tax revenues (the Welfare Initiative for Better Societies' report (2012) cited in Pramudatama 2012) and to fill a gap in whistleblowing literature – there is no direct focus on bribery for reputational risk (Suyatno, Armstrong & Thomas 2015) as an organisation's features may lead to different treatments for different wrongdoings (i.e. Miceli, Near & Dworkin 2013; Victor, Trevino & Shapiro 1993).

2.1. Planned Behaviour Theory, Cultural-Dimensions, and Schein's Six Mechanisms

The focus on "intention" instead of "actual" whistle-blowing is because it is very difficult, even impossible to directly access an actual whistleblowing event given it is a sensitive issue (Chiu 2003; Patel 2003) and a hidden activity (Patel 2003). As well, confidentiality conditions by organisations and restricted access to the whistleblowers (Sims & Keenan 1998), make this topic difficult to research (Patel 2003). The identified conceptual framework is based on the three core constructs of what is known as planned behaviour theory (PBT): attitude, subjective norms and perceived behaviour control (Ajzen 2005). The utility of PBT has been demonstrated in several whistleblowing studies across countries such as Malaysia (Ab Ghani 2013), South Korea (Park & Blenkinsopp 2009), South Africa (Fatoki 2013), and Indonesia (Bagustianto 2015; Banda & Mahfud Sholihin 2012; Kreshastuti & Prastiwi 2014; Sulistomo & Prastiwi 2011). Thus, the theory is widely tested and has general validity as a general theory on whistleblowing. In addition, this study examines cultural dimensions (Hofstede & Hofstede 2005), organizational cultural and leadership (Schein 2010), and Indonesians' or more precisely Javanese's local culture (ewuh-pakewuh) that tends to predominate (Hardjowirogo 1983), as these are inter-correlated with the main theory.

Attitude

Majority identified research indicates that individuals whose positive attitude toward whistle-blowing were more likely to report wrongdoing (i.e. Ellis & Arieli 1999; Lavena 2014; Miceli & Near 1985, 1989; Miceli & Near 2002; Miceli, Near & Dworkin 2013; Miceli, Roach & Near 1988; Near, Dworkin & Miceli 1993; Park & Blenkinsopp 2009; Trevino & Victor 1992; Victor, Trevino & Shapiro 1993).

Subjective Norm

As have been utilized in Ajzen's (2005) model, supporting from important persons are truly matters as subjective norms to encourage or discourage one to take action regarding particular behaviour in question. In whistle-blowing context, if super-ordinates or co-workers support

observers of wrongdoing, the observers will be more likely to report (Trongmateerut & Sweeney 2013). Their conclusion is supported by several research either literature review (Dozier & Miceli 1985; Mesmer-Magnus & Viswesvaran 2005; Miceli & Near 1989; Miceli, Near & Dworkin 2009; Near & Miceli 1995) or empirical studies (i.e. Brown 2008; Cassematis & Wortley 2013; Miceli & Near 1988; Miceli et al. 2012; Park & Blenkinsopp 2009). Moreover, in Israeli Defence Forces, subjective norms effect are much more stronger than attitudes (Ellis & Arieli 1999). In regard to this context, Hofstede and Hofstede (2005) argue that Indonesian cultural dimensions are categorized as large power distance (PD), collectivism (C), moderate feminism (F), and moderate with unknown situations (UA). Since F and UA were considered as moderate which was difficult to distinguish, this study mainly focused on Indonesians' prominent cultures (PD and C), which fitted with the study context also. PD is defined as "the extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally" (Hofstede 2011, p. 9). One of the characteristics of this dimension is that lower level individuals tend to accept order from high ranks without questioning, which may discourage whistleblowing behaviour. While, collectivism is defined as "cultures in which people from birth onwards are integrated into strong, cohesive in-groups, often extended families (with uncles, aunts and grandparents) that continue protecting them in exchange for unquestioning loyalty, and oppose other in-groups" (Hofstede 2011, p. 11). Going deeper to explain high power distance (Hofstede & Hofstede 2005), the majority of Indonesians are influenced by the cultural norms of *"Ewuh-Pakewuh"* and *"Asal Bapak Senang"*. According to Poerbo (2014) interviewed by Worang (2013, p. xvii), *ewuh-pakewuh* was defined as "uneasiness; obedient or attentive an excessive or servile degree. In the organisation this is practiced by the subordinate with his/her superior, or children to parents amongst family members". Moreover, the researcher argues that as a reflection of the cultural power, patron - client culture may arise due to interdependence between patron (super-ordinate) and the client (subordinate) (Wati 2014). Although the pattern has two sides of a coin (both good and bad sides) (Martodjo 2008), *ewuh-pakewuh*, is often used in a negative sense as a deterrent for the staff to give suggestions, opinions, and criticism to their superordinates or seniors (Frinaldi & Embi 2014). Especially since *ewuh-pakewuh* is often rooted (based on) by the norm of "*Asal Bapak Senang*" (keeping the boss happy), which explains how sub-ordinates want to please a superior is a common phenomenon in government organizations (Worang 2013). In addition, as a collectivist culture (Hofstede 2011), an Indonesian tends to conform with whatever his or her group values, norms, and habits are. This dimension illustrates the values placed on maintaining harmony among members (avoiding conflicts and losing face to others) and the emphasis of relationship prevailing over task (Hofstede 2011). In addition, the cultural norm of middle path ("*jalan tengah*") is often misemployed to solve any disputes in order to avoid the application of the law (Worang 2013). Many Indonesians have also indicated the tendency to misuse the culture of working together cooperatively ("*gotong royong*") to conceal as an act of corruption inside the organization (Worang 2013). In general, the culture has positive and negative sides, but since Indonesia has been considered by many people to have a long history of bribery that makes many social commentators believe that Indonesia has a corruption tolerance culture (Arifianto 2001). The cultural norms of *ewuh-pakewuh* and *asal bapak senang*, *jalan tengah*, and *gotong royong* tend to fertilize the culture of corruption.

Perceived Behavioural Control (PBC)

This research adapted Schein's six mechanisms (Fallon & Cooper 2015; Schein 2010) to measure employees' perceived behavioural control in relation to organizational culture and leadership. To get validity of gathering data, Schein (2010) suggests that scholars should consider predictability and replication of recognized methods which are successfully utilized by Fallon and Cooper (2015). Other studies confirm that a corrupt organisation culture has

caused severe damage in various organisations (i.e. Agrawal, Jaffe & Karpoff 1999; Dellaportas, Cooper & Braica 2007; O'Connell 2004). The six mechanisms are attention, reaction to crisis, resource to allocation, role modelling (how leaders behave), allocation of reward, and criteria for selection and dismissal (Fallon & Cooper 2015). Under the Schein's six mechanisms determinants, several most prominent variables, such as retaliation, incentives, were analysed and measured. All identified PBC determinants can be seen on Table III.

Reporting Channel Preferences

According to Dworkin, T and Baucus (1998), whistle-blowers who utilize external channel tend to have experienced more severe retaliation than those who use internal ones because external disclosure often caused greater damage to the organization reputation which also felt upon the employees and employers than internal whistleblowing, as the latter often has benefit for the organization by helping to fix the problems internally without knowing by public (Miceli & Near 1988). In this sense, the employees who report misconduct through external reporting channel, may be seen as a traitor by his or her super-ordinates and colleagues causing them to be subjected to reprisal than the internal whistleblowers (Dworkin, TM & Callahan 1991). In term of anonymous and non-anonymous whistleblower, while negative outcomes either as fact or perception is perceived by a previous non-anonymous whistleblower, it would lower participants' non-anonymous reporting intentions (Kaplan et al. 2012). On the other hand, these negative outcomes did not decline anonymous whistleblower' intentions (Kaplan et al. 2012). In addition, when, no such negative outcomes have occurred, there was no different intentions between the anonymous and non-anonymous channels (Kaplan et al. 2012). As identified from the literature review, it was expected that attitude to be a significant predictor for all whistleblowing channel preferences, but since this paper focused on only to the participants who were not keen to disclose bribery, it was suggested that perceived behavioural control on organization negative image and subjective norm would be the most significant determinants to obstruct whistleblowing intentions. Moreover, those may have differing levels of influence for all eight whistleblowing reporting channel preferences. For this reason, the following hypotheses were that:

Hypothesis 1: Perceived behavioural control and organization image would be related to preferences for reporting channels.

Hypothesis 2: Subjective norm will be a better predictor of intentions for internal whistleblowing non-anonymously than other reporting channel preferences.

A summary of these enablers and inhibitors are shown in Figure 1. Importantly, the cultural inhibitors identified can have both positive negative sides, although in this study these are reported as primarily negative.

Figure I Determinants that enable and/or inhibit intention 'to report

Structural Enablers	Structural Inhibitor	Cultural inhibitors
Positive Attitude Toward Whistleblowing	Organization Negative Image (Punishments)	Subjective Norm*
Organization Positive Image (Support)		High Power Distance, Collectivism
		Ewuh Pakewuh
		Asal Bapak Senang
		Jalan Tengah
Incentives (i.e. Rp100 millions)		*Gotong Royong*
Having Evidence		
Easy to Get Job		

3. METHODOLOGY

The questionnaire design and quantitative analyses mainly adapted from Park and Blenkinsopp (2009) study. However, this study added several items in Perceived Behavioural Control determinants adapting from Schein (2010) research. Moreover, to get better and more comprehensive understanding about the phenomenon, qualitative analysis (i.e. open-ended questionnaire and interview) was also utilized.

4. STUDY CONSTRUCTS: WHY EMPLOYEES DID NOT WANT TO DISCLOSE BRIBERY

The data for this study were collected from several DGT offices between January and October 2016. Questionnaires were distributed to 18 selected sites in Jakarta, with questionnaires allocated to each site based on the number of employees (population). From around 2,1650 questionnaires, 703 (32%) returned, but only 641 (30%) responses could be analysed. From 641 responses, majority respondents (510 or around 80%) claimed that they would disclose alleged bribery if they were aware of it in their workplace. On the other hand, this paper focused only on 131 respondents (around 20%) who did not want to report.

The questionnaire consisted of three parts. The first and second parts measured the three determinants of TPB, that is, attitude, subject norm, and perceived behaviour control and whistleblowing intention and then followed by reporting channel preferences. Attitudes toward whistleblowing were measured by asking how true the respondent thought five statements were with regard to the salient consequences of an employee's reporting of wrongdoing in an organization and their evaluation of the importance of those consequences employing a 5-point Likert-type scale. Those statements, their means and the Cronbach alpha value are reported in Table I.

Table I

Scale items and means for attitude toward whistleblowing (A) (N = 131)

Items	Belief about the consequences (b)[a] Mean (SD)	Evaluation the consequences (e) Mean (SD)	(b x e) Mean
Prevent bribery causing harm to the organization	3.77 (.729)	3.82 (.718)	14.79
Control bribery	3.64 (.785)	3.76 (.735)	14.10
Enhance public interest to combat bribery	3.50 (.880)	3.70 (.741)	13.36
Role responsibility as an employee	3.50 (.854)	3.60 (.792)	13.10
Be my moral obligation	3.56 (.824)	3.60 (.810)	13.39

[a]Cronbach $\alpha = 0.874$

A: Sum of (b x e) = 68.71

The overall means of the items of outcomes as well as their evaluation are mostly higher than 3.50 on average, indicating that the respondents more or less agree whistle-blowing has positive effects and they are important.

Subjective norm was measured by two questions. The first measured normative beliefs, which are a person's thoughts about the likelihood that important referent persons would approve or disapprove of a respondent's reporting of wrongdoing in an organization employing a 5-point Likert-type scale. Items and their means are reported in Table II.

Table II

Scale items and means for subjective norm (SN) (N = 131)

Items	Normative beliefs (b)[a] Mean (SD)	Motivation to comply (m) Mean (SD)	(b x m) Mean
Members of respondent's family	2.98 (.877)	3.49 (.923)	10.73
Co-workers	2.65 (.876)	3.57 (.903)	9.46
Immediate supervisor	2.73 (.961)	3.57 (.895)	9.76
Friends	2.84 (.867)	3.34 (.874)	9.66
Neighbours	2.89 (.771)	3.00 (.928)	8.84

[a]Cronbach α = .921

A: Sum of (b x m) = 48.44

The mean of the motivation to comply for co-workers and immediate supervisor items were the highest (3.57, s.d.=0.903 and 0.895 respectively) indicated that these two group of individuals were considered as the important parties for the respondents either to report or not. However, findings showed that co-worker was perceived as the most unsupportive party (2.65, s.d.0.876), and the immediate supervisor was considered as the second most unsupportive individual in regard to whistleblowing (2.65, s.d.= 0.876). To conclude, the majority of respondents believed that their co-workers and immediate supervisors would not really support whistleblowing behaviour and that group's approval was the most important factors for the respondents' decision.

Perceived behavioural control was measured using 29 paired items - for control factors and the other for perceived power, respectively. The items were inspired mainly from Schein (2010) study. The first eleven control factor items are statements concerning beliefs or perceptions about supportiveness to be faced in the process of the reporting as well as the results of an employee's reporting, and then followed by the perceived power of the eleven control factors. The second group of perceived behavioural control measured beliefs and perceived powers of incentives, which were represented by six pair of questions/statements. The third group was perceived behavioural control measured beliefs and perceived powers of difficulties to be faced in the process of the reporting as well as the results of an employee's reporting, which were represented by ten pair of questions/statements. Lastly, two pair of questions represented the relative ease or difficulty for employees to find other paid employment outside DGT.

Table following on the next page

Table III
Scale items and means for perceived behavioural control (PBC) (N = 131)

Items	Beliefs in control factors (bcf)[a] Mean (SD)	Evaluation of control factors (ecf) (SD)	(bcf x ecf) Mean
Organization seriously investigate reports	1.96 (.48)	4.03 (.71)	7.79
Organization keep giving feedback	1.99 (.44)	3.99 (.73)	7.87
Leader take responsibility	1.99 (.54)	4.09 (.72)	8.04
Organization allocate budget to audit	2.06 (.51)	3.89 (.74)	7.92
Organization allocate budget to system	2.04 (.49)	3.91 (.73)	7.94
Organization protect anonymous	1.92 (.56)	4.16 (.78)	7.83
Leader as role model	1.97 (.58)	4.09 (.75)	7.88
Leader encourage to report	2.01 (.55)	3.98 (.77)	7.78
Organization protect from retaliation	1.89 (.58)	4.17 (.84)	7.68
Organization investigate due evidence	2.39 (.85)	3.27 (.89)	7.69
Organization reward financial	2.14 (.58)	3.53 (.95)	7.36
Organization reward promotion	2.09 (.57)	3.45 (.97)	7.04
Organization reward overseas training	2.09 (.52)	3.50 (.92)	7.21
Organization reward performance	2.07 (.51)	3.53 (.95)	7.19
Organization reward desirable duties	2.14 (.59)	3.50 (.95)	7.36
Organization reward desirable geographic	2.04 (.63)	3.73 (1.01)	7.46
Organization hinder reporting	3.98 (.62)	4.09 (.89)	16.43
Organization ignore reporting	4.03 (.51)	4.10 (.86)	16.66
Organization create difficulties of reporting	4.05 (.48)	4.14 (.88)	16.97
Organization not correct wrongdoing	4.08 (.55)	4.13 (.88)	17.04
Organization blame employees	3.98 (.56)	4.13 (.84)	16.56
Organization a denial of a promotion	3.98 (.61)	4.01 (.81)	16.11
Organization give a poor performance	3.95 (.64)	4.03 (.84)	16.04
Organization restrict to follow training	3.98 (.62)	4.01 (.83)	16.14
Organization assign less desirable duties	3.98 (.62)	4.02 (.79)	16.11
Organization assign to non-preferred geographic	4.12 (.54)	4.06 (.87)	16.93
Organization terminate job	3.88 (.71)	4.04 (.86)	15.79
Easiness to find other job	3.16 (1.00)	3.47 (.93)	11.15
Easiness to get approval to move	2.68 (.93)	3.36 (.91)	8.98

Cronbach α = .892
A: Sum of (b x m) = 322.9772

As shown in the Table III, the range of values for perceived behavioural control was relatively low for "organization positive image" and "incentive" items (all were below 2.5). While for the organization negative image items were all above 3.0 with the highest was "organization not correct wrongdoing" (4.07, sd: 0.55). Moreover, the respondents evaluated that all items were important to encourage or discourage them in disclosing alleged bribery. Only few differences were in evaluated importance among all items. As can be seen, "organization protect from retaliation" was considered as the most important item for the respondents (4.17, sd: .84). Unsurprisingly, the findings indicated that the respondents believed that their organization did not support whistleblowing behaviour.

Whistleblowing intention was measured by asking "If you saw bribery occur in your workplace, would you report it to the authority(ies)?". This question was then followed by an open-ended question for the participants who answered "No" to understand their main reasons not to disclose bribery. After that, through a total of 8 items, asking the question of reporting channels preferences employing a 5-point Likert-type scale to measure respondents' degree of agreement or disagreement. A principal axis factor analysis with varimax rotation of the 8 items resulted 6 items were below 0.8 correlation matrix in two factors which the first two were pure anonymous reporting channels and the 4 items were reporting channels containing of non-anonymous, and counted for 72.9% of the variance with main factor loadings greater than .78. Meanwhile, two items (External and Internal Report Non-anonymous and External anonymous and Internal non-anonymous) were removed due to significant cross-loadings or above of 0.8 (multicollinearity).

The items, mean responses and Cronbach alpha values for the two scales are shown in Table IV, and a factor analysis showing a clear two-factor solution is shown in Table V.

Table IV

Scale items, α, and means for whistleblowing intentions (N = 131)

Whistleblowing Reporting Channel Preferences	Items	Mean	Overall average
Pure Anonymous (PA)[a]	External Report-anonymous	2.82	2.95
	Internal Report-anonymous	3.08	
Containing Non-Anonymous (CN)[b]	External Report-non anonymous	1.95	2.08
	Internal Report-non anonymous	2.14	
	External anonymous and Internal non-anonymous	2.18	
	External non-anonymous and Internal anonymous	2.06	

[a]Cronbach α = 0.55

bCronbach α = 0.882

Since the Cronbach α for PA was less than 0.6, the items were acceptable but weak and particularly in a qualitative study, the researcher needs to support the results with verbatim quotes of the respondents (Hair et al. 2006).

Table V

Results of factor analysis on whistleblowing intentions items (N = 131)

	Component	
Items	F1	F2
External Report-anonymous	.114	**.838**
External Report-non anonymous	**.787**	.161
Internal Report-anonymous	.144	**.802**
Internal Report-non anonymous	**.909**	.001
External anonymous and Internal non-anonymous	**.894**	.207
External non-anonymous and Internal anonymous	**.803**	.186

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

5. ANALYSIS AND RESULTS

Table VI presents the correlations among the variables.

Table VI

Descriptive statistics and the correlation between whistleblowing reporting channel preferences for non-reporter group and the independent variables (N = 131)

	PA	CA	AN	SN	PBC_Posi	PBC_Inc	PBC_Neg	PBC_OtherJob
PurelyAnon	1							
Containing Non	.260**	1						
Attitude N	**.198***	.011	1					
Subjective N	**.226****	**.307****	**.320****	1				
PBC_Posi	.115	.070	.154	.107	1			
PBC_Incentive	.084	.062	.171	-.097	.530**	1		
PBC_Neg	.028	**-.254****	**.283****	.139	**-.286****	**-.205***	1	
PBC_OtherJob	.046	.084	.105	.105	.124	**.232****	-.007	1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

The results in Table IV indicate that intention to blow the whistle pure autonomously (M = 2.95) is higher than that of for channels containing non-anonymous (M = 2.08). However, Cronbach α showed that the later was more reliable (0.882). Pure Anonymous channel preferences were significantly related to Attitude Norms and Subjective Norms only in the positive direction. On the other hand, reporting channel containing non-anonymous preferences were significantly related only to Subjective Norms and PBC-Neg in the predicted directions. In this study, the correlations of SN with both PA (.226, p<.009) and CA reporting channel preferences (.307, p<.000) were stronger than those of Attitude with Purely Anonymous and Containing non-anonymous reporting channel preferences (.198, p<.023 and .011, p<.899 respectively). Moreover, as can be seen from the result, Attitude norms was not significantly related to Containing Non anonymous reporting channel preferences (.011, p<.8990). Meanwhile the Containing non-anonymous reporting channel preferences were significantly related to PBC-Neg in the predicted negative directions.

In order to examine in more detail, the roles of the significant determinants based on the above result, two regression analyses were conducted using whistleblowing reporting channel preferences either Purely Anonymous or Containing non-anonymous as the dependent variables. Table VII shows the results of multiple regressions of whistleblowing reporting channel preference intentions.

Table VII

Results of Multiple regression of the significant variables of Ajzen's theory for Whistleblowing Reporting Channel Preferences (N = 131)

Predictors	Dependent variables	
	Full Anonymous	Containing Non-Anonymous
A	.140 (.122)	-
SN	.181 (.046)	.349*** (.012)
PBC_Neg	-	-.302*** (.005)
Constant	4.206	8.861
Adjusted R2	.054	.171
F value	4.728	14.443
Significant	0.10	0.00

The figures in parentheses are standardized regression coefficients
*** p < 0.001, two-tailed tests.

The subjective norm was clearly the most important predictor for reporting channel preferences containing non-anonymous than other determinants. What we did not expect was that the participants actually distinguished reporting channel preferences based on "pure anonymity" or "containing non-anonymity" not based on "internal" or "external" as previously identified by Park and Blenkinsopp (2009). Hypothesis I was partly supported. The effect of PBC-Neg was significant in negative directions for reporting channels containing non-anonymous but not for other PBC items. Hypothesis II was also partly supported since the subjective norm is clearly the most important predictor for reporting channel preferences containing non-anonymous than other determinants. What we did not expect was that the participants actually distinguished reporting channel preferences based on "pure anonymity" or "containing non-anonymity" not based on "internal" or "external" as previously identified by Park and Blenkinsopp (2009) study. In order to understand the phenomenon deeper and more comprehensively, the open-ended questions to respondents and interview to the authority at DGT were conducted. Findings are drawn from the qualitative responses to open-questions. Of 131 respondents who did not want to report, 70 (53%) provided their reasons not to report. Key words were identified from each respondent's responses and then interpreted. From the NVivo analysis, the three most repeated key words were "*takut*" (afraid), "*bukti*" (evidence), and "*melaporkan*" (reporting). "Reporting" here is used in the context of reporting preference to the direct supervisor and this is very consistent with a high context risk-averse culture. Other words that have similar meaning with "*takut*", such as "*resiko*" and "beresiko" meaning risk, also appeared quite often. Knowing which words are most repeated can assist researchers to identify themes and concepts (Bergin 2011). From 70 respondents who did not want to report, they can be classified into four main groups. The first group, 30 respondents (43%) as the majority did not want to report because they were afraid of consequence or retaliation and/or they did not believe in the existing system. For example, low trust in the institution as they believed that there was no protection for anonymity. These responses confirm findings from a previous study that revealed the two main antecedents not to report wrongdoing are being afraid of retaliation and the belief that the report would not follow up seriously (Brown 2008). In addition, based on interviews conducted with the officials at the Internal Compliance and Transformation of Human Resources, DGT, the main factors that impeded employees to disclose misconduct were as follows: (1) No willingness to report due to some reasons, such as threat from reported party(ies), afraid of being excommunicated by his or her working colleagues or supervisors and so on; (2) He or she is part of or get benefits from illegal practices; and/or (3) Not sure that his or her report would be followed up seriously. Moreover, they argued that "*ewuh-pakewuh*", was considered as one of the main Indonesian cultural norm, which discouraged individuals to disclose misconduct. In line with findings in subjective norm and Hofstede and Hofstede (2005) which placed high-power distance and collectivist cultural dimensions as the prominent Indonesian cultures, the authority also believed that respect toward seniors/higher rank officials (generates reticent attitude towards someone else) and the culture of solidarity to co-workers, team members, alma mater, and so on and so forth led employees not to report fraud in their organization. In addition, the officials also mentioned that culture or attitude of ignorance which does not care or does not want to appear to be an officious bystander were other cultural dimensions hampering whistleblowing behaviour. A second group of some 18 respondents (26%) claimed that they actually preferred to report to their direct supervisor or via internal reporting channels. The responses indicate that the structured authority relationship is still acceptable for Indonesians who are considered as the high power distance societies (Hofstede & Hofstede 2005). Moreover, this finding in line with general views of the respondents (402) who claimed that direct supervisor was an important or very important variable to encourage or discourage their intention to report. However, 16 respondents (22%) said that they would report bribery but they need more salient evidence before doing so.

A minority of some respondents (0.8%) reported that they did not want to report bribery because they did not have a heart to report or other reasons, such as ignorance and indifference. In addition, 23 (17% of 131) claimed that they ever noted bribery in their workplace during the last five years. Five of them ever reported bribery to internal channel during the last five years, but they did not want to report in the future if the similar cases occurred. Unfortunately, no one gave any particular reasons of it. Based on previous studies, two of possible reasons was that they felt poorly treated (Dussuyer, Armstrong & Smith 2015) and/or their report had not been followed up seriously (Bowden 2014). One preferred to report to his or her supervisor instead of to the available reporting channels. Other 17 (13% of 131) claimed that they ever noted bribery in their workplace during the last five years, but they did not report. From those 17 respondents, one indicated that they did not report because it was just small bribery. Five said that they did not report because they were afraid of retaliation and/or did not trust to the existing systems and authorities. Taking those above cases together, it could be argued that whistleblowing is a complex decision that requires careful consideration of the benefits and drawbacks of speaking out.

6. CONCLUSION

The findings of the not willingness to report alleged bribery survey and the authorities interviewed so far reveal that individuals considered organization negative, including feeling afraid of retaliation and not trust that their report would be investigated seriously were the main determinants of structural inhibitors, especially for reporting channels containing non-anonymous. While positive attitude toward whistleblowing behaviour, perceived behavioural controls on organization positive image and incentive were not significant in this case. This is in line with other studies explaining that the feeling of perceived retaliation is stronger than that of supporting items (Miceli 1992; Rothschild & Miethe 1999).

In term of cultural inhibitors, not surprisingly, subjective norm was the only determinant significantly and consistently influencing individuals' intention not to report bribery either through full-anonymity or containing non-anonymity reporting channel. Possible reasons were because some Indonesians still highly value the predominant cultures (*ewuh-pakewuh*, *asal bapak senang*, *jalan tengah*, and *gotong royong*), which attempt to keep harmony in relationship with the superordinates and co-workers overcome the importance of whistleblowing behaviour. Arguably, if the DGT only focuses on structural enablers (i.e. organization positive image and incentive) and ignores cultural phenomenon, the organization will be difficult to attract the group of employees who do not want to report to involve in whistleblowing behaviour.

However, it should be borne in mind that given the focus of the study was for ones who did not want to disclose, it is highly likely that the participants a lived experience. So, given negative views about their organization and systems the sample participants may be biased towards having negative views about whistleblowing concepts, systems, or their organization. Consistent with this latter view, a study that involved only participants who had negative experiences following their reporting of misconduct, indicated the respondents tended to be biased towards having been victimised (Dussuyer, Armstrong & Smith 2015).

LITERATURE:

1. Ab Ghani, N 2013, 'Predicting whistle-blowing intention in Malaysia: evidence from manufacturing companies'.
2. Agrawal, A, Jaffe, JF & Karpoff, JM 1999, 'Management turnover and governance changes following the revelation of fraud*', The Journal of Law and Economics, vol. 42, no. S1, pp. 309-42.

3. Ajzen, I 1991, 'The theory of planned behavior', Organizational behavior and human decision processes, vol. 50, no. 2, pp. 179-211.
4. —— 2005, Attitudes, personality and behaviour, Second edn, McGraw-Hill International, New York.
5. Arifianto, A 2001, 'Corruption in Indonesia: Causes, History, Impacts, and Possible Cures', Brandeis University. http://www. academia. edu/1337711/Corruption_in_Indonesia_Causes_History_Impact s_and_Possible_Cures (April 1, 2013).
6. Bagustianto, R 2015, 'Faktor-faktor yang mempengaruhi minat pegawai negeri sipil untuk melakukan tindakan whistle-blowing (studi pada pns BPK RI) ', Jurnal Ilmiah Mahasiswa FEB, vol. 3, no. 1.
7. Banda, FL & Mahfud Sholihin, M 2012, 'Pengaruh penalaran moral, sikap, norma subyektif dan persepsi kontrol perilaku terhadap whistleblowing intention ', Universitas Gadjah Mada.
8. Bergin, M 2011, 'NVivo 8 and consistency in data analysis: reflecting on the use of a qualitative data analysis program', Nurse Researcher, vol. 18, no. 3, pp. 6-12.
9. Bowden, P 2014, In the public interest protecting whistleblowers and those who speak out, Tilda Publishing and Distribution, Prahran VIC.
10. Brown, A 2008, Whistleblowing in the Australian public sector: Enhancing the theory and practice of internal witness management in public sector organisations, ANU E Press.
11. Cassematis, PG & Wortley, R 2013, 'Prediction of whistleblowing or non-reporting observation: The role of personal and situational factors', Journal of business ethics, vol. 117, no. 3, pp. 615-34.
12. Chiu, RK 2003, 'Ethical judgment and whistleblowing intention: Examining the moderating role of locus of control', Journal of business ethics, vol. 43, no. 1-2, pp. 65-74.
13. Dellaportas, S, Cooper, BJ & Braica, P 2007, 'Leadership, culture and employee deceit: The case of the National Australia Bank', Corporate governance: an international review, vol. 15, no. 6, pp. 1442-52.
14. Dozier, JB & Miceli, MP 1985, 'Potential predictors of whistle-blowing: A prosocial behavior perspective', Academy of Management Review, vol. 10, no. 4, pp. 823-36.
15. Dussuyer, I, Armstrong, A & Smith, R 2015, 'Research into Whistleblowing: Protection Against Victimisation', Journal of Business Systems, Governance & Ethics, vol. 10, no. 3.
16. Dworkin, T & Baucus, MS 1998, 'Internal vs. external whistleblowers: A comparison of whistleblowering processes', Journal of business ethics, vol. 17, no. 12, pp. 1281-98.
17. Dworkin, TM & Callahan, ES 1991, 'Internal Whistleblowing: Protecting the Interests of the Employee, the Organization, and Society', American Business Law Journal, vol. 29, no. 2, pp. 267-308.
18. Ellis, S & Arieli, S 1999, 'Predicting intentions to report administrative and disciplinary infractions: Applying the reasoned action model', Human Relations, vol. 52, no. 7, pp. 947-67.
19. Fallon, F & Cooper, BJ 2015, 'Corporate culture and greed—The case of the Australian Wheat Board', Australian Accounting Review, vol. 25, no. 1, pp. 71-83.
20. Fatoki, O 2013, 'Internal whistleblowing intentions of accounting students in South Africa: The impact of fear of retaliation, materiality and gender', J Soc Sci, vol. 37, no. 1, pp. 31-44.

21. Frinaldi, A & Embi, MA 2014, 'Budaya kerja ewuh pakewuh di kalangan pegawai negeri sipil etnik Jawa (studi pada kabupaten Pasaman Barat, provinsi Sumatera Barat) ', Humanus, vol. 13, no. 1, pp. 68-75.
22. Hair, JF, Black, WC, Babin, BJ, Anderson, RE & Tatham, RL 2006, Multivariate data analysis, vol. 6, Pearson Prentice Hall Upper Saddle River, NJ.
23. Hardjowirogo, M 1983, Manusia Jawa, Yayasan Idayu.
24. Hofstede, G 2011, 'Dimensionalizing cultures: The Hofstede model in context', Online readings in psychology and culture, vol. 2, no. 1, p. 8.
25. Hofstede, G & Hofstede, GJ 2005, Cultures and organizations software of the mind, 2 edn, McGraw-Hill, Two Penn Plaza, New York, NY.
26. Kaplan, SE, Pany, K, Samuels, J & Zhang, J 2012, 'An examination of anonymous and non-anonymous fraud reporting channels', Advances in Accounting, vol. 28, no. 1, pp. 88-95.
27. Kreshastuti, DK & Prastiwi, A 2014, 'Analisis faktor-faktor yang mempengaruhi intensi auditor untuk melakukan tindakan whistleblowing (studi empiris pada kantor akuntan publik di semarang)', Fakultas Ekonomika dan Bisnis.
28. Lavena, CF 2014, 'Whistle-Blowing Individual and Organizational Determinants of the Decision to Report Wrongdoing in the Federal Government', The American Review of Public Administration, p. 24.
29. Martodjo 2008, Kinerja aparat pemerintah masih diwarnai budaya negatif dan ketimuran, BPKP, viewed 3 January 2017, <http://www.bpkp.go.id/berita/read/3484/2445/Kinerja-Aparat-Pemerintah-Masih-Diwarnai-Budaya-Negatif-dan-Ketimuran.bpkp>.
30. Mesmer-Magnus, JR & Viswesvaran, C 2005, 'Whistleblowing in organizations: An examination of correlates of whistleblowing intentions, actions, and retaliation', Journal of business ethics, vol. 62, no. 3, pp. 277-97.
31. Miceli, MP 1992, Blowing the whistle: The organizational and legal implications for companies and employees, Lexington Books.
32. Miceli, MP & Near, JP 1985, 'Characteristics of organizational climate and perceived wrongdoing associated with whistle-blowing decisions ', Personnel Psychology, vol. 38, no. 3, pp. 525-44.
33. —— 1988, 'Individual and situational correlates of whistle-blowing', Personnel Psychology, vol. 41, no. 2, pp. 267-81.
34. —— 1989, 'The incidence of wrongdoing, whistle-blowing, and retaliation: Results of a naturally occurring field experiment', Employee Responsibilities and Rights Journal, vol. 2, no. 2, pp. 91-108.
35. —— 2002, 'What makes whistle-blowers effective? Three field studies', Human Relations, vol. 55, no. 4, pp. 455-79.
36. Miceli, MP, Near, JP & Dworkin, TM 2009, 'A word to the wise: How managers and policy-makers can encourage employees to report wrongdoing', Journal of business ethics, vol. 86, no. 3, pp. 379-96.
37. Miceli, MP, Near, JP & Dworkin, TM 2013, Whistle-blowing in organizations, Psychology Press.
38. Miceli, MP, Near, JP, Rehg, MT & Van Scotter, JR 2012, 'Predicting employee reactions to perceived organizational wrongdoing: Demoralization, justice, proactive personality, and whistle-blowing', Human Relations, vol. 65, no. 8, pp. 923-54.

39. Miceli, MP, Roach, BL & Near, JP 1988, 'The motivations of anonymous whistle-blowers: The case of federal employees', Public Personnel Management.
40. Near, JP, Dworkin, TM & Miceli, MP 1993, 'Explaining the whistle-blowing process: Suggestions from power theory and justice theory', Organization Science, vol. 4, no. 3, pp. 393-411.
41. Near, JP & Miceli, MP 1995, 'Effective-whistle blowing', Academy of Management Review, vol. 20, no. 3, pp. 679-708.
42. O'Connell, BT 2004, 'Enron. Con:"He that filches from me my good name… makes me poor indeed"', Critical Perspectives on Accounting, vol. 15, no. 6, pp. 733-49.
43. Park, H & Blenkinsopp, J 2009, 'Whistleblowing as planned behavior–A survey of South Korean police officers', Journal of business ethics, vol. 85, no. 4, pp. 545-56.
44. Patel, C 2003, 'Some cross-cultural evidence on whistle-blowing as an internal control mechanism', Journal of International Accounting Research, vol. 2, no. 1, pp. 69-96.
45. Pramudatama, R 2012, 'RI loses trillions in taxes from systemic corruption', The Jakarta Post, 14 March 2012, viewed 1 September 2014, <http://www.thejakartapost.com/news/2012/03/14/ri-loses-trillions-taxes-systemic-corruption.html>.
46. Rothschild, J & Miethe, TD 1999, 'Whistle-blower disclosures and management retaliation the battle to control information about organization corruption', Work and occupations, vol. 26, no. 1, pp. 107-28.
47. Schein, EH 2010, Organizational culture and leadership, vol. 2, John Wiley & Sons.
48. Sims, RL & Keenan, JP 1998, 'Predictors of external whistleblowing: Organizational and intrapersonal variables', Journal of business ethics, vol. 17, no. 4, pp. 411-21.
49. Sulistomo, A & Prastiwi, A 2011, 'Persepsi mahasiswa akuntansi terhadap pengungkapan kecurangan (studi empiris pada mahasiswa akuntansi UNDIP dan UGM)', Fakultas Ekonomika dan Bisnis.
50. Suyatno, B, Armstrong, A & Thomas, K 2015, 'Whistleblowing And The Indonesian Tax Department: A Framework For Analysis', Journal of Business Systems, Governance & Ethics, vol. 10, no. 3.
51. Trevino, LK & Victor, B 1992, 'Peer reporting of unethical behavior: A social context perspective', Academy of Management journal, vol. 35, no. 1, pp. 38-64.
52. Trongmateerut, P & Sweeney, JT 2013, 'The influence of subjective norms on whistle-blowing: A cross-cultural investigation', Journal of business ethics, vol. 112, no. 3, pp. 437-51.
53. Victor, B, Trevino, LK & Shapiro, DL 1993, 'Peer reporting of unethical behavior: The influence of justice evaluations and social context factors', Journal of business ethics, vol. 12, no. 4, pp. 253-63.
54. Wati, RF 2014, 'The Effect of Cultural Ewuh Pakewuh Bureaucracy Toward Significance Accounting Fraudulency in the Government: The Perception of Government Internal Control Apparatus Sragen Area Inspectorate', Available at SSRN 2698509.
55. Worang, FG 2013, 'A qualitative analysis of corporate governance in Indonesian state-owned enterprises: An internal stakeholders perspective', Murdoch University.

REVISITING THE DEFINITION OF SMALL STATE THROUGH THE USE OF RELATIONAL AND QUANTITATIVE CRITERIA

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ABSTRACT

Small states make up the vast majority of the international system. However, their absolute power and relative "weight" in that same international system are reversely proportional to their number. A sheer number of small states therefore tells us little about their specific characteristics and the means to pursue their own survival and progress. Nevertheless, the scientists have for decades not been able to agree on the number of small states in the world, so most of them have simply decided to omit this problem from their research, focusing mainly on strategies and specificities of small states, that either derive from their smallness or not. Most classifications usually agree that the number of small states in the world is between a half and two-thirds of all states. The purpose of this paper lies in an attempt to re-initiate a debate among the scholars in order to try to answer the "eternal" question of how many small states actually exist in the world, and what criteria should be primarily used to define i.e. classify them.

Keywords: *small states; regional position; classifications of small states; quantitative, qualitative, and relational criteria; small state definition*

1. INTRODUCTION

Small states make up the vast majority of the international system. Of the 191 UN member-states, it is estimated that no more than two dozen would assuredly fall outside this category (Neumann and Gstöhl, 2006: 3). The size of these state's influence in the international realm along with the benefits of shaping international institutions and structure once in charge make their activity in international relations a part of their political culture. For a small state, these benefits are likely outside the realm of possibilities as they increase their level of foreign policy initiative. For this reason, it is important to look at small states differently than middle or large powers when talking about the development of foreign policy preferences (Scheldrup, 2014: 3). Having in mind no widely accepted definition of small state has yet emerged, most attempts at defining small states have been based upon arbitrarily chosen cut-off values of selected criteria. Trying to develop a distinct research approach we have decided to use the quantitative criteria for classifying small states, "in order to correctly, on the basis of numbers, determine which countries will be discussed, taking exceptions into account" (Lusa and Kurecic, 2014: 265). That way an arbitrary dividing line between small and other EU member states was established, with the aim to have a definite list of states that were in the focus of our study.

On the other hand, according to relational criteria, being a small state is seen as tied to a specific spatio-temporal context, not as a general characteristic of the state; a state may be weak in one relation and powerful in another (Wivel and Thorhallsson, 2006: 654).

2. METHODOLOGY

In determining which states to study, the question, which state is small and which is not, is a crucial one. However, the aim here is to go beyond debating only about the criteria for defining small states, and to determine why a particular state is small and the other is not (and therefore it should not be studied) by using mainly the relational criteria – i.e. identifying the state's position towards the other states and how it affects its behavior. The main strategies of small states in international arena are primarily determined by their *relative influence, "weight", power*, and not by their absolute quantifiable features.

Here, as a one of the corroborations of the use of relational criteria, we can invoke the asymmetry theory concept, theorized by Womack (2004: 359-362). He points out: Contrary to multipolarity theory, the disparities between states can create fundamental differences of perspective between the more powerful and the less powerful. The differences of perspective produce structural misperceptions of the other's intentions, and can lead to a vicious circle of misunderstandings that can culminate in conflict. The second major point is that, contrary to unipolarity theory, and in general, contrary to Western theories of realism and neo-realism, countries that are more powerful usually cannot impose their will on less powerful countries. There is instead a relatively stable matrix of international relationships in which exchanges may not be equal, but they are usually negotiated based on autonomy of both sides (Womack, 359-360).

3. RESULTS AND DISCUSSION

Appadurai (1996) pointed out that the state and its position makes sense only as a part of the system. Which brings us to relational criteria and systemic approach – and at the same time not obliged to accept the neorealism. Very often, the position of small states, especially small island states is explained through a concept of peripherality, as opposed to central position, accentuating physical distance and isolation. Hence, this is a relational concept; it brings us to relational criteria for defining small states (see Campling, 2006: 236, in Greig, Turner and D'Arcy, 2011: 169).

Ponížilová (2013: 8) points out: "The whole concept (of smallness as a specificity, author's remark) is meaningless, unless we take into consideration relations with other states or size of other states, respectively. "Smallness" simply exists and makes sense only vis-à-vis "largeness." That is why "relational" criteria, with regard to "power," are essential for the conceptualization of small state.

Drawing on all this, it is clear that we all the time have to think in the categories of mutual relations, and brings us to the relational criteria, again.

Panke (2012: 315) points out: "Size is inherently a relational concept. Big or small only takes on meaning if it characterizes one actor or object relative to another in a particular context. Hence, this special interest section does not attempt to provide an absolute definition of small states, but instead defines a state as small if it has less than average relevant capacities in a given negotiation setting. Thus, for economic negotiations, such as in the WTO setting, small states are states with less than average gross domestic product (GDP). In a weighted voting system, such as the EU in its day-to-day policy-making, states are considered as small if they have less than average votes in the Council of Ministers."

Mouritzen and Wivel (2005) move away from the power that states possess to the power that they actually exercise. Hence, they point out that a state may be influential in one relation but simultaneously weak in another, i.e. it may be considered small in one policy area but large in another. That brings us to the relational criteria (again).
Steinmetz and Wivel (2010: 6) pose a question: "Is it demography, territory or economic output that determines smallness? If the core question revolves around the degree of power that a state possesses, is it legitimate to characterize a highly populated poor state as being more powerful than a sparsely populated wealthy one?" They are inclined to accept that by defining smallness as a 'relational' concept, these difficulties can be circumvented, and that "a small state is 'the weak part in an asymmetric relationship."[1]

Therefore, the relational criteria offer the best apparatus to determine the smallness of a certain state. By accepting the relational criteria, we open a possibility where the regional position of states indeed matters, determining the classification of small states presented in this paper, and causing the states like Sweden and Switzerland on one side, and much smaller states like Saint Kitts and Nevis and Palau, altogether to be studied as small states. However, not from the same region. That is crucial. Regional approach, combined with the relative criteria, and used here puts the focus on the state's neighbors (immediate and close), and the state's position in the region that it belongs to. It is particularly viable for studying small states since the small states' influence rarely extends beyond the borders of the region that it belongs to, and it is often contained only to its immediate surroundings. This thesis can be found in the book published almost half a century ago, hence Fox (1959: 3) modified her definition of state size based on power with the notion of a range of interests. According to her thesis, small states have, by-and-large at least, only a local (regional) area of interest. In that sense, by using the regional approach, and a premise that the behavior of small states is a consequence of their size, the qualitative criteria were also included in this research.

A commonly accepted definition of a small state is not available (Olafsson, 1998: 3). This is true not only for the small state but also for related concepts such as the 'Microstate' or the 'Ministate': These terms have never been defined adequately' (Rapaport et al., 1971: 29, in: Maass, 2009: 71)'.
While the existence of small states does not seem to be questioned, the problem has always been to meaningfully separate them from other analytical categories (Jazbec, 2001: 36). The main reason for this situation has been the very vague nature of the concepts of size and smallness (Amstrup, 1976).
De Wijk (2005: 17-23) clearly emphasized that the main features of small states are easily recognized by their inability to maintain a full spectrum of military capabilities and limited abilities to project military power in distant regions of the world. Small states are dependent upon larger countries' military capabilities as only they can provide the framework that small states can plug into with their available assets (Urbelis, 2015: 63).
Some studies of small states resolve the problem of the small state's definition by simply omitting it. These authors simply consider the term "small state" to be clear enough, so it does not need a special clarification through definitions and discussions about the various criteria. These kinds of studies study a state or a group of states that they call "small states", and deal with the specificities of small states that are a consequence of their size. For example, within IR, Keohane and Nye (1977) have famously argued that the question of smallness and greatness

[1] "Being 'a small state is tied to a specific spatio-temporal context' and it is this context, 'rather than general characteristics of the state, defined by indicators such as its absolute size or size of GDP relative to other states. (…) "Smallness' shrinks and expands 'according to the waves of change in international power relationships" (Steinmetz and Wivel, 2010: 7).

is not necessarily very useful on the aggregate level of the states' system where we have usually studied it, but that it should rather be treated as a question of clout within what they refer to as specific "issue areas". That is, small states possessing great issue-specific power, for example the influence of Switzerland in the financial services sector or of Saudi Arabia and Kuwait in the oil sector (Neumann and Gstöhl, 2004: 2).

Some authors accentuate the importance of perception, thereby using the qualitative criteria and stating that the small state is the one that perceives itself as small, and is perceived as small by others. Studying the position and importance of the Nordic states in the EU, Magnusdottir and Thorhallsson (2011: 212) point out: "When comparing the perceptual size of the Nordic EU members, one should not focus on the differences in their fixed size, i.e. their population size, but rather on what factors have formed their self-perception and other actors' perception of them."

On the other hand, some studies emphasize the importance of security and defence matters for small states particularly: "The key feature determining the definition of a "small state" is not simply the size of the territory, population and economy. One could rather emphasize the heavy dependence of "small states" for their own security and defence arrangements upon a politically powerful and militarily capable global actor or upon a security and defence organization where such an actor plays a prominent role. In this light, the key issue in determining whether the state is "small" is to address key security and defence issues (Rublovskis, Šešelgyte and Kaljurand, 2013: 14)".

The size and capability of the armed forces, the size and capability of the entire security sector of the state, and the size of the defence budget - both in real money and as a percentage of GDP – will determine whether the state should be viewed as "small" from the perspective of security and defence. Granted, one may also emphasize the role of external factors in shaping the small state security mentality (Väyrynen, 1997: 98).

There is no clear-cut definition of what it means to be a "small state". Qualitative definitions encompass the physical and geographical characteristics of small states, their degree of insularity, and vulnerability. In terms of quantitative characteristics, the factors include land area, population size, Gross National Product, Gross Domestic Product, and per capita income. When discussing certain roles that small states can take in the international arena, the range of small states' functional capabilities is limited to acting as a buffer zone, diplomatic mediator, barrier state, geopolitical gateway, or periphery (Laurinavicius, Motieka, and Statkus, 2005). Due to the peripheral and transit position of the country, the set of functions will be determined by the actions of leading states (in: Smirnov, 2014: 44).

Certainly, the matter of their own survival posed the most important issue for the small states during the most of the territorial states system's history, and even today, it is the main reason for bandwagoning as one of the strategies of small states when it comes to security.

As Raeymaeker (1974: 18) pointed out: "The foreign policy of small states therefore aims at withstanding pressure from the great powers, at safeguarding their territorial integrity and independence, and at insuring the continued adhesion to national values and ideals. A small power is a state on the defensive, a state that thirsts for security."

The Russian political scientist M. Ilyin gave a very different definition of small power concept, in this context different from the concept of a small state.

Ilyin, the author of a state typology based on J. Colomer's ideas, defined small powers as follows: they have a small territory and population, a pronounced dependency complex (however, in some cases they can strive for a relatively independent foreign and domestic policy), whereas their priority function is "adjusting" international relations (Ilyin, 2008). However, the currently increasing interdependence makes it possible to speak not only of

"adjustment" but also of a significant impact on the decisions and actions of larger states (Smirnov, 2014: 43). However, Ilyin argues small powers are incapable of taking an independent position: situated along the axes of mega- and macro-state, small powers can move away from these axes and create more or less wide belts, arcs, and nodes (Ilyin, 2011: 14).
However, a completely precise definition of a small state does not have to pose a necessity. While this can be accepted as a rational conduct, nevertheless, small states can be studied through precisely defining what states are the object of study, and at the same time, these studies do not have to merely discuss the criteria for the small state definition, thereby pushing the discussion and research about the small states out of the focus.
By using more than one criteria and by using different combinations of the various types of criteria (quantitative, qualitative, and relational), it is possible to make classifications of small states that produce the least exceptions. Nevertheless, any classification of small states will always cause certain objections. Therefore, it is the aim of this paper to go beyond the validity of definitions (based on the various criteria) of small states, merely determining, based on multi-criteria arguments that are also explained here, which states are studied and why.
There are also classifications of small states (Maass, 2009) that recognize only two groups of criteria for defining small states: quantitative and qualitative. The quantitative criteria, such as population (for example: Charles et al., 1997; Olafsson, 1998; Kisanga and Dancie, 2007), area (Hanggi, 1998: 81; Olafsson, 1998: 8-10), economic power, usually measured by the GDP (East, 1975: 160) and military power (East, 1975: 160), can be found in the studies mentioned here.
Crowards (2002) defines small states by population in clusters and uses cluster analysis, classifying 79 states as small. Thorhallsson (2006) defines small states as having less than 3 000 people working in the foreign services. On the other hand, East (1973) points out population, land area, size of economy and military resources as indicators for defining of small states.

The main objection to the use of (only) quantitative criteria is comprised in the fact that they produce too many exceptions and that the cut-offs that divide small and not so small states are arbitrary, always leaving doubts whether this divide should be differently fitted (Q: Is a state with 1.6 million inhabitants mid-size and the one with 1.4 million small, especially if a state with smaller population has an economy that is larger than that of the state with slightly larger population? A: Probably not – that is why we need a complex use of the various criteria always having prior knowledge about a particular state and the internal and external environment i.e. region in which it functions).
The reason for using the qualitative criteria (besides quantitative) lies in the fact that no matter what quantitative criteria we use, they are simply insufficient due to the complexity of the state's features (as mentioned in the previous paragraph).
The qualitative criteria are mostly dealing with the state's possibilities of action (Rothstein, 1968: 12), its attitude (Evans and Newnham, 1998: 500-501) and the perception of the (small) states about themselves (Hey, 2003: 1).
The identification of the picture (self-perception) that state has about itself – whether it considers itself small or not, and does this awareness of its own smallness (if there is one) influences the relations with its neighbors and the world in general (Henrikson, 2001: 56-57). The research of state's perceptions about themselves uses that same perception as a factor that influences the attitude of those states and it is known as the perceptive or psychological approach.
Keohane's argumentation (1969: 296) that "a small power [state] is a state whose leaders consider that it can never, acting alone or in small group, make a significant impact on the system" certainly belongs to the qualitative approach, as well as Rothstein's (1968: 29), which

points out that "a small power [state] is a state which recognizes that it cannot obtain security primarily by the use of its own capabilities, and that it must rely fundamentally on the aid of others."
Hey (2003: 3) argues that the idea of small states is based on perceptions: "if states, people and institutions generally perceive themselves to be small, or if any other state, peoples or institutions perceive that state as small, it shall be so considered."
The relational approach uses the relational criteria. It is more objective than the qualitative approach, and less objective than the quantitative. It connects the small states' behavior with the nature of the international system and the relative position of the state in it. The criterion used to determine whether the state is small or not is the (in)ability of a certain state to project its influence in the international system (Hanggi and Regnier, 2000: 7).
Defining some state as small does not mean that this same state can also be considered as a weak state. Weakness is an expression of quality and not of quantity (as smallness is). Small states can be strong, and large states can be weak, if they have weak institutions, and, among other negative features, powerful centrifugal tendencies.
The state's population, usually taken as the main (quantitative) criterion, does not need to determine crucially whether the stated should be considered small or not, and especially it is not a sole determinant of weakness of the state.

For example, The Commonwealth defines small states as sovereign states with a population size of 1.5 million people or less. Using this standard, 46 countries are small. Of the world's 46 small states, 34 are islands, a number of which are located far from major markets – as in the case of the Pacific islands and Mauritius. Some are widely dispersed multi-island microstates (Commonwealth Secretariat, 2009: 5).

When defining which states to study in this paper (and not attempting to pursue the unique definition of a small state), relational and quantitative[2] criteria were used as primary.

Fox (1959: 2-3), for example, views small states as international actors that lack the power to successfully apply power or resist the effective application of power on them by other states. Such a 'Dahlian' understanding of power (Dahl, 1957) in the context of small states studies is widely accepted (Maass, 2009: 72-73).

Despite the major problem known as the "ambiguity and elusiveness of the small state definition" (see Maass, 2009; Kurecic, 2012) the decision was made to determine an exact number of states which would be the object of study in this paper. The small states were firstly grouped into the regional groupings that were determined concerning the previous research on the afore-mentioned topic.

Table following on the next page

[2] The research has shown that there is no consistent correlation between population size and other measures of state size. In response to this criticism, scholars have not abandoned 'population size' as a criterion, however. Instead, the size of a state's population has been integrated with additional criteria (Olafsson, 1998, 8-10). The population as a determinant of the state' smallness simply cannot be ignored.

Tab. 1: The small states studied: continents, regional groupings, states included, and the criteria for defining (Continues on the next four [4] pages)

Continent/world region	Groups of small states on the continent/world region	The small states included	The criteria used for classification and explanations
Europe (39)	Small states of the EU (20)	Austria Belgium Bulgaria Croatia Cyprus Czech Republic Denmark Estonia Finland Greece Hungary Ireland Latvia Lithuania Luxembourg Malta Portugal Slovakia Slovenia Sweden	The relational criteria were used only on the systemic level (large and small EU members), because the depth of the integration among states, and not on the level of the state (small state and big neighbor etc.). The population cut-off size of 12 million inhabitants was used as a compromise. The Netherlands, with a population of 16.85 million, numbers five and a half million inhabitants more than Belgium, with a population of 11.22 million[3]. (…) Of the current 28 EU member states, 20 EU members fell below the limit of 12 million inhabitants. This criterion produced the same results as the second criterion used: the categorization in terms of the number of EU states fitting into two defined groups. Panke (2008) defined small states according to the political weight they possess (with cut-off level of the EU27 average votes in the Council of Ministers (12.78)[4].
	Small European states that opted to stay outside of the EU (3)	Iceland Norway Switzerland	Iceland and Norway are NATO and EFTA members[5]. Switzerland is neutral and maintains deep economic relations with the EU through bilateral agreements. Countries of high or very high income, which are not in the EU because their population does not want them to be the EU member states.

[3] Thorhallsson (2004) considers states with a population of 38 million and above to the large states of the EU and the states with a population bellow 17 million small states.
The only state that therefore would not fit into this classification (large and small EU states) would be Romania (which actually joined in 2007, therefore at the time of Thorhallson's classification still was not an EU member state).
[4] With the entry of Croatia into the EU, the average voting weight in the Council of Ministers has decreased from 12.78 to 12.57. Therefore, the dividing line between Netherlands and the other states with less than 13 votes remained intact, leaving all states in the same groups according to previously used Panke's methodology.
Voting system in the EU Council of Ministers has changed since November 2014. However, until 31 March 2017, member states can still request to use the previous rule for qualified majority voting.
The states, which vary enormously in their population, territory, and economic power, were grouped into one group based on their EU membership and the fact that these 20 states (out of EU's 28) comprise only about 22 percent of EU's population and about 20 percent of its economic power. The fact that describes the asymmetry in the EU regarding the economic power of certain members is best described by the fact the German economy was in 2014 slightly larger than the economies of these 20 states combined: Germany's GDP amounted for 3 852.6 billion US$, while the GDP of the EU20 states was 3 669.8 billion US$. The GDP of the EU's eight largest states (by population) amounted 80.1% of the EU's GDP, while the GDP of EU 20 amounted for only 19.9% of the EU's GDP. If Romania was excluded and Sweden included (since its economy is among the EU's eight largest economies), the asymmetry would be even more visible.
See: Lusa and Kurecic (2017).
[5] Bailes (2009: 18) considers all Nordic states as small, even Sweden.

	Microstates of Europe (5)	Andorra Lichtenstein Monaco San Marino the Vatican City State	Very small states that can be defined as microstates and de facto protected areas, under the protection of larger states (France, Italy, Spain, Austria), from which they benefit[6].
	The Western Balkans states (6)	Albania Bosnia-Herzegovina Kosovo Macedonia Montenegro Serbia	Former Yugoslavia minus Slovenia and Croatia (the EU member states) plus Albania. Countries with many internal problems that have been torn by wars, corruption, and the overall pauperization for the last quarter of a century. Declared intentions to join the EU. Because of the internal and unsolved mutual problems, perspectives for that remain bleak.
	Small non-integrated states in the European and Caucasian part of the Post-Soviet space (5)	Armenia Azerbaijan Belarus Georgia Moldova	Larger and more powerful neighbors. Dependence on Russia in many spheres (except Azerbaijan).

Asia (19)	Small states of Central Asia (4)	Kyrgyzstan Mongolia Tajikistan Turkmenistan	These states are land-locked, have a low population density, surrounded by the major world powers (Russia and/or China) and/or regional powers and larger states in general (Iran, Kazakhstan, Uzbekistan). They are significantly weaker than their neighbors are, economically, demographically, politically, and militarily.
	Small states of the Near East (3)	Israel Jordan Lebanon	Three very different states, classified by the population criterion and their regional position. Israel is of course, because of its international influence, military and economic power a small power, much more than a typical small state.
	Small states of the Arabian Peninsula (5)	Bahrain Kuwait Oman Qatar The United Arab Emirates	These states are petro-dollar monarchies, surrounded and influenced by larger states and powers, Saudi Arabia particularly, which acts like an ally and a protector of most of these states. Iran, as a neighbor across the Persian Gulf, is on the other hand the prime external reason of concern for these states, especially after the overthrow of S. Hussein in Iraq.

[6] Determining micro-size are not limited to choosing the right quantitative geographic or demographic attribute(s) for measurement. More importantly, there is little consensus over the issue of which particular quantitative threshold should be used for isolating microstates from larger political units (Dumienski, 2014: 11). Defining microstates suffers from the similar problem as defining small states: quantitative cut-offs, negative definitions (what microstate is not) and so on. These states should be smaller than small states. However, the questions always remain how smaller and by what criteria. In addition, the "eternal" question as well: what is a small state? This must be answered before defining microstate as "a very small state" or "smaller than small state".
Oest and Wivel (2010: 432) have rightly pointed out that any definition of smallness based exclusively on perception obscures "the distinction between microstates, small states and middle powers" and as such cannot be useful for isolating microstates from other types of polities.

	Small states of South Asia (2)	Bhutan Maldives	Bhutan is a small, underdeveloped state. It is land-locked and heavily dependent on India[7]. Maldives are a small island state.
	Small states of Southeast Asia (5)	Brunei Cambodia Laos Singapore Timor-Leste	This group is comprised of two states in the mainland part of Southeast Asia (Cambodia and Laos – a landlocked state) and three states that occupy the parts of islands (Brunei on the island of Borneo, Timor-Leste on the island of Timor) or islands (Singapore)[8].

The Americas (23)	Small states of the Caribbean (15)	Antigua and Barbuda Bahamas, the Barbados Belize Dominica Dominican Republic Grenada Guyana Haiti Jamaica Saint Kitts and Nevis Saint Lucia Saint Vincent and the Grenadines Suriname Trinidad and Tobago	Guyana and Suriname were included in the Caribbean although they geographically belong to South America. Nevertheless, their history, culture, economic ties position them (geopolitically, economically, culturally etc.) much closer to the Caribbean than to South America. The same argument was used for Belize, located on the Central American isthmus, but was joined to the small states of the Caribbean. The three states are also not a part of Latin America, as a cultural region. Cuba was not included among the small states of the Caribbean because of the size of its population, its unique historical and current geopolitical position and the level of its foreign policy activity and capabilities.
	Small states of Central America (6)	Costa Rica El Salvador Guatemala Honduras Nicaragua Panama	These are the states of the Central American isthmus, between Mexico and Colombia. Except Costa Rica, all these states show a significant level of weakness, besides smallness. They have much larger and more powerful neighbors (The U.S.A., Mexico).
	Small states of South America (2)	Uruguay Paraguay	Uruguay was included because of its small population and larger neighbors (Brasil and Argentina). However, it is not a weak state. Paraguay was included for the same reasons as Uruguay plus a lower level of economic development and a land-locked position[9].

Africa[10] (31)	Small states of Northern Africa (2)	Libya Tunisia	The reason for including Libya and Tunisia among small states of (the Northern) Africa

[7] Due to the enormous size and importance of India in the region, all states except Pakistan could be considered as small if we would only study South Asia and use only the relational criteria.
[8] Singapore is classified as a small state primarily because of its small territory and the fact that it has much larger neighbors. Nevertheless, its economic power and strategic importance make it a small power, much more than just another small state. Cambodia and Laos are surrounded by much larger neighbors, of which Vietnam is quite dominant. In the insular part of the region, all states are certainly small in comparison to Indonesia.
[9] Bolivia could also be included if the qualitative and relational criteria would be used only (without a regard to its population and size). It is also land-locked and therefore geographically handicapped state, surrounded by larger and more powerful, often in history hostile neighbors (Chile, Peru).
[10] To determine which states should be considered as small in Africa (especially in the Sub-Saharan Africa) was the most difficult task. The quantitative criteria, especially when it comes to economy, are difficult to combine with population and size of most of the African states (especially the LDCs – in many cases these states have a large or at least a significant area, a midsize population and a very small economy due to the extremely low level

			is that these states are much smaller than their neighbors are[11].
	Small states of Western Africa (10)	Benin Burkina Faso Cabo Verde Gambia, the Guinea-Bissau Liberia Mauritania Sao Tome and Principe Sierra Leone Togo	Determining factors were relational criteria. However, population was also taken into account. Mali and Niger were not included because they are primarily weak and not so small states (especially if their territory is counted). However, their weakness is not a direct consequence of their smallness[12].
	Small states of Central Africa (4)	Central African Republic Congo, Republic Equatorial Guinea Gabon	Central African Republic was included because of its small population, weakness and-locked position. Gabon and Equatorial Guinea especially, and Republic of Congo as well, besides their abundant oil reserves, have small populations and much larger neighbors.
	Small states of Eastern Africa (11)	Burundi Comoros Djibouti Eritrea Malawi Mauritius Rwanda Seychelles South Sudan Uganda Zimbabwe	Overall weakness, poor economic performance and the inferior position to their powerful and rather hostile neighbors (Ethiopia and Sudan) were used as the criteria for including the countries of the Horn of Africa. Rwanda and Uganda have strong armies, but they are economically weak. The island states of the Indian ocean included here are beyond any doubt small states.
	Small states of Southern Africa (4)	Botswana Lesotho Namibia Swaziland	Botswana and Namibia were included primarily because of their small population and proximity to the much larger and more powerful South Africa. Botswana is also a land-locked state (as are Lesotho and Swaziland).

of economic development). So the qualitative (political (in) stability, the quality of institutions, the level of political freedom, and degree of corruption etc.) and relational criteria come in. Africa is the continent where in most cases smallness also means weakness (small AND weak states). Nevertheless, most states that are not small by their size and/or population can be also considered as weak. Therefore, the criteria for defining small states are very difficult to apply and can be always disavowed. A land-locked position, which is a feature of a number of small states in Africa, also contributes to their overall weakness, low economic performance, and especially their weakness in the relations with their neighbors. Besides the qualitative criteria, relational criteria were very useful because it was possible to see the position of states towards their neighboring states. The states that had significantly larger (by the criteria of population and the size of the economy) and more powerful neighbors were much easier considered as small.

[11] These neighbors have not shown the aspirations towards these states, and the influence of outer, former colonial/imperial powers (France, the United Kingdom) and the U.S.A. was always stronger throughout the 20th century and now than the influence of the immediate neighbors (Egypt, Algeria). This is a fact that tells us much about the de facto weakness of these neighbors (although larger than the states mentioned) and the involvement of more powerful external states in the region.

[12] Of course, all states of the Western and Central Africa are small in comparison to Nigeria, but a line had to be drawn somewhere between the small and mid-size states in these regions. It goes for South Africa in the southern part of the African continent as well.

Oceania (12)	Small states of Melanesia (4)	Fiji Papua New-Guinea Solomon Islands Vanuatu	The small states of Oceania were primarily defined by their insular (in some cases archipelagic character and its remoteness). All states of Oceania are small and island states and some of them can be also considered as microstates. Papua New Guinea, although much larger than the other small states of Oceania, was included because of its ties and closeness to the region, and it shares many of the small and weak states' characteristics. New Zealand was not included in this research, although its population is only 4.5 million. However, it represents a true giant for almost all of the small island states (and especially microstates) of Oceania[13].
	Small states of Micronesia (5)	Federated States of Micronesia, the; Kiribati Marshall Islands Nauru Palau	
	Small states of Polynesia (3)	Samoa Tonga Tuvalu	

4. CONCLUSION

According to the classification developed for the purpose of this paper, based on the combination of quantitative and relational criteria, small states comprise about two thirds of all the world's states. When we are able to classify small states, then we can study them as groups and make comparative analyses of their behavior and achievements. Except North America and Australia, small states were identified in every large region of the world. In some regions, small state comprise a large proportion or majority of all states, and in Oceania – all states except New Zealand are small. The classification of small states in this paper was made according to their regional affiliation, thereby accentuating different, regionally determined criteria, classifying various states that differ significantly in their quantitative characteristics as small, which confirms the relevance of relational criteria. Further research, which will be developed as a part of the project "Small States in the Multipolar World", on which the co-authors are working, will provide more in-depth findings about the specificities of small states and small economies in the contemporary world.

LITERATURE:

1. A Conference "*Sustaining development in small states in a turbulent global economy?*" (2009). Commonwealth Secretariat, Marlborough House, London.
2. Amstrup, N. (1976). The Perennial Problem of Small States: A Survey of Research Efforts. *Cooperation and Conflict*, 11 (2) 163-182.
3. Appadurai, A. (1996). *Modernity at Large*. University of Minnesota Press, Minneapolis.
4. Bailes, A.J.K. (2009). *Does a Small State Need a Strategy?* Occasional Paper, 2-2009. Centre for Small State Studies Publication Series, University of Iceland, Reykjavik.
5. Campling, L. (2006). A Critical Political Economy of the Small Island Developing State Concept: South-South Cooperation for Small Island Citizens. *Journal of Developing Societies*, 22 (3) 235-285.
6. Charles, E. et al. (1997). *A Future for Small States: Overcoming Vulnerability*. Commonwealth Secretariat, London.

[13] Its only proximate neighboring state other than the small states of Oceania is Australia, which is much large and more populous. Nevertheless, the two states share deep connections and are allies, up to a level of military alliance (ANZUS Pact). The relational criteria and the regional position of New Zealand determined why it was not included among the small states of Oceania.

7. Crowards, T. (2002). Defining the Category of "Small" States. *Journal of International Development*, 14 (2) 143-179.
8. Dahl, R. (1957). The concept of power. *Behavioral Science*, (2) 201-215.
9. Dumienski, Z. (2014). *Microstates as Modern Protected States: Towards a New Definition of Micro-Statehood*. Occasional Paper. Centre Small States Studies, Institute of International Affairs, Reykjavik.
10. East, M.A. (1973). Size and Foreign Policy Behavior: A Test of Two Models. *World Politics*, 25 (4) 556-576.
11. East, M. (1975). Size and Foreign Policy Behaviour: A Test of Two Models. In: Kegley, C.W. et al. (ed.), *International Events and the Comparative Analysis of Foreign Policy*. University of South Carolina Press, Columbia.
12. Evans, G. and J. Newnham (1998). *The Penguin Dictionary of International Relations*. Penguin Books, London.
13. Fox, A.B. (1959). *The Power of Small States*. The University of Chicago Press, Chicago.
14. Greig, A., Turner, M. and P. D'Arcy (2011). The Fragility of Success: Repositioning Mauritian Development in the Twenty-First Century. *Island Studies Journal*, 6 (2) 157-178.
15. Hanggi, H. (1998). Small State as a Third State: Switzerland and Asia-Europe Interregionalism. In: Goetschel, L. (ed.), *Small States Inside and Outside the European Union: Interests and* Policies. Kluwer Academic Publishers, Boston: 79-95.
16. Hanggi, H. and P. Regnier (2000). *The Small State and the Triad: the Case of Switzerland's Foreign Policy towards East Asia*. Study in NRF Policy. National Foreign Policy Program, Bern.
17. Henrikson, A.K. (2001). A Coming "Magnesian" Age? Small States, the Global System, and the International Community, *Geopolitics*, 6 (3) 49-86.
18. Hey, J.A.K. (2003). Introducing Small State Foreign Policy. In: Hey, J.A.K. (ed.), *Small States in World Politics: Explaining Foreign Policy Behavior*. Lynne Rienner, London.
19. Ilyin, M.V. (2008). Vozmozhna li universal'naja tipologija gosudarstv? [Is a universal typology of states possible?], Politicheskaja nauka [Political science], (4).
20. Ilyin, M.V. (2011). Al'ternativnye formy suverennoj gosudarstvennosti [Alternative forms of sovereign statehood], Sravnitel'naja politika [Comparative Politics], 3 (5) 14-17.
21. Jazbec, M. (2001). *The Diplomacies of New Small States: The Case of Slovenia with Some Comparison from the Baltics*. Ashgate Publishing Company, Aldershot.
22. Keohane, R.O. (1969). Lilliputians´ dilemmas: Small states in international politics. *International Organization*, (23 (2) 291-310.
23. Keohane, R.O. and J.S. Nye (1977). *Power and Interdependence: World Politics in Transition*. Little, Brown and Co., Toronto.
24. Kisanga, E. and S. Dancie (2007). (ed.), *Commonwealth Small States, Issues and Prospects*. Commonwealth Secretariat, London.
25. Kurecic, P. (2012). The Problematics of Defining Small States. *Croatian Geographical Bulletin*, 74 (2) 89-112.
26. Laurinavicius, C., Motieka, E., and N. Statkus (2005). Baltijos valstybiu geopolitikos bruozai. XX amzius, Vilnius.
27. Lusa, D. and P. Kurecic (2014). The economic growth of small states and small economies in regional economic organizations and integrations: similarities and differences. *Journal of Education, Culture and Society*, 5 (1) 261-284.
28. Lusa D. and P. Kurecic (2017). Small States and European Integration: Different Paths to Security and Influence. First presented at the GERG Conference, Winnipeg, September 2015 /forthcoming paper/.

29. Maass, M. (2009). The elusive definition of the small state. *International Politics*, 46 (1) 65-83.
30. Magnusdottir, G.L. and B. Thorhallsson (2011). The Nordic States and Agenda-Setting in the European Union: How Do Small States Score? *Stjórnmál & Stjórnsýsla*, 1 (7) 204-226.
31. Mattoo, A. and A. Subramanian (2004). The WTO and the Poorest Countries: The Stark Reality". *World Trade Review*, 3 (3) 385-407.
32. McElroy, J. and W. Bai (2008). The Political Economy of China's Incursion into the Caribbean and Pacific. *Island Studies Journal*, 3 (2) 225-246.
33. Mouritzen, H. and A. Wivel (2005). *The Geopolitics of Euro-Atlantic Integration*. Routledge, London.
34. Neumann, I.B. and S. Gstöhl (2004). *Lilliputians in Gulliver's World? Small States in International Relations*. Working Paper 1-2004. Centre for Small State Studies, Institute of International Affairs. University of Iceland, Reykjavik.
35. Neumann I.B. and S. Gstöhl (2006). Introduction: Lilliputians in Gulliver's World? In: Ingebritsen, C., I.B. Neumann, S. Gstöhl, and J. Beyer (eds.), *Small States in International Relations*. University of Washington Press, Seattle: 3-36.
36. Oest, K.J.N. and A. Wivel (2010). Security, profit or shadow of the past? Explaining the security strategies of microstates. *Cambridge Review of International Affairs*, 23 (3) 429-453.
37. Olafsson, B.G. (1998). *Small States in the Global System. Analysis and Illustrations from the Case of Iceland*. Ashgate, Aldershot.
38. Panke, D. (2008). *The Influence of Small States in the EU: Structural Disadvantages and Counterstrategies*. UCD, Dublin European Institute Working Paper.
39. Panke, D. (2012). Dwarfs in international negotiations: how small states make their voices heard. *Cambridge Review of International Affairs*, 25 (3) 313-328.
40. Ponížilová, M. (2013). The Regional Policy and Power Capabilities of Jordan as a Small State. *Central European Journal of International and Security Studies*, 7 (1) 1-22.
41. Raeymaeker, O.D. (1974). Introduction. In: Raeymaeker, O.D., W. Andries, L. Crollen, H. De Fraye, and F. Govaerts (eds.), *Small Powers in Assignment*. Leuven University Press, Leuven.
42. Rapaport, J., Muteba, E., and J.J. Therattil (1971). *Small States & Territories, Status and Problems*. United Nations Institute for Training and Research Study. Arno Press, New York.
43. Rothstein, R. (1968). *Alliances and Small Powers*. Institute of War and Peace Studies of the School of International Affairs of Columbia University, New York.
44. Rublovskis, R., Šešelgyte, M. and R. Kaljurand (2013). *Defence and Security for the Small: Perspective from the Baltic States*. Centre for Small State Studies, Institute of International Affairs, Reykjavik.
45. Scheldrup, M. (2014). *Lilliputian Choice: Explaining Small State Foreign Policy Variation*. International Affairs Departmental Honors Thesis. University of Colorado, Boulder.
46. Smirnov, V. (2014). The Role of Small Countries in Post-Soviet Territorial Restructuring: The Baltic Case. *Baltic Region*, 4 (22) 42-49.
47. Thorhallsson, B. (2004). *Can small states influence policy in an EU of 25 members?* http://secretariat.efta.int/Web/conference_iceland04/EFTAAtAGlance/socialpartners/04(10(2(1InsideConferencePapers.pdf (Retrieved (25/01/2016).
48. Thorhallsson, B. (2006). The Size of States in the European Union: Theoretical and Conceptual Perspectives. *European Integration*, 28 (1) 7-31.

49. Urbelis, V. (2015). The Relevance and Influence of Small States in NATO and the EU Common Foreign and Security Policy. *Lithuanian Annual Strategic Review*, (13) 61-78.
50. Väyrynen, R. (1997). *Small States: Persisting Despite Doubts. The National Security of Small States in the Changing World*. Frank Cass, London.
51. Wijk, de, R. (2005). Security Implications of NATO Transformation for Smaller Members. In: Setälä M. (ed.), *Small States and NATO*, Atlantic Council of Finland: 17-23.
52. Wivel, A. and B. Thorhallsson (2006). Small states in the European Union: what do we know and what would we like to know. *Cambridge Review of International Affairs*, 19 (4) 651-668.
53. Womack, B. (2004). Asymmetry Theory and China's Concept of Multipolarity. *Journal of Contemporary China*, 13 (39) 351-366.

MANAGEMENT APPROACH TO THE ANALYSIS AND THE FORECASTING OF DEMAND IN THE HOME SAVINGS

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ABSTRACT
In paper "The management approach to the analysis and the forecasting of demand in home savings XY" goal is to demonstrate and define the techniques and methods used in the analysis and forecasting of demand in business home savings XY, and the way in which the information are implemented into business development strategy of the building society. Quality analysis of the current market demand and prediction of future demand is of great importance for the business sustainability. The paper will present analysis techniques that are used in the home savings XY business, the way home savings assesses and predicts demand, and problems that arise in the assessment. In order for management to develop a successful business strategy of home savings XY, market trends and macroeconomic indicators of country (with a focus on demographic trends) must be monitored; also various business analysis reports must be created which is analyzed in this paper.
Keywords*: demand analysis, demand forecasting, home savings, management approach*

1. INTRODUCTION - MANAGERIAL APPROACH IN ENTERPRIES

The individuals and companies are the primary paticipants in the market economy. The individuals possess and control the resources which are of some value to companies because they are the necessary inputs in the manufacturing process. Those resources are usually seen as work force, capital and natural resources. The interaction between individuals and markets is carried out through two different spheres. The first sphere represents market of products where manufactured goods and services are being bought and sold, while the other is the market of factors where the trade of work force, capital and natural resources is happening. These interactions can be shown as a customary look of two sector model of economy. On the left side of the economic system, the individuals, consumers, which are the source of resources needed by manufacturers, are placed. Those resources are, as it has been mentioned before, work force, capital and natural resources. The most of the individuals have the work force which they offer for sale. On the other hand, a smaller number of them possesses capital and natural resources which they can offer to rent out to those who need them. The manufacturers, which can be seen on the right side of the economic system, are those who need the aforementioned resources or manufacturing factors. The most common and the most dominant form of manufacturer is company. The companies combine the acquired manufacturing factors according to demands of applied technology by paying (one-time or as an installment) the certain reimbursement for manufacturing factors, and manufacture the output (products and services) with which they tend to satisfy the needs of consumers.[1] The consumers will pay a certain amount of money for the usage of the products and services, while the manufacturers will, by using that money as the

[1] Santini, I., materials from lecture of economics of control, academic year 2013./2014.

source of income, pay for the manufacturing factors which they use in the process of production which the consumers enable. The interaction between consumers and manufacturers is carried out through two arenas. In the first, the economic one, the market of products, the purchase and sale of products and services is being carried out, whilst in the other, the market of manufacturing factors, the purchase and sale of manufacturing factors is taking place. The sole interaction is happening simultaneously, through two courses. The first course is also known as the real or material course and it stands for the motion of material substance which can be seen as a product or manufacturing factor (full line). The other one is called pecuniary or monetary course and it means the motion of money between the oberved sectors of economy (dotted line) On the market of products, individuals seek for the goods and services in order to satisfy their consumer wishes and needs. The consumers make their demands recognizable by competing or bidding. That shows the levels of their incomes and preferences and it's all condensing in declared price which they are ready to pay for the material goods.[2] The companies, wanting to ears money, respond to those demands by putting the wanted products and services in the market. The manufacturing technology of company and the costs of the manufacturing determine the conditions of the supply of wanted products and services. The interaction between the offer and demand determines the price and amount of sold products and services. The prices payed by consumers for manufactured products of a company takes the form of value or income (monetary course), and delivered amount of products by company stands of the real course for consumers.[3] Contrary to market of products, on which the consumers receive products (real course), and the manufacturers money (monetary course), on the market of manufacturing factors, the situation is all but the same: the consumers receive money (monetary course) and manufacturers take on the resources or manufacturing factors (real course).[4] In other words, in this case, consumers offer their services (work force, capital and natural resources) for which they gain reimbursement in the form of salary and manufacturers show their need for the services and, by using services provided by consumers, the manufacturers pay a certain reimbursement (wages, lease etc.). In the market economy shown by this circular course of movement, individuals and companies are deeply interdependent, they are participant who need each other. The work force of individual has no value until a company comes along willing to pay for it. However, it isn't profitable for company to invest in manufacture unless they are able to sell their product – or, to simplify – if there isn't a sufficient demand for that product. As a result of that, all the participants have their motives to offer something that someone else wants and is ready to pay for it, so all the participants achieve economic benefits. If someone doesn't achieve those benefits from participating in the market economy, they can retreat from that participation. It is the use that occurs for individual participants that represent the essence and initiator of the market economy. In the circular course of economic value, companies play an extremely important role. A Nobel Prize winner, Ronald Coese, was first to answer the question of why do enterprises exist. As he put it, they exist because the activities of transactions can be done cheaper inside an enterprise than outside of it. An enterprise generates lower expenses because of two reasons: **1**. the reason why the expenses are lower inside an enterprise is the fact that the use of price mechanism costs money. While using the price mechanism, at least 3 kinds of expenses emerge: I. the expenses of gathering information about the source by which the transaction appears. II. negotiating expenses (making contracts) III. the expenses of implementing contracts. If one was to add all these expenses, he would see that they are sizeable and would conclude that it is better to make all of these expenses by making more transactions simultaneously, and not only for one. **2**. the reason why the expenses are lower in an enterprise

[2] Santini, I., academic year 2013./2014., op.cit.
[3] Santini, I., academic year 2013./2014., op.cit.
[4] Santini, I., academic year 2013./2014., op.cit.

is the government regulation. A state taxes transactions between enterprises, so that expense is removed if the transactions are being made inside an enterprise.[5] The critics of Coeses view ask a legitimate question – Why don't the transactions happen inside merely one enterprise? The answer can be found in two reasons: 1. reason – The principle is that first the transactions with lower expenses are interiorised and then those with the higher ones. It is possible as it is legitimate that sometimes the expenses of internal transactions are tying with or are even higher than the expenses of external transactions – the expenses of use of price mechanism. 2. reason – Enterprises don't grow indefinitely because of decline od managerial efficiency.[6] The logic of uniting the transactions is done by, firstly, internalizing the transactions which result with the biggest savings. Then it is time to internazile the others, which are conducted with relatively lower and lower savings. It is inevitable that sometimes the costs of making internal transactions are the same as the cots of externaly made transactions. The boundary of the growth of a company, generally speaking, is found in the managerial capability which is limited as it is being made following the law of declining efficiency. The phenomenon of decentralisation inside the companies highly progressed in the field of internalization of transactions, is the undoubtable signal to reduce the declining managerial efficiency.[7] After we've studied the operation of economic course of activity and realized the importance of company inside that course, or to say, the impact of management on the company's businesses, in continuation of the chapter, we will get to know the term of managerial economics and determine which are the tasks and goals that management must complete in order to keep the management of the company and increase the profit which is rightly considered to be the heart of the managerial economics.

1.1. The term of managerial economics

Managerial economics is the youngest of all the social sciences, but it has a great significance in organization making business. The primary function of a manager inside the business organization is making decisions and planning of managerial. The managerial economics can be divided into two branches, the economy and managing.[8] Economy for managers regards the application of economic theory and the method of analysis of science about decision making in order to find out the most efficient way for an organization to achieve its intentions or goals.[9] The problems of business decision making appear inside of every organization – whether we talk about enterprise, non-profit organization (for instance hospital of university) or a government organization, when it seeks to ahieve some purpose or a goal with certain limitations. The goals and limitations can be distinguished depending on the case, but the core process of decision making is the same.[10] For example, hospitals will cure everyone who needs a medical assistance, regardless to increasing lack of doctors, the rest of medicinal staff, beds, equipment and financial means. An organization can solve its problems by managerial decision making with application of economic theory and instruments of science about decision making.[11] The economic theory refers to microeconomy and macroeconomy, while the sciences about decision making use the means of mathematical economy and econometry, and are used to find the optimal solution for problem of business decision making. What used to be a unique science, the economic science, split into two immense science fields: macroeconomic on the

[5] Santini, I., academic year 2013./2014., op.cit.
[6] Santini, I., academic year 2013./2014., op.cit.
[7] Santini, I., academic year 2013./2014., op.cit.
[8] Bhat, M.S., Rau, A.V.: Managerial Economics and Financial Analysis, BS Publications, 2008., page 1.
[9] Salvatore, D.: Ekonomija za menedžere u svjetskoj privredi, MATE, Zagreb, 1994., page. 4.
[10] Salvatore, D., (1994.) op. cit., str. 4.

[11] Salvatore, D., (1994.) op. cit., str. 5

one, and microeconomic on the other side. Each of those particular sciences, however, refers to the same object of studying, economic system, but from different perspectives. The managerial economic is defined as application of methodology of economic theory on to problems of decision making inside an enterprise. It studies the regularities and legality which manager must follow while making decisions about making profit.[12] The economy, as a complex scientific discipline it is, had to split to two independent, but closely related, segments: macroeconomics and microeconimics. Macroeconomics studies the economy as a whole, focusing on to homogeneous variables as are gross product, absolute level of price, employment, inflation etc. All of those aggregates are studied by the macroeconomics, not only as separate phenomenons, but as phenomenons in mutual interaction, so the image of efficiency of the functioning of economy can bee seen as a whole. The other segment of economics, microeconomics, focuses on studying of activity and behavior of individual economic units, such as consumers and companies. In the first units, the demands of consumers are analyzed, and in the second, the decisions regarding manufacturing, offers and prices of the companies – all in the context of market structure inside which they are active.

From the perspective of economic unit, microeconomics analyzes the conditions and finds determined partial analysis, while seeking to question if, and under which conditions, the possibility of making general balance exists.[13]

According to picture 3., the managerial economics is a derivative of microeconomics. A small difference between managerial economics and microeconomics is often emphasized, which can be seen through understanding the managerial economics as an application of microeconomical tools and techniques inside the process of decision making inside companies. The adjective „managerial“ must accentuate the manager, the leading person (or a team) inside a company who is in charge of making choices, or decision making.[14] Microeconomics studies the interaction of a company and market, but not as good and convincing as the industrial organization does the job. Keepig in mind that the managers of companies make specific decisions, which mean that they must take into account more details than microeconomics would, it is logical that more helpful tools and techniques are found inside an industrial organization than inside the ancient microeconomics. So, relying on accomplishments of industrial organization, managers can be more certain in the results they want to achieve by decision making.[15] The managerial economy applies the most useful terms and theories from the microeconomy and industrial organization in order to create systematic, logical way of analyzing business practice and tactics to maximize profit and it develops a strategy for longterm sustainability of business making and profit.[16] There are attainments of science which are not economic, but are nevertheless extremely important in the process of making management decisions, such as scientific achievements about making decisions and quantitative methods inside decision making which can be of a great use to management economics. The methods of assessment of demand, for example, used for foresight, are not on of the tools and techniques of microeconomics, but are of immense help to a manager. The manager who will, with the standard tools and techniques of microeconomic, in the process of making decision, use the most developed and sophisticated methods of decision making, can

[12] Santini, I., academic year 2013./2014., op.cit
[13] Santini, I., academic year 2013./2014., op.cit
[14] Santini, I., academic year 2013./2014., op.cit
[15] Santini, I., academic year 2013./2014., op.cit.
[16] Thomas, C., Maurice, C.: Managerial economics: Foundations of Business Analysis and Strategy, 12. edition, The McGraw-Hill Education, SAD, 2015. page. 31.

be certain that he will be making decisions of great quality and certainty.[17] There will be more on methods of assessment and foresight of demand in the third part of this thesis. The managerial economics represents a very interesting and quite significant part inside the business making of every company. It connects the economical concepts with quantitative methods with the purpose of advancement of making manager decisions. The managerial economics uses tools which directly help the manager with decision making; it analyzes the processes through which a manager uses economic theory with a goal of solving complex business problems, so that he could afterwards make a rational decision and achieve the defined goals of the company.

1.2. The tasks of the managerial economics

The managerial economics has two tasks. The first one is to enable the manager to evaluate the existing resource allocation and the other one is to help a manager to react accordingly to the signals from economic environment.[18] While solving the aforementioned tasks, a manager uses tools and techniques such as optimization, making decisions in conditions of uncertainty, as well as the theory of games. It is highly important for manager to possess all the relevant information, in order to make the decision making timely and valid and to decrease the possibility of a mistake – all with the main goal in mind – maximization of profit. The fact that the manager of the company has to make a decision inside variable and unpredictable environment implies that there is a lack of information – so to say – he doesn't own the complete information. Being aware of that, he can engage inthe direction of completion of information in order to ease his decision making process. There are a lot of ways to carry out the completion of information. He can, for example, question his own costumers, or seek an advice from consultants. The results of the research can help him gain the needed information. Furthermore, he can decide to construct simple or complex models which can be solved through computer.[19] The process of completion of information, of course, isn't free of charge. It generates costs of a certain hight which are called the expenses of information and include the money outlays - which are made due to the need of a manager to transform the data to the state that is appropriate for manager decision making. But there is a number of benefits the completion of information carries as well. It is called the value of information. The value of information can be defined as a difference between the values of what one would certainly gain with the completion of information before the decision making; and what one would gain relying on the information available now, or the lesser number of complete current information. The existing extra value, which is gained from the process of completion of information, stands for a limit of expenses of information. A manager will not take on the completion of information if the costs of information are larger than the extra value he can gain by the usage of those information. More often than seldom, it happens that the value of information indeed is greater than the expenses of information so it does not surprise that the activity of completion of information in companies is developing more and more.[20] The information are crucial in the process of decision making as they are when the tasks of management economics are being solved. Without them, the management could not evaluate the existing allocation of resources, neither could it appropriately react to the signals from the economic environment. The theory of game analyzes the way on which two or more players or groups pick the activity or strategies which together influence every participant.[21] Keeping in mind that there situations happen in economic sphere as well, it is logical that the theory of game found its use within economic analysis in general,

[17] Santini, I., akademska godina 2013./2014., op.cit
[18] Santini, I., akademska godina 2013./2014., op.cit
[19] Santini, I., academic year 2013./2014., op.cit
[20] Santini, I., academic year 2013./2014., op.cit
[21] Samuelson, P., Nordhaus, W.: Economics, 19. edition, The McGraw-Hill Education, SAD, 2009., page 195.

as well as in management economics.[22] The standard assumptions of theories of games are: (1) there is an exactly defined number of outcomes (gains) for every individual player; (2) the individual players have exactly defined preferences which, according to vonNeumann and Morgenstern, lead to maximizing the expected use and (3) the players have the unlimited capability to conclude and calculate, so to say, we are talking about a perfect player. The reality of the first assumption is very questionable, which goes for the third assumption as well. The one in between, however, is somewhat less questionable, for example, oligopolists can maximize the expected profit, but that doesn't mean that all the oligopolist behave that way as well. In spite of it, although some of the unlikely assumptions are adopted, they do largely direct and make the analysis itself easier.[23] The participants of the game want to find the optimal strategy, keeping in mind that their behavior, as well as the behavior of other participants, effects on the outcome of game. That is why the participants cannot think only of themselves and the maximization of profit, they are, instead, dependent of one another while they make decisions about the implementation of strategy.

1.3. The goals of management economics

Managers in companies do one of their most important activities – decision making – regarding a certain goal. It is a general opinion that the primary goal of a company is maximization of profit, so the managers make all of their decisions in order to kame that goal. Profit is quite a simple term. It stands for the difference between income that a company makes with the sold products and the expense that were necessary for the amount of products sold.[24] In other words, the most important goal which management needs to achieve is to maximize profit, so we are free to conclude that profit indeed is the heart of the management economics. Profit is what is left when we put together all the incomes and the expenses. When we talk about the income, there is no confusion, it is calculated by multiplying the amount sold and the price achieved. The expenses, however, can be explicit and implicit. Here we can find the difference of value of profit – talking from the accountant and economic perspective. The more detailed description of the differences between them will be explained below. The outlays on the factors of manufacturing: rent, raw materials, work force, borrowed capital etc. are simply called – the explicit expenses.[25] All of them are noted in business books; we find them in the accountant, and profit is what is left when we subtract the income and explicit expenses. The phenomenon of implicit taxes occurs because companies make businesses inside the system of the market economy. Everything a company manufactures, regardless of the existence of the records of usage, represents sacrified values, and there by – the expenses. The concept of implicit expenses requires of the managers to take those kind of expenses into the account while making their calculations.[26] In orded to better understand the term of implicit expene, we will now explain it on the example of an owner of a company who doesn't pay off his own salary. Considering that the owner doesn't pay himself salary for his own work, from the perspective of the explicit expenses, the expense of his salary does not exist for it hasn't been noted inside the accounting. On the other hand, looking from the perspective of the implicit expenses, it does exist. That expense is called the opportunity expense and it represents the value of salary which, in our example, the owner of company would earn by working somewhere else, and that expense would, in that case, be noted inside the business books. If wee know what amount of money did the owner receive on other working place for the same job, we are at the hight of an implicit

[22] Santini, I., academic year 2013./2014., op.cit
[23] Santini, I., academic year 2013./2014., op.cit
[24] Santini, I., academic year 2013./2014., op.cit
[25] Santini, I., academic year 2013./2014., op.cit
[26] Santini, I., academic year 2013./2014., op.cit

expense of the owner of the company who doesn't disburse his salary. This short consideration of the explicit and implicit expenses has a goal – to impose the economic category of expenses. The economic expenses represent the sum of explicit and implicit expenses. Any kind of oversight in the establishment of the expenses shall result with a deviation from an economic profit.[27] The difference between the coverage of the expenses comes down to this – economic profit gives the managers very different signals. It is important to point out that there is a need to establish the relevant expense for a decision, and that can differ from the theoretical categorization of the economic expenses. A manager of a company must decide which implicit expenses are relevant and which have to be included into calculation of the economic profit. The economic profit can come out of one or a combination of these sources: taking up the risk, financial deviation, monopoly power, introduction of inovations or manager efficiency.[28] According to the theory of the explanation of profit of risk, enterprises demand returns of an above average size (economic profit), so that they could enter the fields above average risks (for example, searching for oil).[29] Frictional theory of profit emphasizes that profits emerge because of the friction or deviation from a long term balance. That means that in a long term, perfectly competitive balance, enterprises want to achieve merely a normal return (addapted regarding the risk) or a zero (economic) profit.[30] However, the enterprises are probably not always inside a long term balance, o they cannot achieve profit or bear losses. Often, when those kinds of losses appear, some of the enterprises leave the industry, which leads to larger prices and elimination of the losers. Regarding monopoly profit, it often occurs that monopoly enterprises lower the manufacturing and seek bigger prices that that is the case in a perfect competition – in that way, they are making money. Due to a limited entrance inside the industry, those enterprises can continue to make long term profit. The strength of monopoly can appear because an enterprise has and cotrols the entire offer of raw materials that are necessary for the production of some commodity, because of the economies of extent, because of the ownership of the patent or because of the government restrictions that prohibit competition.[31] The innovation theory of profit claims that (economic) profit is an award for introducing a succesful inovation.[32] The most prominent example is Steve Jobs who became a millionaire within a few years by inducing Apple Cumpoter back in 1977. The theory of profit, based on manager efficiency, depends on observation of enterprises which have, with an above average efficiency, accomplished above average incomes and (economic) profit, while an average enterprise had a long term tendency to achieve merely normal return to their investments.[33] In the economy of a free market, like ours, profit serves a crucial cause. High profits are a sign that consumers want more products of that industry. They give incentives to the industry so that it can expand the production and that more enterprises can enter the industry long term. For an enterprise of an above average efficiency, profits represent a reward for a bigger efficiency. On the other hand, lower profits or wastages are a sign that the consumers want less of those products or that the methods of production are not effective.[34] So, the profits signal an enterprise to make their efficiency bigger or that they should produce less of the products or even leave the industry all together and by doing that make room for some other, more efficient enterprises. By doing so,

[27] Santini, I., academic year 2013./2014., op.cit.
[28] Salvatore, D., (1994.) op. cit.,page. 21.
[29] Salvatore, D., (1994.) op. cit., page 16.
[30] Salvatore, D., (1994.) op. cit., page 16.
[31] Salvatore, D., (1994.) op. cit., page 16.
[32] Salvatore, D., (1994.) op. cit., page 16.
[33] Salvatore, D., (1994.) op. cit., page 16.
[34] Salvatore, D., (1994.) op. cit., page 17.

the profits show the crucial signs for conversion of social resources in order to evoke changes in tastes and demands for the goods as the time goes by.

2. THE FUNDAMENTAL FEATURES OF MARKET OF HOME SAVING BANKS

The contracting models of home saving banks have been developed so that they could make it easier to finance housing needs of citizens during the end of 18. century and they haven't stopped to develop since, in accordance with the evolution of society and current fiscal and housing politics. A lot of countries have chosen the development of contract model of the housing finance (housing societies or building society), including the Republic of Croatia – which introduced the Law of home savings and state deriving of home savings on the October 20th 1997., which became formal on the 1st of January, 1998.[35] Today, there are five of home savings doing business in Croatia, four of which are owned by foreigners (directly or indirectly), while only one is in Croatian ownership. Contrary to the assets of banks, the assets of home savings slightly increased during 2015., but their share was stil quite small within the total assets of the credit institutions – a total of 1,99% (on the 31st of March 2016.[36]). Home savings in Croatia are doing businesses accordant to the Law of banks and other regulations of monetary and public authorities which regulate the management of banks and savings, and their management is under surveillance of Croatian national bank, the Ministry of the finances and the State revision office.[37]

2.1. The indicators of the management of home savings

Banks are very specific in relation to other economic subjects. Because of that, the classification of indicators is different for banks than for the rest of economic subjects.[38] In the continuing part of the thesis, we will show the review of indicators of management with the existing home savings in Croatia, whose yearly financial reports are publicly published on the Internet sites of the savings and on the sited of Financial agency. The indicators of business are collected by reading the financial reports for 2015.

The classification od financial indicators for banks:

1) Indicators of relations in the bank's balance sheet
   a) Indicators of bank's liquidity
   b) Indicators of bank's indebtedness
   c) Indicator of investment in fixed assets
2) Indicators relation in the income statement
   a) Indicators of economy
   b) Indicators of non interest bank activities
3) Profitability ratios
   a) Indicators of profitability
   b) Indicators margin an average interest rates
4) The investment indicators[39]

[35] Tepuš, M.M.: Analiza poslovanja stambenih štedionica: Rezultat drugoga HNB-ova projekta anketiranja stambenih štedionica, HNB, 2006., str. 1.
[36] HNB: Privremeni nerevidirani podaci za kreditne institucije, na dan 31. ožujka 2016.
[37] Tepuš, M.M.: Analiza modela stambenog financiranja u Republici Hrvatskoj, HNB, 2004., str. 16.

[38] Žager, K., Žager, L., Sever, S., Mamić Sačer, I.: Analiza financijskih izvještaja, Masmedia, Zagreb, 2008., str.298.
[39] Žager, K., et.al. 2008., op.cit., page 299.

Remark: All the amounts used in the calculation of the indicators in the table are expressed in thousands of kuna's. Balance is the basic financial statement showing the balance of assets and liabilities on a certain day. Based on data from the balance sheet, the indicators are formed and they are showing the relations in the balance sheet of a bank. These indicators measure the security of business, which is nothing but the financial situation. Liquidity indicators measure the ability of companies to pay their overdue payables. When talking about the liquidity of banks as specific institutions, liquidity is usually defined as the ability to generate the necessary cash primarily using readily cashable assets of the bank, at a reasonable cost and in a time when it is needed, whether for asset growth, either to settle the obligations. The ratio of loans and deposits received is an important indicator of liquidity. The higher the ratio, the lower the liquidity of banks.[40] From the table „Liquidity ratio in savings", we can see that the indicator of the relations of the given credits and the received deposit is the smallest in PBZ home savings, while the biggest one is in Wüstenrot home savings. We can conclude that in the given day, PBZ home saving was the most liquid one, followed by HPB, Raiffeisen, Prva stambena saving and lastly – Wüstenrot.

Table 1. Liquidity ratio in savings

Liquidity ratio in savings		
	numerator/denominator	indicator
Home saving	Given credits / Received deposits	**The relation of given credits and received deposits**
HPB home saving	143.198 kn / 242.820 kn	0,5897
Prva home saving	1.591.369 kn / 2.215.198 kn	0,7184
PBZ home saving	459.404 kn / 1.340.667 kn	**0,3427**
Raiffeisen home saving	826.203 kn / 1.155.067 kn	0,7153
Wüstenrot home saving	1.269.414 kn / 1.695.322 kn	0,7488

Source: author's work

The gearing ratios measure how the bank finances itself from external sources, and how much from the capital. The ratio of capital and total assets ratio tells us the amount of assets financed by the capital. This indicator is also known as the coefficient of self-financing and is classified in the group of the gearing ratio. In the context of the gearing ratio, the higher the ratio is, the bank makes less debt, resulting in less risk for a bank when it does business. In addition to capital as the most stable source of funding, funding sources are also appointments, and in this context the indicator can be defined t show the relations of the total liabilities and total assets, better known as the gearing ratios. The bigger their gearing ration, he bigger the indebtness of bank. As the overall asset is financed with the capital and obligations, the sum of indicators of relations of capital and the overall assets and the relations of the obligations and the overall assets is precisely 100%. Therefore, according to the table „Indicators of indebtness in savings", we can conclude that the biggest coefficient of their own financing belongs to the PBZ home saving. Out of all of the savings in Croatia, PBZ home saving finances itself mostly from its own capital. That being said, PBZ home aving also has the smallest indebt coefficient, while Wüstenrot home saving is at the bottom, it has the biggest debt considering the biggest coefficient of debt.

[40] Žager, K., et.al. 2008., op.cit., page 301.

Table 2. Indicators of indebtness in savings

Indicators of indebtness in savings				
	numerator/denominator	indicator	numerator/denominator	indicator
Home saving	capital / Overall assets	**Relation of capital and overall assets**	Total liabilities / Overall assets	**Relations between total liabilities and overall assets**
HPB home saving	39.416 kn / 292.096 kn	0,1349	252.617 kn / 292.096 kn	0,8648
Prva home saving	297.246 kn / 2.607.420 kn	0,1140	2.310.174 kn / 2.607.420 kn	0,8860
PBZ home saving	246.645 kn / 1.600.303 kn	**0,1541**	1.353.658 kn / 1.600.303 kn	**0,8459**
Raiffeisen home saving	87.174 kn / 1.322.570 kn	0,0659	1.235.396 kn / 1.322.570 kn	0,9341
Wüstenrot home saving	106.336 kn / 1.942.298 kn	0,0547	1.835.962 kn / 1.942.298 kn	0,9453

Source: author's work

Under the indicators of relations in the balance sheet, the indicators of investments in fix assets are shown. Coefficient of investment in fixed assets shows how much of the capital is immobilized into fixed asset, in other words, how much of the capital is free for the financing of a bank placement.[41] According to the table „Indicator of investment in fixed assets“, the biggest coefficient of investment in fixed asset belongs to Wüstenrot home saving and Raiffeisen home saving. Knowing that the other three home savings have considerably lower coefficients, we can conclude that Wüstenrot and Raiffeisen home savings have a bigger coefficient of investment in fixed assets because the sale of services is being done in offices which are financed from the budget of the savings, while the rest of them (HPB, Prva and PBZ home savings) do their sales in the spaces that belong to the offices of banks (HPB, Zagrebačka bank and PBZ), where the business of savings is being done.

Table 3. Indicator of investment in fixed assets

Indicator of investment in fixed assets		
	numerator/denominator	indicator
Home saving	fixed asset / capital	**Coefficient of investment in fixed asset**
HPB home saving	39 kn / 39.416 kn	0,0010
Prva home saving	639 kn / 297.246 kn	0,0021
PBZ home saving	149 kn / 246.645 kn	0,0006
Raiffeisen home saving	4.112 kn / 87.174 kn	0,0472
Wüstenrot home saving	5.223 kn / 106.336 kn	**0,0491**

Source: author's work

[41] Žager, K., et.al. 2008., op.cit., page 302.

The calculation of gains and losses shows efficacy of banks management. So, the calculation process of the indicators which are based on the calculation of gains and losses is primarily a directed measurement of the efficacy of the managerial. It is usually pointed out that economy represents relations of cost-income ratio. So, economy shows how the revenue realized per unit of expenditure. Thus, the fundamental principle that applies here is to achieve maximum revenue with minimum expenditure. The most common indicator of the economy overall business, which is calculated as the ratio of total revenue and total expenditure. Besides, it is possible to calculate a range of partial indicators of economy. The ratio of total income and operating costs is a key indicator under consideration in relation to the calculation of gains and losses. For the bank, it is good that the value of this indicator as big as possible. The relation of the cost of employees and total revenue is an indicator that banks often follow in order to control the costs of employees. The cost of bank's staff represent a significant item in total costs and it is therefore interesting to follow the movement of this indicator at a given time, although the ratio is more important for internal analysis of the financial statements of the bank. Based on everything written above, and according to the table „Indicators of cost-effectiveness of the savings", we can conclude that the biggest cost-effectiveness of the overall managerial belongs to PBZ home saving. We can aslo conclude that the rest of the savings have the value of the same indicators on a satisfying level. When we talk about interests of income and expenses, we can say that all of the savings have an approximate value of the indicator, but in this case, the biggest one belongs to Wüstenrot home saving. The ratio of total income and expenses as a key indicator under consideration in respect of the income statement is the largest at Prva home saving. Prva home saving also has the largest value and the relationship of total revenue and the cost of staff, while at HPB home saving, these two indicators are the smallest, but it still has big enough total revenues to cover the expenses.

Table 4. Indicators of cost-effectiveness of the savings

Indicators of cost-effectiveness of the savings				
Home saving	**Cost-effectiveness of the overall management**	**The ratio of interest income and expenses**	**The ratio of interest income and expenses**	**The ratio of overall interests and the expenses of the staff**
HPB home saving	1,0388	1,6608	2,0621	3,9471
Prva home saving	1,3110	1,5676	**5,9208**	**14,3766**
PBZ home saving	**1,3379**	1,7198	5,1402	13,4751
Raiffeisen home saving	1,0319	1,6645	2,3530	6,1682
Wüstenrot home saving	1,0623	**1,7940**	2,2606	4,5802

Source: author's work

As the non-interest incomes encompass a wide range of service and in order to resolve bank activity in the field of non-interest income more clearly, the fee incomes and commissions within non-interest incomes are defined separately, while all of the other non-interest incomes are classified as non-interest incomes. Bank that has these indicators above the average of the

banking system is considered to be a modern bank for it offers a diversified and varied services to its customers and based on it the bank charges a fee or gives commission. In the conditions of developed financial marker, where there is a diversity of financial institutions, the banks no longer differ in interest rates – they should seek other services to make them different from their competitors.[42] According to this, HPB home saving stands out from the value of the indicator share of net income fee in the total income from other savings banks and from the average value of the same indicator in the system of home savings (value of average is 0,1073). Also, Wüstenrot home saving is beyond the aforementioned average as well.

Table 5. Indicators of non-interest activities in the savings

Indicators of non-interest activities in the savings		
	numerator/denominator	indicator
Home saving	net income of reimbursement (commission) / Total income	**share of net fee income in total income**
HPB home saving	4.123 kn / 17.225 kn	**0,2394**
Prva stambena štedionica	11.493 kn / 124.099 kn	0,0926
PBZ home saving	2.541 kn / 78.115 kn	0,0325
Raiffeisen home saving	4.204 kn / 77.207 kn	0,0545
Wüstenrot home saving	14.148 kn / 120.300 kn	0,1176

Source: author's work

The indicators of profitability measure the return of invested capital, which is often considered the highest control efficiency. In the context of profitability, it is possible to distinguish two groups of indicators 1) indicators of rentability – or the true indicators of profitability and 2) indicators margin and average interest rates, which are not the real profitability indicators, but one of their functions is to increase profitability. These indicators are usually expressed as percentages. The rentability (profitability) of capital is a typical indicator that comprises at large amount of information. This indicator is represented by the ratio of net profit and capital, and is also an indicator of increasing shareholder value. It tells us how many units of profit are accomplished for the unit of capital. As the bank has a small share of the total capital in total liabilities, the return on equity will be higher than the profitability of assets. An important indicator to consider within the indicators of profitability is rentability (profitability) of asset, or the profitability of the bank's assets, which is defined by the ratio of profit before tax and total assets.[43] (IROE) Indicator of return on equity stands for the power of the saving's earnings. In other words, it is an indicator that shows how much profit a saving can gain from a 100 kuna's of invested capital. Prva home saving has the maximal value (among the observed savings) and for a 100 kuna's of the invested capital, it gains 7 kuna's and 92 Lipa's of net profit. (IROA) The indicator of return on assets measures the amount of the earnings a of home saving and it shows how many Lipa's did a saving earn for every kuna of asset. The biggest profitability of asset belongs to PBZ home saving which earns 1 kuna and 23 Lipa's for every kuna of asset.

[42] Žager, K., et.al. 2008., op.cit., str. 304.
[43] Žager, K., et.al. 2008., op.cit., page 305.

Table 6. The indicators of profitability of home savings

The indicators of profitability of home savings				
	numerator/denominator	indicator	numerator/denominator	indicator
Home saving	net profit / capital	**rentability (profitability) of capital (IROE)**	profit before tax / total asset	**rentability (profitability) of asset (IROA)**
HPB home saving	405 kn / 39.416 kn	1,03%	642 kn / 292.096 kn	0,22%
Prva home saving	23.543 kn / 297.246 kn	**7,92%**	29.442 kn / 2.607.420 kn	1,13%
PBZ home saving	15.769 kn / 246.645 kn	6,39%	19.727 kn / 1.600.303 kn	**1,23%**
Raiffeisen home saving	2.390 kn / 87.174 kn	2,74%	2.390 kn / 1.322.570 kn	0,18%
Wüstenrot home saving	5.437 kn / 106.336 kn	5,11%	7.058 kn / 1.942.298 kn	0,36%

Source: author's work

Interest margin or net interest margin is and indicator that makes a ratio between the interest income, expense and total asset. When talking about the interest margin and net interest margin, one should keep in mind the factors on which it depends. Firstly, it depends on the financial system of a country, the size of the bank and its position relative to the competition, the environment in which the bank operates, the size of assets etc. In the context of indicators margins, indicators of margins and fee margin operating expenses are of a great importance. It is quite clear that the situation of the bank is more favorable when margin interest and margin and fee are bigger, but on the contrary, in the context of success, it is better for profitability when the margin of operating costs as low as possible. It's usually pointed out that a well organized, modern bank should manage its businesses in the way that interest margin covers the margin of operating expenses, whilst the margin fee should eliminate the result of bank.[44] According to the results of financial reports for 2015., Wüstenrot home saving has the biggest margin of interest (2,14%), the biggest margin fee belongs to HPB home saving (1,41%), while Prva home saving has the smallest margin of operating expenses. Regardless, only Prva home saving and PBZ home saving can cover the margin of the operative expenses with the margin of interest, which mean that those two home savings are well organized.

Table following on the next page

[44] Žager, K., et.al. 2008., op.cit., page 306.

Table 7. The indicators of margin and average interest rates

The indicators of margin and average interest rates						
	numerator/ denominator	indicator	numerator/ denominator	indicator	numerator/ denominator	indicator
Home saving	net interest income / total asset	**margin of interest (interest margin)**	net fee / total asset	**margin fee**	Operational expenses / total asset	**margin of operational costs**
HPB home saving	4.565 kn / 292.096 kn	1,56%	4.123 kn / 292.096 kn	**1,41%**	7.511 kn / 292.096 kn	2,57%
Prva home saving	39.919 kn / 2.607.420 kn	1,53%	11.493 kn / 2.607.420 kn	0,44%	20.960 kn / 2.607.420 kn	**0,80%**
PBZ home saving	30.304 kn / 1.600.303 kn	1,89%	2.541 kn / 1.600.303 kn	0,16%	15.197 kn / 1.600.303 kn	0,95%
Raiffeisen home saving	26.015 kn / 1.322.570 kn	1,97%	4.204 kn / 1.322.570 kn	0,32%	32.812 kn / 1.322.570 kn	2,48%
Wöstenrot home saving	41.508 kn / 1.942.298 kn	**2,14%**	14.148 kn / 1.942.298 kn	0,73%	53.327 kn / 1.942.298 kn	2,75%

Source: author's work

With the help of indicators of investment, the efficacy of investment into the stocks of enterprise is measured. These indicators observe the bank's management from the perspective of an investor – the people who invested into the stock of bank. The indicators of investment are determined on the same way for banks as are for economic operators from the real sector. Besides the data from financial reports, the data about stocks, especially the number of stocks and their market value is needed.[45] As the observed home savings aren't on the Zagreb's stock market, and the market prices of indicators of investments are unknown, only the profit per stock has been calculated. The biggest profit per stock was achieved by Prva home saving, while the smallest one belongs to HPB home saving.

Table 8. Indicators of investment

Indicators of investment		
	numerator/denominator	indicator
Home saving	net profit / number of stocks	**gain (profit) per stock (PPS)**
HPB home saving	405.000 kn / 40.000	10,13 kn
Prva home saving	23.543.000 kn / 8.000	2.942,88 kn
PBZ home saving	15.769.000 kn / 1.150.000	13,71 kn
Raiffeisen home saving	2.390.000 kn / 18.000	132,78 kn
Wöstenrot home saving	5.437.000 kn / 31.693	171,55 kn

Source: author's work

[45] Žager, K., et.al. 2008., op.cit., page 307.

Based on all of the indicators, we can conclude that PBZ and Prva home saving are the best operators in the Republic of Croatia, which doesn't struck as a surprise, taking into account that they operate inside PBZ bank and Zagrebačka bank, which are one of the top leading banks in Croatia, judging by the sizes of the earned assets and by the achieved profit in 2015.

3. THE ANALYSIS AND FORESIGHT OF DEMAND IN XY HOME SAVING

3.1. The analysis and diagnosis of the general state in XY home saving

Home saving XY operates on the teritory of the Republic of Croatia and is one of the five savings. It is 100% in the foreign ownership. The sale of the services is done through it's own offices and business partners. Except of the services of lending and saving, the XY home saving can offer some of the services of the business partners, such as life insurance, insurance of real estates and cash loans. The economic picture of Croatia greatly influences the operations of the home saving XY. That is the cause because the macroeconomic indicators directly influence the possibility of the savings among the citizens, as they do the movements in interest rates which connect the increasing tendency of reduction – the credits as well as the savings. After six years of the economical decline in the row, the year 2015. marked the beginning of a slight recovery of the Croatian economy. Gross domestic product recorder an increase of 1.6%. on an annual basis. The recovery was mostly caused by growth in domestic private consumption due to changes in income tax and reduced energy prices. The record number of tourists in the season of 2015. helped as well and so did the increased export of products and services. The registered unemployment rate decreased by 1.8% and at the end of the year, it was 17.6%, however this decrease was partially caused by significant outflow of labor force to other EU countries, and the negative demographic trends – the aging of the population. Despite the slight signs of recovery, the Republic of Croatia remains faced with significant macroeconomic imbalances, which are primarily related to the high level of public debt and deficits and relatively low levels of investment. The lack of structural reforms and fiscal consolidation has resulted in a lowering of the credit rating, resulting in a high risk premium of the country.

The European Central Bank implemented a policy of quantitative easing, ensuring a high level of liquidity in the market, which resulted in a reduction of benchmark interest rates on loans and deposits. Despite of it, credit activity on the level of sectors has slowed, and in combination with the trend of further deleveraging of the population, total sum of mortgage loans on the market fell by 3.4% and amounted to 55.8 billion kuna's. The decrease in the total amount of housing loans was partially affected by the conversion of the loans indexed to the Swiss franc. This trend of deleveraging population was manifested by decreasing the overall level of gross loans of the XY savings bank to 2.07% on an annual basis. The legal framework for home savings was stabilized by introducing variable state incentives in 2015 (by the decision of the Government of the RH from 2014.) in the hight of 4,9% on the amount of payed deposits to the maximan amount of 5 thousend kuna's. For the year 2016., DPS will amount to 4.1%, which gave the home savings an attractive means to restore the customer's confidence in the system of home savings, which should allow a long-term positive and stable operations. In order to ensure the long-term stability of operations, the XY home saving concluded (Decemer 2015.) an agreement on the prolongation of hybrid instruments by 2025. with a related company, which expressed confidence of shareholders in the current work of the Board. XY savings Bank continues to implement a long-term strategy of the conservative approach and measurement of all risks to which it is exposed in daily operations. That is mainly reflected in the management of credit risk where the Saving maintained a high quality portfolio structure. The share of partly recoverable and fully irrecoverable loans was (1.40%), a slight increase compared to 2014.

(1.36%), while the share of debt with banks continues a long-term trend of increase (8.79% in 2014 . year and 9.73% in 2015). Based on the data from August 2016., in the segment of cash flows, the most significant deviation from the plan is evident at higher deposit savings (41.64% deviation from the plan). The deviation is also evident in the segment of loan repayment (109.15% of the plan), while the other segments do not differ significantly from the planned values. In the segment of cash flows, deviation is present in cash flows of payments of notices, whose values were 18 million kuna's higher than the planned. The realization of cash payments of loans is lower than plan by 9.5%. Other cash outflows were lower than planned by 1.5 million kuna's. The other cash outflows were lower than planned by 1.5 million HRK. The total difference between cash inflows and outflows amounted to -1,245 million, and the plan was 140 thousand, so the realization deviates from the plan by 1.385 millions HRK. For the period from January to August 2016., total realization of cash flows is higher than the planned value by 8.29%. The payment of savings were realized in the amount of 108.19% of the plan, recover credits 111.16% of the plan, while the proceeds from the sale of other financial products were 100.98% of the plan. The rest of the segments are in the going accordingly, just as planned. The cash outflows in the period of January to August 2016. recorded a value of 7.16% more than planned. The deviation from the planned value is evident in the segment of loan payments, 101.20% of the plan, in the category of notices that are higher 9.85% compared to the plan, and in the category of other cash flows that are higher 9.69% compared to the plan. Other segments are consistent with the plan.

3.2. The analysis of the internal and external environment of the XY home saving

The internal environment of the savings bank XY is made of permanent and part-time employees. The organizational structure of the savings bank XY is shown in picture 4. The Supervisory Board oversees the work of Management board of the XY home saving XY and decide on the number of its members. The Board holds meetings when required, usually quarterly, but more often if necessary. Management, internal audit and compliance function report to the Supervisory Board on the activities in the Saving. The organizational position of internal audit is defined by the adopted internal regulations of the XY. The function of internal audit of the XY home saving was established as a separate organizational unit, and is independent from the activities it audits and from other organizational units of the XY. Within the organizational structure of the XY, the internal audit has the administrative responsibility towards the Administration, and functionally to the Supervisory Board of the XY home saving. Internal audit, in the context of audits carried out, among other things, performs testing compliance of the Home saving with the laws and regulations, internal and other relevant regulations. Internal auditors do not perform any other tasks in the Home saving, except of those defined in the Credit Institutions Act and the Decision on internal control systems. Internal environment is completely under the influence of the XY home saving. External environment of the XY home saving is divided into general or social and business environment, while the XY home saving has no influence over the external environment. The concept of general or social environment refers to the natural - ecological, scientific - technological, socio-cultural, political-legal, economic and demographic environment. The operations of the Savings Bank XY are mainly affected by political-legal, economic and demographic environment. After six years of consecutive decline in economic activity, the real GDP showed increase of 1.6% in 2015., compared to 2014. Favorable economic developments were mainly caused by growth in export - reflecting the economic growth of major trading partners - the increase market share in Croatian exports and a good tourist season. All the components of domestic demand, particularly private consumption supported by favorable developments in the labor market, the amendments to the income tax and the fall in the price level due to overflow of lower crude oil

prices to domestic prices, contributed to the economic recovery. Although the investment activity of the general government decreased significantly, gross fixed capital had the highest growth rate since the start of the recession as a result of favorable developments in the private sector. A slightly positive contribution to the growth was given by the government spending.[46] Financial availability of residential property has increased in terms of the fall in their prices, almost unchanged interest rates on new housing loans and a slight increase in household disposable income in 2015. Nevertheless, the number of transactions in the property market continued to fall, suggesting a further decline in demand for residential real estates.[47] The demographic structure is also a significant factor in the operations of the XY home saving. The demographic picture of Croatia shows that the number of residents is decreasing. According to the Central Bureau of Statistics, it was estimated that at the end of 2015., there were 4.190.669 inhabitants, while, according to the census from 2011 there was 4.284.889 inhabitants. what He is therefore at the end of 2015. There were 94.220 inhabitants less than the now Summary 2011. So, at the end of 2015., there were 94.220 less inhabitants in Croatia than there were in 2011, according to the conducted census. Given the trend of the decreasing population, and a growing proportion of the elderly population, plus the increasing exodus of young people, the XY home saving must adapt and offer credit terms in line with the general situation (economic and demographic), as well as the current demand for home savings and mortgage loans. Also, its offers must comply with the current movements in market interest rates, and accordingly offer fixed interest rates on savings and loans, which are still sufficient to continue a sustainable business. The XY home saving operates in a highly competitive environment, regardless of the fact that they are merely five home savings in Croatia. All the home savings have very similar interest rates on loans and savings, so it is necessary to differentiate one self from the competition. The XY home saving does it in a way that it includes services of partner banks and insurance companies in their stndard offer, thus standing out, because it is able to provide customer service that is necessary. It also offers to its clients a still attractive interest rate, compared to other home savings. However, the sustainability of this business is questionable, if you take into account the fact that interest rates on savings are getting smaller and smaller, and that customers are turning to other forms of savings and investments, such as life insurances or investment and pension funds. It is precisely because of that that the XY home saving must closely monitor market developments at all times so it could act promptly in the event of reducuction of the collected deposits.

3.3. Methods of analysis and forecasting of demand in the XY home saving

The home saving maximizes the total profit in the level of business in which there is the largest positive difference between total revenue and total cost, and in which the marginal revenue equals the marginal cost. The home saving regularly monitors the interest rate, liquidity and currency risk, which affect its business the most. Based on indicators from the daily reports of liquidity risk published on August 31st of 2016., it is evident that the Home saving has significantly increased the amount of minimum and regular liquidity reserves in regard to the required values. The ratio of liquid to total assets on the same date, which amounted to 33.79%, also indicated that the short-term liquidity reserves of the Home saving are at an acceptable level. Daily liquidity indicators to the CNB (minimum liquidity coefficient up to one week and up to 1 month) were also calculated, with a reporting date of August 31st of 2016., and the results were within the legal and internal limits. The indicators from the monthly reports of liquidity risk from August 31st of 2016., also were within the agreed limits. The indicators of early warnings, related to the home savings, were positive, while the indicators related to market

[46] Croatian National Bank: Yearly report from 2015., May, 2016., page 1.
[47] Croatian National Bank, (2016.), op. cit. page 18.

and macroeconomics suggest a deteriorating macroeconomic situation in the Republic of Croatia. The home saving reacted successfully to this indicator back in June of 2016., through the agreed to maintenance of the internal indicator of daily liquidity exceeding 10%. The amount of the overall stressless level of risk on the 30th of June of 2016., was 5.8 million kuna's down compared to 31st of December of 2015., primarily due to the reduction of credit risk. The decline in the overall stressless level of risk resulted in an increase in the overall level of risk in stress, especially in the category of credit risk and interest rate risk in the banking book. The indicators of interest rate risk were within the agreed limits. The realized net interest margin, interest income and expense differ only slightly from the planned values. The demand is largely regulated on the basis of reports in the XY home saving. The reports are mostly made by made the department of Accounting and Controlling for the management and the shareholders. The goal of these reports is to timely deliver information on the status of the home saving to directors and shareholders. Reports can be divided into three categories.

1. Basic financial reports - balance sheet, income statement, cash flow statement and statement of changes equity (monthly monitoring of all positions of balance sheet and income statement, and the realization of the financial plan - absolutely and relatively)
2. Statistical reports - reports of production of savings and loan contracts (monthly monitoring of the fulfillment of the financial plan - absolutely and relatively)
3. The reports of business analysis - reports on capital ratios (regulatory capital), the structure of loans and deposits, the average interest rate, average contract amount, the average payment, the state, market shares and the like.)

If we talk about frequency, the reports are mostly made monthly, quarterly and annually, but it isn't seldom that „ad hoc" requirements appear, creating the need to make unplanned reports that require quick response and don't leave much time to prepare. A Set of reports for management and shareholders is: balance, P & L, Statement of Changes in equity, cash flow statement, the structure of deposits and loans, aggregated balance of the home savings - market shares, analysis of average payments of savings, the analysis of the average height of the agreed sum, the compliant values, total income and expenses of the newly signed deals in 2015., the top 50 contract savings and loans, the average interest rate on interest-bearing assets and liabilities, the weighted interest rate on loans and deposits of the population, state value adjustments on credit parties, recoveries of loans in the period given, comparing the situation of payments of sales network and banks, the overall payments of network and banks, budgeting – state of costs. The analysis of the report, as written document that is based on the collected data and the prepared reports for Management, draws the attention of the Administration to spot new trends and get recommendations for their application in business strategy as are the elimination of trends for directing the business strategy (eg, reducing the amount of payments on savings contract, reducing the number of new contracts, increasing the number of contract termination and similar trends that need to be eliminated). It can also draw the attention to the application of trends to enhance business strategy (eg. increasing repayment of housing loans, increasing demand for housing loans, increase the percentage in state incentives, etc.). The analyzes the analysis of market and market shares and are submitted monthly, serving as an additional basis for planning. The planning in the XY home saving is done in the short, medium and long term. Short-term planning is made for the period up to 3 years, with emphasis on the following year. The focus is on detailed analysis and forecasts of revenues and expenditures and a high degree of feasibility is an imperative. Medium-term planning is made for up to 5 years in advance. The current trends and regulatory requirements for a longer period are used, and the emphasis is on the movement of the operation of the XY business bank. Finally, long-term planning is made for up to 10 years in advance. Izt applies the expected regulatory

requirements and changing regulations. The planning of a long-term strategy and the ongoing, unlimited operations are made. Planning (short, medium, long term) is made on the basis of the balance sheet, profit and loss account and the capital plan. The main inputs used in the planning are the number of savings and credit agreements, the planned lending activity, planned interest rates on deposits, the level of administrative and material costs etc. Historical analysis of the movements in balance sheet and income statement, and analysis of all important input for planning are made for the purpose of planning. By planning, targeted profitability is determined as well as the growth of the balance sheet, with a given strategy and regulatory restrictions. Activities are conducted in accordance with the level of regulatory capital and other regulatory requirements, such as liquidity, interest rate risk in the banking book, foreign exchange position, and so on. In addition to planning, various simulations are made with taking into account a variety of variables that can have an impact on business (depending on the market situation, changes in interest rates, legislative changes, such as government incentives, regulatory changes, such as changes in capital requirements, changes to the protective layers capital...). Among the various simulation, management selects the most appropriate one and makes it a business plan and strategy, while other strategies are stored for future analysis. Simulations are made on the basis of software and computer support.

3.4. Control access to the analysis and forecasting of demand in the XY home saving and the development of business strategies

The XY home saving will, during 2016, as well as in future periods, try to balance the ratio of interest income and interest expenses. Proactive credit policy and the intensification of credit activity, as well as dynamic management of loan portfolios with the use of variable DPS, will enable the realization of the set goal for the XY. At the same time, XY will continue the policy of rationalization of costs, both administrative and material, in order to increase profitability. The Home saving plans to finance intensive credit activity from the regular inflow of deposits, as well as from the sale of securities with a goal of realization of previous unrealized expenses and avoiding future negative value adjustments. In the conditions of low market interest rates, variable DPS is gaining in importance and is becoming a significant, attractive element in the process of obtaining long-term deposits at an acceptable expense.

In the XY home saving, the Management watches over the results and processes, they also keep financial plans, control of sales plans, control of revenues (fees and interest), control of costs (material and administrative), and other controls that serve reaching set goals, under control. Goals are set on the basis of the analysis and simulation of future possible events, and based on all the information needed for the functioning of the business process. Sources of information that are necessary for the development of business strategies and production of the report are:

- Informatic system of the home saving – the main and subsidiary book, databases of XY home saving (the sales database, database of loans and deposits, securities databases, etc.)
- Croatian National Bank – different statistical data necessary for the making of reports about the analysis of market
- National Institute of Statistics - data on the macroeconomic condition, the analysis of the census, such as demographic data
- General information – various information which can be helpful for the business

Based on all the gathered information which are regularly submitted to the Administration, Management decides on the development of a business strategy, sets goals and decides in which

direction should the business development of the XY home saving go. Leaning on the same information, the decisions on how they will respond to the current and future market demand are made as well as the plans to improve the offer of their own services. With the analysis of the report, presented simulation, analysis and estimates of future demand and business, Management creates business strategy, sets future goals, and develops business plans.

4. CONCLUSION

Individuals, consumers and companies participate in the roundabout of economic values, depending on eachother in such scale that they cannot survive on the marker one without the other. Companies runned by managers have an extremely important role in a circular course of the economic value. In order to successfully manage the company, managers should possess the knowledge of economics and management. These two concepts have been unified under the name of a control economy that is one of the youngest fields of social sciences. Managerial economics applies the most useful terms and theories of microeconomics and industrial organization to create a systematic, logical way of analyzing business practices and tactics aimed at maximizing profits, as it develops strategies for long-term sustainability of business and profits. Managerial economics stands for a very interesting and important part of the business in every company. It connects economic concepts with quantitative methods in order to improve management's decision-making process. Managerial economics uses tools of microeconomics that directly assist management in making decisions. There are two main tasks for management economics; to enable managers to evaluate existing, the current allocation of resources, and to help a manager to properly react to signals from the economic environment, all in line with the main goal of the managerial economy - and that is maximization of profit. Home finance made its way to Croatia in the end of the 18th century, and hasn't stopped developing since, continuously evolving in accordance with the evolution of society, and current social, fiscal and home policy. The Republic of Croatia has adopted the Act on Home Savings and State Incentives for Home Savings, which entered into force on 1 January 1998. Today, the Republic of Croatia operates five building societies, of which only one is locally owned. The Republic of Croatia has adopted the Act on home savings and State incentives for home savings on the 1st of January, 1998. Today, the Republic of Croatia operates with five home savings, of which only one is under domestic ownership.

Home savings collect deposits under a contract of home savings, and it is strictly based on these deposits that they make lends, exclusively for residential purposes. The country of Croatia encourages home savings as well, approving the government incentives that come from the state budget. In 2016, the maximum amount of state incentives was 205 kuna's on paid 5.000 kuna's year, or 4.1% of the total amount of the payment, but not more than 5.000 HRK. An important advantage of the model of home savings and lending interest rate is fixed rate for the entire time of the use of the savings and lendings. The most liquid home savings in Croatia is PBZ home saving. It also has the largest economy of the overall business, and the largest share is financed by equity. When talking about the indicator of return on equity, Prva home saving makes the highest profit, while in the return on assets achieved, the highest earnings go to PBZ home saving. Looking at the value of the indicator of margin and average interest rates, only Prva home saving and PBZ home saving can cover the margin of operating expenses with an interest margin, which means that the two savings are well organized. As for the indicators of investing, the maximum earnings per share were achieved by Prva home saving. Based on all indicators, we can conclude that PBZ and Prva home saving operate in the best way in Croatia. Management of the XY home saving makes its decisions based on the information that it regularly receives by all departments in the organizational structure. Analysis and forecasting

of demand is made on the basis of the analysis report, as well as a written document that is based on the collected data and prepared reports. Analysis of the report draws the attention of the Board at spotting new trends with recommendations for their application in business strategy, such as the elimination of trends for routing the business strategy, or focusing on the application of trends that can enhance business strategy. On the basis of the information and statements in which simulations of different business situations are presented, and analysis of business and demand, the management of the XY home saving makes business strategy, sets future goals, and develops business plans.

LITERATURE:

1. Baye, M., Prince, J.: Managerial Economics and Business Strategy, 8. izdanje, The McGraw – Hill Education, SAD, 2013.
2. Benić, Đ.: Mikroekonomija menadžerski pristup, Školska knjiga, Zagreb, 2012.
3. Bhat, M.S., Rau, A.V.: Managerial Economics and Financial Analysis, BS Publications, 2008.
4. Brickley, J., Smith, C., Zimmerman, J.: Managerial Economics and Organizational Architecture, 6. izdanje, The McGraw-Hill Education, SAD, 2015.
5. Državni zavod za statistiku: http://www.dzs.hr/ [19.09.2016.]
6. Hrvatska narodna banka: Bilten o bankama br. 28, kolovoz, 2015.
7. Hrvatska narodna banka: Godišnje izvješće za 2015., svibanj, 2016.
8. Institut za javne financije: Analiza sustava poticanja stambene štednje u Republici Hrvatskoj, Zagreb, 2013.
9. Jones, T.: Bussiness Economics and Managerial Decision Making, John Wiley & Sons, Inc., SAD, 2004.
10. Leko, V., Stojanović, A.: Modeli financiranja namjena koje sadrže javni interes, Grafit Gabrijel, Zagreb, 2011.
11. Ministarstvo financija: http://www.mfin.hr/hr/stambena-stednja [19.09.2016.]
12. McGuigan, J., Moyer, C., deB. Harris, F.: Managerial economics: Applications, Strategy and Tacts, 13. izdanje, Cengage Learning, SAD, 2013.
13. Ocjena učinaka i perspektiva stambene štednje u Hrvatskoj, Arhivanalitika d.o.o., Zagreb, 2009.
14. Orsag, S.: Poslovne financije, Avantis: HUFA, Zagreb, 2015.
15. Pindyck, R., Rubinfeld, D.: Microeconomics, 8. izdanje, Pearson, SAD, 2012.
16. Salvatore, D.: Ekonomija za menedžere u svjetskoj privredi, MATE, Zagreb, 1994.
17. Samuelson, P., Nordhaus, W.: Economics, 19. izdanje, TheMcGraw-HillEducation, SAD, 2009.
18. Samuelson, W., Marks, S.: Managerial economics, 7. izdanje, John Wiley & Sons, Inc., SAD, 2012.
19. Santini, I.: Potražna strana tržišta i odlučivanje, HIBIS d.o.o, Zagreb, 2002.
20. Tepuš, M.: Analiza modela stambenog financiranja u Republici Hrvatskoj, HNB, 2004.
21. Thomas, C., Maurice, C.: Managerial economics: Foundationsof Business Analysis and Strategy, 12. izdanje, The McGraw – Hill Education, SAD, 2015.
22. Tintor, J.: Poslovna analiza: [operativno poslovanje, poslovna načela, financiranje, kreditna sposobnost, proizvodnja, snaga zarađivanja, ljudski potencijali], Masmedia, Zagreb, 2009.
23. Tintor, J.: Poslovna analiza: koncepcija, metodologija, metode, HIBIS d.o.o., Zagreb, 2000.
24. Zakon o stambenoj štednji i državnom poticanju stambene štednje (NN 109/97, 117/97, 76/99, 10/01, 92/05, 21/10, 15/13, 139/13, 151/14, 110/15)

25. Žager, K., Žager, L., Sever, S., Mamić Sačer, I.: Analiza financijskih izvještaja, Masmedia, Zagreb, 2008.
26. Financial reports:
    a. HPB stambena štedionica: https://www.hpb-stedionica.hr/
    b. PBZ stambena štedionica: http://www.pbz-stambena.hr/
    c. Prva stambena štedionica: http://www.prva-stambena.hr/
    d. Raiffeisen stambena štedionica: http://www2.raiffeisenstambena.hr/
    e. Wüstenrot stambena štedionica: http://www.wuestenrot.hr/

THE IMPACT OF INFORMATION TECHNOLOGY (IT) IN HUMAN RESOURCE MANAGEMENT

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ABSTRACT
This paper attempts to clarify the impacts of information technology (IT) on Human Resource Management. Managed information technology all science can influence and establish a relationship with the complex among the important role has played in all scientific fields. Information technology has caused today no boundaries and distance world, for circulation there is no information and all aspects of human societies. Like how to live, work and Human Resource Management in organizations, offices and unexpected extent. The subject has been these changes will be effective when the domain ICT activities identified and the creation of these activities will be provided. In this paper, a brief review the impact of technology information the Human Resource Management the business objectives of the organization and satisfaction of employees has been set.here.
Keywords: *"Information Technology", "Human Resources Management", "Organization Structure", "human resource".*

1. INTRODUCTION

There is no underestimation of importance and effect of the Human Resources management at all. Lately, management of Human Resources and its needs are becoming the center of the attention of each individual employer in every organization. The orientation of company on human resources starts to be one of the key tasks of a strategic management and Human Resources play an important role in all strategic decisions. Managers of Human Resources ask for more strategic position of their department within the organization with the aim to get to the essence of the problem how to manage, to motivate and to increase the performance of organization.

The importance of human potential for company increases proportionally with the speed of changes which appear in the business area because human capital represents a basic qualitative parameter of fruitfulness of any changes. Following that, Human Resources Management (HRM) must aim at achieving the competitiveness of the company in the field of HR by means of providing constant educational and training programs for personal development of employees.

It has been scientology proven that one of the supporting pillars which can contribute to the fulfillment of the personal policy is the usage of IT technologies in HR. Information and Communication Technologies (ICT) - a catchall term for techniques associated with mobile communication, internet, new media and PCs – allow companies to improve their internal processes, core competencies, organizational structures as well as relevant markets on a global scale. ICT is spreading throughout every sector of the economy and has implications for almost every enterprise (Helfen and Krüger, 2002).

Human resource processes should be focused on the strategic objectives. These strategies are led to prepare an IT strategic plan that in turn translates into an appropriate human resource strategic plan in the field of IT as the Figure 1 depicts (Sameni and Khoshalhan, 2006).

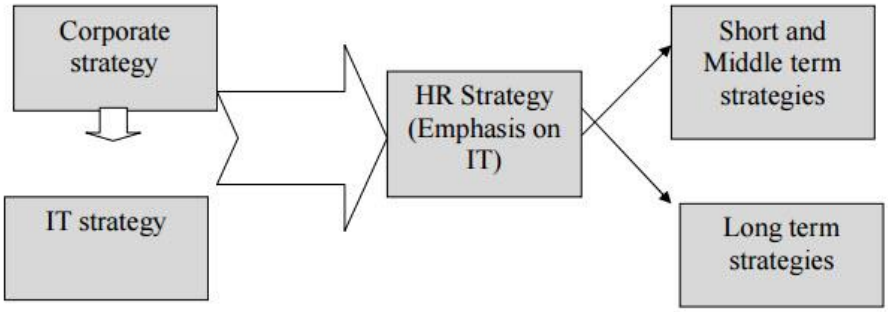

Figure 1: The Framework of Information Technology Human Resources Plan (Sameni& Khoshalhan, 2006, p.119)

IT plays a critical role in leveraging and complementing human and business resources (Powell and Dent-Micallef, 1997). The importance of using the HR – IT tools, the authors express as follows: "in organizations, despite increasing needs for technological advancement, human and cultural factors play a more important role than before. However, technology is often seen by management as essential means to compete in the global market. To that technology, including information technology, brings the desired results, the most important issue for an organization is how to manage the technology with respect to human organizational aspects, how to analyze and understand human factors guided by the norms, shared beliefs, and assumptions of the organization, as well as by individuals' unique values-all together known as " culture."" (Zakaria and Yusof, 2001).

Information systems in HR can (Armstrong, 2002):

- provide better services to line managers,
- serve as a pipeline connecting a personal policy and personal processes in all organization and thus facilitate personal management in the company,
- provide important data for a strategic personal decision-making and enable a quick acquiring and analysis of information for HR assistants,
- reduce cost labors at performance of personal activities.

The study called "Effects of HRM practices on IT usage" (Lee, 2009) shows that organizations use technologies for HR field such as employee participation, clearly defined jobs and extensive formal training. On the other hand, according to survey, companies which are using external IT capability, only internal career opportunities used IT tools. HR function used to employ IT for administrative processes, primarily payroll processing, with little attention being paid to so-called transformational HR practices (DeSanctis, 1986). Nevertheless the results present in paper (Bondarouk and Ruël, 2009) that "in 2006, as the CedarCrestone 2006 HCM Survey shows, companies
broadened the scope of HRM applications: although administrative e-HRM was still the most popular application (62% of surveyed companies), companies reported an increasing use of strategic applications like talent acquisition services (61%), performance management (52%), or compensation management (49%)."

2. DIRECTION OF THE RESEARCH

The main aims of an empirical study performed within multinational manufacturing companies with over five-hundred employees is to identify the level of using the HR IT tools in companies, factors on which management should make stress during the implementation of the IT tools and

simultaneously find out which IT tools can be used in scope of HRM. The research is compiled by forty questionnaire surveys and consecutively by direct observation in the firms and structured interviews with fifteen HR managers. The anonymous questionnaire and interviews were focused on the following fields:

- IT tools usage in HR field,
- Efficiency of HR IT tools usage,
- Management's support of the HR information systems application,

3. RESEARCH RESULTS

The questionnaire reveals that 98 % of the respondents use IT tool in HR field. Concerning the efficiency of HR IT tools usage 66,7 % of respondents confirmed that HR IT tools help in everyday work considerably and 33,3 % of the respondents point out that HR IT tools support daily work moderately.

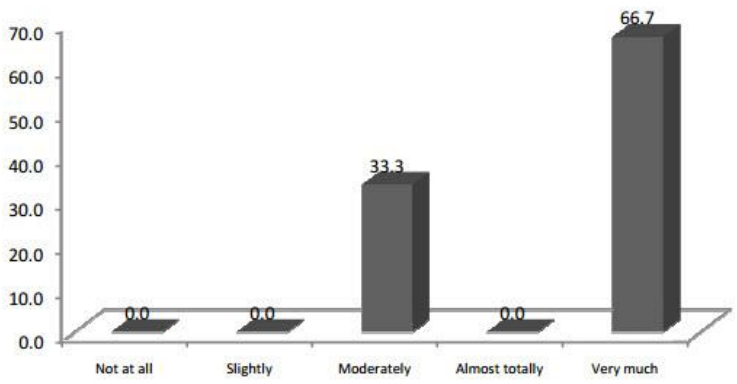

Figure 2: Efficiency of HT IT tools usage in %

Further the survey shows that 22 % of respondents confirmed supporting the reaching of HR goals significantly by using of HR information system and 50 % of respondents answered that HR IT tool support HR goals moderately and 25 % slightly and 3 % not at all. The results are depicted in the graph:

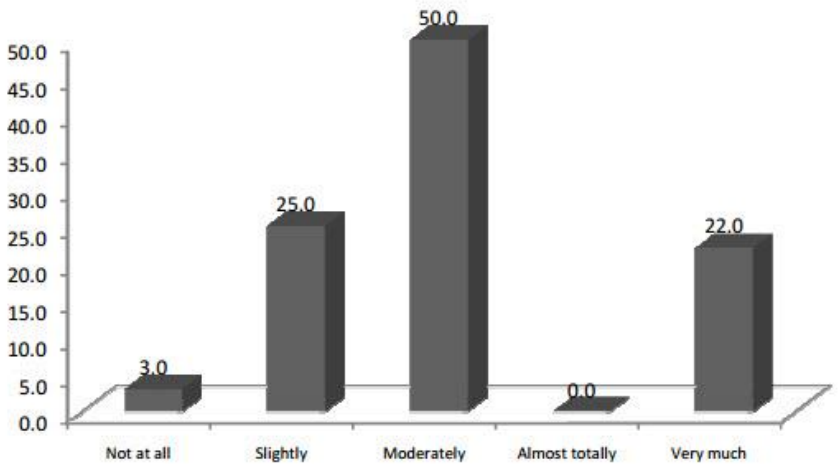

Figure 3: Reaching strategic goals using the HR IT tools in %

To evaluate the using of IT tools in HR management the respondents answered on the following question "In which HR area the IT tools are used in your company?"The results are shown in the graph:

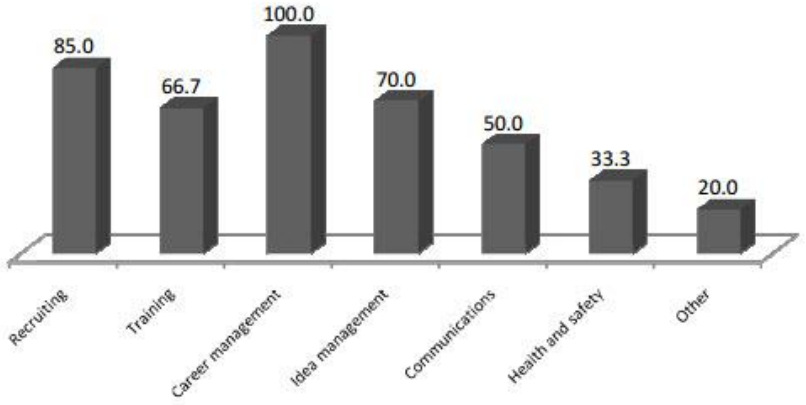

Figure 4: IT tools usage in HR field in %

Based upon the interviews with HR managers, firstly management has to clearly define which core HR processes are to be integrated and transferred into HR IT systems. This is one of the crucial factors for effective implementation and accomplishment of HR IT usage. Consequently, it must be defined which IT tools fulfill described HR demands. Secondly, HR managers state that main advantages of using HR IT tools are time saving, work efficiency, keeping employees fully informed. The research reveals that HR managers should make stress on HR goals, the HR budget in the beginning of the implementation of the HR IT tools. The IT tools should be user friendly, service efficient and reduce HR transactions that add no value. HR managers confirmed that usage of HR information system is essential and it makes their work easier on the one hand but it requires effective HR IT tools on the other hand. Further the interviews were focused on the three HR fields where companies use the HR information systems according to online questionnaire (Fig 4). The usage, benefit and add value of HR IT tools in firms are shortly described.

4. THE HR ROLE IN IT HUMAN RESOURCES DEVELOPMENT

Career planning tool is a generic, learning, knowledge-based system that helps top leaders to manage the personal development and path career of employees. One of the most important online supports within Human Resources is tracking the Human Resources Development Core Processes. The tool should provide all necessary information about individual succession planning of employee, next development measures or evaluation of overall performance and review of the potential. Experience from many companies points out that the essential part of the tool is agreement of individual goals between employee and supervisor which should be directly connected to a business target. This is also connected with the fact that companies use determination of individual goals for employees in the full range in order to reach strategic goals of the company. One big advantage of the tool is that entered data are stored in database which provides attainability and visibility of the history anytime and simultaneously online system can provide a considerable cost saving. The tool should also include the reporting, it means provide information about needed trainings for employees, report about ideas for further employee's personal development. The above mentioned reports make easier the work of the Human Resources department.

5. THE HUMAN RESOURCE ROLE IN INFORMATION TECHNOLOGY RECRUITING

In nowadays, managers realize that human capital has become the last competitive benefit and IT recruiting can broadly support efficient hiring together with forming the workforce. In order to attract the best candidates, it is vital that both HR and IT departments cooperate together. The HR role in IT recruiting is of key importance, including time of crisis. The "war of talents" carries on, despite the current crisis. The HR IT tools can support hiring and retaining a high potential. It begins with launching the career website what is a very good promotional tool. Employer can present all necessary information related to job, careers or personal development of each applicants there. The career website should focus not only on potential employees, but target group should also include the students, graduates or school pupils in order to have a possibility to "raise" new employees for the future.

The cooperation with students can save the costs especially if company needs specialists for future business needs. One big advantage which companies should use via career website is to have opportunity to apply for a job online. Additionally, company can present information about corporate culture or environment. Further, it can be connected to the internal recruiting track system which can help to HR generalist in communication with candidates to organize the selection processes. System should cover the whole application process, from position approval to candidate approach.

6. THE HUMAN RESOURCE ROLE IN INFORMATION TECHNOLOGY IDEA MANAGEMENT TOOL

To keep high performance culture, company should maintain a continuous improvement of core processes and activities. The tool which supports Idea Management processes should provide how many improvement proposals are submitted by the employees. It can also provide the information of saved revenues and costs by implementation of improvement proposals. The main purpose of online support in Idea management is to build a tool which gives the opportunity to all employees to present their applicable and well-founded ideas on the one hand and on the other hand company becomes more competitive. The above mentioned IT support carries the advantages as follows:

- Save money,
- Avoid costs or
- Improve process performance

Considerable benefit is an immediate possibility to create various reports and finally to see if company fulfils the target of a key performance indicator. One of the last advantages of IT online system is that it helps to provide availability of improvement proposals anytime and thus enables to avoid paper form. Above mentioned gives overview how technologies can assistance HR processes in order to reach the business targets.

7. DISCUSSION

The survey confirms that companies use HR IT tools and should contain all HR processes which will sustain all parts of HR it means from "Recruit to Retire" functions within the company. The research presents that the importance of HT – IT usage is getting more and more important not only due to the fact that HR productivity increases but at the same time, the value of the organization increases, including the most important asset – Human capital. First of all implementation HR IT tools requires to perform analysis which provides information about benefit of IT usage. Also during the implementation, attention must be paid to the protection of sensitive data about employees. If the tools are implemented on higher level, it can bring cost saving for the company, reduce process time, quality of work and finally the major benefit is

the contribution to the strategic development of the company. It is essential that the tools are user friendly for all employees, provides data and reports necessary for the employees´ jobs. Next point which has to be taken into consideration is that implementation of HR – IT tools can increase the costs e.g. purchase of the facilities, i.e. companies have to be aware of it during preparation of budget. Nevertheless, HR IT tools must help all employees because incorrect implementation may bring negative consequences e.g. the employees may understand the usage of tools as an inevitable evil which does bring any effect neither them nor the company.

8. CONCLUSION

Globalization brings the requirement to think how IT can contribute to fulfillment of business strategy in the frame of Human Resources management in order to steer the business towards excellence and reach competitiveness in the market. Despite the fact questionnaire revealed that information technology sustains reaching the HR goals moderately, precise plan of implementation of HR information system can significantly support HR strategy in the company to attain defined key performance indicators (KPI). The project should mainly contain what has to be achieved it means how IT tools can support the KPI and which kind of HR processes IT tools should sustain. The research will be extended by further survey.

LITERATURE:

1 Book

1. *ARMSTRONG, M. A. (2002). Handbook of Human Resources Management Practise, 8 th edition. (in Czech.) Praha: Grada. 777p. ISBN 80-247-0469-2.*

2 Periodicals

1. BONDAROUK, T.V., RUËL, H.J.M.(2009). Electronic Human Resource Management: challenges in the digital era. The International Journal of Human Resource Management. Vol. 20, No. 3, 505P.

2. *LEE, CH. S., LEE, CH. H.(2009). Effects of HRM practices on it usage. Journal of Computer Information Systems.*
3. *POWELL, T. C., DENT-MICALLEF, A.(1997). "Information Technology as Competitive Advantage: The Role of Human Business, and Technology Resources," Strategic Management Journal.*
4. *DeSANCTIS, G. (1986). Human Resource Information Systems: A Current Assessment. MIS. Quarterly, 10.*

3 Other reports and documents

1. HELFEN, M., KRÜGER, L.(2002). Information Technology, New Organizational Concepts and Employee Participation - Will Unionism Survive?. 0-7803-7824-0/02.

2. SAMENI, M.K., KHOSHALHAN, F.(2006). Analysis of Human Resource Development for Information Technology and E-Commerce in Iran. IT Department, Faculty of Industrial Engineering, K.N.Toosi University of Technology, Tehran, Iran.

3. ZAKARIA, N., YUSOF, S.A.M. (2001). The role of human and organizational culture in the context of technological change. School of Information Studies, Syracuse University, Syracuse, USA. 2001. 0-7803-7260-3.

THE PORTFOLIO MANAGEMENT WITH ISLAM EQUITY IN KOREA STOCK MARKET

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ABSTRACT
This paper investigated the volatility spillover effects between Islamic stock markets and Korean stock market using the AR-DCC-GARCH models. First, we found bi-directional volatility transmissions between the Islamic and Korean financial markets Second, we compared the correlation of KOSPI-DJIM portfolio and that of KOSPI-SHX portfolio. It shows the correlation of KOSPI-DJIM portfolio has stronger linkage than that of KOSPI-SHX portfolio. In the portfolio perspective, the S&P 500 Sharia stock Index(SHX) acts as a better hedge asset than DJIM against the risk of stock market. Last, the hedge ratio between two Islamic stock market and Korean stock market pairs is generally low, indicating that the Korean stock risk can be effectively hedged by taking a short position in the Islamic stock markets. In comparison with two pairs, the pair of KOSPI-SHX relatively shows a cheaper hedging cost than that of KOSP-DJIM pair. This evidence indicates that S&P 500 Sharia index serve more effective hedging role against the risk of Korean stock market.
Keywords: *Islamic market, hedge ratio, AR-DCC-GARCH model*

1. INTRODUCTION

The Islamic equity markets are seemingly different from conventional markets in the United States and other developed countries. Islamic finance is guided by the principles of Islamic law (shariah) which prohibits interest (riba), excessive risk-taking (gharar), gambling (maysir), and promotes risk sharing, profit-sharing, asset-backed financial transactions, and ethical investment. Islamic investment can be also regarded as a subset of the socially responsible or ethical investment universe. The growing demand for Islamic investment products emerges as new business opportunities. To explain the diversification benefits through investing in Islamic stock market we explore the volatility spillover effects between Islamic and conventional finance markets. A few studies have been conducted on the volatility spillover between Islamic and conventional markets. But there has been no consensus on the evidence of volatility spillover between Islam and conventional markets in the prior literature.

Some studies show an Islamic stock index is argued to be more resilient to a financial crisis compared to a conventional stock index (Charles, Pop & Darné, 2011; Sukmana and Kolid, 2012). Majid and Kassim (2010) found that investors can gain benefits by diversifying in the Islamic stock markets across economic grouping. It is generally argued that the characteristics of the Islamic stocks are different compared to those of the conventional stocks in that the former entails a lower leverage, smaller size of firms and less diversified markets resulting in different risk-return portfolios. The quantitative criteia, Debt/equity ratio and the limit of interest-based leverage would also lead to lower systemic risks of Islamic stocks indices, both during expansion and recession. Due to the ethical foundations of Islamic stock indices, Iqbal, et al., (2010) argue that Islamic stock indices provide better diversification benefits compared with their conventional counterparts,

On the contrary to decoupling Islamic financial markets from conventional markets, The Linkage effects of Islamic equity finance with conventional equity finance exist. That is, the volatility of conventional markets spills over to the that of Islam market, or vice versa. Ahdi et al.,(2014) reveal evidence of significant linear and nonlinear causality between the Islamic and conventional stock markets but more strongly from the Islamic stock market to the other markets. They also show potent causality between the Islamic stock market and financial and

risk factors. Marcos et al.,(2014) also find that the Islamic markets are causal and interactive with conventional markets and also do not perform much better than the conventional markets during crises. It implies that the Islamic equity markets may not be good candidates as risk diversifiers in asset allocations and hedgers against risk exposures. Ajmi A, et al.,(2014) show that the Islamic equity market is not isolated from external shocks of different types, regions, and sources. They find that there is a causal link coming from the Islamic market to both the European and the Asian stock markets and Brent oil market, which are stronger Islamic relationship with regions in which Islamic Finance is more developed. These findings thus suggest the rejection of the decoupling hypothesis of Islamic equity finance from conventional equity finance, still implying that the Islamic finance system may not provide either a good cushion against financial shocks affecting the conventional markets or large diversification benefits for portfolio managers. Hence the Islamic finance system is also exposed to global shocks common to the world financial system as well as to contagion risks in the case of economic and financial crises.

Hence the objective of this study is to investigate whether Islamic stock indices provide more diversification benefits from the perspective of equity portfolio management in Korean stock market. This requires an empirical investigation of linkage between the conventional and Islamic stock indices. Especially, an understanding of how volatilities and correlations change between asset returns of both markets over time including their directions (positive or negative) and size (stronger or weaker) is of crucial importance for investors with a view to diversifying their portfolios for hedging against unforeseen risks. If the Islamic finance system is only weakly linked or even decoupled from conventional markets in terms of volatility spillover effects, Islamic finance and conventional finance in the asset returns are substitutes or complements in terms of hedging risk. Then this system may provide a cushion against potential losses resulting from probable future financial crises.

The remainder of this paper is organized as follows. Section 2 presents the econometric methodology. Section 3 provides the descriptive statistics of the sample data in pre- and post-crisis periods using a Markov-switching dynamic regression (MS-DR) model. Section 4 discusses the empirical results. Section 5 concludes.

2. EMPIRICAL METHODOLOGY

We assume that the return generating process can be described by an AR(1) model in which the dynamics of current stock returns are explained by their lagged returns. The AR(1) model is defined as follows:

$$r_{i,t} = \mu + \phi_1 r_{i,t-1} + \varepsilon_{i,t} \text{ , with } \varepsilon_{i,t} = z_{i,t}\sqrt{h_{i,t}} \text{ , } z_{i,t} \sim N(0,1),$$

Where $|\mu| \in [(0,\infty),\ |\phi_1| < 1$ and the innovations $\{z_{i,t}\}$ are an independently and identically distributed process. The conditional variance $h_{i,t}$is positive.

We also assume that the conditional variance generating process can be described by an standard GARCH(1,1) model of Bollerslev (1986) as follows:

$$h_{i,t} = \omega + \alpha\varepsilon_{i,t-1}^2 + \beta h_{i,t-1}$$

where ω>0, $\alpha \geq 0$ and $\beta \geq 0$. In the above equation, the persistence of conditional variances can be measured by the sum $(\alpha + \beta)$.

To evaluate the volatility spillovers, we applied a trivariate GARCH model to conventional stock markets and Islamic stock market. We decided to model the structure of conditional correlations using the DCC approach of Engle (2002). This approach allows us not only to

investigate the time-varying correlations, but also to ensure the positive definiteness of the variance-covariance matrix (H_t) under simple conditions imposed on specific parameters. The parameterization of a trivariate GARCH-DCC model enables direct inferences about the time-varying correlations between the Islamic stock markets and Korean stock markets and can handle a relatively large number of variables in the system without encountering a numerical convergence problem at the estimation stage. In the multivariate case we used, the variance-covariance matrix of residuals is defined as follows:

$$H_t = D_t R_t D_t,$$

$$R_t = (diag(Q_t))^{-1/2}\, Q_t\, (diag(Q_t))^{-1/2}$$

where $D_t$is a (3×3)diagonal matrix of time-varying conditional standard deviation from the univariate AR(1)-GARCH(1,1) model. $R_t$is a matrix of time-varying conditional correlations.

The covariance matrix $Q_t = [q_{ij,t}]$ of the standardized residual vector $\varepsilon_{i,t} = (\varepsilon_{1,t}, \varepsilon_{2,t}, \cdots)'$ is denoted as:

$$Q_t = (1 - \alpha - \beta)\bar{Q} + \alpha(\varepsilon_{t-1}\, \varepsilon'_{t-1}) + \beta Q_{t-1}$$

where $\bar{Q} = [\overline{Q_{i,j}}]$ denotes the unconditional covariance matrix of ε_t. The coefficients α andβ are non-negative scalar parameters depicting the conditional correlation process and $\alpha + \beta < 1$. If $diag(Q_t)^{1/2} = \{\sqrt{q_{ij,t}}\}$ is a diagonal matrix containing the square root of the i^{th}diagonal elements of Q_t, the dynamic correlation can be expressed as:

$$\rho_{ij,t} = \frac{(1 - \alpha - \beta)\overline{q_{ij}} + \alpha\varepsilon_{i,t-1}\varepsilon_{j,t-1} + \beta q_{ij,t-1}}{\sqrt{\left|(1 - \alpha - \beta)\overline{q_{ii}} + \alpha\varepsilon^2_{i,t-1} + \beta q_{ii,t-1}\right|\left|(1 - \alpha - \beta)\overline{q_{jj}} + \alpha\varepsilon^2_{j,t-1} + \beta q_{jj,t-1}\right|}}$$

The significance of α and βimplies that the estimators obtained from the trivariate GARCH-DCC model are dynamic and time-varying. α indicates short-run volatility impact, implying the persistence of the standardized residuals from the previous period. β measures the lingering effect of shock impact on conditional correlations, which indicates the persistence of the conditional correlation process. $\rho_{ij,t}$ indicates the direction and strength of correlation. If the estimated $\rho_{ij,t}$ is positive, the correlation between the $i^{th}$and j^{th}return series is moving in the same direction and vice versa.
We estimate the DCC model using the quasi-maximum likelihood (QML) estimation method in which the log-likelihood can be expressed as:

$$\log L = -\frac{1}{2}\sum_{t=1}^{T}[k\log(2\pi) + 2\log|D_t| + \log|R_t| + \varepsilon'_t\, R_t^{-1}\, \varepsilon_t]$$

The DCC model's design allows for the two-stage estimation procedures of the conditional covariance matrix H_t. In the first stage, we fit the univariate GARCH-type models for each returns, and then obtain estimates of $h_{ii,t}$. In the second stage, we transform the return series using the estimated standard deviation from the first stage; this information is then used to estimate the parameters of the conditional correlation.

3. DATA

3.1. Descriptive statistics

This paper considered daily closing stock index series for two Islamic stock indexes of Dow Jones Islamic Index(DJIM) and S&P 500 Sharia index(SHX) as well as for Korean Composite Stock Price Index (KOSPI200) from 2 January 2002 to 10 November 2015. All sample data are obtained from Blooomberg database. We calculate the continuously compounded daily returns by taking the difference in the logarithms of two consecutive prices: that is, $r_{i,t} = \ln(P_{i,t}/P_{i,t-1}) \times 100$, where $r_{i,t}$ denotes the continuously compounded percentage returns for stock indexes at time t and $P_{i,t}$ denotes the price level of stock indexes at time t.

Table 1 presents the descriptive statistics and unit root tests of the daily return series for the Islam and Korean stock markets. In Panel A of Table 1, the KOSPI200 return presents the highest average return, followed by the S&P 500 Sharia index series. Regarding to risk, the KOSPI index return shows the highest value of the value of standard deviation (volatility). Conversely, the Dow Jones Islamic market DJIM return is found to have the lowest volatility. This implies that the Korean stock market provides higher return with higher risk.

Regarding to non-nomrality features, skewness is negative for all return series, with DJIM being the most skewed, implying frequent small gains and extreme large losses. The excess kurtosis values for all return series are above three, indicating the presence of the peaked distributions and fat tails. That is, all return series display a leptokurtic distribution with a higher peak and a fatter tail than the case of a normal distribution. Accordingly, the Jarque-Bera test results are consistent with the aforementioned deviations from the Gaussian distribution, signaling a non-linearity process.

Table 1. Descriptive statistics and results of unit root tests

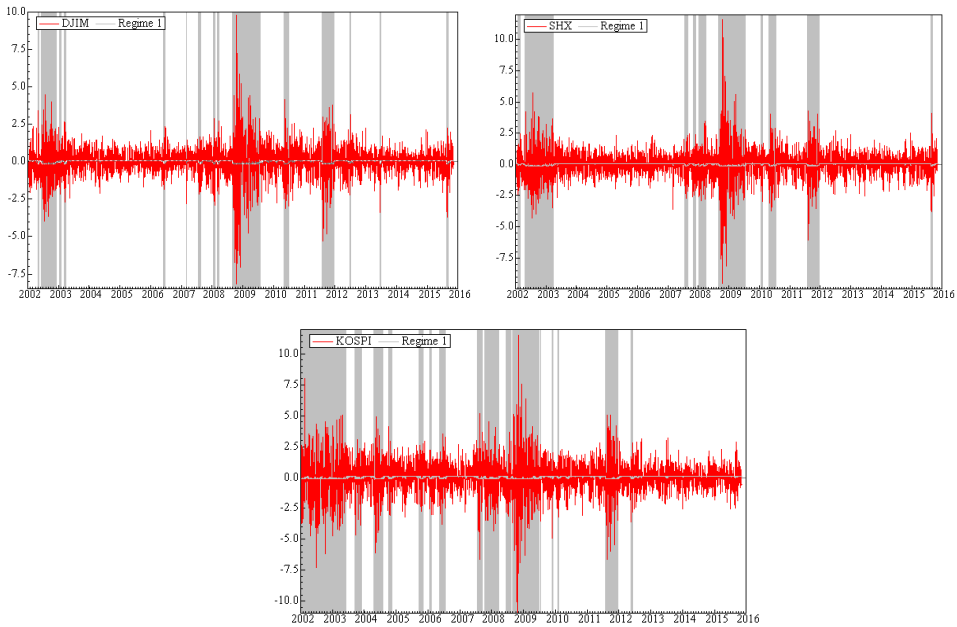
	DJIM	SHX	KOSPI
Panel A: Descriptive statistics			
Mean	0.0172	0.0211	0.0290
Max.	9.7745	11.582	11.539
Min.	-8.7745	-9.5306	-10.903
Std. dev.	1.0306	1.1664	1.4382
Skewness	-0.3662	-0.0410	-0.3414
Kurtosis	11.971***	12.974***	8.4347***
J-B	12206.4***	14991.0***	4520.4***
$Q^2(30)$	7176.1***	7389.8***	3778.6***
ARCH-LM (10)	173.95***	133.46***	90.277***
Panel B: Results of unit root tests			
ADF	-42.394***	-47.267***	-59.629***
PP	-53.400***	-66.901***	-59.755***
KPSS	0.0595	0.1353	0.1180

Notes: J-B and $Q^2(30)$ refer to the empirical statistics of the Jarque-Bera test for normality, the Ljung-Box test for autocorrelation, respectively. ADF, PP and KPSS are the empirical statistics of the Augmented Dickey-Fuller (1979), and the Phillips-Perron (1988) unit root tests, and the Kwiatkowski et al. (1992) stationarity test, respectively. The ARCH-LM(10) test of Engle (1982) checks the presence of ARCH effects. *** denotes the rejection of the null hypotheses of normality, no autocorrelation, unit root, non-stationarity, and conditional homoscedasticity at the 1% significance level.

3.2. Identification of regimes

In this section, we analyse further the impact of crisis events on the dynamic correlations, and provide additional explanation of the factors driving the correlations between Islamic stock index returns and KOSPI200 return. In order to identify excess conditional volatility regimes, we apply a Markov-switching dynamic regression (MS-DR) model, which allows the data to determine the beginning and end of each phase of the crisis. The MS-DR model classifies the existence of two regimes: regime zero ('stable' regime) and regime one ('volatile/crisis' regime). Note that regimes zero and one indicate lower and higher values of conditional volatility, respectively.

Figure 1 shows the several regimes in the unconditional variance of the Islamic stock markets and Korean stock market. In general, important political, social and economic events at the local, regional and global levels such as country-specific economic situations, the 2000 IT bubble, the 2003 Iraq war, the 2007 sub-prime mortgage crisis, the 2008-2009 global financial crisis(GFC), and 2011-2012 Eurozone sovereign debt crisis (ESDC). Among these regimes, the most severe regime point is the 2008 global financial crisis (GFC), triggered by the 2007 sub-prime mortgage crisis. Hence, we can consider the 1st August 2007 as a structural breakpoint in order to identify the GFC occurrence and divide the full sample period into pre- and post-crisis periods. The pre-crisis period spans the period from 1st January 2002 to 31th July 2009, while the post-crisis period ranges from 1st August 2007 until the end of the sample.



Notes: The shaded areas highlight regimes of excess volatility according to the Markov switching dynamic regression model.

Figure 1. Regimes in the return dynamics

4. Empirical results

4.1. Estimate of trivariate DCC-GARCH model

This section considers volatility transmission effects between two Islamic stock markets and Korean stock market, using the trivariate DCC-GARCH model. Table 2 presents the estimation results of trivariate AR(1)-DCC-GARCH(1,1) model in three different time periods, such as the whole period, pre- and post-crisis periods. We explain the estimation results in the whole sample period and then compare the results between pre- and post-crisis periods.

First, the estimation results in Panel A reveal similarity in the estimates of the univariate GARCH model for Islamic stock markets and Korean stock market. For example, the sum of ARCH and GARCH term is very close to unity, implying volatility persistence or volatility clustering in the markets. Panel B of Table 2 presents the estimates of the trivariate dynamic conditional correlation (DCC) model. As shown in this table, the ARCH effect (α) is positive and significant, indicating the importance of shocks between the Islamic stock markets and Korean stock market. For the GARCH effects and (β), the estimates are significant, implying volatility clustering. And sum ($\alpha + \beta$) is very close to one, confirming the high persistence of volatility between the Islamic stock markets and Korean stock market.

In particular, the average conditional correlations ρ_{ij} between the Islamic stock markets and Korean stock markets are all positive and significant at the 1% level, indicating bi-directional causality between Islam Indexes and KOSPI200 Index. We also found bi-directional volatility transmissions by employing VAR-GARCH-BEKK models between the Islamic and Korean financial market Moreover, the correlation of KOSPI-DJIM portfolio ($\rho_{KOSPI-DJIM}$) shows stronger linkage than that of KOSPI-SHX portfolio ($\rho_{KOSPI-SHX}$). In the portfolio perceptive, the S&P 500 Sharia stock Index(SHX) acts as a better hedge asset than DJIM against the risk of stock market due to the lower correlation of KOSPI-SHX pair.

Second, we now compare the results between pre- and post-crisis periods in Table 2. In all cases, the average conditional correlations ($\rho_{KOSPI-DJIM/SHX}$) become stronger in the post-crisis period, indicating that the GFC leads to strengthen linkages between the Islamic markets and Korean stock market. However, the KOSPI-SHX pair shows weaker correlation than KOSPI-DJIM portfolio in the post-crisis and the pre-crisis, respectively. The KOSPI-SHX pair is only weakly linked from Korean stock markets in terms of volatility spillover effects, Islamic stock market and Korean stock market complements in terms of hedging risk.We can also see these features in Figure 2.

Finally, according to the diagnostic tests (in Panel C), Hosking's (1980) and McLeod, Li's (1983) tests accept the null hypothesis of no serial correlation in trivariate models, at least at the 1% significance level, indicating that there is no evidence of statistical misspecification of the trivariate AR(1)-DCC-GARCH(1,1) models.

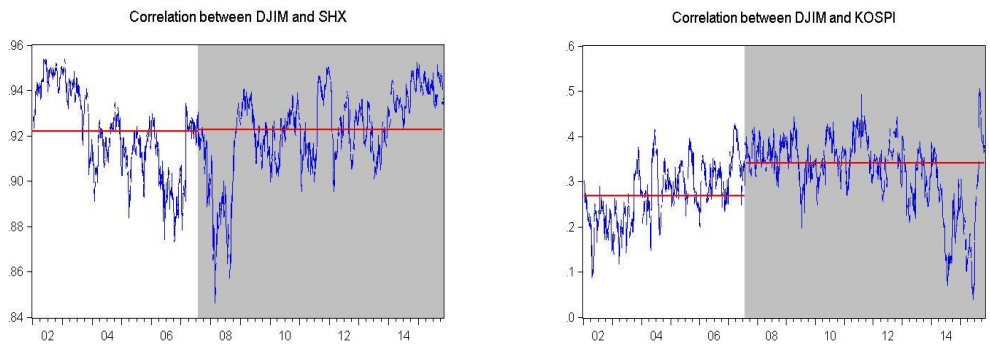


Figure 2. Estimates of dynamic conditional correlation (DCC) between two markets

Table 2. – Estimation results of trivariate AR-DCC-GARCH model

	Whole sample period			Pre-crisis period			Post-crisis period		
	DJIM	SHX	KOSPI	DJIM	SHX	KOSPI	DJIM	SHX	KOSPI
Panel A: Estimates of AR(1)-DCC GARCH(1,1) model									
Const. (M)	0.0514***	0.0546***	0.0518***	0.0556***	0.0413**	0.1254***	0.0479**	0.0640***	0.0209
	(0.0138)	(0.0128)	(0.0182)	(0.0206)	(0.0193)	(0.0339)	(0.0186)	(0.0170)	(0.0213)
AR(1)	0.1216***	-0.0648***	0.0082	0.1208***	-0.0682***	0.0225	0.1249***	-0.0607***	-0.0034
	(0.0165)	(0.0169)	(0.0166)	(0.0259)	(0.0260)	(0.0258)	(0.0222)	(0.0221)	(0.0216)
Const. (V)	0.0104***	0.0199***	0.0118***	0.0062***	0.0086	0.0223***	0.0127***	0.0237***	0.0107**
	(0.0031)	(0.0049)	(0.0040)	(0.0028)	(0.0047)	(0.0103)	(0.0042)	(0.0056)	(0.0044)
ARCH(1)	0.0791***	0.0897***	0.0619***	0.0480***	0.0435***	0.0610***	0.0986***	0.1164***	0.0617***
	(0.0114)	(0.0116)	(0.0082)	(0.0102)	(0.0110)	(0.0121)	(0.0169)	(0.0165)	(0.0117)
GARCH(1)	0.9088***	0.8910***	0.9322***	0.9410***	0.9449***	0.9292***	0.8911***	0.8662***	0.9311***
	(0.0122)	(0.0123)	(0.0088)	(0.0119)	(0.0134)	(0.0140)	(0.0166)	(0.0155)	(0.0123)
Panel B: Estimates of the DCC equation									
$\rho_{SHX-DJIM}$	0.9268***			0.9252***			0.9267***		
	(0.0053)			(0.0076)			(0.0069)		
$\rho_{KOSPI-DJIM}$	0.3022***			0.2594***			0.3359***		
	(0.0356)			(0.0585)			(0.0429)		
$\rho_{KOSPI-SHX}$	0.1910***			0.1634***			0.2085***		
	(0.0377)			(0.0548)			(0.0485)		
α	0.0148***			0.0078**			0.0188***		
	(0.0027)			(0.0037)			(0.0037)		
β	0.9764***			0.9874***			0.9700***		
	(0.0055)			(0.0080)			(0.0082)		
$Q^2(30)$	32.601	19.190	28.587	32.843	21.064	19.105	26.753	22.719	45.904
	[0.3401]	[0.9359]	[0.5393]	[0.3293]	[0.8858]	[0.9377]	[0.6361]	[0.8266]	[0.0317]

Notes: P-values are in brackets and the standard errors are in parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% levels, respectively.

4.2. Implications for risk management and portfolio allocation

In risk management and portfolio allocation decisions, an optimal portfolio requires a preliminary and accurate estimation of the temporal covariance matrix. To manage the risk of both the Islamic and Korean stock markets more efficiently, we use the estimates of the trivariate AR-DCC-GARCH model which allows investors to make optimal portfolio allocation decisions by constructing dynamic risk-minimizing hedge ratios. We compute thus the hedge ratios for designing optimal hedging strategies.

As for the hedge ratios, we consider the beta hedge approach of Kroner, Sultan (1993) in order to minimize the risk of this portfolio (Korean and Islamic stock). We measure how much a long position (buy) of one dollar in the Korean stock index(KOSPI200), should be hedged by a short position (sell) of β_t dollar in the Islamic stock indexes (DJIM and SHX) that is:

$$\beta_t = \frac{h_t^{cs}}{h_t^c},$$

where h_t^c, h_t^s and h_t^{cs} are the conditional volatility of the Islamic indexes returns, the conditional volatility of the KOSPI returns and the conditional covariance between the Islamic and the KOSPI returns at time t, respectively.

Figure 3 represents the hedge ratio evolution between the Korean and Islamic stock market pairs (KOSPI-DJIM and KOSPI-SHX), estimated from the trivariate AR-DCC-GARCH model. These hedge ratio is generally low except specific period, indicating that the Korean stock risk can be effectively hedged by taking a short position in the Islamic stock markets. In comparison with two pairs, the pair of KOSPI-SHX relatively shows a lower average hedge ratio (cheaper hedging cost) than that of KOSP-DJIM pair. This evidence indicates that S&P 500 Sharia index serve more effective hedging role against the risk of Korean stock market. [1]

These graphs also show the time-varying hedging ratios over the time. Investors adjust their portfolio structure and hedging positions corresponding to the stock market conditions (bullish and bearish markets). In the post-crisis period (in the grey shed), the average hedge ratios is higher than that in the pre-crisis period. This implies that investors reconstruct the optimal portfolio, including a lower proportion of Korean stock(KOSPI 200) than of Islamic stock (DJIM and SHX) during the episodes of financial turmoil (in the grey shed period).

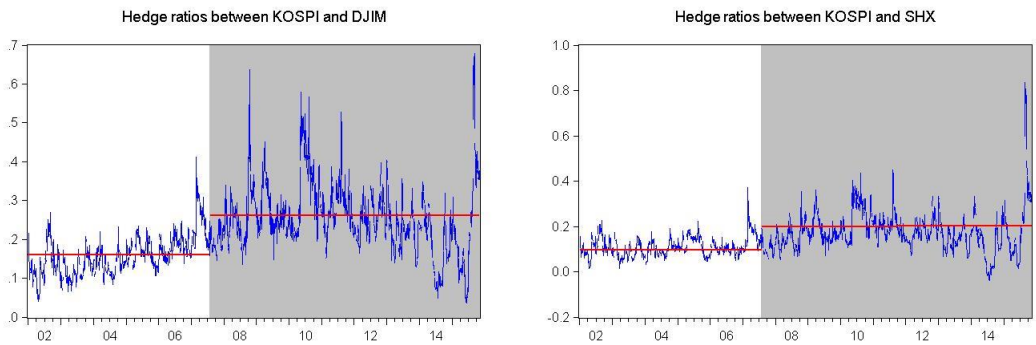


Figure 3. Time-varying hedge ratios between the Islamic and Korean stock markets

[1] But considering KOSPI-Gold portfolio allocation as a safe haven it has a mean value of 0.0718, KOSPI-SHX portfolio with a mean value of 0.0718 is higher. On the other hand, The Islamic finance of the Sharia principles have restrictive domain in Investment because conventional markets use several kinds of hedging strategies against risks which may have helped to shield themselves from cross market spillovers from the unhedged Islamic market. Consequently, the Islamic market may outperform the conventional counterparts during bull markets but underperform in bear markets because of lack of hedging.( )

This study conforms Majid and Kassim (2010) that limited benefits are available if conventional finance investors only diversify their investments in the uncorrelated or less correlated Islamic stock index. This study also highlight the diversification benefits of investing in the various Islamic stock markets.

5. CONCLUSION

The Islamic equity markets are seemingly different from the well-known and well-established conventional markets with perspectives of the principles of Islamic law (shariah) and ethical investment. This paper investigated the volatility spillover effects between Islamic stock markets and Korean stock market using the AR-DCC-GARCH models. First, we found bi-directional volatility transmissions between the Islamic and Korean financial markets during the study period we cover, indicating that Islamic market volatility increases Korean stock market volatility and vice versa. We reject decoupling hypothesis of the linkage between Islamic stock markets and Korean stock market. Therefore, the Islamic stock market may not be a strong therapy that heals from global and Korean financial crises.

Second, we compared the correlation of KOSPI-DJIM portfolio and that of KOSPI-SHX portfolio. It shows the correlation of KOSPI-DJIM portfolio has stronger linkage than that of KOSPI-SHX portfolio. In the portfolio perceptive, the S&P 500 Sharia stock Index(SHX) acts as a better hedge asset than DJIM against the risk of stock market. Last, we investigated the hedge ratio evolution between two Islamic stock market and Korean stock market pairs. These hedge ratio is generally low, indicating that the Korean stock risk can be effectively hedged by taking a short position in the Islamic stock markets. In comparison with two pairs, the pair of KOSPI-SHX relatively shows a cheaper hedging cost than that of KOSP-DJIM pair. This evidence indicates that S&P 500 Sharia index serve more effective hedging role against the risk of Korean stock market.

Overall, This evidence leads to the rejection of the decoupling hypothesis of the Islamic equity market from Korean stock markets, there by increases the portfolio benefits from diversification with Sharia-based markets. The further study needs to investigate the filtering criteria for Islamic indices[2].This requires an empirical investigation of the Islamic stock indices on the characteristics of firm and sectors based on Sharia principle.

LITERATURE:

1. Abul Shamsuddin, Are Dow Jones Islamic equity indices exposed to interest rate risk? Economic Modelling 39 (2014) 273–281
2. Ahdi Noomen Ajmia, How strong are the causal relationships between Islamic stock markets and conventional financial systems? Evidence fromlinear and nonlinear tests, Int. Fin. Markets, Inst. and Money 28 (2014) 213– 227
3. ÁAlvarez-Díiaz M, Hammoudeh S, Gupta R, Detecting predictable non-linear dynamics in Dow Jones Islamic Market(DJIM) and Dow Jones Industrial Average(DJIA) indices using nonparametric regressions, North American Journal of Economics and Finance 29 (2014) 22–35
4. Ahdi Noomen Ajmi, Shawkat Hammoudeh.,Duc Khuong Nguyenc Soodabeh Sarafrazi How strong are the causal relationships between Islamic stock markets(Dow Jones Islamic Market (DJIM) index and conventional financial systems? Evidence from linear and nonlinear tests Int. Fin. Markets, Inst. and Money 28 (2014) 213– 227
5. Al-Khazali, Lean H, Samet A, Do Islamic stock indexes outperform conventional stock indexes? A stochastic dominance approach, Pacific-Basin Finance Journal 28 (2014) 29–46

[2] Among filtering criteria there are the qualitative criteria such as the concentration of sectors, and the quantitative criteria of various financial ratio.

6. Ajmi A, Hammoudeh S, Nguyen D.K., Sarafrazi S, How strong are the causal relationships between Islamic stock markets and conventional financial systems? Evidence from linear and nonlinear tests Int. Fin. Markets, Inst. and Money 28 (2014) 213– 227
7. Buerhan Saiti, The Diversification Benefits from Islamic Investment during the Financial Turmoil: The case for the U.S-based Equity Investors, Borsa istanbul Review (2014)
8. Bollerslev, T. (1986). Generalized autoregressive conditional heteroskedasticity, *Journal of Econometrics*, 31(3), 307-327.
9. Ciner, C., Gurdgiev, C., Lucey, B. M. (2013). Hedges and safe havens: an examination of stocks, bonds, gold, oil and exchange rates, *International Review of Financial Analysis*, 29, 202-211.
10. Catherine Soke Fun Ho, Performance of global Islamic versus conventional share indices: International evidence, Pacific-Basin Finance Journal 28 (2014) 110–121
11. Dickey, D. A., Fuller, W. A. (1979). Distribution of the estimators for autoregressive time series with a unit root, *Journal of American Statistical Association*, 74 (366), 427-431.
12. Engle, R. F. (1982). Autoregressive conditional heteroscedasticity with estimates of the variance of United Kingdom inflation, *Econometrica*, 50 (4), 987-1007.
13. Engle, R., Ito, T., Lin, W. (1990). Meteor showers or heat waves?: Heteroscedasticity intra-daily volatility in the foreign exchange markets, *Econometrica*, Vol. 58, pp. 525–542.
14. Engle, R. F., Susmel, R. (1993). Common volatility in international equity markets, *Journal of Business and Economic Statistics*, Vol. 11, pp. 167–176.
15. Engle, R., Kroner, K. (1995). Multivariate simultaneous generalized ARCH, *Econometric Reviews*, Vol. 11, pp. 122–150.
16. Engle, R. (2002). Dynamic conditional correlation: a simple class of multivariate generalized autoregressive conditional heteroskedasticity models, *Journal of Business & Economic Statistics*,
17. Fredj Jawadi, Conventional and Islamic stock price performance: An empirical investigation, international Economics, 137 (2014) 73–87 20(3), 339-350.
18. Ho, Rahman, Yusuf, Zamzamin Performance of global Islamic versus conventional share indices: International evidence, Pacific-Basin Finance Journal 28 (2014) 110–121
19. Hosking, J. R. M. (1980). The multivariate portmanteau statistic, *Journal of the American Statistical Association*, 75 (371), 602-608.
20. Hood, M., Malik, F. (2013). Is gold the best hedge and a safe haven under changing stock market volatility? *Review of Financial Economics*, 22(2), 47-52.
21. Inclán, C., Tiao, G. C. (1994). Use of cumulative sums of squares for retrospective detection of changes of variance, *Journal of the American Statistical Association*, 89 (427), 913-923.
22. Imam Wahyudi, Interdependence between Islamic capital market and money market: Evidence from Indonesia, Borsa _Istanbul Review 14 (2014) 32-47
23. Jihed M., Mansour W., Islamic equity market integration and volatility spillover between emerging and US stock markets North American Journal of Economics and Finance (2014)
24. Jawadi F., Jawadi N., Louhichi W, Conventional and Islamic stock price performance: An empirical investigation , International Economics,137 (2014), 73–87
25. Kroner, K. F., Sultan, J. (1993). Time-varying distributions and dynamic hedging with foreign currency futures, *Journal of Financial and Quantitative Analysis*, 28 (4), 535-551.
26. Kwiatkowski, D., Phillips, P. C. B., Schmidt, P., Shin, Y. (1992). Testing the null hypothesis of stationarity against the alternative of a unit root: how sure are we that economic time series have a unit root? *Journal of Econometrics*, 54(1-3), 159-178.
27. McLeod, A. I., Li, W. K. (1983). Diagnostic checking of ARMA time series models using squared residual autocorrelations, *Journal of Time Series Analysis*, 4(4), 269-273.
28. Marcos ÁAlvarez-Díiaz, Shawkat Hammoudeh, Rangan Gupta, Detecting predictable non-linear dynamics in Dow Jones Islamic Market(DJIM) and Dow Jones Industrial

Average(DJIA) indices using nonparametric regressions North American Journal of Economics and Finance 29 (2014) 22–35
29. Nazrol K.M. Kamil, Heads we win, tails you lose: Is there equity in Islamic equity funds Pacific-Basin Finance Journal 28 (2014) 7–28
30. Narayan, P. K., Narayan S. (2010). Modelling the impact of oil prices on Vietnam's stock prices, *Applied Energy*, 87(1), 356-361.
31. Osamah Al-Khazali, Do Islamic stock indexes outperform conventional stock indexes? A stochastic dominance approach, Pacific-Basin Finance Journal 28 (2014) 29–46
32. Phillips, P. C. B., Perron, P. (1988). Testing for a unit root in time series regression, *Biometrica*, 75(2), 335-346.
33. Reboredo, J. C. (2013). Is gold a safe haven or a hedge for the US dollar? Implications for risk management, *Journal of Banking & Finance*, 37(8), 2665-2676.
34. Rizvi S.A, Dewandaru G, Bacha O.I, Masih M. An analysis of stock market efficiency: Developed vs Islamic stock markets using MF-DFA Physica A 407 (2014) 86–.99
35. Shamsuddin A, Are Dow Jones Islamic equity indices exposed to interest rate risk, Economic Modelling, 39 (2014) 273–281
36. Syed Aun R. Rizvi, An analysis of stock market efficiency: Developed vs Islamic stock markets using MF-DFA, Physica A 407 (2014) 86–.99
37. Sansó, A., Aragó, V., Carrion, J. L. (2004). Testing for changes in the unconditional variance of financial time series, *Revista de Economía Financiera*, 4, 32-53.
38. Umar F. Moghul, "Introduction to Islamic Finance.", Publication of the Federal Reserve Bank of Boston (2006)
39. Wahyudi I., Sani G.A. , 2014 Interdependence between Islamic capital market and money market: Evidence from Indonesia, Borsa Istanbul Review 14 (2014) 32-47

SECURITIES AND ITS THEORETIC – LEGAL FORMULATION NOT ONLY IN THE CONDITIONS OF THE SLOVAK REPUBLIC

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ABSTRACT
In the most general meaning of the word, security is an instrument that embodies certain right of the owner against the drawer of this document. The long historical development contributed to this generalization, beginning with the era of the reign of Alexander the Great in the 4th century BC, while some authors speak even about the eras of the Babel Empire. In the majority of European states with the exception of Switzerland, floatation of securities or contracts is not amended not even in one Act. The same situation was also in the era of the first Czechoslovak Republic, where from the reason of excessive fractionalism of the particular adjustments of securities and further, with regard to the financial market needs, the intention to create legal enactment arose after 1989 in the form of codex, that would eliminate this defect. Theoretic – legal research of the issue of securities not only in the conditions of the Slovak Republic presents the main aim of this paper, that with its content focus interferes in the area of financial management, however it leads to the area of financial law and it offers significant overlaps into commercial and constitutional law. The paper has effects of multidisciplinary and international research of the issue of securities whose concept and legal enactment remains in the legal environment to a large extent unfinished after years of professional and amateur discussions.
Keywords: *Act on securities, financial management, security*

1. INTRODUCTION – HISTORICAL DISCURSION

In the most general meaning of the word, security is an instrument that embodies certain right of the owner against the drawer of this document. The long historical development contributed to this generalization, beginning with the era of the reign of Alexander the Great in the 4th century BC, while some authors speak even about the eras of the Babel Empire. (Van de Mieroop,2010, p. 103). As soon as that time, first documents started to exist that were similar to securities, with which debtors confirmed their liabilities to their creditors. In the era of Roman Empire there was not enough attention paid to the legal – economic institute of securities and moreover it was being degraded and damaged by the classic Roman law despite the fact that ancient Rome had its commerce developed significantly and it was mediated by bankers who, because of savings of payments, created the chain of remittances. However, the problem appeared. The liability to pay persons not named originally in the sense of the modern additional clause of meeting liability of owner of security to person not listed in document (additional clause on the holder of bearer securities) could not have developed in the money trade because it directly opposed to the underlying opinions of Roman obligation law (Šikl, 1927, p. 8). According to this, it was possible to conclude a contract with definite person

whereby contracts concluded between the indefinite persons or for the benefit of the third person were void contracts. Despite of this restriction of the legal regulation, there is knowledge about the handing out orders known as „*tesserea*," to people by roman ceasars, on the basis of which the owner got either money or perquisities. They could even be used as the tickets to theatre with the exact seating. There are also known the cheques ancestors lat. „*attributio*" or „*perskriptio*" from the era of Roman empire. It was again the tool of roman bankers based on the fact that wealthy people vested their money to bankers to administer it and they got money for it. Bonds were known already in the era before Christ in the Jewish nation, Talmud even contained certain practical cases of its usage.

In Middle Ages, known as lag period, the roman legal institutes were sinking into obscurity mainly from the reason of its deep formality and strictness. It was substituted by simpler instruments certifying legal right. It was mainly the issue of letters of credit, by means of which the ruling class gained resources necessary for conducting wars, mainly crusades. They were so called General letters of credit (bonds), whereby it was partial bond where the Establishment, i.e. monarch or aristocracy divided certain necessary amount into smaller amounts, which were after collected from their lieges resp. other persons, mainly bankers. At the same time, they were obliged to pay these loans after certain period of time and to pay the creditor regular interest till the maturity. It is possible to mention the letters issued by the English King in 1199, then the letters issued with the connection to crusades that were led by the French King Louis IX, or the letters issued by the city of Split in 1261 (Beneš, Musílek, 1990, p. 7) as the examples of these letters of credit.

As the professional literature states, in general, bills of exchange used in the north-italian Town Republics were considered in strict sense of the term, the first securities. The commerce with bills of exchange began at the meetings of tradesmen in 12th and 13th century in Milan, Genoa and Florence. These meetings of tradesmen took place around factories of italian tradesmen mainly in the vicinity of italian consular houses. Places where this trade took place were not in that time called stock markets but loggiems (Dědič et al. 1997, p. 29) The ancestors of bills of exchange can be found except of the Middle East also in China, where in 8th century BC, under dynasty Tang rule, the special tools so called "feitsyn" were used for the safe transfer of money for long distances. Later, arab tradesmen used as the papers for money transfer instruments (ancestors of bills of exchange) called „suftadja" and „hawala" and consequently the italian tradesmen began to use similar financial instruments in 12th century , that brought along its subsequent growth and they gained the main features of the current appearance of bills of exchange. The next stage of its development was connected to France and Netherlands in 16th to 18th century, when the endorsement appeared. The popularity of bills of exchange and its relationships was connected also to the fact that bill of exchange was from its start able to fulfill more functions. As the tool of payment method, it enabled the payment of without the risk of cash transfer to distant places as well as it provided the possibility of credit settlement.

The developing commerce and increasing living standard of citizens meant also the development of securities which interfered more and more with the ordinary life of citizens. Under the government of Napoleon III, Act on loans preferred by the Caesar, influenced the common citizen life, which should have solved the unstable necessity of industrial society for financial resources.

By this step, the state helped itself by means of issuing bonds and big capital trade companies emitted stocks and premissory notes. However, they did not look on the necessities and interests of third state or agriculturists, who missed more and more credit and insurance law. Agriculture must have adapted after the revolutionery agricultural reform and after the abolishing of landlordry and cooperative economy to capital intensive and income demanding economy what was not possible without foreign capital and loans. The basis of liability could have been only land ownership, what required the adjustment of loan and morgage conditions. Citizens, who

wanted to invest safely and profitably, needed securities that could be transfered and be profitable. More and more people wanted to secure their retirement. In that time, the possibility "*to be a rentier from the profit of their own capital"* was an ideal to secure their retirement. (Urfus, 1994, p. 129).

The youngest and so far not finished impulse for the development of securities became the posssibility of its dematerialization (removal of its own material substratum) i.e. the letter that was for long-term untouchable. We can see its removal right with the connection to solving the sensitive cases, where security was destroyed, lost or stolen. As far back as 19th century, french law used the analog intitute of amortization of security , where because of the uprising of communards, the significant part of securities in the given country was destroyed in the previous two years. (Dědič, Pauly, 1994, p. 88). However, the real development of dematerialized securities in the mass measure came with the development and mass arrival of information technology.

2. THEORETIC – LEGAL DEFINITION OF FORMULATION

The theory of law was not discussed for long decades in Czechoslovakia and consequently in Slovakia, because the economic meaning of securities was negligible in the conditions of the centrally planned economy and there was no interest to deal with this problematics not even in the field of juridical science. Except of Act no. 191/1950 of Journal of Laws, there was no legal regulation of this issue.

Till the entry into the force of the Act of Federal Assembly of Czech and Slovak Federal Republic no. 600/1992 of Journal of Laws on securities, the legal definition of this expression did not exist in the conditions of the mentioned countries. The Civil Procedure Code according to which "*it is posible to amortize lost or destroyed letter, which has to be presented for the claiming of right "(Ficová et al., 2005, p. 31)* was the first to define this expression. However, from this articulation of law, it did not result unambiguously that letters have at the same time the status of securities. However, the Slovak Republic was not by no means unique by the absence of the adjustment of this formulation because the majority of european countries left this formulation to theory of law as well to Court's case-law, e.g. in the english law it is not valid even that securities are those subjects of legal relationships, that are provided by law, but the determination what is security is highly left to judicial practice. (Kasinec, 2011, pp. 115-127)

Czech legal theory, when trying to define this expression, focused on the german legal theoretician H. Brunner, who, as the first one who systematically summarized single types of securities used in commercial environment to the single category and separated them from other letters, that had legal meaning. The result of his performance is the formulation of the first definition of security in 1882, according to what security is a letter about private right whose application is private legal and it is dependent on understanding the letter. Its standing in german law persists till now. As H. Brox states in the Commercial law and Securities' law, "security is the letter with which the private right is secured by the way that . the holding of the letter is necessary for the law to be applicable. (Brox, 1983, p. 222))

This definition is similar in the swiss law which in Clause of the Article 965 of the Swiss obligation Act from 1911 states that security is the letter , which the right is connected to in that way that it can not be applicable or transferred without this letter. Supreme Court tried to define this expression in 1940, that in its sentence stated, that securities are those letters which are the condition of creation, transfer, execution or duration of right where are those letters exposed and by this they are different from the accompanying (legitimate) letters, which are the evidence about the right, however they are not carriers of right and they have only the formal legal meaning for law. (Kasinec, 2013, pp. 9-35).

However, these traditional definitions were not possible to apply for book-entry securities where the certificated form is substituted by the registration into the certain record. However, letter and registration in the certain record is not its substantial certain script and therefore Š. Elek regarded the legal law of J. Dedič and J. Pauli as the most convenient definition which is possible to apply for certificated as well as book-entry securities. According to them security is the written expression of will (script act), with which subjective law is connected to by the way that the disposition with this law is possible only together with the disposition of script act.
Supreme Court of USA understands this expression completely differently and extensively. It keeps the opinion that "*security is every invesment contract on the basis of which , certain person invests their financial resources to the common business and they are led by the expectation of profit exclusively on the basis of endeavour of the certain businessmanor the third person.* From the above, it results that the understanding of security in the american law, in contrast to central –european legal cultures, the way of applying or transfer of the right is not decisive but the content of legal right established by security is. The basis of security is in this sense investment contract and the expression security rather accords with the expression investment. It is necessary to say that whatever conparison of the slovak, resp. european understanding of the expression security is, with its understanding in english or american law it is quite problematic with regards to the completely different development of these legal cultures. (Kasinec, 2011, pp. 312 -320)

3. CZECHOSLOVAK, RESP. CZECH LEGAL REGULATION OF SECURITIES AFTER 1989.

In the majority of the european states with the exception of Switzerland, the issue of securities or contracts is not regulated not even in one act. The same situation was in the era of the first Czechoslovak Republic, when, from the reason of the extensive difference of regulations of securities, and moreover regarding the necessities of financial market, the intent to create legal enactment in the form of codex arose, which would have removed this defect.
The first endeavour of the common legislator – Federal Assembly of Czech and Slovak Federal Republic was the approval of Act no.600/1992 of Journal of Laws, that was effective in the Slovak Republic as late as 31.12. 2002. Other, more problematic situation was in the Czech Republic, where Czech National Council also approved at the end of 1992 the act on securities published in Journal of Laws with no. 591/1992, that became effective on 1.1. 1993. Except of the different determination of competence of the Republic and federal organs, there were only two legal enactments with the same content and it was necessary to equal legally with the existence of the same legal enactments. The convenient solution that was accepted by the theory and practice was first proposed probably by J. Dedič, whose opinion came out of the Constitution Act of Czech National Council no. 4/1993 of Journal of Laws on measurements connected to the extinction of Czech and Slovak Federal Republic from 15.12 1992. As the Article I from this constitutional act states, the legal enactments remain valid in the day of extinction of Czech and Slovak Federal Republic, in the area of Czech Republic, however, according to the enactment of the Article II that solves the collision of the Republic and federal legal enactments, the preference is on the Republic legal enactments. From the stated, J. Dedič made the conclusion that was accepted also by the legal practice, what meant the necessity to follow the Act FA CSFR no.591/1992 of Journal of Laws on securities, whereas the Act FA CSFR no. 600/1992 of Journal of Laws could not have been applied in Czech Republic as the valid act. The faith of federal Act was finally sealed by the approval of the Act no.152/1996 of Journal of Laws, which changes and amends the Act of Czech National Council on securities whose Article IV cancelled federal legal enactment and by this the issues above mentioned were removed forever. (Nováčková, Milošovičová, 2011, pp. 88-99)

The new czech Civil Code, that entered into force on 01.01. 2014 cancelled the Act of Czech National Council 591/1992 of Journal of Laws and implemented into the legal order of Czech Republic the legal definition of security, that states that *security is a letter which is law connected with in the way that after issuing of security it is not possible to apply it without this letter, not transfer it.* On the first sight it appears here as the czech legislator after the years of preparation forgot that also book-entry form of security exists. The stated enactmnet comes out from the Article 965 of Swiss Act on obligation law, from which other legal enactments come out, mainly italian or polish ones

4. THE SLOVAK LEGAL ENACTMENT AFTER 1993

The legal order of the Slovak Republic left the federal legal regulation as the part od the slovak legal order as it was not in conflict with the clause of the Article 152 part 1 of the Constitution of the Slovak Republic, according to which constitutional acts, acts and other generally binding legislative acts remain valid in the Slovak Republic if they are not in conflict with the Constitution. They can be changed or cancelled by the competent authorities of the Slovak Republic.' The Act no. 600/1992 of Journal of Laws on securities regulated generally legal status of securities, securities traders, stock exchange as well as the conditions of securities public negotiability. It has been amended 12 times during its effectiveness.

Regarding the proposed range of changes in the regulation of performance and status of traders, stock exchange and other subjects of the capital market of the Slovak Republic as well as with the implementation of other institutions (guarantee fund of investments, state supervision on the consolidation basis), it was substituted by the Act no.566/2001 of Journal of Laws under the new name – the Act on securities and investment services. (Saxunová, 2014, pp. 96-103)

The enactment of § 2 part 1 of this act contains also the legal definition of security, according to which security is the listing valuable by money in the form appointed by law and with which the rights are connected according to this law and the rights according to the special laws, mainly the authorization to require certain property rights or to execute certain rights against the persons legally determined. There are three basic characters of security that come out from this legal definition and they are:

1. security is the listing that is valued by money,
2. security owner has the right to require certain either financial or property rights,
3. the right connected to the listing has to have legal form.

The following clause 2 of the Act on securities also names enumeratively particular types of securities.

5. CONCLUSION

If we came out from the basic expression of security, it would be possible to say that the first characteristic mark is the material substrate (letter) where the certain written speech is caught. Generally, it is the letter in the classical meaning of the word, i.e. sheet of paper. However, the character of the particular material substrate does not have the important meaning, it can be whatever movable asset that has the ability to become the bearer of written information. As the professional literature states, the second characteristic mark is then the value of security, which it is not possible to understand in the general meaning of the word , but in the legal meaning. Letter is valuable by its legal consequences that are connected to it by legal order. It means then, that security can be whatever marked letter whose contain is capable of inducing legally certificated consequences. It results from the stated that under the expression of security we can not understand those letters that are legally irrelevant, despite the fact that they can be very importatnt for parties. (Milošovičová, Nováčková 2014, p. 70) As the above mentioned, it is clear that german, austrian or czech definitions of securities find its legal nature in that they are

letters resp. papers that the right is connected to in the special way where it is incorporated to and that is necessary to present for the purpose of claiming the right.
There are many other papers except of securities that are not considered as securities in spite of the fact that they show certain legal meaning and can be presented to claim certain subjective right. To conclude, it is possible to state that the way, that has been chosen by the slovak legislator , i.e. accepting the legal definition of security and legal enumerative naming of particular types of securities, it is necessary to evaluate this way as the right one. Only the legal enactment that does not allow different digressions or liberal explanation is the guarantee of the financial market stability, that is inseparable part of the properly funcioning market economy of state. (Stoličná, 2012, p. 14)

LITERATURE:

1. Beneš, V., Musílek, P. (1990). *Cenné papíry a burza.* Praha: Vysoká škola ekonomická
2. Brox, H. (1983). *Handelsrecht und Wertpapierrecht.* Beck: München
3. Dědič, J., Pauly, J. (1994). *Cenné papíry.* Praha: Prospektrum
4. Dědič, J. et al. (1999). *Právo cenných papírů a kapitálového trhu.* Praha: Prospektrum.
5. Ficová, S. et al. (2005). *Občianske právo procesné : základné konanie.* Bratislava: Univerzita Komenského v Bratislave
6. Kasinec, R. (2011). *Európska právna kultúra.* In: Míľniky práva v stredoeurópskom priestore 2010, Bratislava: Univerzita Komenského v Bratislave,
7. Kasinec, R. (2011). *Precedens a ostatné pramene práva v Anglicku a v USA,* In: Historia et theoria iuris. Bratislava: Univerzita Komenského v Bratislave
8. Kasinec, R. (2013). *Sudcovská tvorba práva v slovenskom právnom poriadku - včera, dnes a zajtra.* In: Vybrané aspekty súdneho precedensu v podmienkach Slovenskej republiky. Bratislava : Univerzita Komenského v Bratislave
9. Milošovičová, P., Nováčková D., (2014). *Uplatňovanie práva EÚ na Slovensku.* Plzeň: Aleš Čeněk
10. Nováčková D., Milošovičová P., (2011). *Medzinárodné ekonomické právo.* Bratislava: Eurounion
11. Saxunová, D. (2014). *Vplyv účtovania dlhových cenných papierov na finančnú situáciu a výsledok hospodárenia.* Bratislava: Univerzita Komenského v Bratislave
12. Stoličná Z., (2012). *Vývoj hospodárskej politiky SR od transformačného obdobia roku 1989 až po súčasnosť.* Bratislava: KARTPRINT
13. Šikl, H. (1927). *Soustavné výklady na právo směnečné.* Praha: Česká akademie věd a umění
14. Urfus, V. (1994). *Historické základy novodobého práva soukromého.* Praha: C. H. Beck
15. Van de Mieroop, M. (2010). *Dějiny starověkého blízkeho východu*, Praha: Academia

CROWDFUNDING IN CHINA – DEVELOPMENT PERSPECTIVES

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ABSTRACT

China is the world biggest economy with a still present rapid growth rate. Yet, relying on direct foreign investments for a long time, the financial market in China is still in the development phase. The crowdfunding financing model, which is rapidly increasing in value in the world for the last couple of years, made a relatively recent appearance, with the first crowdfunding platform appearing in China in 2011. The starting delay was quickly caught up by the galloping growth, as today China is third biggest crowdfunding market in the world, after USA and EU, with incredible potential for growth. The sudden greater access to and wider acceptance of internet technologies, online financial services and especially smartphones combined with the rise of GDP per capita of the numerous Chinese population created a perfect economic environment for the explosive development of crowdfunding. Yet, the government regulation did not follow the economic developments so readily. The first moves by the government to regulate the market came in 2014, thus benefitting from experiences from other countries. At the end of that year the Securities Association of China released the Measures for Administration of Private Equity Crowdfunding. In March 2015, the General Office of the State Council released the Guiding Opinions on Expanding Maker Space to Promote Innovation and Business Startups by General Public, of which an important part is to conduct the pilot program of Internet-based equity crowdfunding and to promote crowdfunding to better serve innovation and business startups by general public. In December 2015, the China Banking Regulatory Commission (CBRC) issued the first draft for online lending, and in August 2016, announced the first official rules. Chinese crowdfunding market today has a perspective to become the largest one in the world, but there are still many challenges to overcome. This paper will analyse the status quo in China and highlight important aspects of this market including comparative analysis with the USA and UK market, and propose regulatory solutions, taking note of the unique aspects of Chinese economy.

Keywords: *China, crowdfunding, financing, innovation, regulation*

1. INTRODUCTION

China is the second-largest economy in the world with an average rate of 9% GDP growth over the last 20 years and a rapidly growing domestic market for new products and services driven by its population of 1.3 billion (Hu, Yang, 2015). Although the predictions are that this incredible growth is predicted to slow down to 6.1% by 2018 (OECD, 2016), even this rate coupled with the size of Chinese economy will ensure the dominant position of China in global economy in decades to come. These incredible statistics make China one of most popular investment destinations for venture capital and private equity firms from all over the world, but innovative world trends such as internet based capital raising are also making their way into Chinese capital market, in the form of crowdfunding.

Although it is hard to accurately define and measure crowdfunding (Blaće, Grubišić 2016), compiling various sources, the growth rates that the industry demonstrates are undeniable. In 2009, the world crowdfunding market was estimated to be $3.61 billion. In 2012, this figure increased to $17.3 billion (Hu, Yang, 2015). In 2016, the initial reports place crowdfunding industry at $22 billion (Crowdsurfer 2016).

In this paper, the crowdfunding market in China was analyzed in comparison with the developments in the rest of the world, most notably comparing it to the USA and EU market. Publically available data is used and analyzed in this context. Furthermore, an overview of the legal status of crowdfunding is performed. Based on the results thus obtained, priority areas and necessary development will be indicated.

2. CROWDFUNDING IN CHINA

2.1. Size and features of the crowdfunding market in China

China has had the benefit of coming late to the crowdfunding wagon. First online platform, Demohour, opened in 2011 as a response to the crisis of 2008 (World Bank 2013). After that modest start, the market soon erupted and has seen unprecedented rates of acceptance and growth. For example, crowdfunding for the movie titled "Happy Boys Movie" enlisted nearly 4 million Chinese participants, setting a new record for the number of investors in a single crowdfunding project (Hu, Yang, 2015). Demohour has specialized for art projects, but soon, big companies realized the potential of the market and started their own platforms for crowdfunding. In December 2013, Aliababa launched crowdfunding on Taobao, creating Yulebao, which allows investors to support Chinese films. In July 2014, JD.com, one of China's largest e-commerce websites, launched Coufenzi, a crowdfunding platform hosting a variety of projects. Shortly after, in 2015, JD.com launched JD Equity Crowdfunding, a platform devoted to entrepreneurs looking for early-stage investors. Baidu and Tencent also entered the market by launching Baidu Crowdfunding and Tencent Succor, also known as Tengxun Lejuan (China Business review, 2016).

Today, all sub-types of crowdfunding are flourishing in China, driven by high acceptance of internet and especially mobile technologies. There are 650 million internet users in China, and 86 percent of internet usage is through smartphones. The nature of the market is especially evident in the use of electronic money; Alipay consists of 350 million users, with WeChat Wallet, Baidu Wallet, and many others vying for market share (China Business review, 2016). These factors have combined to form a prognosis of forming a world's biggest crowdfunding market. Estimates by the The World Bank put China's crowdfunding market at $50 billion in 2025, more than half of the estimate of the total amount of funds raised through crowdfunding in the developing countries (The World Bank 2013).

Still, the progress in the crowdfunding market didn't come without drawbacks. In 2016, Chinese police have arrested 21 people involved in the operation of peer-to-peer (P2P) lender Ezubao over an online scam. Ezubao was accused of operating a large Ponzi scheme. It took in some 50 billion yuan ($7.6 billion) from about 900,000 investors (Reuters 2016). This unfortunate development has highlighted the weak regulatory framework under which crowdfunding operates in China, which will be analyzed in the next chapter in this paper.

User mentality of the Chinese users is interesting, described as "more accustomed to the role of buyer rather than investor. They tend to be more interested in the physical products and benefits such as early delivery of the good or discount prices, rather than showing support for the

entrepreneurial and inventive spirit, which has been an important element for crowdfunding's popularity in the US." (The World Bank 2013).

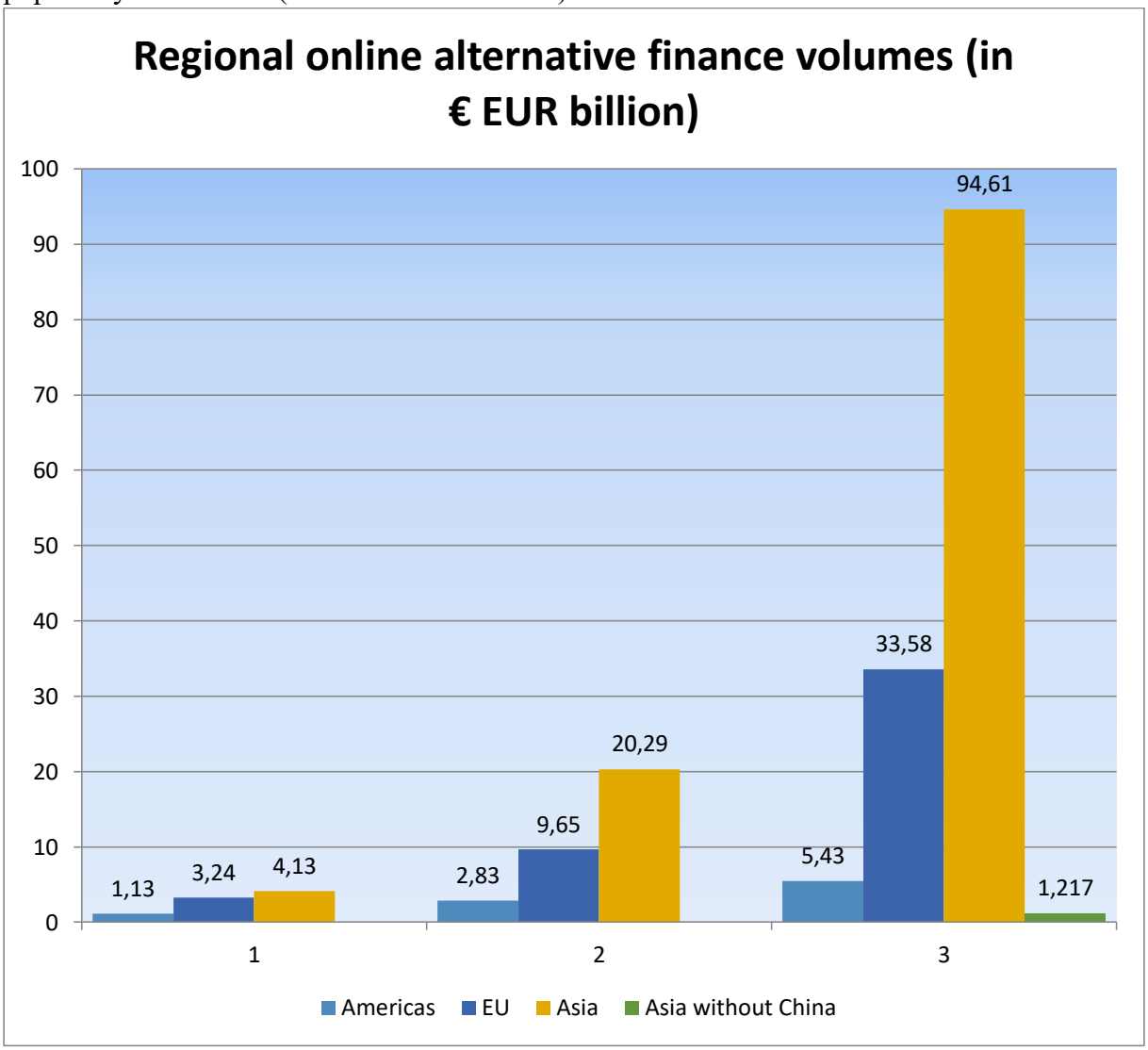

Chart 1: Total regional online alternative finance volumes, in € EUR billion (Source: Sustaining momentum, the 2nd European alternative finance industry report, Cambridge Centre for Alternative Finance, September 2016)

Chart 1. shows the incredible rate of growth in total online finance volumes in 2013-2015. While American market has grown 480% in these three years, and in EU the growth has been 1036%, Asia has grown for the incredible amount of 2290%. This figure looks even more impressive when we take into account that out of the 94.61 billion € in 2015 in Asia only 1.217 billion € was made outside of China. This number includes marketplace / P2P consumer lending, balance sheet consumer lending, marketplace / P2P business lending, balance sheet business lending, marketplace / P2P real-estate lending, invoice trading, equity-based crowdfunding, equity-based real estate crowdfunding, reward-based crowdfunding, donation-based crowdfunding and revenue/profit-sharing crowdfunding (Cambridge Centre for Alternative Finance, 2016). While most of the above mentioned finance models do not fall into traditional definitions of crowdfunding, the incredible rate of expansion of online alternative financing models show the fertile ground for the development of crowdfunding, which happens practically exclusively online.

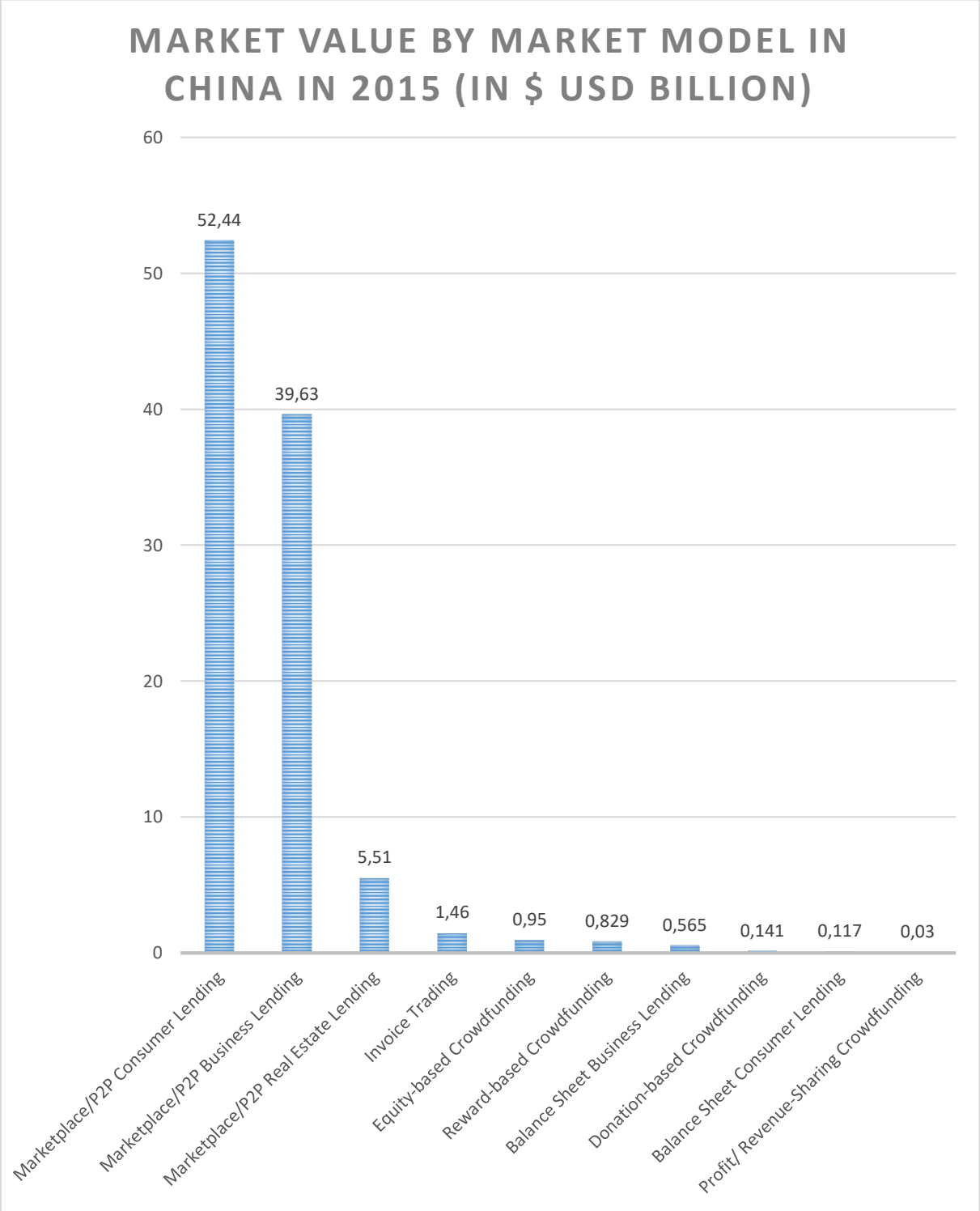

Chart 2: Market value by market model in China in 2015, in $ USD billion (Source: Harnessing Potential: The Asia-Pacific Alternative Finance Benchmarking Report, Cambridge Centre for Alternative Finance, March 2016)

Chart 2 shows us the distribution of market value by market model for online alternative finance in China in 2015. The four models of crowdfunding indicated (Equity-based crowdfunding, Reward-based Crowdfunding, Donation-based Crowdfunding and Revenue-based / Profit Sharing Crowdfunding) provide a market volume of $2 billion.

2.2.Comparison with USA and UK

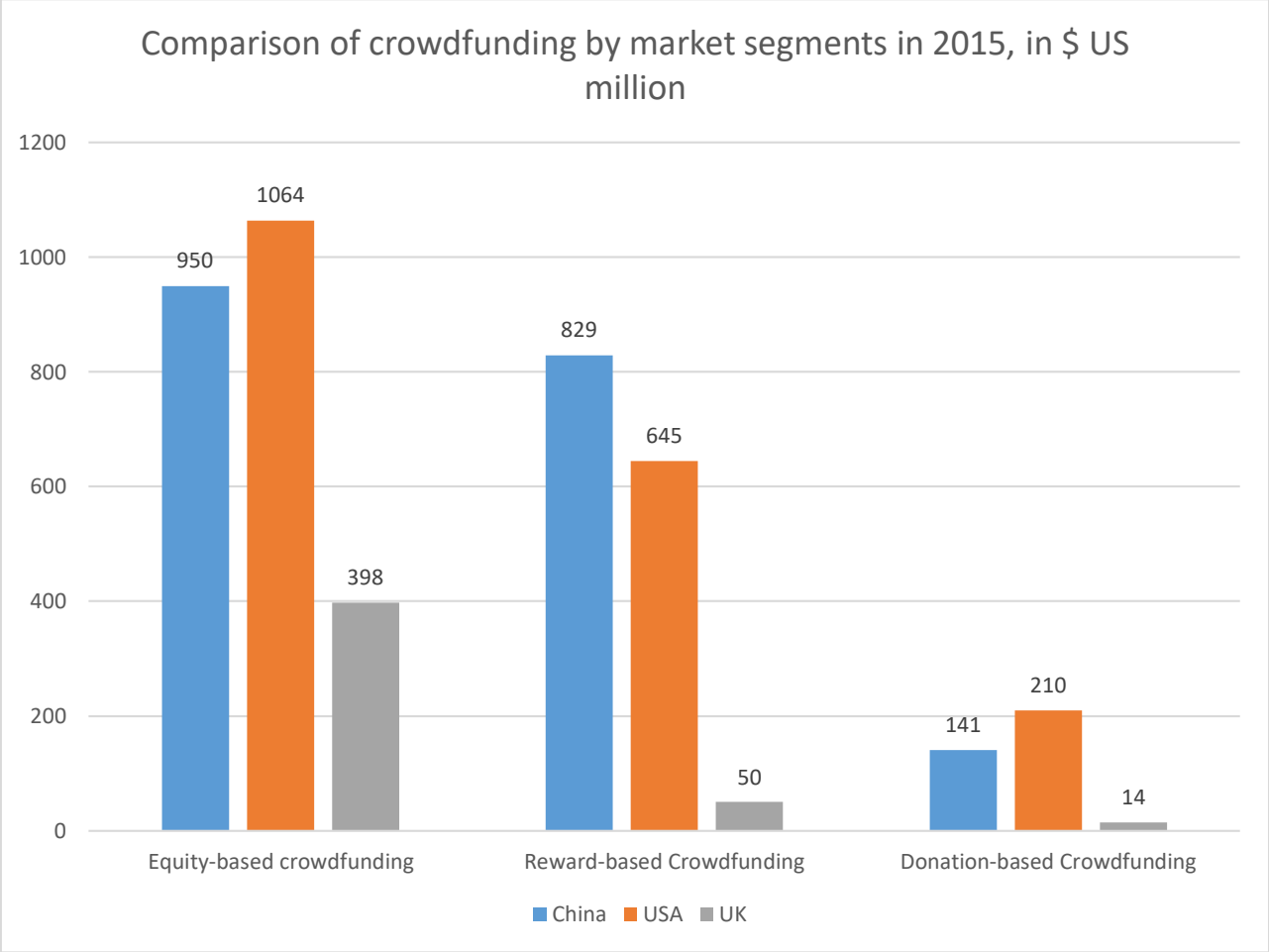

Chart 3: Comparison of crowdfunding by market segments in 2015, in $ US million (Source: Sustaining momentum, the 2nd European alternative finance industry report, Cambridge Centre for Alternative Finance, September 2016, Harnessing Potential: The Asia-Pacific Alternative Finance Benchmarking Report, Cambridge Centre for Alternative Finance, March 2016, Pushing boundaries: The 2015 UK Alternative Finance Industry Report, Cambridge Centre for Alternative Finance, February 2016). Note: USA includes data for Canada, however, given the small amounts of money raised through crowdfunding in Canada, the impact in negligible.

Chart 3 shows the comparison of the amount of volume of transactions in three main models of crowdfunding for the worlds three biggest markets: China, USA and United Kingdom. While the crowdfunding market has been developing for quite a while in the USA and United Kingdom has not lagged behind much, China has managed to pull ahead of the USA market in just 5 years (between 2011 and end of 2015).

In comparison of segments, the cultural differences between Chinese and other users can be easily viewed from the chart. As we gave previously said, a Chinese user tends to act more like a buyer, rather than the investor. Therefore, China is taking a large lead in reward-based crowdfunding. On the other hand, USA takes precedence in equity-based crowdfunding, highlighting the investor culture. This is especially evident for the users from the United Kingdom, whose preference for the equity-based crowdfunding take up the largest ratio of total amount of market volume. Such user behavior will probably change in the future given the changing nature of Chinese society.

3. LEGAL FRAMEWORK FOR CROWDFUNDING IN CHINA

3.1. Status quo and recent changes

Chinese financial market is traditionally dominated by state-owned banks, and compared to the financing models such as direct loans, initial public offerings, or bond issuances, equity-based crowdfunding is still in its embryonic stage (Hu, Yang 2015). Conversely, there is no single legislative source regulation crowdfunding, such as JOBS Act in USA or the Financial Services and Markets Act in the United Kingdom. In the period between 2005-2013 China was regulating the banking sector, achieving greater stability and security, trying to achieve the ultimate goal of "full banking service coverage" (Weihuan et al. 2015). However, the period also saw the emergence of microfinance services, such as P2P lending, microcredit companies, village banks, etc. At the same time, non-traditional forms of digital finance have grown very rapidly in a very short time in China, bringing major challenges to policymakers and regulators (Weihuan et al. 2015). For example, a major hurdle for the development of equity-based crowdfunding in China is the strict distinction between public and private offerings. Generally, the definition of a public offering is quite crystallized, but crowdfunding invades the traditional supervisory arena of public offerings by encouraging online private offerings to the general public via an Internet platform (Hu, Yang 2015). The transfer of equity to non-specific persons and/or to more than 200 specific targets is deemed to be an issue of securities to the public and is subject to approval by state administration, in accordance with the Criminal Law. In China, the qualification requirements and approval standards for the public issue of securities are highly rigorous and thus, it is unlikely that small and medium-sized enterprises (SMEs) and start-up enterprises will be eligible for the public issue of securities. Furthermore, the cost of publicly issuing securities is far too high to be borne by SMEs and start-ups, and is too expensive compared with the amount of the capital raised. Thus, it is unrealistic for SMEs and start-ups, to conduct fundraising by strictly complying with the requirements for a public issue of securities because the approval standards required by the state administration are unlikely to be met (Peng 2015). Another issue is the definition of non-specified investor. This is usually circumvented by crowdfunding platforms by prior registration and approval of the investor by the platform, and by limiting the percentage of contribution so as to stay within the limits of 200 investors (Weihuan et al. 2015).

The Ezubao case and the issues mention above had led the Chinese government to act on regulating the crowdfunding, especially so after 2014 when the crowdfunding boom began to take place. In December 2014 The Securities Association of China has published the Consultation Draft called "Measures for the Administration of Private Equity Crowd Funding", thus for the first time producing specific regulation for crowdfunding. The requirements for the investors were lowered, though by many, they have remained high. The draft regulations require investors to be accredited, meaning that anyone who wants to invest in equity crowdfunding projects must meet at least one of the following requirements: Invest at least RMB 1 million in a single project; Possess net assets of RMB 10 million; or Possess financial assets of RMB 3 million and having an annual income of at least RMB 500,000 for the past five years (Erdenebileg 2016).

In March 2015, the General Office of the State Council released the Guiding Opinions on Expanding Maker Space to Promote Innovation and Business Startups by General Public.

More recently, in July 2015, China's central bank and several other relevant government departments issued guideline to regulate the general online finance industry. In August 2015,

the China Securities Regulatory Commission (CSRC), the supervising government body for crowdfunding, announced that it would begin inspecting online equity financing platforms and assessing any possible illegal activities (Xinhua 2015). In December 2015, the China Banking Regulatory Commission (CBRC) issued the first draft for online lending, and in August 2016, announced the first official rules. This development indicates that crowdfunding will soon be subject to more specific regulatory requirements (Erdenebileg 2016).
The requirements in other legal documents, such as the Criminal Law, PRC Securities Law, Offenses Against Company and Enterprise Management Order and Crimes of Undermining the Order of Financial Management were not changed at this time.

3.2.Proposals for the legal framework for crowdfunding

Chinese government has shown determination to strengthen the legislative framework for crowdfunding. It faces classical dilemmas in this area – whether to introduce stricter laws and therefore provide more security for the investors, or to reduce the criteria for crowdfunding participation, therefore opening more space for embezzlement and fraud. Hu and Yang (2015) argue that any such development has to be in line with the existing Chinese legislation and culture. Otherwise, it may "easily become descriptive, mechanical, and perfunctory elements with tenuous practical value or legislative significance". Although the Chinese government has voiced the complete dedication for the growth of economy based on mass innovation and entrepreneurship with a market orientation (China science and technology newsletter 2015), the rather non-flexible legislation does not follow those guidelines.
The proposals are:

1. To better define the illegal fundraising in PRC Criminal Law. This crime is most often linked with false advertising, but as it is not strictly defined, it may or may not be an obstacle for the development of crowdfunding (Hu, Yang, 2015)
2. Provide investor with more control over the investment. Current framework allows for only basic information and monitoring rights, which is not adequate protection for the investors right of return. Potential conflicts of interest should be announced up front, before the contract is made. This includes any financial interests of the fundraising portal and any and all relations between the portal and the fund-receiver, therefore ensuring full disclosure (Li, Y. 2016).
3. To lower the investor qualification and therefore truly allow the wider crowd to participate in crowdfunding ((Li, Y. 2016).
4. Clarify the identity and function of the equity crowdfunding platform. At the moment, the Contract Law and Securities Law (virtually unchanged from 1992) do not provide for clearly delineated obligations that such platforms must adhere to. By better defining the contract obligations between the platform and the user, users will be provided more security for their investments without any perceived loss of effectiveness of the system (Hu, Yang, 2015)

4. CONCLUSION

Although China is a latecomer to the crowdfunding movement, it has quickly embraced the movement and by the metrics studied in this paper, taken the world lead in the amount of total volume of funds in both the online alternative finance and crowdfunding. The sudden development has caught government regulators unprepared, despite similar trends in other leading economies. The size and rate of growth of Chinese economy, number of potential users, unique combination of social and economic system, a specific legal system and many other factors complicate the development. In terms of development potential, it is enormous. Yet, a

wish for harmonious and secure development is not quite as simple to fulfill. The legal framework is non-specific and undefined. Better, more concise regulation is desirable, though any regulation carries the risk of over norming the market, thus strangling its development. China has the unique advantage of being able to observe the rules already implemented in other economies and therefore pick and choose the most successful practices. The resoluteness of Chinese government to stop fraudulent practices such as the Ezubao case is commendable from every angle, unless it leads to the future regulation that is too strict, therefore preventing the even wider spread of the model, especially the equity crowdfunding. China has all the prerequisites to become world leader in crowdfunding – it will be most interesting to watch its development.

LITERATURE:

1. Hu T., Yang D. (December 2015), The People's Funding of China: Legal Development of Equity Crowdfunding – Progress, Proposals, and Prospects (IMI Working Paper No. 1508 {EN}), International Monetary Institute, Beijing, China
2. OECD (2016), *OECD Economic Outlook, Volume 2016 Issue 2*, OECD Publishing, Paris
3. Blaće M., Grubišić A., Crowdfunding in the EU – Challenges of the innovative source of financing, Economic and Social Development (Book of Proceedings), 17th International Scientific Conference on Economic and Social Development – "Managerial Issues in Modern Business", Warsaw, 2016
4. Crowdsurfer (22.12.2016.), Crowd finance in 2016, retrieved on 08.01.2017. from https://www.crowdsurfer.com/blog/crowd-finance-in-2016/
5. Zolzaya Erdenebileg (16.11.2016.), Better Together: The Potential of Crowdfunding in China, China Business review. Retrieved 07.01.2017. from https://www.chinabusinessreview.com/better-together-the-potential-of-crowdfunding-in-china/
6. The World Bank, Crowdfunding's Potential for the Developing World. 2013. info Dev, Finance and Private Sector Development Department. Washington, DC
7. Reuters (01.02.2016.), Chinese police bust $7.6B Ponzi scheme at P2P lender Ezubao. Retrieved 01.08.2017. from http://www.cnbc.com/2016/02/01/chinese-police-bust-76b-ponzi-scheme-at-p2p-lender-ezubao.html
8. Massolution (2015), 2015CF Crowdfunding Industry Report, available at http://reports.crowdsourcing.org/index.php?route=product/product&path=0&product_id=54&sort=p.date_available&order=DESC
9. Zhang B., Wardrop R., Ziegler T., Lui A., Burton J., James A., Garvey K., (September 2016), Sustaining Momentum: The 2nd European Alternative Finance Industry Report, Cambridge Center for Alternative Finance, Cambridge, UK. Retrieved 07.01.2017. from https://www.jbs.cam.ac.uk/faculty-research/centres/alternative-finance/publications/sustaining-momentum/#.WHvjK1xsxaQ
10. Zhang B., Deer L., Wardrop R., Grant A., Garvey K., Thorp S., Ziegler T., Ying K., Xinwei Z, Huang E., Burton J., Chen H., Lui A., Gray Y. (March 2016), Harnessing Potential: The Asia-Pacific Alternative Finance Benchmarking Report, Cambridge Center for Alternative Finance, Cambridge, UK. Retrieved 07.01.2017. from

https://www.jbs.cam.ac.uk/faculty-research/centres/alternative-finance/publications/harnessing-potential/#.WHvgjFxsxaQ

11. Zhang B., Baeck P., Ziegler T., Bone J., Garvey K. (February 2016), Pushing boundaries: The 2015 UK Alternative Finance Industry Report, Cambridge Center for Alternative Finance, Cambridge, UK. Retrieved 07.01.2017. from https://www.jbs.cam.ac.uk/faculty-research/centres/alternative-finance/publications/pushing-boundaries/#.WHvg_FxsxaQ
12. Wardrop R., Rosenberg R, Zhang B., Ziegler T., Squire R, Burton J, Hernandez E., Garvey K. (April 2016), Breaking new ground: The Americas Alternative Finance Benchmarking Report, Cambridge Center for Alternative Finance, Cambridge, UK. Retrieved 07.01.2017. from https://www.jbs.cam.ac.uk/faculty-research/centres/alternative-finance/publications/breaking-new-ground/#.WHvkEFxsxaQ
13. Weihuan T, Arner D., Buckley P. (September 2015), Regulation of digital financial services in China: Last mover advantage?, Tsinghua China Law Review (Vol. 8:25)
14. Peng W., (10.05.2015.), Equity-based Crowd-funding and its Supervision in China Today, China Law Insight. Retrieved on 09.01.2017. from http://www.chinalawinsight.com/2015/04/articles/securities/equity-based-crowd-funding-and-its-supervision-in-china-today/
15. Li, J., Equity Crowdfunding in China: Current Practice and Important Legal Issues (September 19, 2016). Available at SSRN: https://ssrn.com/abstract=2842752 or http://dx.doi.org/10.2139/ssrn.2842752
16. Xinxua (08.08.2015), China to regulate online equity financing platforms. Retrieved 09.01.2017. from http://english.gov.cn/state_council/ministries/2015/08/08/content_281475163531038.htm
17. China science and technology newsletter (30.06.2015), Special Issue: Popular Entrepreneurship and Mass Innovation in Full Swing. Retrieved 09.01.2017. from http://www.chinaembassy.org.nz/chn/zxgxs/kjhz/P020151123361006938250.pdf

MODELLING OF THE POLITICAL BUDGET CYCLE AND THE IMPACT OF TRANSPARENCY

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ABSTRACT
This paper models the political budget cycle with stochastic differential equations. The paper highlights the development of future volatility of the budget cycle. In fact, I confirm the proposition of a less volatile budget cycle in future. Moreover, I show that this trend is even amplified due to higher transparency. These findings are new evidence in the literature on electoral cycles. I calibrate a rigorous stochastic model on public deficit-to-GDP data for several countries from 1970 to 2012.
Keywords: *Stochastic Modelling, Political Budget Cycle, Transparency*

1. INTRODUCTION

The study of the 'traditional' political budget cycle is well established in economic literature since the publication of the seminal paper by Nordhaus (1975). Polite-economy models propose that politicians have incentives to focus on the period shortly before elections. They tend to do so as voters are easily affected in their economic well-being by government policies. This pattern is commonly known as the 'political budget cycle' (PBC).

This paper extends the existing PBC literature in line with recent research by Herzog & Haslanger (2014, 2016). The new research takes into consideration the impact of transparency through e-governance, the Internet, and social media. In general, I study whether the PB-cycle is less volatile in future and whether this is due to higher transparency.

This paper utilizes a stochastic modelling approach of the PBC model. I calibrate the model based on public deficit data from 1970 to 2012 for different countries. I forecast the PBC and evaluate the volatility across time periods with a t-tests. Hence, this approach is novel and different to the econometric estimation of the PBC in relation to transparency by Herzog & Haslanger (2016).

To my knowledge, this paper is the first that models and analyses the problem of the PBC in respect to transparency in a stochastic framework. In order to study this case, first I build a stochastic model and calibrate it. In a second step, I forecast the PBC. Finally, I compare the variance of the deficit-to-GDP cycle between the historical data period and the forecasting horizon. In addition, I include transparency dynamics in an extended model. I expect an smaller PB-cycle in the extended stochastic model.

The study of transparency and the development of transparency measures is a new topic in the literature of budget cycles. It is mainly due to a growing public demand of transparency in government processes since the onset of the Internet age. Therefore, the role of the Internet has gained importance in the political process even in political election campaigns all around the world. This new demand of higher public transparency by citizens and their implications on the budget cycle, however, is difficult to measure. Overall, I demonstrate the proposition that transparency mitigates the political budget cycle.

The paper is structured as follows: in the section 2, I review the literature. The model is introduced in section 3. Finally, I discuss the simulation results in section 4. Section 5 concludes the paper.

2. LITERATURE REVIEW

Seminal papers on the topic of political budget cycles are by MacRae (1977), Alesina (1988), Rogoff & Sibert (1988), Nordhaus (1989) and Persson & Tabellini (1990). Despite this well-established literature there is remarkably little literature on the issue of transparency and the political budget cycles. To my knowledge, the only exception is Klomp & De Haan (2011) amd the recent research by Herzog & Haslanger (2014, 2016).

The origin of the political budget cycle literature is the seminal article by Nordhaus (1975). He studied why politicians spend more money in upcoming elections despite an obvious economic trade-off. Governments have to 'chose between present welfare and future welfare' (Nordhaus 1975). The main finding was that unemployment rates will rise in the beginning and fall in the second half of a government's term and that the opposite is true for public expenditure. Paldam (1979) find similar actions during an election period. This means 'a restrictive policy in the beginning of an election period followed by an expansive phase later on' (Paldam, 1979). Hence, governments try to make the immediate time before elections as good as possible for their voters in order to be re-elected. This theoretical argument coined the idea of the political budget cycle in general.

Broadly speaking, my paper is in line with this research, however, goes beyond in respect of two dimensions. First, I study the relationship of the political budget cycle and transparency. Second, I study the consequences within a newly designed stochastic model. Thus, I extend the existing literature and give evidence in line with recent research by Herzog & Haslanger (2016). There exists empirical literature in relation to this paper. According to Rogoff (1990) governments 'engage in a consumption binge, in which taxes are cut, transfers are raised and government spending is distorted towards projects with high immediate visibility'. Although this behavior seems to influence the decisions of voters, there is evidence that expansionary fiscal policy actions do not necessarily create higher well-being (Alesina, Roubini & Cohen 1997). However, those policies someway create positive psychological feedback to human behavior and the overall economy. Drazen (2002) states that although there is 'agreement that aggregate economic conditions affect election outcomes (...), there is significant disagreement on about whether there is opportunistic manipulation'. In other words, it is hard to determine whether politicians have the power to shape economic conditions in a way that influences voters' behavior. The empirical literature demonstrates that the political budget cycle is more noticeable in developing countries (Shi & Svensson 2006, Grier 2008, Ames 1987, and Rojas-Suarez, Canonero & Talvi 1998). One explanation of this phenomenon is either the higher trade-openness (Murao 2014) or perhaps the lower transparency in developing countries. The last explanation is the proposition of this paper.

3. THE MODEL

The following model simulates the PB-cycle using a mean-reverting stochastic differential equation with seasonality and a jump component. The model is calibrated under the real-world using historical public deficit-to-GDP data from 1970 to 2012. In a second step, I conduct a Monte Carlo simulation using the calibrated model. The simulation results are finally evaluated and statistically tested. The modelling and simulation is conducted in MATLAB (Appendix B). The deficit-to-GDP cycle exhibit a prominent seasonal component, along with mean-reversion. In addition, the PBC displays jumps during periods of recessions. Therefore, I have to account for both components inside the stochastic model. The PBC is modeled according to the following rule:

$$PBC(t) = f(t) + X(t) \ , \tag{1}$$

where $PBC(t)$ denotes the public deficit-to-GDP over time, $f(t)$ is the deterministic seasonal component of the model and $X(t)$ captures the stochastic part of the model.

The modelling of the seasonal component $f(t)$ is as follows:

$$f(t) = s_1 \sin(2\pi t) + s_2 \cos(2\pi t) + s_3 sin(4\pi t) + s_4 \cos(4\pi t) + s_5 \qquad (2)$$

where s_i , i = 1,…,5 are estimated constant parameters. These five parameters are estimated by a dynamic OLS regression. I calibrate this model for selective countries such as Australia, Canada, Sweden, Spain, Netherlands, the United Kingdom and the United States. I use the public deficit-to-GDP data over the period from 1970 to 2012.

The stochastic component $X(t)$ is modelled as an stochastic mean-reverting Ornstein-Uhlenbeck process with jumps

$$dX(t) = (\alpha - \kappa X_t)dt + \sigma dW_t + J(\mu_J, \sigma_J)d\Pi(\lambda) \ , \qquad (3)$$

where the parameter α and κ are the mean-reversion parameters. The term W_t is a standard Brownian motion and σ denotes the volatility. The jump size is $J(\mu_J, \sigma_J)$ with normal distribution and mean μ_J and standard deviation σ_J. The jump is modeled with a standard Poisson process $\Pi(\lambda)$, and has jump intensity of λ.

In a final step, I extend the benchmark model of equation [3] with a transparency parameter. According to the paper hypothesis and the evidence by Herzog & Haslanger (2016), transparency reduce the variance of the political budget cycle. This means that the volatility, σ, is lower. Indeed, I model transparence by a new parameter θ, and included this term in equation [3]:

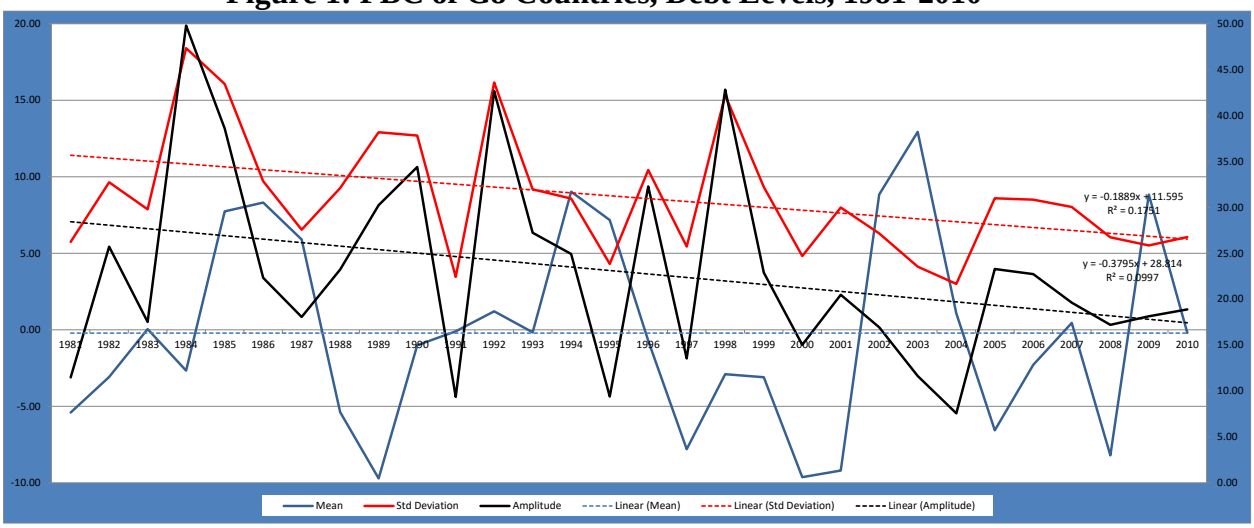
$$dX(t) = (\alpha - \kappa X_t)dt + \theta * \sigma dW_t + J(\mu_J, \sigma_J)d\Pi(\lambda) \ . \qquad (4)$$

In the extended model, I choose for $\theta = 0.9$. This imitates a 10 percent decline in the simulated volatility based on the historical data due to transparency while the jump size is still unaffected. The calibrated and estimated model according to equation [1] is finally discretized for forecasting purposes. The model simulation is performed without the seasonal trend. The simulation is conducted for approximately 20 years with 10 000 trials by utilizing Monte Carlo's method. At the end of the Monte Carlo simulation, I add the seasonality back on the simulated paths and plot the results.

4. SIMULATION RESULTS AND DISCUSSION

According to Herzog & Haslanger (2014), the political budget cycle (PBC) is getting less volatile especially in terms of the amplitude and standard deviation for more than 100 countries, including G8 (Figure 1). However, the ups and downs of the cycle itself, measured by the mean value, are almost unchanged over the past three decades. Whether this trend is due to higher transparency remains to study.

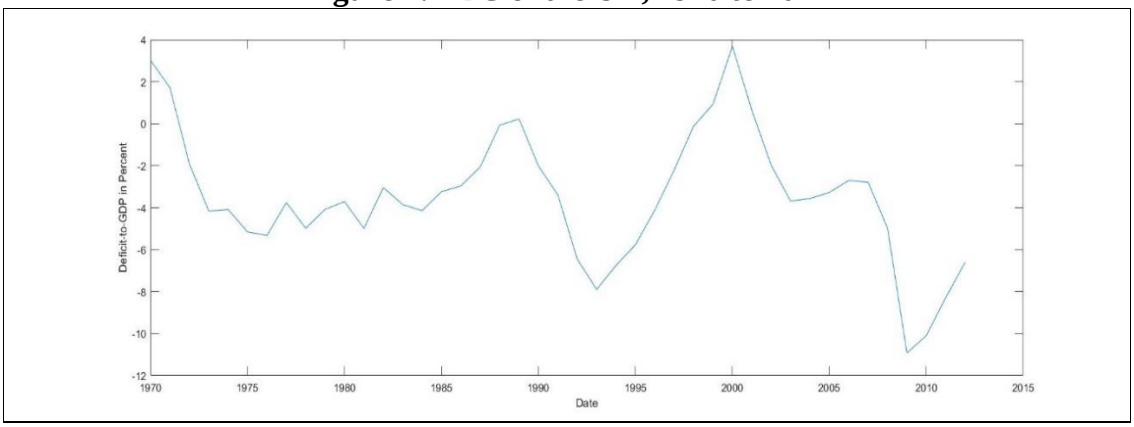
Figure 1: PBC of G8 Countries, Debt Levels, 1981-2010



Source: OECD, author's calculation.

The model simulation is based on real-world deficit-to-GDP data (Appendix A). In the following, I demonstrate the methodology for the United Kingdom (UK). In Figure 2, you see the deficit-to-GDP cycle from 1970 to 2012. Undoubtedly, the UK deficit-to-GDP has large swings in particular in the last decade. Around the millennium year 2000, there was a surplus due to an economic boom and the IT-bubble aligned with the public auction of mobile frequencies to private telecom providers. In 2009 on the other hand, the so-called 'great recession' moved the deficit-to-GDP significantly downwards. This was due to public expenditures to stabilize the financial system and a fiscal stimulus package in response to the financial and economic crisis of 2007-2008.

Figure 2: PBC of the UK, 1970 to 2012



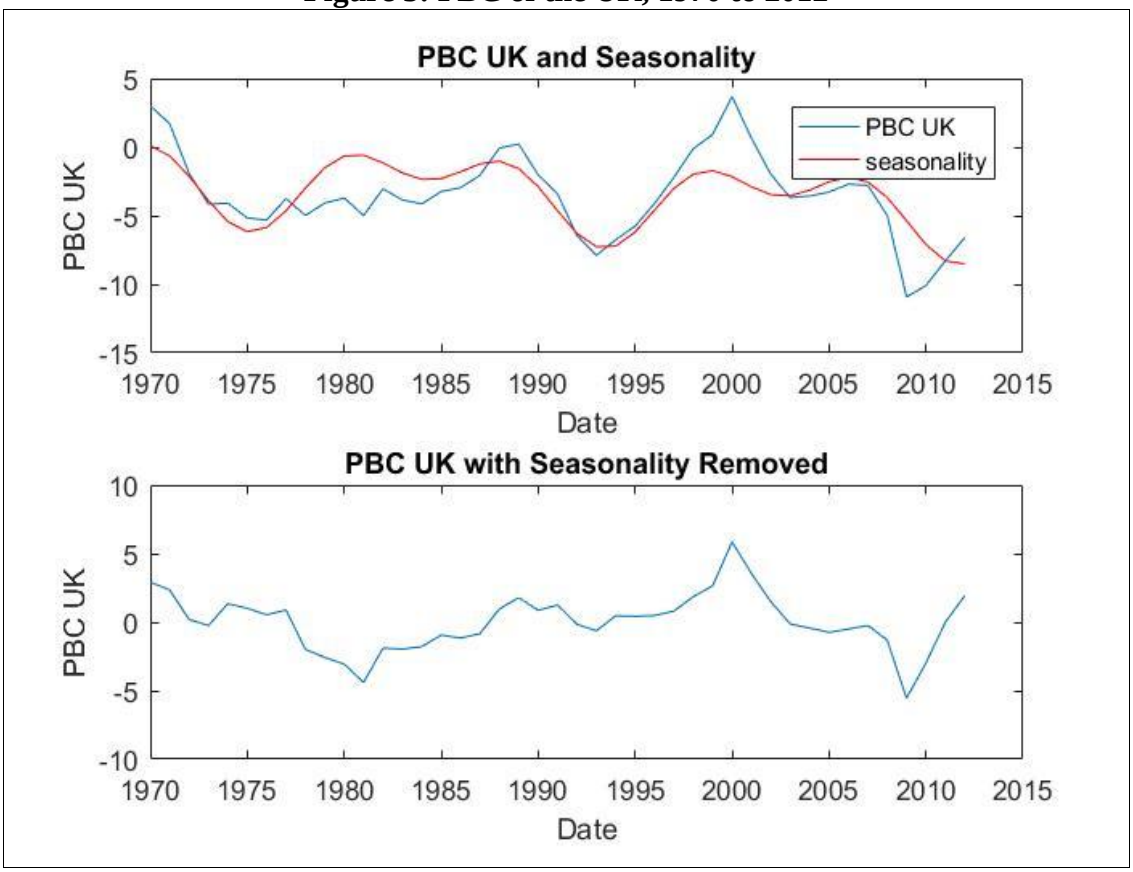
Source: IMF, illustration author.

Despite the large swings in the deficit-to-GDP ratio in recent decades, I attempt to study whether the volatility in the PB-cycle is declining and what is the role of public transparency. The stochastic model is calibrated on the historical deficit-to-GDP from 1970 to 2012 (Appendix A). Based on the calibration, I simulate the future development of the deficit-to-GDP.

The top-panel in Figure 3 illustrates the deficit-to-GDP of the UK (blue line) together with the estimated seasonal trend (red line). The seasonal trend is estimated and computed by sophisticated smoothing and OLS methodology (Appendix B). The bottom-panel in Figure 3 subtracts the seasonal trend from the deficit-to-GDP ratio. Finally, I obtain the so-called de-trended deficit-to-GDP curve. This de-trended time-series is utilized for the stochastic simulation in the next step.

Figure following on the next page

Figure 3: PBC of the UK, 1970 to 2012



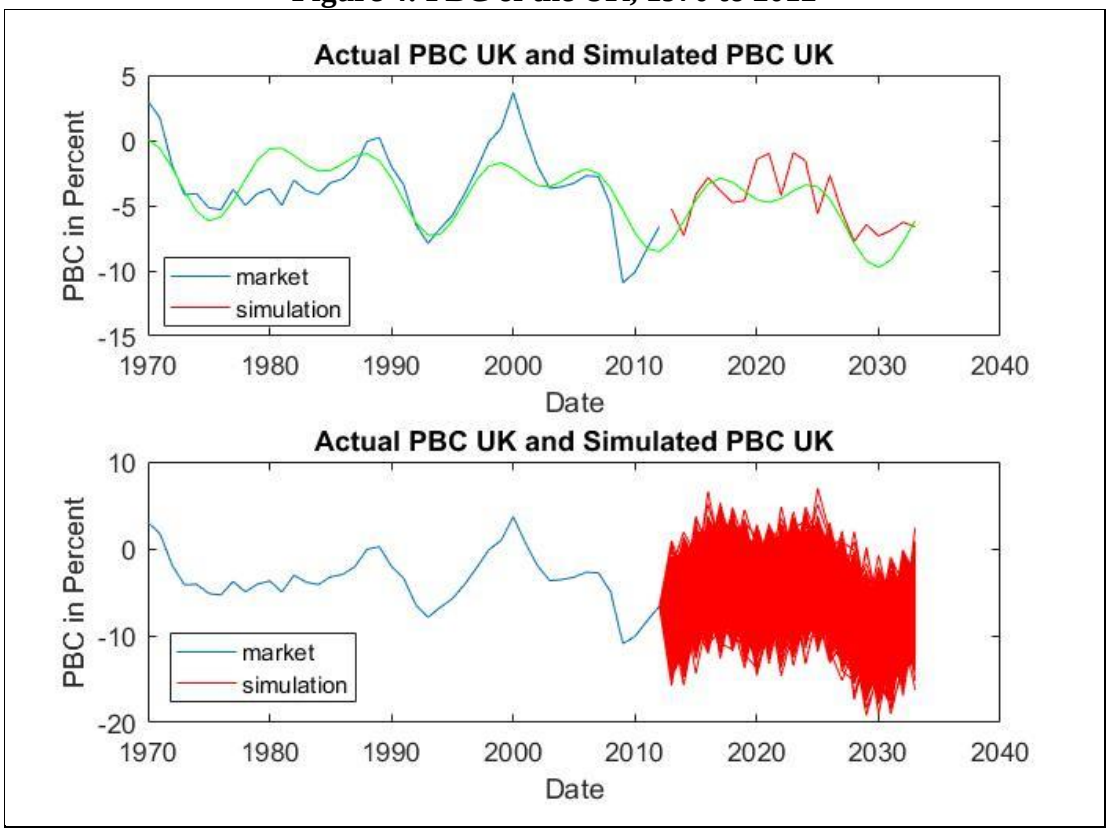
Source: author's calculation.

The stochastic simulation is based on the Monte Carlo method of equation [3]. The MATLAB code for this simulation is in Appendix B. The simulation runs 10 000 trials and uses the most likely outcome (average) of all simulations. Finally, I add the seasonal trend component to the simulated curve and obtain the final dynamics of the deficit-to-GDP over 20 years.

The top-panel in Figure 4 illustrates the Monte Carlo simulation. The blue curve is again the historical deficit-to-GDP data from 1970 to 2012. The green curve represents the seasonal trend including the forecast from 2013 to 2030. The red line denotes the simulated deficit-to-GDP based on the historical model parameters. It turns out that the simulation based on historical data contains already a declining volatility of the deficit-to-GDP ratio in the future. Thus the red curve is less volatile than the blue despite the whole simulation is based on the data period from 1970 to 2012. The bottom-panel contains all Monte Carlo simulations of the deficit-to-GDP ratio over the forecasting horizon of about 20 years. I use the mean scenario in the top-panel (red curve) which is the most likely outcome of all Monte Carlo simulations.

Figure following on the next page

Figure 4: PBC of the UK, 1970 to 2012



Source: author's calculation.

This stochastic simulation model is run for the following set of countries: UK, US, Canada, Japan, Sweden, Netherlands, Italy, Austria and Spain. The country selection is due to data availability. Most other countries have either shorter time-series or a significant data break, for instance in Germany due to the reunification in 1990. The simulation result for all countries is summarized in Table 1.

Table 1: Summary of Model I: Benchmark

	UK	US	Canada	Japan	Sweden	Netherlands	Italy	Austria	Spain
Variance PBC 1970 to 2012	9.4584	8.4789	11.5214	11.2294	18.2281	5.4892	12.1141	3.3766	11.4396
Variance PBC Forcasting Horizont	4.8002	5.2192	3.7824	5.7766	11.0498	3.7776	3.3585	3.2651	6.1178
Test of Difference: p-value	0.0245	0.0008	0.0000	0.0000	0.7353	0.0160	0.0000	0.1049	0.1304
Test of Difference: t-value	-2.4299	-3.9515	6.8670	-8.4636	-0.3428	-2.4939	14.6307	-1.6987	-1.5772
Evaluation of Difference	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No

Source: Own simulations and computations. Significance test at 5% level.

Source: author's calculation.

The first row denotes the variance of the deficit-to-GDP ratio in the calibrated model based on historical data. The second row displays the variance of the deficit-to-GDP based on the simulated model. It turns out that the future variance is lower in all cases despite the model dependence on historical data. The bottom rows demonstrate the test of significance. For the majority of countries, the variance is already significantly lower in the benchmark model. Keep in mind, the benchmark model does not contain any transparency parameter. Only for three

countries Sweden, Austria, and Spain the variance is not significantly different. Consequently, I run the extended version of my stochastic model according to equation [4]. The extended model includes the transparency parameter and computes the significance tests again. The transparency parameter is set at 0.9, which means a 10 percent increase in transparency. The result of this simulation is summarized in Table 2. The countries of interest are Sweden, Austria, Spain – the three outliers in my benchmark model above. Now, the result is a significantly lower variance for all countries, including Sweden, Austria and Spain.

Table 2: Summary of Model II: Higher Transparency

A 10% reduction in Vola due to Higher Transparency			
	Sweden	**Austria**	**Spain**
Variance PBC 1970 to 2012	18.2281	3.3766	11.4396
Variance PBC Forcasting Horizont	17.7075	2.7454	6.1290
Test of Difference: p-value	0.0295	0.0427	0.0421
Test of Difference: t-value	-2.3443	-2.1643	-2.1712
Evaluation of Difference	YES	YES	YES

Source: Own simulations and computations.
Significance test at 5% level.

Source: author's calculation.

In summary, I confirm the hypothesis in this paper, however, with a completely different model in contrast to the econometric evaluation of Herzog & Haslanger (2014, 2016). In fact, I find the mitigation of the PBC within a stochastic framework based on historical data. If I include a transparency parameter in the stochastic model, the overall result is even more significant. In fact, the hypothesis is confirmed at a significance level of 5 percent for all countries. Consequently, transparency will mitigate the amplitude and thus variance of the public budget cycles over time and across countries. Of course, the model has limitations. But most of the limitations are excellent topics for further research. One issue is the data limitation and the sensitivity of the calibrated model on the future path of simulations. Despite these limitations, my finding completes the picture of the recent econometric findings by Herzog & Haslanger (2016). Hence, further research is needed but there is preliminary evidence of the PBC-transparency hypothesis.

5. CONCLUSION

The paper demonstrates that transparency mitigates the variance of the public budget cycle over time and across countries. My theoretical finding is in-line with recent econometric research based on large samples such as of 99 developing and 34 OECD countries. However, the utilized stochastic model has the advantage that all simulations are based on historical data. Hence, the simulation of the deficit-to-GDP ratio is replicating all historical trends accordingly. Overall, the model proposition is verified. I do not reject the hypothesis that transparency will mitigate the public budget cycle in future.

LITERATURE:

1. Alesina, Alberto. "Macroeconomics and Politics." *NBER Macroeconomics Annual* 3 (1988): 13 - 62.
2. Ames, Barry. *Political Survival - Politicians and Public Policy in Latin America.* Berkley, California: University of California Press, 1987.
3. Drazen, Allen. *Political Economy in Macroeconomics.* 2. Princeton University Press, 2002.
4. Grier, Kevin. "US Presidential Elections and Real GDP Growth, 1961-2004." *Public Choice* 135 (2008): 337-352.
5. Herzog, Bodo, and Patric Haslanger. "Does Transparency Mitigate the Political Business Cycle?" *(under review)*, 2016.
6. Herzog, Bodo, and Patrick Haslanger. "Does e-Goernance Mitigate the Politicial Budget Cycle?" *3rd International Conference on Business, Management and Governance.* Singapore: LACSIT Press, 2014.
7. Klomp, Jeroen, and Jakob De Haan. "Do political budget cycles really exist?" *Applied Economics*, 2011: 329-341.
8. MacRae, Duncan C. "A Political Model of the Business Cycle." *Journal of Political Economy* 85, no. 2 (1977): 239-263.
9. Murao, Reis. "Has Trade Openness Already Voted? A Panel Data Study." *Emerging Markets Finance and Trade* 47 (2014): 53-71.
10. Nordhaus, William D. "The Political Business Cycle." *Review of Economic Studies Ltd.*, 1975: 169-190.
11. Nordhaus, William D., Alberto Alesina, and Charles L. Schultze. "Alternative Approaches to the Political Business Cycle." *Brookings Paper on Economic Activity* 2 (1989): 1-68.
12. Paldam, Martin. "Is There an Electional Cycle? A Comparative Study of National Accounts." *Scandinavian Journal of Economics* 81, no. 2 (1979): 323-342.
13. Persson, Torsten, and Guido Tabellini. *Macroeconomic Policy, Credibility and Politics.* 4th. Amsterdam: OPA (Overseas Publisher Association) N.V., 1990.
14. Rogoff, Kenneth. "Equilibrium Political Budget Cycles." *The American Economic Review* 80, no. 1 (1990): 21-36.
15. Rogoff, Kenneth, and Anne Sibert. "Elections and Macroeconomic Policy Cycles." *The Review of Economic Studies* 55, no. 1 (1988): 1-16.

Appendix

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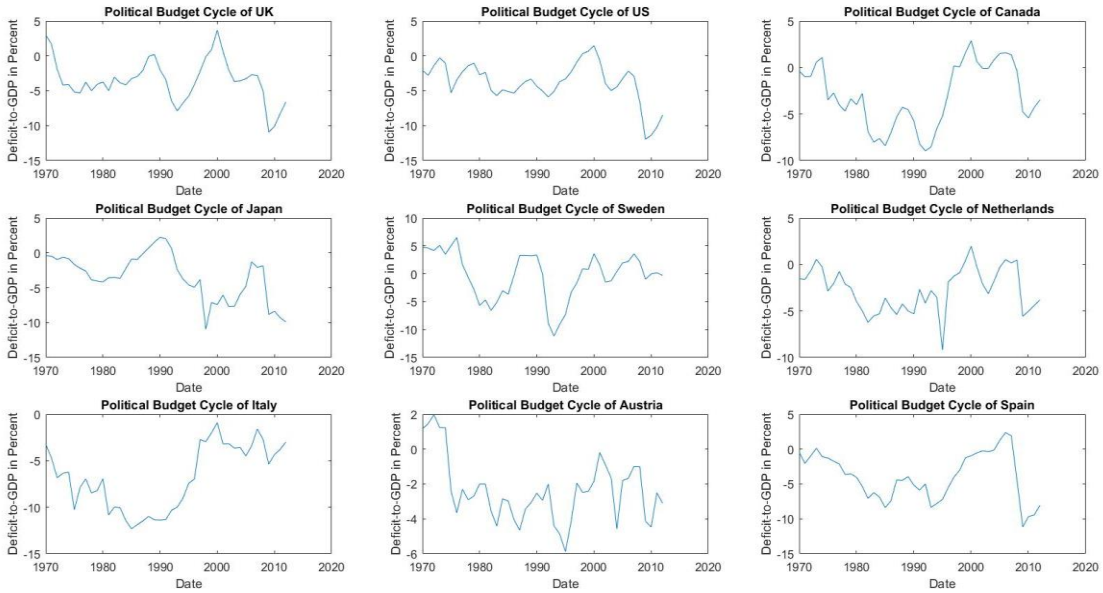
Appendix A: Overview of Budget Cycle in Selected Countries from 1970 to 2012



Appendix B: Stochastic Simulation Model: MATLAB Code

```
%% PBC Stochastic Simulation Model
figure;
plot(year1,UK);
title('PBC');
xlabel('Date');
ylabel('Deficit-to-GDP in Percent');
PriceTimes = yearfrac(year1(1), year1);

%% Model Calibration
seasonMatrix = @(t) [sin(2.*pi.*20*t) cos(2.*pi.*20*t)
sin(4.*pi.*20*t) ...
     cos(4.*pi.*20*t) t ones(size(t, 1), 1)];
 C = seasonMatrix(PriceTimes);
 seasonParam = C\UK;

% Plot PBC and seasonality
figure;
subplot(2, 1, 1);
plot(year1,UK);
title('PBC UK and Seasonality');
xlabel('Date');
ylabel('PBC UK');
hold on;
plot(year1, C*seasonParam, 'r');
hold off;
legend('PBC UK', 'seasonality');

% Plot de-seasonalized PBC
X = UK-C*seasonParam;
subplot(2, 1, 2);
plot(year1, X);
title('PBC UK with Seasonality Removed');
xlabel('Date');
ylabel('PBC UK');
```

```
% The model for $X_t$ needs to be discretized in order to conduct the
calibration. The discretized equation is:
% $X_t=\alpha \Delta t + \phi X_{t-1} + \sigma \xi$
% with probability $(1 - \lambda \Delta t)$ and, $X_t=\alpha \Delta t +
\phi X_{t-1} + \sigma \xi + \mu_J + \sigma_J \xi_J$ with probability
$\lambda \Delta t$, where $\xi$ and $\xi_J$ are independent standard normal
random variables, and $\phi = 1 - \kappa \Delta t$.
% The density function of $X_t$ given $X_{t-1}$ is [1,4]:
% $f(X_t|X_{t-1}) = (\lambda \Delta t) N_1(X_t|X_{t-1}) + (1 - \lambda
\Delta t) N_2(X_t|X_{t-1})$
% $N_1(X_t|X_{t-1}) = (2 \pi (\sigma^2 + \sigma_J^2))^{-\frac{1}{2}}
\exp(\frac{-(X_t - \alpha \Delta t - \phi X_{t-1} - \mu_J)^2}{2 (\sigma^2 +
\sigma_J^2)})$  $N_2(X_t|X_{t-1}) = (2 \pi \sigma^2)^{-\frac{1}{2}}
\exp(\frac{-(X_t - \alpha \Delta t - \phi X_{t-1})^2}{2 \sigma^2})$
% Learning Toolbox(TM) is well suited to solve the above maximum likelihood
problem.

% PBC at t, X(t)
Pt = X(2:end);
% PBC at t-1, X(t-1)
Pt_1 = X(1:end-1);
% Discretization
dt = 1/365;

% PDF for discretized model
mrjpdf = @(Pt, a, phi, mu_J, sigmaSq, sigmaSq_J, lambda) ...
    lambda.*exp((-(Pt-a-phi.*Pt_1-mu_J).^2)./ ...
    (2.*(sigmaSq+sigmaSq_J))).* (1/sqrt(2.*pi.*(sigmaSq+sigmaSq_J)))
+ ...
    (1-lambda).*exp((-(Pt-a-phi.*Pt_1).^2)/(2.*sigmaSq)).* ...
    (1/sqrt(2.*pi.*sigmaSq));

lb = [-Inf -Inf -Inf 0 0 0];
ub = [Inf 1 Inf Inf Inf 1];

% Initial values
x0 = [0 0 0 var(X) var(X) 0.5];
% Solve maximum likelihood
params =
mle(Pt,'pdf',mrjpdf,'start',x0,'lowerbound',lb,'upperbound',ub,...
    'optimfun','fmincon');

% Obtain calibrated parameters
alpha = params(1)/dt
kappa = params(2)/dt
mu_J = params(3)
sigma = sqrt(params(4)/dt)
sigma_J = sqrt(params(5))
lambda = params(6)/dt

%% Monte Carlo Simulation
PriceDates = year1;
rng default;

%Transperency Model II
```

```
%sigmaT = 0.90; include as a product sigmaT*sigma in simulation equ.
below!
nPeriods = 2+20;
nTrials = 10000;
n1 = randn(nPeriods,nTrials);
n2 = randn(nPeriods, nTrials);
n3 = randn(nPeriods, nTrials);
j = binornd(1, lambda*dt, nPeriods, nTrials);
SimPrices = zeros(nPeriods, nTrials);
SimPrices(1,:) = X(end);
for i=2:nPeriods
    SimPrices(i,:) = alpha*dt + (1-kappa*dt)*SimPrices(i-1,:) + ...
                +sigma*sqrt(dt)*n1(i,:) +
j(i,:).*(mu_J+sigma_J*n2(i,:));
End

% Add back seasonality
SimPriceDates = daysadd(PriceDates(end),0:nPeriods-1);
SimPriceTimes = yearfrac(PriceDates(1), SimPriceDates);
CSim = seasonMatrix(SimPriceTimes);
logSimPrices = SimPrices + repmat(CSim*seasonParam,1,nTrials);

% Plot simulated PBC
figure;
subplot(2, 1, 1);
plot(year1,UK);
hold on;
plot(SimPriceDates(2:end), logSimPrices(2:end,1), 'red');
seasonLine = seasonMatrix([PriceTimes;
SimPriceTimes(2:end)])*seasonParam;
plot([PriceDates; SimPriceDates(2:end)], seasonLine, 'green');
hold off;
title('Actual PBC UK and Simulated PBC UK');
xlabel('Date');
ylabel('PBC in Percent');
legend('market', 'simulation');

PricesSim = exp(logSimPrices);
subplot(2, 1, 2);
plot(PriceDates,UK);

hold on;
plot(SimPriceDates, logSimPrices, 'red');
hold off;
title('Actual PBC UK and Simulated PBC UK');
xlabel('Date');
ylabel('PBC in Percent');
legend('market', 'simulation');

% Computation of Variance and Test of Significance
var(UK)
var(logSimPrices(2:end,1))
[H,P,CI,STATS] = ttest(logSimPrices(2:end,1),mean(UK))
[P,H] = signtest(logSimPrices(2:end,1),mean(UK))
[P,H] = signtest(UK,mean(logSimPrices(2:end,1)))
```

IMPORTANCE OF COST FUNCTION IN BUSINESS DECISION MAKING

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ABSTRACT

Decision making is complex and time limited process that begins with insight of problem and it ends with making a decision. Significance of decision making in today business world is growing, especially because of market situation, what is in primary caused by global financial crisis.

Furthermore, it is important to accent that because of opening towards european and world market, where competition is extremely big, encirclement is dynamic and quickly adaptable, it is impossible to survive if management is not prepared to make decison rapidly, with no space for mistakes, because wrong decision can destroy the whole business.

In order to make good business decisions, management must be in dispose of correct and well – timed information and data. Key information for management are correct information about costs that are related to certain decision. Because of that, in this paper are analyzed key terms that are related to costs and importance of cost function in business decision making.

Furthermore, the hardest and most responsible thing in managing is making decision. Making decision, i.e. capability and readiness for taking responsibility is a characteristic that is typical for only small number of people. Without reliable information about costs and their influence on the price, revenues and quality of products or services, it is not possible to make quality decision.

Because of importance of costs in business decision making, so as different possibilites of appliance, depending on activities, there are many number of models of cost management that are developed, and in sequel of this paper there will be more word about them. According to that, in this paper are analyzed basic determinants of costs and importance of cost function in business decision making. Basic framework of this paper is presentation of cost management based on activities that is in function of enlargement of profitability, so as presentation of costs of providing services to buyer and analysis of profitability.

Keywords*: managerial economics, cost managemen*

1. CIRCUMSTANCES OF BUSINESS DECISION - MAKING AND PHASES OF INTEGRAL PROCESS OF DECISION - MAKING

Each individual in personal life and each manager in a company is going through different circumstances in which they are making decisions. Common matter for them is search for best information in the pool of imperfect information and desire for decision making, with purpose of problem solving or getting advantage in front of competition. Main objective is to overcome limiting factors which are standing in the way of achieving desirable goals. In purpose of completing required knowledge about decision making, it is important to perceive each phase of process of decision making. All phases are equally important because each previous phase is a base for next one. In sequel will be explained characteristics of circumstances in which are business decisions made and also phases of making that decisions.

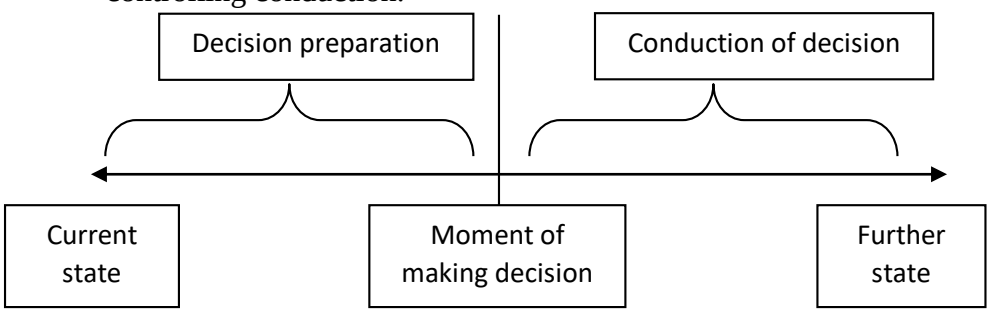
1.1. Characteristics of circumstances in which business decisions are made

Manager will rarely make decision in situation where he is absolutely sure in outcome of selected alternative. Decision making in safe conditions can only be applied at lowest levels of management and only for routine and operational decision that are determined by the time of use. As much it is moved hierarchically from routine decisions it is coming up to higher degree of risk and uncertainty. Managers are those who have to recognise and overcome those limiting factors that are standing in the way of achieving desirable goals. Usually used models are reffered to mathematical models, models of evaluation and models that are based on experience. Most unfavorable situation for decision making is making decision in uncertain condition. This situation is almost ordinary in world of business and it is putting manager on a test. Characteristics of uncertain situations are: 1.lack of valid information;2. insecurity of available information; 3.lack of cognition about possibilities of evalution of decision making situations;4. unfamiliarity with relations between different variables that can affect on process of decision making. Managers efficiency in risky conditions is reflected in availability of information and his experience in similar risky situations. Different models are made for each situation in decision making with the use of reducing risk for decision maker.

1.1. Phases of business decision - making

Making decisions is old as much as the humanity. Each human activity is a consequence of some earlier process of decision making or itself it is a decision making. According to that, everything that people do today, in certain moment or now is a decision making or realisation (implementation) of that process. This process takes certain time period which duration depends on complexity and importance of individual decision. Despite many classifications of phases of decision making, next classification on four phases is accepted:

- decision preparation (with sub – phases),
- making decision,
- conduction of decision and
- controlling conduction.



Picture 1. Phases of process of decision making

Picture 1 is showing standard procedure of decision making in broader sense because the whole process of decision making is not ending with making decision, but with conduction and control of decision conduction.

Further looking, key phases of integral process of decision making are:

- problem identification,
- task defining,
- recording and analyzing current conditions,
- looking for different versions of problem solving,
- evaluation of versions of problem solving,

- making decision,
- decision conduction and
- controlling decision conduction.

Each of this phases has its own specificities. Process of decision making enables feedback between observed phases. Phase of problem identification is connected to problem diagnosis that can be compared to making choice of the direction while walking the street to some objective. Wrongly choosen direction will lead to lose of more time and energy in the way to the goal. This phase is essential for the success of whole process of decision making, because wrong identified problem is forcing decision maker to solve some other problem even that second problem was not the goal at first, and if this situation occurs - the whole process makes no sense. Problem identification begins with cognition of symptoms, outside manifestation of problem and then insight of real problem. Example of symptom is sale decline of ready – made meals in Konzum (in Šibice next to Zaprešić). Management thinks that the problem is in competition (Plodine, Spar in Zaprešić) but the real problem is in quality and range of those ready – made meals. Recognition of problem is followed by next phase of decision making – task defining, determination of things that has to be done, determination of ahcievement to be made by the process of decision making[1]. In example of Konzum, defined task would be to stop further sale decline of ready – made meals. Defining task is much easier than identifying problem. Phase of recording and analyzing current conditions defines disposable ways for solving problem that is noticed and needs to be solved. In this phase are analyzed material, financial and human resources. In this cycle are appearing some limitations in decision making. Reasons for that limitations are availability of information, resources and time, unclear circumstances of decision making and personal limits of decision maker. Listed reasons are also charachteristics of insecure situation. On example of Konzum will be made analysis of sale by each meal in the whole assortment, analysis of quality of ingredients, analysis of qualifications of staff etc. Reason for gathering larger number of versions is that they represent larger possibility for choosing the best solution. Managers must have in sight that certain problem can have larger number of optimal solutions, so it is neccesary to consider all possible variances of solutions. In example of Konzum different versions can appear as possible solution. One of those versions can be that they do not use food (especially meat) which expiry date is due; employing quality chef so he can process food in better and superior way; induction of new meals and always popular reducing prices are options. Evaluation of versions of solving problem is the last preliminary phase in process of decision making in which all possible versions are graded through quality and quantitative methods. Grading is followed by screening smaller number of versions, in the way of comparing positive and negative aspects of each version of problem solving. In given example it is given overview of all positive and negative aspects of bringing fresh ingredients into process of making ready – made meals. Main positive aspect would be increase in quality of ready – made meals that would have immediate impact on sales increase, while negative impact would be higher cost due to bigger amount of writing – off ingredients that expired. After five detailed phases it is coming to phase in which best graded version is being chosen. Managers efficiency is valuated through ability of choosing most satisfying solution. In example of Konzum, best graded version will depend on previous cycle. In this case that is the version that will, in short - term, stop decrease in sales of ready – made meals with biggest probability of increase in sales. Quality implementation of decisions that are made is one of the most important skill with which successful manager differs from unsuccessful manager. Management of entire organization must be capable to coordinate all decisions that are made – those that are made on different organizational levels and those that

[1] Sikavica, P., Hunjak, T., Ređep, N. B., Hernaus, T. (2014.) Poslovno odlučivanje. Zagreb: Školska knjiga, str. 166

are made by different decision makers[2]. In this phase it is expected from the manager that he implement carried decision and take responsibility for that choice. Control of decision implementation is the last phase in process of decision making, but also equally important as ones before it. Control gives answers on questions, is decision implemented and in which way and what results has it given, all in favour of determinating possible divergence and introducing changes. In example of Konzum, management should track stopping of sale decline, meaning by that, comparing financial results from sales projections and real state of sales. In state of divergence, it should get back to previous phases and with compatible changes try to get back on the right way.

2. CHARACTERISTICS OF COST FUNCTION IN BUSINESS DECISION - MAKING

Because of business process management, from competititive point of view, it is important to overview the validity of costs that appeared through accomplishment of managerial goals. In purpose of getting to essence of this theme, it is necessary to explain elementary terms like cost definition, terms connected to costs, their classification and by gradation, come to most important terms for decision making in business - critical points in cost motion. Costs are value expressed expenditures of work, materials, short – term asset, long – term asset so as needed services from other participants, all in favour of production of certain product or service. Considering the fact that every business decision is related to costs, it is undisputed that costs have key role and they have to be considered with special attention, and that is possible through cost management. Purpose of this chapter is not to explain every possible classification and every type of cost, but only to explain certain classifications that would be helpful to understand participation of costs in decision making. According to that, in the sequel, it will be explained basic determinants of costs and importance of cost function in business decision making.

2.1.1. Basic concepts and types of costs

Traditionally looking, there are three basic concepts of costs: explicit, implicit and opportunity (alternative) costs. First, explicit costs are explicit, because they undoubtedly and indisputably show all values of indispensable factors that were payed in advance and spended in favour of realizing value of product[3]. Mainly, they are resource costs that do not belong to the owner of company. Payouts of wages to employees, payed interests on credits, amortization of stable resources etc., are belonging to explicit costs. In generally speaking, implicit costs define amount of money that had to be payed for some resource in favour of acquiring practical posibbility of its usage in production[4]. Unlike explicit, implicit costs relate on spending resources that belong to the owner of the company. Even implicit costs do not enter in booking evidence, it does not mean that they do not have to be calculated in all costs of company. Accent at opportunity (alternative) costs is put on known, available and feasible alternative use. Only one alternative use is keeping existent, even number of possible scenarios can be bigger than one, i.e. the one that is considered. For example, company that is producing textile has four production workshops (A, B, C, D). Because of positive longtime profit they are planning to expand their production on production of footwear. Because this change have to occur succesive, they are having in mind that only one workshop would be in charge of the production of footwear. Organisation came to cognition that only workshops A and C can deal with extra specification of work. From this statement, it is visible that company would, by choosing one

[2] Sikavica, P., Hunjak, T., Ređep, N. B., Hernaus, T. (2014.) Poslovno odlučivanje. Zagreb: Školska knjiga, str. 175
[3] Santini, I. (2006) Troškovi u poslovnom odlučivanju. Centar za ekonomski consalting, Zagreb: Hibis d.o.o., str. 10
[4] Santini, I. (2006) Troškovi u poslovnom odlučivanju. Centar za ekonomski consalting, Zagreb: Hibis d.o.o., str. 12

option, lose value of another option that is better in some other parts of production than the first one. Furthermore, looking at alternative costs, it is not necessary to focus only on costs, but on the other relevant dimensions such as: neto value, revenues, profit, contribution to cover etc. Classificiation of costs can be made by various criteria. This classificiation has evolved due to development of economic science. Most common and familiar classifications of costs are[5]:

- by natural kind or appearance form,
- by business functions,
- by segments (centers of responsibility) and locations of costs,
- by ways of allocation on holders,
- by reaction on degree of capacity employment (dynamism),
- by way of account to each period,
- by influence on business result,
- by the amount of investment in business process,
- by contribution to quality.

Table 1. Classification of costs by different criteria *(Continues on the next page)*

No.	Criteria	Type of cost
I	Costs of natural kinds or appearance form (natural costs)	Costs of long-term asset
		Costs of short - term asset
		Labour costs
		Service costs
		Other costs
II	Costs by the way of including due to business functions functional costs	Costs of planning, construction and projecting
		Costs of labour preparation
		Costs of indirect production
		Procurative costs, costs of production, distribution, storage
		Costs of financial transactions
		Costs of control
III	Costs by segment (centers of responsibility) and cost centers	Costs of segments (production, organisational unit, geographical segment)
		Costs of profit center, cost center, revenue center, investment center
		Costs by cost centers

[5] Drljača, M. (2004) Metode upravljanja troškovima. Elektrika, Vol. 4., str. 2

IV	**Costs by arrangement on holders**	**Direct single or costs of production**
		Indirect single or utility costs
V	**Costs by the reaction on degree of capacity use**	**Fixed costs (absolute or relatively fixed)**
		Variable costs (progressive, degressive and proportional)
VI	**Costs by the way of accounting to each period and possibility of control**	**Controllable (considerable possibility of control)**
		Uncontrollable (small possibility of control)
VII	**Costs considered on business result**	**Positive costs**
		Negative costs
VIII	**Costs by the amount of investment in business process**	**Primary costs (they are entering the process for the first time)**
		Secondary costs (they are entering the process several times)
IX	**Costs by the contribution to quality**	**Costs for quality (prevention costs and examination costs)**
		Costs because of low quality (costs of inner oversights and oversights that are occured after delivery)

As it is seen in Table 1., costs can be divided by natural kind or appearance form, business functions, segments and locations of costs, ways of allocation on holders, reaction on degree of dynamism, way of accounting, influence on business results, amount of investment and by contribution to quality.

2.1.2. Cost management methods

Cost Management can be defined as achieving managerial goals based on optimal engagement of costs. Basic goal of cost management is to maintain the biggest possible longterm benefits from committed costs or to maintain certain managerial goal with the smallest costs without longterm negative cosequences on business result and competitive position[6]. Author asserts that primary goal of cost management is, with the lowest costs, maintain planned managerial goal without endangering competitivness and longterm results of company. In that purpose are developed methods and procedures, many models, that are ensuring critical amount of informations based on certain facts for management unavoidable for decision making with intention of costs optimisation. Those are models/methods of[7]:

- cost management based on product costs (traditional),
- cost management based on processes,
- cost management based on activities,

[6] Belak, V. (1995.) Menadžersko računovodstvo. Zagreb: RRiF plus, str. 130
[7] Drljača, M. (2004) Metode upravljanja troškovima. Elektrika, Vol. 4., str. 4

- target costs,
- budgeting based on activities,
- balance sheet of attainment,
- „Kaizen“ costs,
- value analysis,
- cost management based on quality costs and
- other managerial concepts with influence on development of models of informational systems for managing business processes - whole system of organizational management.

Traditional Product Costing (TPC) model is used for allocation of costs. It is based on cost allocation in several basic groups:

- direct material costs,
- direct labour costs,
- utility costs.

Direct material and labour costs, are tracked and controlled by each product category, and utility costs are joined to direct product costs on the basis of participation of labour costs. Because of its simplicity, traditional model is a base for understanding other model, even it is not more in use today. Process Based Costing (PBC) model tracks and evaluate production costs due to movement through phases in production process. In PBC model direct material and labour costs are allocated and tracked due to phases in production process, and utility costs are added to direct costs at each phase with usage of certain keys of allocation based on cost drivers. PBC models should show causes of utiliy costs and degree of their joining to direct costs of each phase in production process.[8] Author is explaining Process Based Costing (PBC) model that is used in production processes in the way that direct material and labour costs are recorded and charged by each phase of production, while utility costs are added to direct costs at each phase with usage of certain keys of allocation based on cost drivers. Process costs that are made on the level of whole organisation can be reduced by symplification of product processes, by improving the core of processes, and by shortening and synchronizing processes. Activity Based Costing (ABC) model is model of classificating costs by activity. This method is tracking costs motion by each activity or part of the business process. By this actions, it is given better controll of costs and by that, managers can focus easier on elimination of redundant costs and actions. Establishment of costs through activities is accounting procedure that allows business subject recognition of, and connection between actual costs of company and each product or service that is produced or given by the company. Authors are asserting that ABC model is based on connecting actual costs of company and each product or service that is produced or given by the company. Target Costing (TC) model is relatively new accounting form of comprehension and systematic measurement of those costs that are involved into product or service and that with those costs product is still making profit[9]. According to author, his accent in defining target costs and model that is describing their usage, is on existence of detailed analysis that will show those costs that are involved into product or service and that with them product is still making profit. In order to further usage of TC model,, it is neccesary to understand current costs structures. This fact is crucial, because primary interest of company is

[8] Belak, V. (1995.) Menadžersko računovodstvo. Zagreb: RRiF plus., str. 134
[9] Cingula, M., Klačmer, M. (2003) Pregled nekih metoda i postupaka upravljanja troškovima. RRiF, No. 8, Zagreb, str. 24.

to maintain balance between quality, functionality and design of products in combination with price level that is accepted by market. Activity Based Budgeting model is starting from determination of buyers demands and not from determination of costs. Interest of this method is directed towards capacity of equipment and number of employees, all in favour of defining company possibilites. By this method, management is making more quality decisions related to capacity and it is confronting easier with question of new product or service development. Balanced Score Card (BSC) model is a set of carefully choosen indicators and measures, deducted from companies strategy with which activities and success measures are planned from different perspectives based on connecting and balancing most important factors for success of the whole company[10]. Author is explaining Balanced Score Card model and asserts the fact that model is based on set of indicators and measures that are connected to corporate – level strategy by which company activities are planned.

2.2. Importance of cost function in business decision - making

In order to better and more efficient cost management, it is neccesary to understand one of the most important accounting principle, and that is confrontation of revenues and expenses (expenditures) and recognition of economic changes at the moment of occurence. Confrontation of revenues and expenditures – matching principle, is related to determination of business results (profit/loss). Business result is always determined for certain accounting period, so it is necessary to confront revenues and expenditures of the same accounting period. Principle of recognition of economic changes at the moment of occurence - acccrual principle, demands that revenues and expenditures are determined and admitted at their moment of occurance, not at their charging or payment[11]. From this quote, it can be concluded that it is important to confront revenues to expenditures that have appeared because of realization of those revenues, and due to that, get actual business result (profit/loss) for that accounting period. Furthermore, it is given accent on fact that charge of reveneus and expenditures does not have a role that is having the moment of occuration of revenues and expenditures. Financial and managerial accounting are tracking costs and preparing informations to ultimate users, but they are also of essential importance to manager for quality business decision making. Financial accounting is tracking costs by natural types, what is secured through elaboration of costs in chart of accounts. By elaboration of this chart it is given the structure of the main book, for what is in accounting important to firstly decide about next things[12]:

- evidence of costs only in the main book (at smaller number of locations of costs and cost holders) or in internal accounting of certain workshop;
- decide about faculty usage of class 5 – Locations and cost holders;
- accept demands from IAS 2 about accounting stocks in financial statements, production stocks and done products in balance sheet, and period expenditures in profit and loss statement;
- accept demand of managers for information, including demands from IAS 2, that are important for decision making, controlling costs etc.

Author is considering the fact that the way of costs evidence and elaboration of chart of costs depends on type of activities and number of locations and cost holders. In all business subjects, not depending on their core business (production, services, trade), and also not depending on the size or costs, are tracked through effects (products, services, merchandise of each department, product line or type of activity. In subjects that are engaged in production activities,

[10] Drljača, M. (2004) Metode upravljanja troškovima. Elektrika, Vol. 4., str. 6
[11] Ramljak, B. (2013.) Racionalizacija troškova u funkciji ostvarenja poslovnog rezultata. Računovodstvo, financije i porezi u praksi, Split: Udruga računovođa i financijskih djelatnika Split, str. 4
[12] Ibid, str. 4, 5

product costs are the most important. Informations about costs given from financial and managerial accounting should be reliable because of making business decisions like those[13]:

- in which price products should be selling in order of bringing a satisfactory profit;
- is it possible to produce certain version of product with costs that will allow selling that product in competitive price;
- would it be more affordable for business subject to buy certain parts needed for the production or it would be cheaper to produce those parts;
- does it need to install highly automatized line for production etc.

Author also asserts the need for accuracy in cost data at production activites, all in favour of more precise making business decisions and predicting profit. This need is especially related to managers and their process of decision making. Furthermore, it is neccesary to know well the production costs of own company, so that the most quality decision can be made. Even though, it is important to mention the fact that in nowadays terms, most informations that managers are getting about costs, are coming from accounting systems that are directed to external users – mostly gonvermental control authorities.

2.2.1. Graphic review of cost movement and critical points

Here it will be shown the elaboration of break – even point and other points, i.e. two corellated charts that are showing costs movement and break – even point. There will be no numbers (excluding zero) on x and y axis because they are irrelevant for explaining the functioning of costs, points and zones. If are considered two charts on page 17, it can be observed how does costs are standing in mutually determined relation (1 – 7) and also how they stand towards total revenue. Word is about critical points (intersection of individual curves). Total cost curve is obtained by summing fixed and variable costs.

TC = FC + VC

It is starting from fixed costs (FC) and is moving over the total revenues (TR) curve. If it is looked at point x_1, it is seen how TC curve intersect curve of total revenue that is obtained by sale of poducts and services, i.e. financial result (FR) is equal to zero. Also, on the chart of average costs (AC), it is seen that average variable cost (AVC) is equal to selling price (SP). That is first critical point and it is named threshold of rentability or lower break – even point. From this point, company is starting to gain profit.

In second critical point x_2, total costs are equal to total revenues, i.e. average total costs are equal to selling price. That point is named rentability limit or upper break – even point. By that point, company is working with profit and that point is critical because it is giving signal that in case of extension of production, it will found itself in loss, because of progression of total costs. From that two points, following statements can be made:

- TR = TC, FR = 0;
- TR = SP, FR = 0.

Next important points are points of bussines minimum and business maximum. At critical point x_3 of business minimum, total variable costs are equal to total revenue, i.e VC = PC (it is important to mention that average variable costs are mean of variable costs in all layers). At point x_4, it comes again to eqaulity of the same variables, and that point is called critical point of business maximum. It does not pay out to the company, produce to business minimum point, because they can not, with total revenues, cover all costs (material costs, wages etc.). Looking

[13] Ramljak, B. (2013.) Racionalizacija troškova u funkciji ostvarenja poslovnog rezultata. Računovodstvo, financije i porezi u praksi, Split: Udruga računovođa i financijskih djelatnika Split, str. 5

at the chart, in that point, only variable costs are covered while fixed costs are not. Business maximum is critical point that is reached during the great expansion of production or when selling price has a downfall trend, alltogether with increase of capacity usage (monopol, olygopol)[14]. Author, with this statement, want to say that usage of capacity in production has a significant role and how and in which way it needs to be balanced by that measure that would prevent unfavorable situations in company and on market. That point warns, that is better to reduce production or if is causing downfall of selling price, then it should also go at lower level of production or take better care of assortment, in order to preventing further downfall of selling price. Legalities of this points are next:

- VC = TR,
- VC = SP.

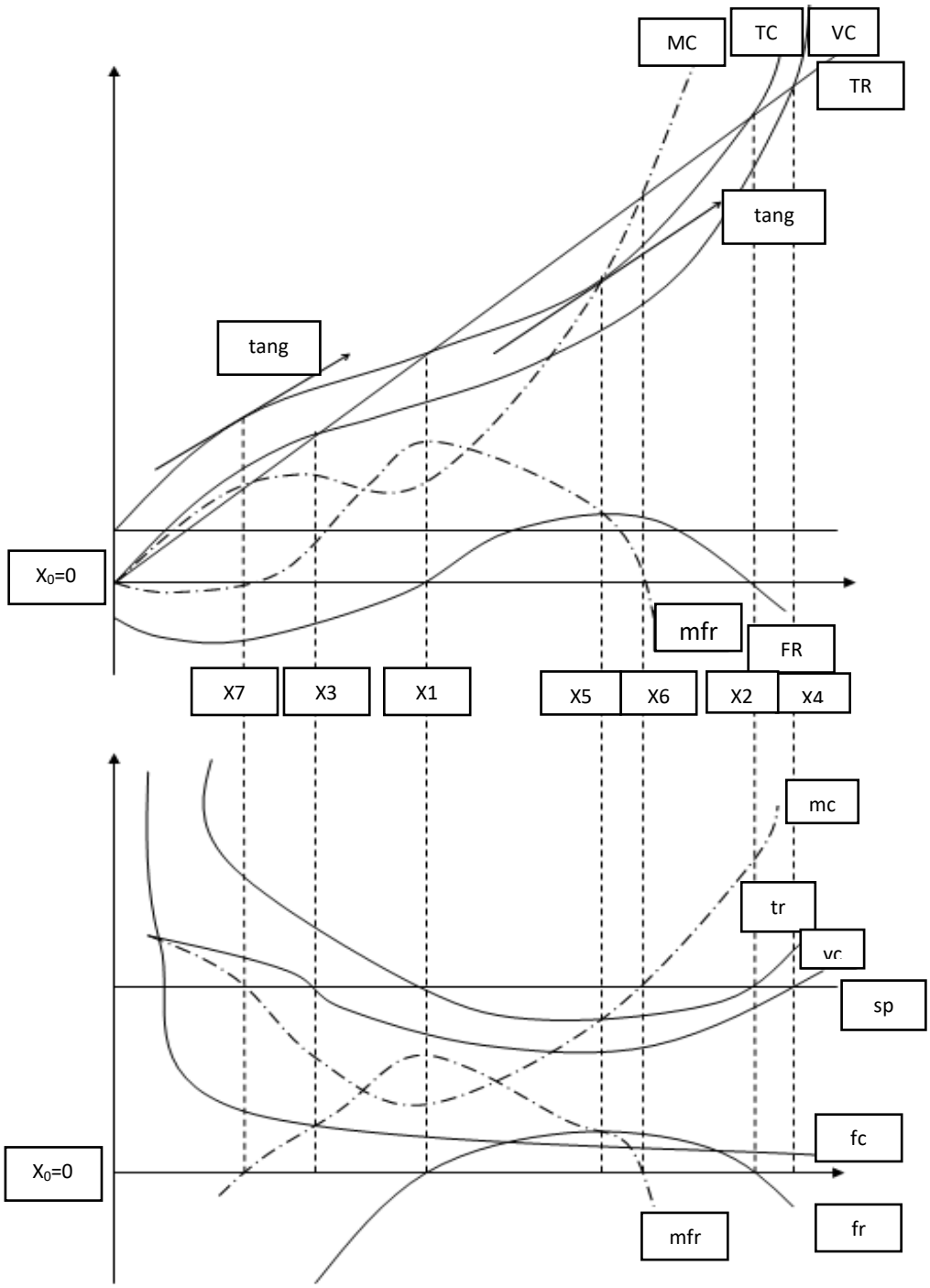
Point x_5 is called critical point of optimal costs. It is situated between threshold and limit of rentability. In that point, total average costs are at lowest level and there is proportionality of total and average costs. According to that, in state of optimal costs, margin costs (average variable costs that are occuring at the final layer of production) always intersect total average costs, i.e. total margin cost intersect total cost (MC = TC). Next characteristic of this optimum point is that, with requirement that selling price is constant, average financial result (AFR) is gaining its maximum at that point. Last characteristic of this optimum of costs is that margin financial result is equal to average financial result, i.e. MFR = FR. All legalities of optimum of costs:

- tc – minimum,
- TC and tc = proportional,
- mc = tc, MC = TC
- fr = mfr, FR = MFR.

The last two critical points are showing maximum positive and negative financial result (± FR). Point of maximum positive financial result x_6 is accomplished between x_1 and x_2, so as optimum point of costs. However, by condition of constant selling price, point x_6 (FR and fr) is always standing at higher utilization of capacity of production. At total cost chart, point of positive maximum can be established over tangent 1 (tang 1 at chart) which is parallel with total revenue chart. It is touching total costs when they are smaller than total revenues. Contact of that tangent is showing that TC is parallel with TR, and from that, it can be shown that FR is the biggest at that point (FR = TR – TC). Looking from total cost chart and from formula MFR = TR – MC (with MFR = 0) it is seen that it needs to be MC = TR, i.e. if average cost chart is being observed mfr = 0, then it needs to be sp = mc (mr = mc). Legalities of maximum positive financial result are next:

- TR > TC, TR ⎪⎪TR, + FR
- mfr = 0, MFR = 0
- mc = sp, MC = TR

[14] Majcen, Ž., (1971.) Troškovi u teoriji i praksi. Zagreb: Informator, str. 117



Picture 2. Total revenue, all total and average costs, financial result and margin (total margin) financial result

Maximum loss point (- FR) is appearing at starting phase of TC movement over TR. It is established by tangent line 2 that is also parallel with total revenues, only now TC are bigger then TR. All other legalities are identical as legalities for point of maximum FR.

Legalities of maximum loss of financial result are next:

- TR < TC, TR ‖ TC, - FR
- mfr = 0, MFR = 0
- mc = sp, MC = TR

3. COST MANAGEMENT IN FUNCTION OF ENHANCEMENT OF PROFITABILITY

Costs are one of the most important areas of business decision making. They are extended through all company activities related to production and it is very important to know how to manage them. Quality cost management is a characteristic of educated, motivated and ethical management and in first place of successful organizations. In nowadays terms of business, when companies does not have big influence on defining selling price level, their main role is to answer at question how to reduce cots in order of gaining targeted profit. In praxis, often are applied so called „fire measures“, that give only short – term effects, and they are implemented from managers that are called „the costs cutters“. Costs are reduced without objectional criteria or thinking about long – term effects, wages are reduced, cheaper resources are purchased with questionable quality, educations are cancelled, marketing activities etc.[15]

Authors opinion is that in praxis, managers often cut costs without analysis and criteria, also not thinking about long – term harmful consequences of that decisions.

In short term, effects of that kind of measures, can and will reduce costs, but in long term they will usually have harmful consequences. Those so called „costs cutters“ do not see clearly enough, that all cost must have purpose. Managers usually, especially in crisis period because of lack of analysis and pressures from crisis situations, indiscriminately reduce costs.

It is process of saving on wrong things, while costs that do not make newly value are „leaking through fingers“. Reasons for wrong cutting of costs are many, but one is, for sure, wrong and inappropriate cost classification by kinds and holders. Decisions made by managers, for sure, would be much more correct if the base for decision making is clearer and understandable. Contrary to cutting of costs stands cost management. Nowadays of business management want to answer on next questions[16]:

- what is the real amount of production or procurative costs of product or merchandise and what does affects on their value;
- what management can do in order to reduce listed costs with condition of same quality of product or merchandise;
- what costs are generated from other sectors that are not directly connected with production or procurative, like i.e. sale or marketing;
- how to maintain control at all costs and establish responsible persons for each supervision;
- how to motivate all employees that each one of them is participating in reducing costs;
- where to invest effects made by quality cost management,
- does it and in which way organisational structure effects on irrational spending or at their rationalization.

Authors are considering that it will be more useful when managers would, instead cutting costs, implement cost management, and through cost management came to answer on questions about irrational spending and about way of access to rationalization of costs. Essence of managerial accounting is systematic classification and evidence of costs by listed categories (storable, unstorable, direct, indirect, fixed, variable) that are also basic precondition of managerial decision making. In sequel it will be explained charateristics of cost management, conception of management based on activities and costs of customer service and profitability analysis.

[15] Očko, J., Švigir, A. (2009.) Kontroling troškova u proizvodnom društvu. Računovodstvo, RRiF, Vol. 7., str. 49
[16] Ibid

3.1. Cost management features

Nowadays it is almost impossible to imagine business without tracking and cost management. Costs are surely the best indicators of success of some company. Cost analysis is giving insight in efforts and results of increasing the scope of company, increasing productivity, rationalizing in resource using so as success in work organization. In global economy terms, profit gaining still imposes as primary goal for each company. Even, in last few years, there are attempts of developing social entrepreneurship, which goal is creation of social values and improving living quality; profit is still basic initiator, also key goal of modern business, because it is obvious that without profit all other economic and social goals cannot be achieved and realized[17]. Author points up that key initiator and business goal is profit and that without it all other – economic and social, goals can not be realized. Social entrepreneurship concept includes wide spectre of activities, entrepreneurial individuals that want to make changes, philantrophists that are supporting entrepreneurial capital as portfolio investition and non – profit organisations. Social entrepreneurship is a modern phenomenon and it is obtaining popularity by virtue of idea of changing people conscious and different ways of thinking. Today, social entrepreneurship is situated in upper phase of research work. Most important fact about research work is coming to new knowledges and conclusions, all in favor of getting intelectual integrity. According to that, it is necessary to carry out ambitious researches what would bring to development of this area. Social entrepreneurship, despite the fact that it is original, it is also innovative and has social value of creating activities that can be found later in non – profit, public or private sector. Surely, it needs to be said, that cost management enables reducing of costs what results with increase of business result (profit), so as cash flow, i.e. it contributes to maintenance of appropriate liquidity.

3.2. Conception of management based on activities

Cost management can be implemented on different ways and through different models. In terms of selection of the optimal ways and models is difficult to speak in a vacuum. The fact that can be said with certainty, is that for positive result of the process of cost management of whole organisation is necessary to knew in details current structure of total costs of organisation. That is starting point for further analysis of cost management concept. Next important term is optimisation of costs. Optimisation of costs is a process of balancing the amount of resource spended in process of gaining effects, which means fulfillment of buyers/users requirements, what in other word means maximization the amount of quality effects with minimization of total costs. The best way of cost management is through management of business processes. Optimization of business processes is a set of actions by which, through application of methods and technologies, goings – on of process are brought into limits of allowed deviations, what will result with total costs optimization of whole process[18]. Authors opinion is that the biggest influence on cost management, has optimization of business processes by which we can get acceptable deviations, and the final result would be total cost optimization of whole process. In sequel, it will be explained usage of cost accounting based on activities and development of concept of management based on activities – activity – based management.

3.2.1. Appliance of cost accounting based on activities

Activity – based management (ABM) is a managing process that in first place has a goal of cost reduction and improvement of asset and resource usage. It appears in strategic and operational form. Operational ABM is engaged in improvement of resource usage (human and material), eliminating activities that do not contribute to creation of value, while strategic ABM is related

[17] Mikić, M. (2009.) Upravljanje troškovima u malim i srednjim proizvodnim poduzećima. Zagreb: Zbornik Ekonomskog fakulteta u Zagrebu, Vol.7., No.1., str. 162
[18] Drljača, M. (2004) Metode upravljanja troškovima. Elektrika, Vol. 4., str. 8

to adjustment of current and development of new business activities[19]. Author is explaining that ABM model as a managing process has a goal of cost reduction and improvement of asset and resource usage. It can be operational – it is engaged in improvement of usage of human and material resources; and strategic – it is engaged in improving current business activities and developing new business activities. ABM model is implemented through two different activities: conduction of activity based cost management (ABC model), and through reaction on analysis result. Managements accent is on the question how to implement changes and increase productivity in organisation. Answers on next questions are found based on implemented ABC method,: if distributive channel or market are unprofitable, where does the company can reduce costs and make them profitable; if company set aside some unprofitable product or service, how much would save on costs; if company reduces prices of services or products in order to increase volume of production, how will that affect on unit cost; what is the reason of cost appearance and how to manage them, how to decide about the amount of charging each user for service that the company is serving him etc.[20] Author explains in this quote the use of ABC metod and the possibility of reducing costs in order of making unprofitable product profitable or if company abolish unprofitable product, how much would it be saving in cost, and if it is reducing price withal increasing the volume of production, how will that change affect on unit cost, what is the reason for appearance of costs and how to manage them.

3.2.2. Development of management concept based on activities

In the last few years, many companies have acknowledged the fact that operational methods based on activities are giving all necessary information for succesfully understanding of costs and managing them. Using ABM model they are in state of managing business and they are giving answer what is reason for appearance of costs and how to manage them. It is absolutely indispensable for managers to identify which activities are incorporated in providing each service and to understand cost holders which are caused by that activity, i.e. service. In most cases, creation of cost accounting system based on activities is based on three main phases[21]:

- initial frames;
- process of revision of service layer;
- use of activity – based frame.

Author is explaining wide use of ABM model in many companies and the fact that managers have realized the importance of understanding cost holders and activites that are related to it. Accounting system goes on in three phases: initial frame, process of revision of service layer and use of activity – based frame.

In first phase all efforts are directed towards collection of information about activities and costs, defining relations between activities, services and costs, and then all collected information are „pulled through“ ABC model.

Second phase contains information about provision of services, analysis of costs based on activities for each service. Also are analyzed service from aspect of past, i.e. through which

[19] Gabelica, J. (2011.) Utjecaj primjene ABC metode na alokaciju troškova u proizvodnom poduzeću. Split: Sveučilište u Splitu, str. 15
[20] Gabelica, J. (2011.) Utjecaj primjene ABC metode na alokaciju troškova u proizvodnom poduzeću. Split: Sveučilište u Splitu, str. 15
[21] Ibid

levels is service provided before, bases of costs that are cauesd by service and real, i.e. current amount of costs for that service[22].

Author divides each phase and emphasizes the analysis of costs for each service especially from aspect of the past or through which levels is service provided before, costs that are caused from service and real (current) amount of costs for the service.

After every service is being examined, it is making decision, will the service be provided in the future and in which volume, i.e. through which levels, simulating operational, selling and cost changes. ABC model helps managers to identify costs of possible alternatives before they make a final decision.

Largest contribution is reflected in frame of changes and improvements, meaning by that processes of re - engineering and measuring performances. Activity – based management means integration of information about accounting costs based on activities in whole process of management.

3.3. Costs of providing services to customer and profitability analysis

Cost management has appeared as a source of information for managerial decision making about questions related on production. Bigger share of costs that are appearing outside the production in total costs of company, has stimulated the developing process of instruments for cost management that are appearing outside the production, primary in marketing and logistic activities[23]. Author points out that cost management has appeared because of need for managerial decision making in production, and with enhancement of costs that are appearing outside of production (marketing and logistic activities), he stimulated the importance of managing costs that appeared outside production process. According to that, cost management does not includes only costs based on products and its departments, but also costs made by distribution channels and certain buyers[24]. Key factors that are appearing nowadays are development of IT technology and modern managerial methods. Due to their development, it camed to widening of the area in which cost management contributes to profitability of whole business process in production, retail and service companies. Especially significant area of new breakthrough of concept of cost management are costs of providing services to customers, that are enabling analysis of profitability of distribution channels and certain customers. Author has came to acknowledgment that in new time, cost management is appearing more often, especially at providing services to customer with possibility of analysis of profitability by distribution channel and each customer. Business success is defined from economic, technical, legal and art view, so according to those views, efficieny of whole business is evaluated. From economic view, economist will consider that company has gained the goal of its business, only in case of positive economic success or profit. It is important to accent that, even if main goal of company is that business result must be bigger than business investments, that is not enough indicator for efficiency of business. In order to answer at question how much is company successful, it is necessary to measure accomplished level of economic success. Each company is tending to accomplish highest level of profit with its activities. Company is achieving that goal through reducing costs by unit cost, i.e. maximizing production and sale. In economic literature are considered different economic measures of success, i.e. efficacy of business. As most common economic measures of business success are used next: a) labour productivity, b)

[22] Gabelica, J. (2011.) Utjecaj primjene ABC metode na alokaciju troškova u proizvodnom poduzeću. Split: Sveučilište u Splitu, str.16
[23] Karić, M. (2010.) Utjecaj novih metoda upravljanja troškovima na profitabilnost poduzeća. Poslovna logistika u suvremenom menadžmentu, Osijek : Ekonomski fakultet u Osijeku, str. 27
[24] Ibid

efficiency, c) rentability or profitability. It is important, for economic success of business, to know, are the made products or provided services adequate, looking from quality and quantity view, regarding demands and buyers needs and also regarding quality and quantity of elements that are invested in working processes. Further question that management must ask itself is related to rationality of use of resources, i.e. is the best result achieved, regarding the amount of resources that are spended for production. Economic success of business is determined with success standards that are applied in analysis of financial statements. Information that can be found in basic financial statements are not enough for determination and objective evaluation of quality of business efficacy, looking from each factor of business and its overall influence. Indicators of business efficacy are very helpful in making good decisions, in favor of making the best result for company. Depending on type of information that each indicator is giving, two different groups can be distinguished – indicators of efficacy and indicators of business stability. Despite listed indicators, in theory and practice can be also found indicator of activities.[25] Author asserts that there are many types of indicators - indicators of efficacy, stability and activities which have to be combined in order of making good decisions and gaining good business results. It is expected, considering the benefits of indicators of business efficacy, that owners and management would apply listed indicators of business success. It is necessary, in order of making chance to success, that management is in dispose of sufficient level of knowledge so they can manage resources, analyze financial statements and apply listed indicators.

4. INFLUENCE OF ORGANIZED COST MANAGEMENT ON BUSINESS DECISION - MAKING

Cost management is challenging and continuous process, it is a result of positive relation of manager to whole business and constant analysis of relation of costs and benefits that are brought by them. One of most important item in this process is profit by unit cost. Benefits of cost management do not come over night, but long – term work on cost management can result with excellent results[26]. It is important to determine what are comparative advantages of company on the market and what goals are set in front of company. Because of the fact that companies are founded primarily with goal of long – term earning, we will look at long – term goals in that way. In next step, all costs must be listed and ranked and their importance must be determined in company activities. Because of ignorance, managers, in crisis periods (depending on time interval), instead of reducing costs, are choosing to increase selling prices that can result with lots of damage for company. That technique can, oftentimes, trigger counter – reaction of buyers and competition, and also sales decline so in general this move is considered as risky move. Economy as a science and through practice, is engaged in, for long time, studying and use of certain methods in cost management and endeavoring, that made costs bring maximum performances. Through that process, certain rules and guidelines are developed, and few of them should be accepted[27]:

- in long – term it is crucial to be cheaper than competition through providing the same amount of services/products or offer more for the same price;
- in order of maintaining competitiveness, all costs must be designed in constant, but also they need to be reduced constantly;
- it is necessary, in every moment, to track precisily real costs, revenues and profits for each part of business;

[25] Vujević, K., Balen, M. (2006.) Pokazatelji uspješnosti poslovanja poduzeća pomorskoga prometa. Pomorstvo, Scientific Journal of Maritime Research, Vol.20., No.2., str. 33
[26] http://profitiraj.hr/cost-management-%E2%80%93-kako-uspjesno-upravljati-troskovima/ 25.6.2016
[27] http://profitiraj.hr/cost-management-%E2%80%93-kako-uspjesno-upravljati-troskovima/ 26.6.2016

- real prices and profit for each service/product must be known at any time (this worth especially for key customer relations);
- take care of cash flow and liquidity sources.

Cost management is a process with which operational margins are raised so as business result through reducing costs by made profit unit, but not in a way certain companies are functioning – endangering their own position with decreasing quality of products or sale profits. This process, when it is regularly and successfully guided, ensures continuity of revenue streams and competitivness of the company what are necessary preconditions for long-term development and existence at market.

5. CONCLUSION

Decision making is a process of choosing between various possibilites. That is basic thought process that is consisted of recognizing and choosing possible solutions that are leading to desirable state. For quality decision making, it is neccesary to comprehend the demand for decision making and be aware of time limit that exists in that process. That elements are natural preconditions for quality decision making. Making business decisions demands a lot more attention, knowledge, experience and responsibility. Basic difference between making decision in private and business life is, that in process of making business decisions, decision making refers to organization as unity, i.e. to all employees, stakeholders, suppliers, buyers and partners. Making decisions is old as much as the humanity. Each human activity is a consequence of some earlier process of decision making or itself it is a decision making. From view of competitiveness, it is important to realize validity of costs that appeared during achievement of general and special managerial goals of organization. It is impossible to eliminate all costs because it is apsurd situation in which the whole sense of business is coming in question. Costs optimization allows that costs are minimized with desirable result. Whereas desirable result is not only quantitative expression or measure of business activites, but also subjective feeling of buyers satisfaction. Costs can be defined as resources that needs to be sacrificied in order of achieving certain goal. Looking from cost management view, it is necessary to distinguish close categories, like expenses, costs and expenditures. In order to rectify relation between total investments and total effects, on what is really depending good business result, it is wanted to affect on inputs that are put in business process. Imperative of good business result practically enforces the management to apply different cost management methods. Costs are one of the most important areas in management. They are extended through all company activities related to production and it is very important to know how to manage them. Quality cost management is a characteristic of educated, motivated and ethical management and in first place of successful organizations. In today terms of business, when companies does not have big influence on defining selling price level, their main role is to answer at question how to reduce cots in order of gaining targeted profit. Cost management is challenging and continuous process, it is a result of positive relation of manager to whole business and constant analysis of relation of costs and benefits that are brought by them. One of most important item in this process is made profit by unit cost. Benefits of cost management do not come over night, but long – term work on cost management can result with excellent results.

LITERATURE:

1. Belak, V. (1995.) *Menadžersko računovodstvo*. Zagreb: RRiF plus
2. Cingula, M., Klačmer, M. (2003.) *Pregled nekih metoda i postupaka upravljanja troškovima*. RRiF, No. 8, Zagreb, str. 20-25.
3. Drljača, M. *Metode upravljanja troškovima*. Elektrika, Vol. 4., 2004., str. 1-10.

4. Gabelica, J. (2011.) Utjecaj primjene ABC metode na alokaciju troškova u proizvodnom poduzeću. Split: Sveučilište u Splitu
5. Karić, M. (2010.) *Utjecaj novih metoda upravljanja troškovima na profitabilnost poduzeća*. Poslovna logistika u suvremenom menadžmentu, Osijek : Ekonomski fakultet u Osijeku, str. 27-55.
6. Koontz, H., Weihrich, H. (1999.) *Menedžment*. Zagreb: Mate d.o.o.
7. Majcen, Ž., (1971.) *Troškovi u teoriji i praksi.* Zagreb: Informator
8. Mikić, M. (2009.) *Upravljanje troškovima u malim i srednjim proizvodnim poduzećima*. Zagreb: Zbornik Ekonomskog fakulteta u Zagrebu, Vol.7., No.1., str. 161-176.
9. Očko, J., Švigir, A. (2009.) *Kontroling troškova u proizvodnom društvu.* Računovodstvo, RRiF, Vol. 7., str. 49-57.
10. *Poslovni forum*- www.poslovniforum.hr, 16-19.05.2016.
11. *Profitiraj*- www.profitiraj.hr, 25.06.2016.
12. Ramljak, B. (2013.) *Racionalizacija troškova u funkciji ostvarenja poslovnog rezultata*. Računovodstvo, financije i porezi u praksi, Split: Udruga računovođa i financijskih djelatnika Split, str. 1-12.
13. Santini, I. (2006.) *Troškovi u poslovnom odlučivanju*. Zagreb: HIBIS d.o.o.
14. Sikavica, P., Hunjak, T., Ređep, N. B., Hernaus, T. (2014.) *Poslovno odlučivanje.* Zagreb: Školska knjiga
15. Vujević, K., Balen, M. (2006.) *Pokazatelji uspješnosti poslovanja poduzeća pomorskoga prometa*. Pomorstvo, Scientific Journal of Maritime Research, Vol.20., No.2., str. 33-45.
16. Yates, J. F. (2011.) *Poslovno odlučivanje, inovativna rješenja za goruća poslovna pitanja*". Zagreb: MATE, ZŠEM

BOUND-TESTING ANALYSIS OF THE TRADE-OFF BETWEEN UNEMPLOYMENT AND ECONOMIC GROWTH IN NIGERIA (1970-2014)

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ABSTRACT

The increasing presence of agitations resulting from economic hardships and recession around the globe calls for a reassessment of the impact of unemployment on economic growth in Nigeria. This paper attempts to measure the long-run effect of unemployment on economic growth. Using data from 1970-2014, we established that the variables were cointegrated with an Autoregressive Distributed Lagged (ARDL 1, 1) Model or "Bound Testing Approach" to cointegration.

The parsimonious model shows that unemployment has a negative short-run effect on economic growth. This finding validates the Okun`s Law. The Error Correction Model (ECM) shows that it will take over 3years for the unemployment gap to be cleared. Also, the "Block Exogeneity Wald Test" shows a uni-directional causality originating from economic growth to unemployment.

The authors recommend that government should partner with the private sector to close the infrastructural gaps particularly electricity and roads. This will make economic growth more inclusive.

Keyword: *Bound Test Economic Growth Nigeria Unemployment Wald Test*

1. INTRODUCTION

The high rate of unemployment in Nigeria has been a crucial challenge for decades in the country`s administration. Since the 1990`s when it struck double digits, it has become uncontrollable and the trend has continued to pose grave concern to citizens, stakeholders, economists and policymakers. However, the Nigerian economy has continued in an overall positive and consistent growth trend since the late 1980`s, and not even the sub-prime crisis which started in 2008 could change this positive trend. Though the economy has been facing dwindling growth since 2015 because of the fall in oil price and resurgence of militancy and pipeline vandalism in oil rich region of the Niger-Delta (NBS News Letter, 2016)

Ogbuagu (2014) defined unemployment as a state in which people who can work are without jobs and are seeking for pay or profit. If any country experiences unemployment, it will not only put negative impact on the economic indicators of that country but, it will also hurt the social norms of such country.

Authur Okun opined that GDP will experience a gain if unemployment rate decrease from 7% to 4% of the labour force. This led to the postulation of Okun`s Law which states that an increase in unemployment by 1% will cause a 3% decrease in GDP (Okun 1962 in Ochoche 2014). This research report seeks to build its foundation on this theoretical framework.

This paper seeks to investigate "The effect of unemployment on economic growth using the Pesaran and Shin Approach". The research further verify the relation between the levels of unemployment and economic growth and ascertain whether or not its result supports the existence of Okun`s Law using Nigerian data set.

2. LITERATURE REVIEW

The relationships between unemployment and economic growth have been highly researched over the decade. An empirical investigation using simple regression showed that the rising nominal wages and the accelerated growth of population which affected the supply side through a high and rapid increase in labour force relative to the absorptive capacity of the economy appear to be the main determinant of high unemployment in Nigeria (Ogbuagu 2014).

Researcher like Rama (1998) found a trade-off between unemployment and economic growth in African economies. Babalola et al (2013) empirically tested the validity of Okun's law in Nigerian economy from 1980-2012. They utilized the VAR-Cointegration method and examining the direction of causality using the VAR-Granger causality/Block Exogeneity Wald test. Only one cointegrating vector and uni-directional causality from unemployment rate to real output growth. Meidani and Zabihi (2011) examined the dynamic effect of unemployment rate on per capita real GDP in Iran over the period 1971 and 2006. Using an Auto-Regressive Distributed Lag (ARDL), the study finds that the unemployment rate has a significant and negative effect on per capita real GDP in the long-run and short-run periods.

Arewa and Nwakanma (2012) conducted an empirical evaluation of the relationship between output and unemployment using the first difference and output-gap models of Okun's law. The study finds no evidence to support the validity of Okun's law in Nigeria. Ochoche (2014) using time series data from 1985 to 2013, discovered that the present structure of the economy and output changes in Nigeria have no significant effect on unemployment.

3. METHODOLOGY

This section shall make use of the Bounds Testing Approach to cointegration by Pesaran et al (2001). Firstly, the researchers will conduct the unit roots tests to avoid spurious results. Since most data are usually integrated of order one and zero, the most appropriate technique to check for cointegration is the Bounds Test. Here, the F-Statistic (Wald Test) is compared with the Upper bound of the F-tabulated on the Pesaran table to conclude whether or not the variables cointegrate in the long run. The estimated Autoregressive Distributed lagged Model using the Least Square Technique will help to ascertain both the short-run and long run effect of unemployment on economic growth. Time series data were obtained from the World Bank Database and Central Bank of Nigeria Statistical Bulletin, 2014.

Theoretical viewpoint supports the existence of negative relationship between real GDP growth and unemployment level. Arthur Okun (1962) defined this negative relationship as the only empirical hypothesis explaining the relationship between unemployment rate and GDP growth. The model is adopted from Arewa and Nwakanma (2012) and is specified below:

Expressed Econometrically: $RGDPG_t = Ø_0 + Ø_1UMP_t + Ø_2CONS_t + Ø_3NATS_t + Ø_4GOVT_t + Ø_5NX_t + Ø_6INF_t + Ø_7OILR_t + \mu_t$……1. Where t is the time trend and μ is the white noise (stochastic term) which is assumed according to Ordinary Least Square to be normally distributed with zero mean and constant variance. The parameters for estimation from equation 8 are $Ø_1$, $Ø_2$, $Ø_3$, $Ø_4$, $Ø_5$ and $Ø_6$. In consonance with economic theory, it is expected that $Ø_1<0$, $Ø_2>0$, $Ø_3>0$, $Ø_4>0$, $Ø_5>0$, $Ø_6>0$, $Ø_7>0$ The Dynamic Version is in the form of an Autoregressive Distributed Lagged (ARDL (1,1)) Model: $RGDPG_t = Ø_0 + Ø_1UMP(-1) + Ø_2CONS(-1) + Ø_3NATS(-1) + Ø_4GOVT(-1) + Ø_5NX(-1) + Ø_6INF(-1) + Ø_7OILR(-1) + Ø_8\delta(UMP(-1)) + Ø_9\delta(CONS(-1)) + Ø_{10}\delta(NATS(-1)) + Ø_{11}\delta(GOVT(-1)) + Ø_{12}\delta(NX(-1)) + Ø_{13}\delta(INF(-1)) + Ø_{14}\delta(OILR(-1)) + Ø15(RGDPG(-1) + \mu_t$…….2

Where: RGDPG = Real Gross Domestic Product Growth Rate, UMP = Unemployment Rate CONS = Aggregate Consumption, INV = Aggregate Investment (Proxy as National Savings), Govt = Government Expenditure, NX = Net Export (Export minus Import), INF = Inflation Rate, OILR= Oil Revenue.

4. RESULT AND INTERPRETATION

TABLE I: PARSIMONIOUS ARDL (1, 1) REGRESSION RESULT
Dependent Variable: GDP
Method: Least Squares

Variable	Coefficient	Std Error	t-Statistic	Prob. Value
GDP(-1)	-0.3055	0.1693	-1.8041	0.0806
Ln(GOVT(-1))	-38709.30	19279.71	-2.0078	0.0532
Ln(NATS(-1))	43256.16	22197.40	1.9487	0.0601
OLR(-1)	0.0269	0.0080	3.3474	0.0021
D(OLR(-1))	-0.0186	0.0099	-1.8653	0.0713
D(UNEM(-1))	-328.87	740.29	-0.4442	0.6594
@TREND	7581.088	2395.633	3.1645	0.0034

R-Squared	**0.71914**	**Mean Dependent Var**	**284749.5**
Adjusted R-Squared	**0.69835**	**S D Dependent Var**	**210375.5**
Log Likehood	**462.47**	**Akaike Info Criterion**	**24.075**
Durbin-Watson	**1.904877**	**Hannan-Quinn Criter.**	**24.1825**

Computed by Authors

The regression result above in table II is the parsimonious model. The lagged values of economic growth, government expenditure have long-run negative effects on economic growth; while national saving and crude oil revenue have long-run positive impact on economic growth. On the other hand, the short-run effects of unemployment and crude oil are -3.329 and -0.019 respectively.

The estimation shows that an increase in GDP(-1) by 1% will reduce GDPt by 0.3% holding other variables constant. This result is significant at 10% levels. From the above regression result, it is clear that the GDP growth rate in Nigeria is not stable overtime. This might be as a result of the fact that our economy is "mono" in nature, and dependent on oil which is highly susceptible to external shock. Also, the long run effect of the Ln(Govt(-1)) on GDP is negative. The estimation shows that 1% increase in Ln(Govt(-1)) will lead to 0.004% fall in GDP holding other variables constant. This result is significant at 5% levels. The above result contradicts convectional economic theory (Keynesian theory), that an increase in government expenditure increases economic growth. This is owing from the fact that historical data have shown that over 70% of the government budget allocation are spent on recurrent non-economic expenditures.

However, the long run effect of Ln(Nats(-1)) on economic growth is positive though very infinitesimal. The result shows that 1% increase in Ln(Nats(-1)) increases GDP by 0.043% holding other variables constant. This might be as a result of the fact that the level of our national savings do not transmit into favourable and vibrant monetary policy instruments which may trigger investment, employment and growth. Also, in the long run, lagged value of oil revenue will impact GDP by 0.03% when increased by 1% holding other variables constant. This little impact reflect the shock and high level of corruption in the oil sector. The result is significant at 5%. Note that in the short-run D(OLR(-1)) and D(UNEM(-1)) have negative effects on GDP. This means that if unemployment rate increase by 1% in the short-run, economic growth falls by approximately 3%. This finding upholds Okun`s Law and it supports the works of Meidani and Zabihi (2011), Arewa and Nwakamma (2013).

The Wald test result indicates that the sum of the coefficients of the variables is not jointly equal to zero. But to confirm that these variables are cointegrated in the long run, the F-Statistic (30.8) computed from the Wald test was discovered to be greater than the upper bound of the Pesaran table with trend and intersect (5.72) (see Pesaran et al 2001). This means that these variables co-move in the long-run, and so are cointegrated. Further scrutiny of the result on table II

exposes the fact that the rate of adjustment from the short-run disequilibrium to the long-run equilibrium is approximately 0.3%.
Owing from the above, it will therefore take over 3years for the level of disequilibrium to be cleared. In addition, the Block Exogeneity Wald Test shows that there is uni-directional causality running from economic growth to unemployment in Nigeria. It might be as a result of the growth experienced in Nigeria which is not inclusive and so, do not trickle down to the poor.

5. RECOMMENDATIONS

- Governments at all levels should spend more on capital expenditures such as fixing infrastructure particularly electricity and roads. Availability of electricity, its regularity and correct voltage will go a long way to reduce cost of production, joblessness and poverty.
- Government should formulate monitoring policy to check the channel of increase in government spending and also find out why the huge increase in spending has not transmitted into a viable economic growth.
- The monetary authorities should set up a committee that will manage and make available these pool of funds to both the public and private investors at cheap rates. This will encourage investment in the real sectors of the economy, agriculture, real estate, power, transport etc.; and then rescue our mono-economy from the socio-economic vices attached with the plague of unemployment.
- The large chunk of our national savings should be made available through the financial inclusion programme of the central bank. This will encourage small and medium scale enterprises which are the drivers of the economy and the highest employers of labour. The above will increase employment and growth will follow.
- Finally, there should be a good blend of both fiscal and monetary policies as instrument to reduce interest rate, increase investment, reduce unemployment and trigger off sustainable and all inclusive growth.

6. CONCLUSION

This paper have investigated the relationship between economic growth and unemployment in Nigeria to prove the validity of the Okun`s Law in the short-run using the bounds testing analysis. Time series data from 1970-2014 were analysed. Flowing from the empirical results is the fact that sustained inclusive growth will trigger employment. It is therefore important that fiscal and monetary instruments are channelled towards investment, wealth creation, employment and stable growth. Also, scholars can revisit the interaction between these macroeconomic variables using the bootstrap approach.

LITERATURE:

1. Arewa, A. and Nwakanma., P.C. (2012). Potential-Real GDP and Growth Process of Nigerian Economy: An Empirical Re-Evaluation of Okun’s Law; European Scientific Journal, 8(9): 25-33.
2. Babalola, S. J., Saka, J.O. & Adenuga, I. A. (2013). The Validity of Okun`s Law In Nigeria: A Difference Model Approach; Asian Economic and Financial Review, 2013, 3(12): 1598-1608.
3. Meidani, N. A., and Zabihi .M. (2011). The Dynamic Effect of Unemployment Rate on Per Capita Real GDP in Iran; International journal of Economics and Finance, 3(5): 170-177. Available from http://www.ccsenet.org/ijef.
4. National Bureau of Statistics (2016). Statistical News Letter: Labour Force Sample Survey, Nigeria.

5. Ochoche .A. (2014). The Effects of Output Shock on Unemployment: An Application of Bounds Testing Approach to Nigeria; Journal of Economics and Sustainable Development, ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online), Vol. 5 (23).
6. Ogbuagu, M. I. (2014). Relationship between Unemployment and Economic Growth in Nigeria. LAMBERT Academic Publishing, Germany, ISBN: 978-3-659-58927-0.
7. Okun, A.M. (1962). Potential GNP: Its Measurement and Significance; Cowles Foundation, New Haven: CT: Yale University.
8. Pesaran M. H., Shin .Y. & Smith .R. J. (2001). Bound Testing Approaches to the Analysis of
9. Level Relationships; Journal of Applied Econometrics, Vol. (16) pp. 289-326.
10. Rama, M. (1998). How Bad is Unemployment in Tunisia? Assessing Labour Market, Efficiency in a Developing Country; Research Observer 13(1):59-78.

QUALITY IMPROVEMENT IN PRACTICE OF IT SERVICE MANAGEMENT

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ABSTRACT
The practice of IT service management is increasingly implemented within the modern business companies. Based on the information and communication tehcnology (ICT), IT services have a great influence on the performance potential of the business processes and provide the business outcomes within the business company. There are different standards to implement IT service management practice such as ITIL (IT Infrastrucure Library) and ISO/IEC 20000. Furthermore, there are different models for the assessment the actual level of the quality of the IT service management practice as well as the guidelines for increasing its quality. The purpose of the paper is to analyze the practice of IT service management according to existing ITIL standard as well as to assess the existing level of IT service management quality within the concrete business company using the Capability Maturity Model Integration for Services (CMMI-SVC). The obtained results of the research will be an useful contribution to managers in the decision making processes related to the implementation of IT service management practice.
Keywords:*, IT Service Management practice, ITIL, Assessment of the quality level of IT Service Management practice, CMMI-SVC*

1. INTRODUCTION

Modern companies are increasing their dependency on *the information and communication technology (ICT)* and its effective support in the implementation of the business strategy. This tendency leads to an increasing need to ensure quality applications and IT services that are aligned with the business requirements. In order to realize the business value of ICT investments, the alignment of the business and IT management is very important. IT Service Management (ITSM) is a set of the processes, methods, roles and other activities to provide the business value to the customers in the form of IT services (Salle,2004). The primary goal of the ITSM practice is to provide high-quality IT services not only to support business processes, but also for the realization of innovation and business development. Accordingly, IT managers must be business focused with the customer-oriented approach in providing IT services (Haes, Grembergen,2015). There are different standards to implement IT service management practice such as ITIL (IT Infrastrucure Library) and ISO/IEC 20000. The purpose of the paper is to analyze the practice of IT service management according to ITIL standard (described in the Chapter 2). Furthermore, there are different models to assessing the actual level of the quality of the IT service management practice as well as the guidelines for increasing its quality. One of them is the *Capability Maturity Model Integration for Services (CMMI-SVC)*, version 1.2 , described in the **Chapter 3.** The conducted assessment of the actual quality level of ITSM practice within the concrete business company using the Appraisal Assistant tool and CMMI – SVC model is described in the **Chapter 4.**

2. IT SERVICE MANAGEMENT PRACTICE ACCORDING TO THE ITIL STANDARD

The Information Technology Infrastructure Library (ITIL) standard provides a consistent concept of the best practices within the IT service management. ITIL provides guidelines for the management of IT processes, IT infrastructure, IT services with an emphasis on the monitoring of their performance and continuous improvement (OGC Office of Government Commerce, 2002). We can discuss about different benefits of the ITIL implementation such as: *improved performance of the business processes supported by ICT; quality of IT services and lower costs; managed ICT incidents and ensured the continuity of IT services; improved change management; customer satisfaction and etc.*

The business value of IT service, provided by the IT service provider in order to meet the user requirements and support their business activities, is described by the two major components: ***utility and warranty*** (availability, capacity, continuity and security). The concept of the business value of IT service is shown in Fig.1 (AXELOS Global Best Practice,*ITIL Service Strategy* ,2011).The customers pay for the value they receive, and IT service provider ensures adequate ROI / ROA.

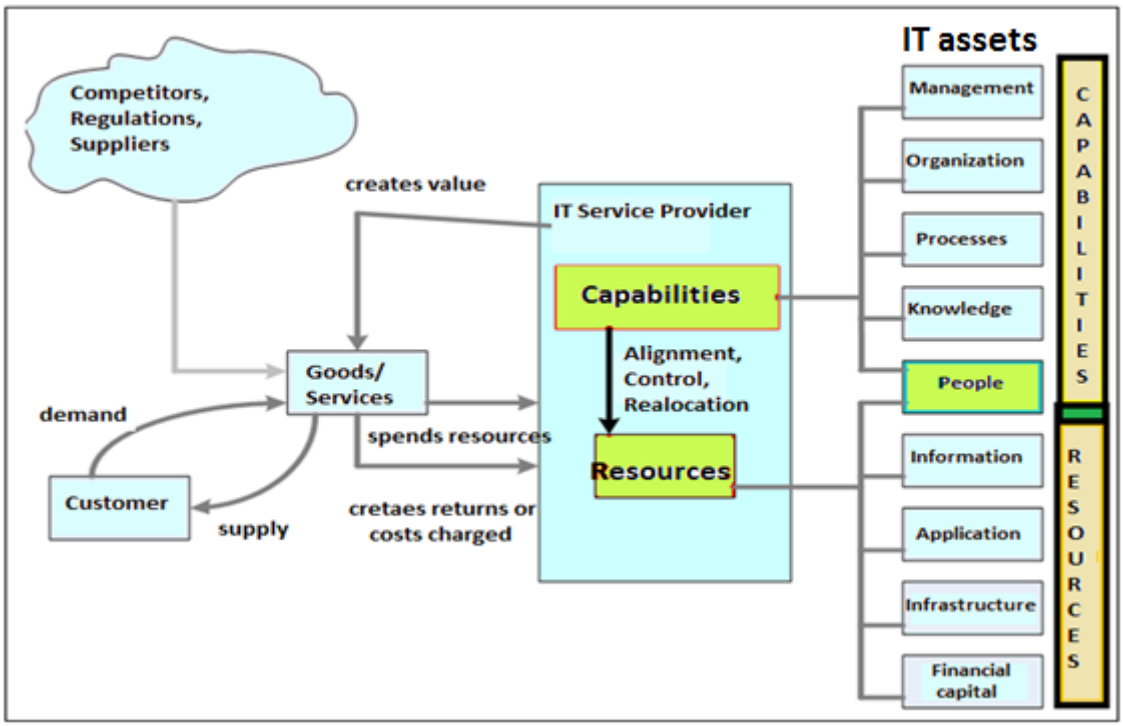

Figure 1: The concept of the business value of IT service

IT assets include the capabilities and the resources to create the business value of IT service. IT services have an influence on the performance potential of the customer assests and create the business outcomes. Such business oucomes can be measured using the different quantitative and qualitative metrics such as *better organization of work with users*; *improving the decision-making process*; *improving the process of knowledge management*; *better use of resources*; *reducing the user costs; reducing the business risk and others*.

Fig. 2 shows the concept where IT services enhance the customer assets and increase the performance potential of the customer assets and create the business value (business outcomes) (AXELOS Global Best Practice, *ITIL Service Strategy*,2011).

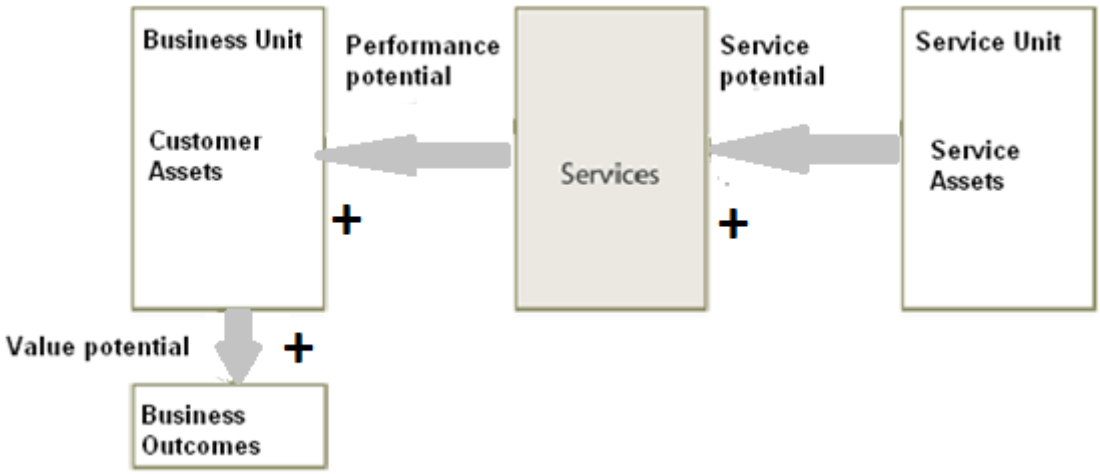

Figure 2: IT services have a great influence on the performance potential of the customer assets

IT service management is concerned with planning, sourcing, designing, implementing, operating, supporting and improving IT services that are appropriate to the business needs. IT Service Management provides the strategic alignment between the business company and IT organization (service provider), shown in Fig.3 (OGC Office of Government Commerce, 2002).

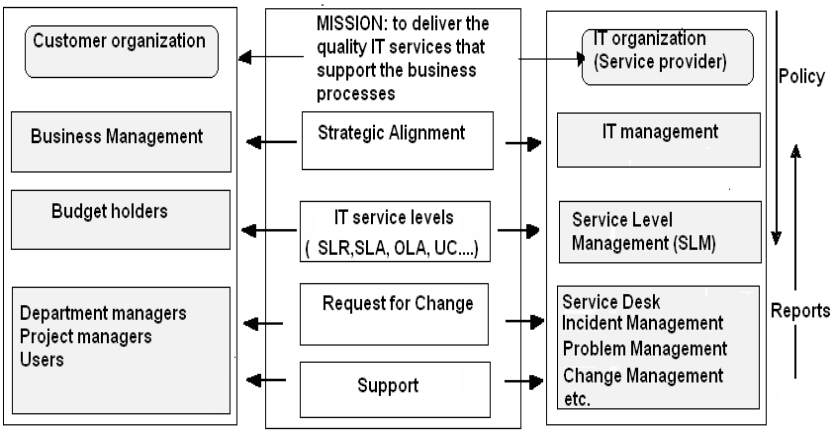

Figure 3: IT Customer Relationship Management

The strategic level of communication is very important because it aligns the strategic objectives of both organizations (customer organization and IT organization) and directs the development of IT solutions (services) to meet customer needs and solving their business goals. At the tactical level, the Service Level Management (SLM) defines Service Level Agreements (SLA) which include specifications of the customer requirements regarding to the functionality, availability, support, implementation of the changes as well as the cost of IT services. If the

customer wants to change some of IT service, the change management will conduct the required request for change. On the operational level users contact the Service Desk function for all operational issues, incidents and problems. The vertical communication refers to a variety of reports that can include the customer feedback and its satisfaction as well as other performance indicators of IT service management processes. In this way, the service quality plans and policy ensure the quality of IT services in accordance with the customers needs and the business goals.

The processes and functions within the life cycle of IT services according to the ITIL V3 standard are shown in Fig.4 (OGC Office of Government Commerce ,2007).

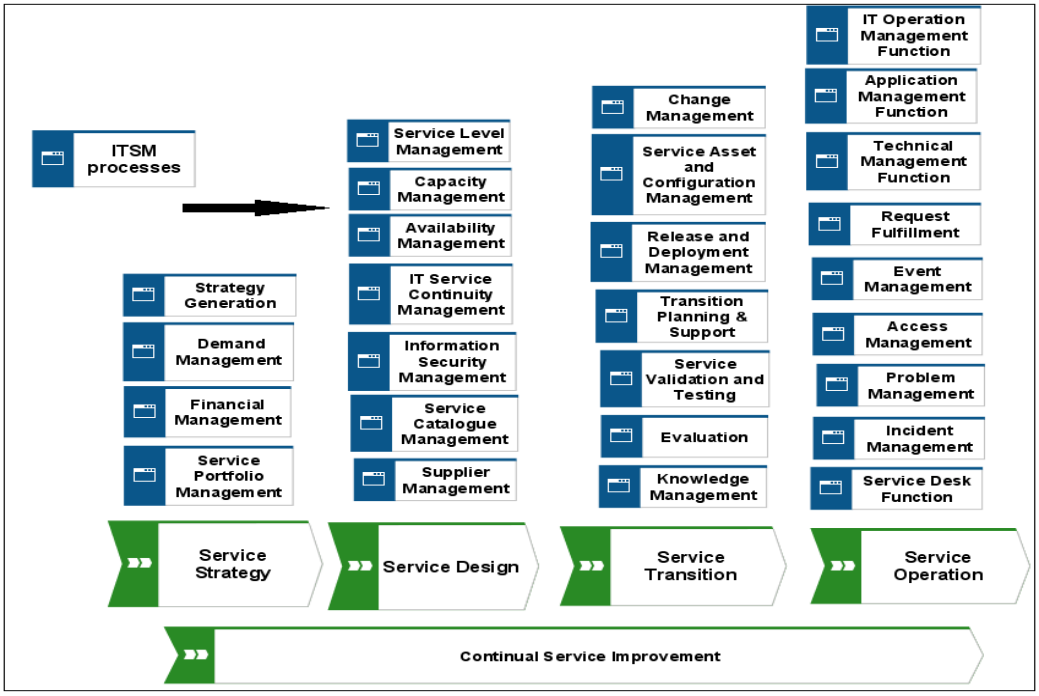

Figure 4. ITIL V3 processes and functions

The life cycle of IT services is initiated by the business requirements (based on the different business strategies). The requirements can be identified and modified through the package of the agreed service levels (Service Level Package (SLP)) within the Service Strategy. IT organization as a service provider must identify the customer needs and increase competitiveness in the market to provide services. The IT service providers have to achieve the ability to recognize the users of their services not only to support the business processes, but also for the business development and innovation. The Service Design creates all the necessary arrangements for the implementation of IT services and stores them in the Service Design Package (SDP). The Service Transition is the following phase for the evaluation and testing the IT services. The Service Operation is focused to the operational use of IT services and Continual Service Improvement is focused to the continual measurement and improvement of the IT service management processes as well as the quality of IT services.

3. CMMI-SVC MODEL

SPI (Software Process Improvement) methodology is increasingly applied for the improvement of the software development. The concept of the SPI models are based on the two

dimensional reference model for describing the processes and their capability, so called Process Assessment Model (PAM). The PAM defines a set of the key process areas and their domains, purpose and outcomes. Furthermore, the PAM defines also a measurement framework for evaluating the capability each of the key process areas through the following capability levels: *0=incomplete; 1=performed; 2=managed; 3=defined; 4=quantitative managed; 5=optimizing* (ISO/IEC 15504-2:2003). Capability Maturity Model Integration (CMMI) belongs to the modern SPI models that are based on the PAM concepts and provide the integration of the best practice not only for the software development, but also for the IT service management and other disciplines. Furthermore, CMMI defines the approaches for the process capability determination and the process improvement. Accordingly, there are more CMMI frameworks: CMMI-DEV (CMMI for Development), CMMI-ACQ (CMMI for Acquisition), CMMI-SVC (CMMI for Services), P-CMM (People Capability Maturity Model), etc. There are also different SPI methods: SCAMPI A v1.2, SCAMPI B v1.1, SCAMPI C v1.1, etc.

The basic components of the CMMI-SVC model are shown in Fig.5 CMMI-SVC (version 1.2) contains 24 process areas (CMMI Product Team, *CMMI for Services*, 2009). Each process area has its defined purpose. In adittion, the goal (specific/generic) is achieved by implementing the practices (specific/generic).The practice describes the activities that are important for the implementation of the objectives (goals). Work products are the results of the specific practice (typical work products) as well as the results of the generic practice. Work products are the important indicators for the assessment of the practice implementation and achieving the goals.

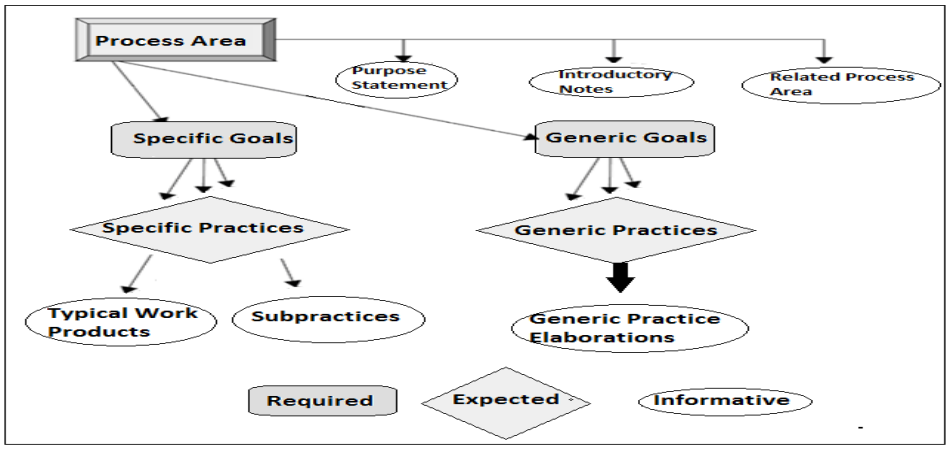

Figure 5: The basic components of the CMMI-SVC model

CMMI-SVC model has 24 process areas related to the IT service management practice. These process areas are assigned to the maturity levels from ML2 to ML5 (shown in Fig. 6).

Figure following on the next page

ML1 - Initial
ML2 - Managed
ML3 - Defined
ML4 - Quant. Managed
ML5 - Optimizing

CL0 - Incomplete
CL1 - Performed
CL2 - Managed
CL3 - Defined
CL4 - Quant. Managed
CL5 - Optimizing

ITSM practice according to the CMMI-SVC model

maturity level ML | **capability levels CL**

Model	Process Area	Acronym	ML	CL1	CL2	CL3	CL4	CL5
CMMI-SVC 1.2	Project Monitoring and Control	PMC	2					
CMMI-SVC 1.2	Project Planning	PP	2					
CMMI-SVC 1.2	Requirements Management	REQM	2					
CMMI-SVC 1.2	Supplier Agreement Management	SAM	2		ML2			
CMMI-SVC 1.2	Configuration Management	CM	2					
CMMI-SVC 1.2	Measurement and Analysis	MA	2					
CMMI-SVC 1.2	Process and Product Quality Assurance	PPQA	2					
CMMI-SVC 1.2	Service Delivery	SD	2					
CMMI-SVC 1.2	Organizational Process Definition	OPD	3					
CMMI-SVC 1.2	Organizational Process Focus	OPF	3					
CMMI-SVC 1.2	Organizational Training	OT	3					
CMMI-SVC 1.2	Integrated Project Management	IPM	3		ML3			
CMMI-SVC 1.2	Risk Management	RSKM	3					
CMMI-SVC 1.2	Capacity and Availability Management	CAM	3					
CMMI-SVC 1.2	Service Continuity	SCON	3					
CMMI-SVC 1.2	Decision Analysis and Resolution	DAR	3					
CMMI-SVC 1.2	Strategic Service Management	STSM	3					
CMMI-SVC 1.2	Service System Development	SSD	3					
CMMI-SVC 1.2	Service System Transition	SST	3					
CMMI-SVC 1.2	Incident Resolution and Prevention	IRP	3					
CMMI-SVC 1.2	Organizational Process Performance	OPP	4		ML4			
CMMI-SVC 1.2	Quantitative Project Management	QPM	4					
CMMI-SVC 1.2	Organizational Innovation and Deployment	OID	5		ML5			
CMMI-SVC 1.2	Causal Analysis and Resolution	CAR	5					

Figure 6: Key process areas according to the CMMI-SVC model assigned to the maturity levels from ML1 to ML5 (adjusted to Appraisal Assistant tool)

Below, the differences between the capability level and the maturity level are desribed.

Capability level (CL) for some of the process area is a measure that shows how the process area is capable to perform its purpose. Capability level CL1 is related to the performed process. This is an implemented process that achieves its process purpose. Capability level CL2 is related to the managed process i.e. performed process that is planned, monitored and adjusted, and its work products are appropriately established, controlled and maintained. Capability level CL3 is related to the defined process. Capability level CL4 is related to the quantitative managed process i.e. defined process that operates within defined limits to achieve its process

outcomes. Capability level CL5 is related to the optimizing process i.e. quantitative managed process that is continuously improved in order to achieve the business goals.

Maturity level (ML) shows the maturity of the organization as a whole. So e.g., maturity level ML1 (initial) according to the CMMI-SVC model has no assigned process areas (shown in Fig. 6). This is initial maturity level that include mainly incomplete processes within ITSM practice. Their capability levels are mainly CL0 because that these processes are not implemented or fails to achieve the process purpose.

To achieve organizational maturity ML2 (Managed), all processes assigned to level ML2 should achieve capability level CL2 (managed process). To achieve organizational maturity ML3 (Defined), all processes assigned to level ML2 and ML3 should achieve capability CL3 (defined process). To achieve organizational maturity ML4 (Quantitative Managed), all processes assigned to level ML2, ML3 and ML4 should achieve capability CL3. To achieve organizational maturity ML5 (Optimizing), all processes assigned to level ML2, ML3, ML4 and ML5 should achieve capability CL3 (shown in Fig. 6).

4. THE MATURITY ASSESSMENT OF IT SERVICE MANAGEMENT USING CMMI-SVC MODEL

This chapter describes the assessment of the actual quality level of the ITSM practice within one business consulting company. This company is the service provider for the public sector services and uses ITSM standards such as ITIL and ISO/IEC 20000. CMMI-SVC model and Appraisal Assistant tool (Software Quality Institute, Appraisal Assistant, 2016) were used within this assessment. An example of the assessment of the actual maturity level within the business consulting company will be explained through the following steps.

Step 1: the initial *target maturity level* of the company **is ML2 (Managed).**

Step 2: the *target capability level* for each process assigned to the ML2 is CL2 (managed process), shown in Fig.6. It is necessary to assess the actual capability level (CL) for each process assigned to the maturity level ML2. The capability assessment was conducted for all 8 processes assigned to the ML2: *project monitoring and control* (PMC), *project planning* (PP), *requirements management* (REQM), *supplier agreement management* (SAM), *configuration management* (CM), *measurement and analysis* (MA), *Product and Process Quality Assurance* (PPQA) and *Service Delivery* (SD).

The assessment for the Service Delivery (SD) process area is described in the paper in detail. However, the assessment procedure is equal for all other 7 processes.

Step 3: It is necessary to assess the specific goals (SG1, SG2, SG3) and specific practices (SP1.1, SP1.2, SP2.1, SP2.2, SP2.3, SP3.1, SP3.2, SP3.3) for the process area – Service Delivery using the relevant input/output work products as assessment indicators (example: SLA, plans, lists, records and etc.), shown in Fig.7.

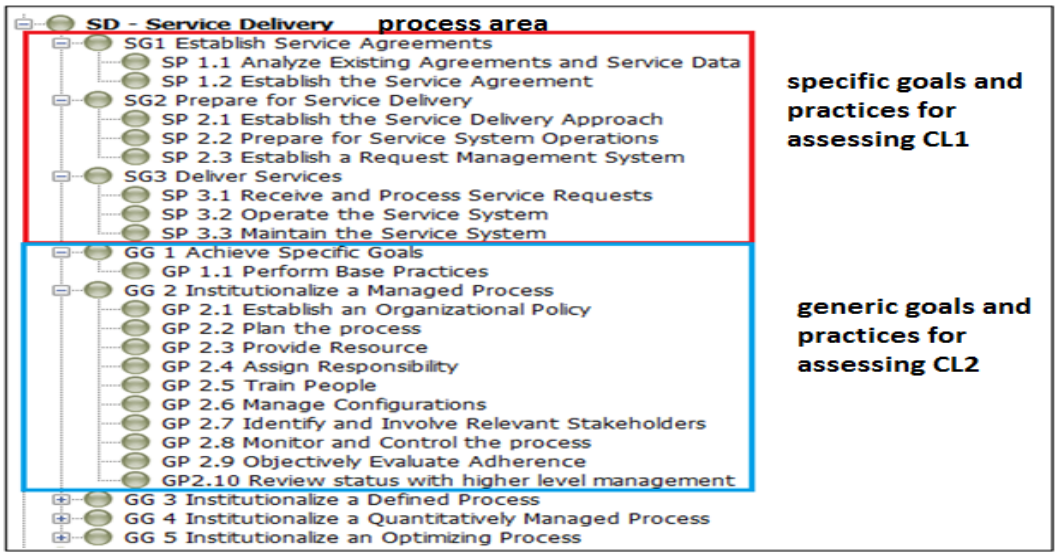

Figure 7: Specific/generic goals and practices for the assessment of the capability level for Service Delivery process area (adjusted to Appraisal Assistant tool)

Step 4: It is necessary to assess the generic goals (GG1, GG2) and generic practices (GP1.1, GP2.1, GP2.2, GP2.3, GP2.4, GP2.5, GP2.6, GP2.7, GP2.8,GP2.9,GP2.10) for the process area – Service Delivery using the relevant work products as assessment indicators (example: policy, plans, education materials, descriptions of the process, reports of the configuration management and etc.), shown in Fig.7. Rating scale for the assessment of the practice implementation is: *fully implemented practice* (80-100%); *largely implemented practice* (50-80%); *partially implemented practice* (20-50%); *not implemented practice* (0-20%); *not yet* (0%). Rating scale for the goal satisfaction is: *satisfied, unsatisfied*. Rating scale for the process area capability level (CL) is: CL0 (*Incomplete*), CL1 (*Performed*), CL2 (*Managed*), CL3 (*Defined*), CL4 (*Quatitative Managed*) i CL5 (*Optimizing*).

Step 5: It is necessary to analyze the obtained results from the Step 4. The actual capability level for Service Delivery process area is CL2 (managed process) because all specific and generic goals are satisfied within this process areas, shown in Fig 8. Other words, the actual capability level for the Service Delivery process areas is equal to the target capability level for this process area.

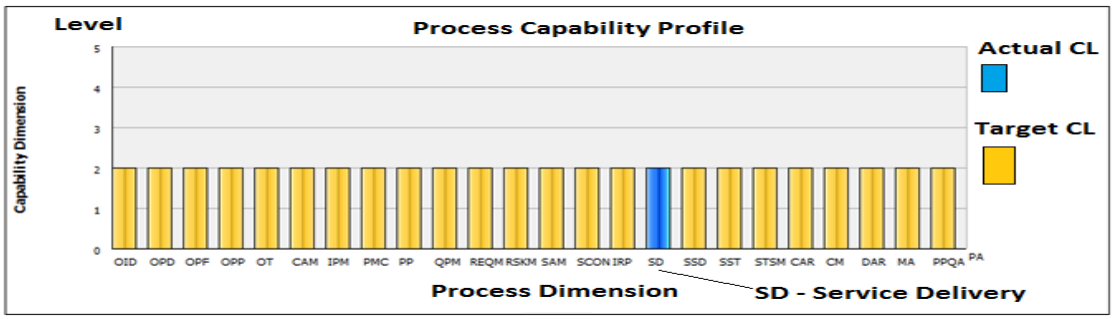

Figure 8: The assessment results of the process area SD- Service Delivery (adjusted to Appraisal Assistant tool)

Step 6: It is necessary to assess the capability level of other process areas assigned to ML2: **PMC, PP, REQM, SAM, CM,MA,PPQA**. The assessment results are shown in Fig.9.

Organization Unit Maturity Rating : ML1 - Initial

CMMI Equivalent Staging Table

Save

Model	Process Area	Acronym	ML	CL1	CL2	CL3	CL4	CL5
CMMI-SVC 1.2	Project Monitoring and Control	PMC	2					
CMMI-SVC 1.2	Project Planning	PP	2		ML2			
CMMI-SVC 1.2	Requirements Management	REQM	2					
CMMI-SVC 1.2	Supplier Agreement Management	SAM	2					
CMMI-SVC 1.2	Configuration Management	CM	2					
CMMI-SVC 1.2	Measurement and Analysis	MA	2					
CMMI-SVC 1.2	Process and Product Quality Assurance	PPQA	2					
CMMI-SVC 1.2	Service Delivery	SD	2					
CMMI-SVC 1.2	Organizational Process Definition	OPD	3					
CMMI-SVC 1.2	Organizational Process Focus	OPF	3					
CMMI-SVC 1.2	Organizational Training	OT	3					
CMMI-SVC 1.2	Integrated Project Management	IPM	3					
CMMI-SVC 1.2	Risk Management	RSKM	3					
CMMI-SVC 1.2	Capacity and Availability Management	CAM	3			ML3		
CMMI-SVC 1.2	Service Continuity	SCON	3					
CMMI-SVC 1.2	Decision Analysis and Resolution	DAR	3					
CMMI-SVC 1.2	Strategic Service Management	STSM	3					
CMMI-SVC 1.2	Service System Development	SSD	3					
CMMI-SVC 1.2	Service System Transition	SST	3					
CMMI-SVC 1.2	Incident Resolution and Prevention	IRP	3					
CMMI-SVC 1.2	Organizational Process Performance	OPP	4					
CMMI-SVC 1.2	Quantitative Project Management	QPM	4			ML4		
CMMI-SVC 1.2	Organizational Innovation and Deployment	OID	5					
CMMI-SVC 1.2	Causal Analysis and Resolution	CAR	5			ML5		

Figure 9: The assessment results of all process areas assigned to the ML2(adjusted to Appraisal Assistant tool)

According to the obtained results, the observed company has 6 process areas with capability level CL2 (managed processes), but the process areas such as *CM (Configuration Management) and PPQA (Process and Product Quality Assurance)* have the capability level CL1 (performed processes). To achieve the target organizational maturity ML2 (Managed), all processes assigned to the maturity level ML2 should achieve the capability level CL2 (managed processes). In this study, it has not been achieved. The actual maturity level of this company is the initial maturity level i.e. ML1, shown in Fig. 9.

The observed company has also other ITSM processes that are assigned to the maturity level ML3, ML4 and ML5 (shown in Fig. 9).However, these processes were outside the scope of the assessment through this research. According to the obtained results, the company has to initiate the improvement projects related to the process areas CM and PPQA in order to achieve ML2. If the company wants to achieve the maturity level ML3, all process areas, assigned to ML2 and ML3, need to improve in order to achieve the capability level CL3 (well-defined processes).

5. CONSLUSION

IT Service Management is a set of the processes, methods, roles and other activities to provide the business value to the customers in the form of IT services. The business companies are increasing their dependency on the information and communication technology and it leads to an increasing need to ensure quality applications and IT services that are aligned with the business requirements. The main principles that apply through the IT service management practice are described in the paper with special emphasis on the concept of the business value of IT services. IT services have an influence on the performance potential of the customer assests and create the business outcomes. ITIL standard provides guidelines how to conduct the implementation of the IT service management practice as well as its continual improvement. Furthermore, the assessment of the existing quality level of IT service management practice in the case of one consulting company was conducted and analyzed in the paper. CMMI-SVC model was used for this assessment. According to the obtained results, the company should invest in the further improvements of the ITSM practice.

LITERATURE:

1. AXELOS (Global Best Practice) (2011). *ITIL Service Strategy*. TSO,UK.
2. AXELOS (Global Best Practice) (2011*). ITIL Service Design*. TSO,UK.
3. AXELOS (Global Best Practice) (2011). *ITIL Service Transition*. TSO,UK.
4. AXELOS (Global Best Practice) (2011). *ITIL Service Operation*. TSO,UK.
5. AXELOS (Global Best Practice) (2011).*ITIL Continual Service Improvement* TSO,UK.
6. CMMI Product Team (2009). *CMMI for Services, Version 1.2,* (CMU/SEI-2009-TR-001), Software Engineering Institute Carnegie Mellon University Pittsburgh, PA 15213.
7. Haes, D.S., Grembergen, V.W.(2015). *Enterprise Governance of IT: Achieving Alignment and Value*. Springer, USA.
8. Haes, D.S., Joshi,A.,Grembergen, V.W.(2015).State and Impact of Governance of Enterprise IT in Organizations Key Findings of an International Study. *ISACA Journal,* Volume 4.
9. ISO/IEC 15504-2:2003. Information technology -- Process assessment -- Part 2: Performing an assessment.
10. OGC Office of Government Commerce (2002). *Planning to Implement Service Management***,** U.K.
11. OGC Office of Government Commerce (2007). *The Official Introduction to the ITIL V3 Service Lifecycle,* U.K.
12. Salle, M. (2004). *IT Service Management and IT Governance: Review, Comparative Analysis and their Impact on Utility Computing*. Retrieved 20.10.2016 from http://www.hpl.hp.com/techreports/2004/HPL-2004-98.pdf.
13. Selig, G. J. (2015). *Implementing Effective IT Governance and IT Management*. A Practical Guide To World Class Current and Emerging Best Practices. Van Haren Publishing: 2nd Edition.
14. Software Quality Institute, Appraisal Assistant, Retrieved 20.10.2016 from https://www.griffith.edu.au/engineering-information-technology/software-quality-institute.

EFFECT OF INTRODUCTION OF *RELIANCE JIO* ON THE COMPETITION ENVIRONMENT IN THE TELECOMMUNICATION BUSINESS IN INDIA

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ABSTRACT

The introduction of 4G or fourth generation telecommunication technology in both voice and data services in India by Reliance Jio Infocomm (RJio) is widely celebrated in the country. Apart from this, the company has also made provision for a very lucrative trial period from 1st September 2016 to 31st December, 2016 where the subscribers are allowed to use both the voice and data services of the operator for free. However, a little is known or understood about its effect on competition in the telecommunication business in India. Many allegations had come up regarding the company resorting to predatory pricing to acquire larger market share. However, this was countered immediately as according to the competition law provisions in India, predatory pricing is a kind of 'abuse of dominance' and since the operator in question did not enjoy a dominant position, it could not have deployed predatory pricing in the eyes of law.

This paper analyses how the introduction of a seemingly customer-friendly service, although not per se anti-competitive according to the provisions of the Competition Act, 2000, disrupt the competition in the telecom business in India. The modus operandi deployed by RJio in acquiring the 4G spectrum in 2010 along with the retrospective amendment in 2013 to permit the use of the spectrum for both data as well as voice services and the TRAI recommendation in 2016 to quash the IUC makes the author wonder if it is actually 'being at the right place at the right time' that worked in case of RJio.

Keywords*: Competition, Internet Protocol, Predatory pricing, RJio, Telecom business, 4G spectrum*

1. INTRODUCTION

The commercial launch of Reliance Jio Infocomm (hereinafter referred as RJio) on September 1, 2016 was the first of its kind to introduce fourth generation (4G) telecommunication technology in both voice and data services in India. Currently, it is the only telecom operator in India to have both its voice and data services wholly based on Voice over Internet Protocol (VoIP) technology. This way, the voice is transferred over an internet protocol network making it much faster compared to the existing second generation (2G) and third generation (3G) communication technologies.

With an investment of Rs.1,50,000 crore, RJio is said to be the biggest start-up in the world. The whole nation is overwhelmed with the launch of 4G in India and the lucrative free trial period which was supposed to end by December 31, 2016 but got extended by their Happy New Year offer till March 31, 2017 whereby the subscribers, both new as well as existing, are allowed to use the operator's services for free. This has resulted in the company crossing 50 million subscribers in as short as eighty three days, making it the fastest growing company in the world.

A Public Interest Litigation challenging the allocation of the spectrum was dismissed by the Supreme Court of India and the final decision whether to allow voice services of RJio on 4G spectrum as left to the government to decide. This paper is an effort to bring to light the effect

of RJio on the telecom market in India, strictly from a competition law point of view. The following chapters elucidate on the acquiring of the spectrum, the coincidental amendments or liberalisation in the spectrum usage, the accusations made by competitors of anti-competitive practices and the fate of it. It also touches upon the grounds on which the Public Interest Litigation was quashed by the apex court. Finally, the research concludes with the grounds which according to the author make RJio liable for anti-competitive behavior.

2. ALLOCATION OF THE SPECTRUM

Mobile service providers (MSPs) build and maintain network through the electromagnetic waves travel, which in turn enables mobile communication. For this purpose, the government allocates each one of the providers specific blocks of frequency within which they are allow to operate. This allocation takes place by way of a public auction where MSPs compete for frequency blocks. Batches of unallocated spectrum are thus auctioned by the Department of Telecommunication (DoT). For administrative purposes, the country is divided into twenty two 'service areas' or 'telecom circles'. Spectrum blocks of each telecom circle are sold separately.

2.1 The Background of Allocation

The DoT announced the auction of 3G and 4G spectrums on 25.02.2010. The notice inviting applications provided the criteria that would make a company eligible to participate. It also specified what the spectrum being sold could be used for, according to which the 3G spectrum could be used for any purpose – both voice services and internet or data services and 4G spectrum of a type BWA could only be used for internet purposes. The BWA/4G auctions took place in May-June 2010 and a seemingly small and unheard-of company named Infotel Broadband Services Private Limited (IBSPL) which had a net worth of Rs.2.49 crore won, getting one block each in all the 22 telecom circles for a total amount of Rs.12,847.44 crores. The remaining blocks were shared between five Indian/foreign MSPs (BWA Auction Final Results, GOI).

The DoT mandated that all the aspiring bidders to make an 'earnest money deposit' to show their commitment to bidding in the auction which was set at Rs.252.5 crore. IBSPL, despite lacking the financial backbone to pay such an amount, did furnish the amount at the stipulated time with the help of a bank guarantee from Axis Bank for the same amount (Guha Thakurta, 2016)

2.2. The Draft CAG Report

A draft report of the Comptroller and Auditor General (CAG) of India leaked to the media in 2014. It noted that IBSPL had submitted an allegedly forged bank guarantee to the DoT in order to participate in the auction and that the auction is allegedly rigged and also that IBSPL acted as a front company for Reliance Industries Limited (RIL) as they did not disclose about the talks they were having with RIL on RIL acquiring IBSPL.

The report made certain keen observations. Firstly, it mentioned about the non-disclosure about IBSPL's relationship with RIL as an associate or partner in its application to participate in the auction when the details of all applications were to be disclosed on the DoT website. Secondly, it pointed out that such a non-disclosure deprived the other bidders of their right to know the financial capacity of IBSPL and thus caused obscurity and violated the sanctity of the auction. In addition to it, the report also indicted Dot as having failed to recognize the signs of bid rigging where a small ISP emerged as the winner by bidding 5000 times its net worth. The report finally recommended that the government should get the matter investigated and penalize the bidders who violated the conditions of the auction and cancel the allotment of the BWA

spectrum along with exemplary punishment on the colluding firms. However, none of these recommendations were found in the final report (Guha Thakurta, 2015).

3. AMENDMENTS IN THE REGULATORY FRAMEWORK

On 17 June 2010, less than a week after the auction ended, IBSPL's board of directors authorized the allotment of 4.75 billion equity shares of 10 each to RIL allowing it to own 95% of the company. Following this, on 22 January 2013, IBSPL was renamed as Reliance Jio Infocomm Limited.

3.1. The Creation of a Unified Licence Regime

The DoT in 2008 had held that requests made by prospective BWA spectrum holders to provide voice services in addition to the data services may be considered if they apply to the government for the same. However, it was later clarified in 2010 that voice services were only permitted using 2G and 3G spectrum, while 4G/BWA spectrum was meant for faster diffusion of broadband and data services only. These were the conditions that were known to the bidders at the time of the auction (Guha Thakurta, 2016 B).In 2012, DoT set up a committee to look into issues relating to the creation of a unified licence (UL) regime. The committee held that the bidders during the auction process could not make an informed choice as their bidding patterns would have been different if they had known that the spectrum could be used for both data and voice services.

In 2013, another DoT committee decided that Internet service providers (ISPs) could convert their licences to include Cellular mobile telephone services (CMTS) under the new UL regime, so as to use their spectrum to provide both data and voice services. Thus, the pre-condition fixed on the BWA/4G spectrum resource at the time of the auction, namely, to provide only data and internet services was overturned in 2013 after IBSPL won the auction in 2010. (Bhatia, 2016).

Not surprisingly, RJio was the first beneficiary of this regulatory change as they could, under this scheme, convert their ISP licence to a Unified Access Service (UAS) licence combining the possibilities of the CMTS and ISP licences. The company was granted a UL in October 2013 on payment of an entry fee of Rs.15 crore and a migration fee of Rs. 1,658 crore in August, 2013. The CAG in its draft report also pointed out the undue advantage to RJio as the migration fee paid by the company was the amount decided in 2001 and was not the 2013 value of the spectrum which according to the estimates would be around 5,025 crore, i.e., RJio made an undue advantage of about Rs.3,367.29 crore.

3.2. Spectrum Usage Charge

Spectrum usage charges (SUC) is a recurring annual fee that telecom operators need to pay in exchange for acquiring or being assigned a spectrum. It is set at different rates depending on the specific band of spectrum. Currently, telecom operators who provide voice and data services cough up anywhere between 3% and 8% of their adjusted gross revenue (Srivas, 2016). Since the BWA/4G spectrum was originally only meant for data services only, the SUC for the BWA spectrum was fixed at 1%.

Even after the 2013 amendment by the DoT giving the spectrum winner (RJio/IBSPL) the opportunity to use the spectrum for voice services as well, the SUC was not revised thereby giving RJio a substantial advantage over its competitors. In effect, other telecom operators would pay around 3% - 5% of their gross revenue as SUC, but RJio will pay only 1%.

3.3. Interconnect Usage Charge

In order to connect a call, operator A must pay an Interconnect Usage Charge (IUC) to operator B, when A's customer wishes to call B's customer. From February 2015 till now, the IUC has been fixed at 14 paise per call terminated and total IUC charges comprise around 20,000 crore of revenues by all telecoms operators put together.

In August 2016, TRAI published two separate documents which considers a change in the payments regime and potentially, a reduction or a complete doing away with the IUC on both traditional and IP-based networks. The Cellular Operators Association of India (COAI) termed this development as indicative of a "bias" in favour of RJio. Since voice calls are free for RJio subscribers, it is obvious that its subscribers would make more outgoing calls than receive incoming calls. Since RJio customers will be calling relatively more people on other networks, it will have to convert the VoIP/PS signals for a CS network, thereby incurring interconnection charges.

A Bank of America–Merrill Lynch estimate is that in the first year of operations and assuming a subscriber base of 30 million, RJio would incur an IUC bill worth Rs.2,400 crore (Parbat, 2016). If the IUC is brought down to zero, it could potentially shrink the annual revenues of the top three operators (Airtel, Idea and Vodafone) by about Rs.5,000 crore and provide a distinct cost and competitive advantage to RJio. Since the subscriber base has already reached 50 million in less than three months and also taking into account the subscriber base the Chairman of RJio aspires to have, it is calculated to be a bill that is more than three times this estimate, which will be around Rs.7,200 crore.

4. FATE OF PUBLIC INTEREST LITIGATION

The means used by RJio in acquiring the spectrum in the Broadband Wireless Access or 4G auction 2010 using a front company, viz, the Infotel Broadband Services Private Limited (IBSPL) was challenged in a Public Interest Litigation (PIL) in the case of *Centre for Public Interest Litigation v. Union of India*.

The petition filed by lawyer and activist Prashant Bhushan requested the Court to conduct an investigation into the forged bank guarantee furnished by IBSPL at the time of the auction. The petition also prays the apex court to pass an order directing the DoT to levy on RJio an SUC which is in par with that of the other operators providing voice services. While the CAG Report estimates a loss of around Rs.22,842 crore to the exchequer, the petitioner calculated a loss of around Rs.40,000 crore, considering that DoT has also failed to revise the SUC (Majumdar, 2014).

Three basic allegations were made against RJio. Firstly, the questionable means of acquiring the spectrum; secondly, amendments in various government policies and regulations post auction enabling RJio to provide both data as well as voice services in a BWA/4G spectrum; and thirdly, in such display of favouritism, it was continued to be allowed to pay a lower spectrum usage charge (Guha Thakurta, 2016A).

The Court, in this case, without hearing either the CAG or the Director General of Audit, who prepared the report, held that they have committed an error in forming their opinion and dismissed the petition. On the issue regarding the SUC, the Court chose not to pass any order, but left it for the government to decide.

5. ACCUSATIONS OF PREDATORY PRICING

Predatory Pricing is the sale of goods, or provision of services, at a price, which is below the cost of production of such goods or services, with a view to reduce competition or eliminate competitors (Ramappa, 2012, p.141). This later on is generally followed by an unscrupulous

increase in the price, to cop up with the loss incurred by reducing the price. Since, all the competition is eliminated by way of predatory pricing, the player enjoys monopoly profits. Employing such methods to conduct one's business is anti-competitive.

Although not raised at the Competition Commission of India (CCI) level, there were accusations of predatory pricing against RJio at the time of its launch by the competitors. However, the provisions of the Competition Act of India assert that predatory pricing is a form of abuse of dominance (Section 4). That is, only companies with a dominant market position can deploy predatory pricing as there can be no abuse of dominance if there is no dominance.

As to how to determine the dominance of an enterprise, the act itself provides that in order to constitute dominant position, there must be a position of strength which should be in the relevant market in India and such position should give the enterprise the power to operate independently of market forces (Ramappa, 2012, p.140).

In the past, the CCI has determined the dominant position of an enterprise based on the market share it has, like in the cases of Ola and Uber, when they provided huge discounts and offers to the extent of challenging the existence of the then functioning taxis. CCI, in those cases decided in favour of Ola and Uber on the ground that they don't have enough market share to be at a dominant position and hence are not liable for anti-competitive behavior. If we apply a similar logic in this case, we have to first see what market share does RJio have in the telecom market.

The virtual merger of Reliance Communications (Rcomm) with RJio suggests to them as a single entity. Thus, the market shares of RJio-Rcomm and other competitors like Bharti Airtel, Idea Cellular, Vodafone India and Aircel are shown in Figure1.

Variable	***Bharti Airtel***	***Idea Cellular***	***Vodafone India***	***RJio-Rcomm***	***Aircel***
Revenue market share	32.7%	19.2%	23.2%	3.6%	5.3%
Subscriber base (million)	294	175	198	100	65.1
Wireless subscriber base	24.7%	17.03%	19.26%	9.54%	8.59%
Data revenues (% of total)	23.7%	20.6%	18.57%	31.8%	20%
3G users (in million)	28.1	30.5	27.8 (4G included)	25.4 (4G included)	NA
4G users (in million)	5	1.8			

Figure 1: Schematic representation of market share of competing telecom operators based on Q1 FY17 (TRAI 2016b)

Based on the revenue market share, Rcomm only has 3.6% of the total telecom market share and it is obvious that Rcomm does not enjoy a dominant position in the market compared to the other incumbents like Bharti Airtel, Idea Cellular and Vodafone India who collectively hold about 75.2% of the total market share. Therefore, the argument that RJio deployed predatory pricing tactics does not apply. And since the trial period has not ended, one cannot blindly predict that the firm's behavior would be anti-consumer once it ends. Thus, in the eyes of Indian law, there has not been any kind of predatory pricing tactics used by the company.

Another take on it is put forward by Rahul Singh, a competition law researcher at the University of Oxford where he takes RJio as a single entity and not the entity in a virtual merger with Rcomm and hence according to him, the company alleged with predatory pricing has to necessarily be an incumbent with significant market power, in the form of high market share (the degree of market power being assessed relative to competitors) and with respect to access to resources. Jio, being a new entrant in the market, doesn't fit this description and hence is not liable for predatory pricing under the provisions of the Act (Philipose, 2016).

6. THE EXTENDED WELCOME OFFER

When RJio announced about its welcome offer in the month of September, the offer was to last till December 2017 after which all the voice services would be free and the data services of the operator should be paid for. However, the scenario changed by the last week of December 2017 and this trial period was extended in the form of a new offer, i.e., Happy New Year offer which is to last till March 2017. On the expiry of the trial period, RJio offers to all its subscribers free voice calls in HD quality. There are certain nuances which are not put to layman's comprehension at this point. First, to truly get the best service, that is, RJio's calling service that aims to provide HD (high-definition) calls, both the caller and receiver need to have VoLTE-enabled handsets and both need to be connected to a 4G network. Secondly, when an RJio customer calls and the receiver is on another network, the call will not be HD as RJio has to convert the call from a packet-switched to a circuit-switched network. Third, if a particular customer does not have a VoLTE enabled phone, he or she would have to use the Jio4GVoice application (voice, text, photos and video conference) to ensure that the call is free (Banerjee, 2016).

7. CONCLUSION

It is very well understood that RJio so far is not liable for predatory pricing in accordance with the provisions of Competition Act, 2002. However, the above literature definitely gives an unambiguous picture of anti-competitive behavior exhibited by the company. Although not predatory pricing to be exact, the company does show a kind of behavior which is predatory to the consumers and violative of the competitive spirit of the telecom market for the following reasons:

Firstly, the dubious manner in which RIL acquired IBSPL post the auction of BWA/4G spectrum and the incidental amendments in the regulatory provisions that allowed them to get a unified licence thereby enabling them to provide both data and voice services in 4G technology. Secondly, the fact that RJio continues to pay 1% as SUC while all the other operators are obliged to pay between 3% to 5% of their gross revenue. Thirdly, favouritism or what, the proposals to reduce or even do away with the interconnect usage charges not only giving a huge cost advantage to RJio but also increasing the loss of other operators. Fourthly, the wrong idea to the consumers that all calls would be free, when that is not going to be the case if the receiver does not have a VoLTE enabled handset or if not, use the Jio4GVoiceApplication. Thus, a subscriber might end up losing more money than he would otherwise lose because he might spend a little more time mistakenly thinking that the call is free. The tragedy will come to the consumer's notice only on the receipt of his first bill. One of

the main objectives of Competition Act, 2002 is protection of the interests of the consumers. Here, when RJio fails to provide technical and operational information with clarity and has targeted unsuspecting consumers with their lucrative offers with the title 'free', it is the responsibility of the country's legal system to analyze this case with an open mind and not within the strict constraints of law.

LITERATURE:

1. Banerjee, Prasid. (2016). Understanding How Calling Works on Reliance Jio. *Digit*. (05.09.2016). Retrieved on 09.01.2017 from http://www.digit.in/telecom/understanding-how-calling-works-on-reliance-jio-31607.html
2. Guha Thakurta, Paranjoy. (2016). A Call for Review: Supreme Court's Decision on Reliance Jio. *Economic and Political Weekly*. (11.06.2016). Retrieved on 08.01.2017 from http://www.epw.in/journal/2016/24/perspectives/call-review.html?0=ip_login_no_cache%3Dcaf619faec5bd445fa18c23acf2929df#¬sthash.8K¬VB¬M¬¬¬¬WrV.dp¬uf.
3. - 2016 A- Guha Thakurta, Paranjoy. (2016). Why It's Crucial For Apex Court to Listen to Prashant Bhushan's Petition on Reliance Jio. *Scroll.in*. 25.01.2016. Retrieved on 06.01.2017 from http://scroll.in/article/802277/why-its-crucial-for-apex-court-to-listen-to-prashant-bhushans-petition-on-reliance-ji
4. - 2016 B- Guha Thakurta, Paranjoy. (2016). How Many Committees Does It Take To Consider A Reliance Request?. *Scroll.in*. (26.01.2016). Retrieved on 06.01.2017 from http://scroll.in/a/802282
5. Majumdar, Ushinor. (2014). Does CAG Have A Case Against Reliance *Tehelka.com*. (02.08.2014). Retrieved on 06.01.2017 from http://www.tehelka.com/2014/07/reliance-jio-in-trouble-over-4g-spectrum-cag-draft-report/
6. Parbat, Kalyan. (2016). Reliance Jio Interconnect Bill May Hit Rs.2,400 Crore In Its First Year. *Economic Times*. (27.08.2016). Retrieved on 06.01.2017 from http://economictimes.indiatimes.com/tech/internet/reliance-jio-interconnect-bill-may-hit-rs-2400-crore-in-its-first-year/articleshow/53880460.cms
7. Philipose, Mobis. (22.09.2016). Do Reliance Jio's Free Offers Amount to Predatory Pricing?. *Livemint*. Retrieved on 06.01.2017 from http://www.livemint.com/Money/s5ntYNvq43ltcwpxEVY9iO/Do-Reliance-Jios-free-offers-amount-to-predatory-pricing.html
8. Ramappa, T. (2012). *Competition Law in India: Policy, Issues and Developments* (2nd edn). New Delhi: Oxford University Press
9. Srivas, Anuj. (2016). Reliance Jio Set To Lose Big As Government Favours Uniform Spectrum Usage Charge. *The Wire*. (23.05.2016). Retrieved on 06.01.2017 from https://thewire.in/37991/reliance-jio-set-to-lose-big-as-government-favours-uniform-spectrum-usage-charge/
10. (29.11.2016). Reliance Jio Reaches The Mark of 50 million Subscribers In 83 Days After The Launch. *The Huffington Post*. Retrieved on 05.01.2017 from http://www.huffingtonpost.in/2016/11/29/reliance-jio-reaches-the-mark-of-50-million-subscribers-in-83-da/

THE ECONOMIC IMPORTANCE OF MARITIME SHIPPING WITH SPECIAL REFERENCE ON CROATIA

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ABSTRACT
The aim of this paper was to accentuate the importance of maritime shipping and present its role in the international commercial transport. Under today's market conditions, where there is high competition, economic transport by sea is becoming more and more prominent. The focus of this paper is the role of maritime shipping as an independent activity in the maritime transport and commerce. Maritime transport in Croatia also has long history, so, it is fair to say that this branch is Croatian tradition. The role of shipping in the general progress of mankind is significant. It connects producers and suppliers i.e. sellers and buyers. Maritime shipping is therefore seen as one of the most important transport activities. The aim of this paper is to look into the current state of maritime shipping in Croatia in relation to the rest of the world, as well as detect the factors crucial for success in this industry.
Keywords: *Croatia, globalization, maritime shipping, merchant fleet*

1. INTRODUCTION

The focus of this paper is the role of maritime shipping as an independent activity in the maritime transport and commerce. Maritime shipping goes back to ancient history, when the old Egyptians saw the need for building ships. Maritime transport in Croatia also has long history, so, it is fair to say that this branch is Croatian tradition. The role of shipping in the general progress of mankind is significant. It connects producers and suppliers i.e. sellers and buyers. Maritime shipping is therefore seen as one of the most important transport activities. Many maritime nations, as well as those who do not have maritime tradition, participate in the large maritime shipping market with their ships. In any type of freight shipping, shipping companies place before themselves a great challenge – lowering the costs and increasing the profit. The organization of a shipping company can be very complex – starting with the sales, then development, production, supply, staff etc. Those shipping companies that are not flexible enough to adjust to market changes will go under. The competition is strong and it is hard to survive the times of big crises.

The aim of this paper is to look into the current state of maritime shipping in Croatia in relation to the rest of the world, as well as detect the factors crucial for success in this industry. The paper is concluded with the analysis of the effects of globalization on maritime shipping. In order to reach the aims of this paper, a secondary research has been conducted. International and domestic science literature, science and professional papers, electronic data bases and data from the Croatian Shipowners' Association were all used as sources of secondary data.

2. MARITIME TRANSPORT IN GENERAL

2.1. The concept of maritime transport

Generally speaking, maritime transport can be defined as an independent industry, i.e. organized transport of people or goods (Glavan, 1992). The functions of the sea are multiple,

one of them being a waterway for ships and other watercrafts which connect all land on Earth. Maritime transport is therefore seen as universal, for it binds the entire world in exchanging material resources, people etc. ((Bendekovic, Arzek, 2008). Maritime shipping is a special branch of transport industry where the shipping company (the transporter) plays the leading role. It holds many responsibilities set by the United Nations Convention on the Carriage of Goods by Sea from 1978 (the "Hamburg Rules"), the United Nations Convention on Contracts for the International Carriage of Goods Wholly or Partly by Sea from 2009 (The "Rotterdam Rules"), the International Convention for the Unification of Certain Rules of Law relating to Bills of Lading, and Protocol of Signature (The Hague Rules), and, in Croatia, by the Maritime Code of the Republic of Croatia, etc.

Every transport industry has specific characteristics which condition its special position and significance in the sphere of traffic and economy in general. Characteristics of maritime transport are the following:

1) the sea as the great waterway connecting the entire world;
2) the sea as the natural waterway which does not require special investments into the infrastructure;
3) marine ships as the only means of transport which can transport thousands of tons of freight at once (Glavan, 1992).

Out of these three characteristics, the third one is the only one conditioned by physical and technological properties of ships, while the other two are set by natural geographic properties. Basic elements of maritime transport as an organized transport activity are: seafarers and other shipping workers of specific qualifications, ships as the means of transport, people or goods transported and the sea as the waterway.

Marine market is a very sensitive one and reacts to any change in the shipping and trade. The price of shipping is called the freight, which is, as a rule, different every time, even though the same ship navigates the same route again. The freight is the result of supply and demand, and it is characterized by constant oscillations which can last for days, weeks or even months.

2.2. The development of maritime transport

Shipping is a special type of transport industry whose beginnings go far back in history. Seeing the need for overcoming geographical obstacles (seas, oceans, rivers), people built first watercrafts. With the emergence of trade, people have been modernizing the shape and sizes of their means of transport. The building of these watercrafts advances alongside the technological innovations of mankind. The industrial revolution in the late 19th century also enabled a significant development of shipping. It is exactly at this moment when shipping separated from the trade industry as a separate economy. In 1807, Robert Fulton and James Watt construed the first steamboat. “Clermont” was the first means of transport with the mechanical propulsion. The building of iron ships started, sails were being replaced with steam engines, then with diesel motors, and the very business organization was beginning to change. The roles of ship owners, shippers and shipmasters were clearly defined. The division was made between functions of management and operating the ship’s propulsion and the function of managing the ship and navigation (Lusic, 2003). Thanks to the advances in the field of electronics after the World War II, conditions were made for automation of ships’ navigation. The development of shipping industry goes further because of the growth in demand for various goods and the fact that the use of new energy sources was intensified. The first diesel motor was placed inside a ship in 1911, and already in 1939, 24.7% of ships had diesel drive.

The factors which influenced the development of maritime transport market i.e. which set the supply and demand are:

1. the dynamics of growth and distribution of the world's population,
2. the structure of world energy balance,
3. the world's foreign trade exchange,
4. protectionism and
5. the development of other transport markets.

2.3 The economic significance of maritime transport

Maritime transport is the most important (almost monopolistic), the cheapest and most economic transport industry in the national and international commerce. From the economic point of view, the advantages of maritime transport are: large individual capacities of transport ships, enormous total capacity of the entire transport branch, low costs and low price of the transport route in relation to other transport services, the quality of adjustability (flexibility) to demand, long service life, and the sea as the broad and free way which does not require big investments in the infrastructure. The importance of maritime traffic can be seen in the fact that there is almost no country, regardless of its geographical position, which does not use maritime transport in its trade with the rest of the world (Ceric, 1959). Means of transport are ships as the main factors of transport of global trade. Their hold advantage over other means of transport with their big capacity and economic use of energy sources (Bartulovic, 2000). For this reasons, maritime transport has a significant economic role.

The task of a merchant ship is to transport goods and passengers. This transport service is based on the economic effect expected from the navigation. It depends on the balance of the costs which emerge during a trip and the profit generated from that trip. Profit is a fee a ship company receives for the executed transport service and the costs arise from the expense ships incur during navigation and in the ports. There are two, rather contrasting interests. One is the interest of the ship owner to generate the highest profit possible and the other is the owner of the cargo wishing to pay as less as possible for the service of transport (Mitrovic, 2008). In the maritime transport industry, ton mile is used as the unit for measuring transport performance. It is the product of multiplication of the cargo volume and the mileage (Bartulovic, 2000).

The most important economic activities of the maritime transport are lowering prices of many mass articles, raw materials and commercial goods (Jelinovic, 1983). Many places in the world depend mainly on the goods transported by the sea. Maritime transport contributes to the modernization of the foreign trade, for it generates profit by trading with currencies via import and export of goods from and into foreign countries. During the disruption of supply and demand equilibrium, the party which at that point holds greater interest to perform transport activities is also liable for the consequences which influence the freight rates. In those situations, expansion or contraction of the maritime shipping market can take place. During the rise in demand, new ships are ordered which are rarely being exploited during the period of influences which caused their production. Namely, world merchant fleet is expanding rapidly above its real requirements, which results in damaging consequences. This is because, after a relatively short-term market rise, a longer-lasting recession follows, often followed by depression (Mencer, 1990). The imbalance in demand is also connected with the change of the scope of global trade which relies on the industrial production, economic factors and political situation. The ships' capacity is in fact inflexible. It is impossible to adjust the capacities to the elasticity of the demand, and there is also difference in the intensity of flexibility between various types of ships. In order to reduce that, shipping companies order multi-purpose vessels.

The industry of maritime shipping and its components is one of the most liberal economy branches, inside which special trading activities have developed. Namely, all of its capital and other components, like vessels, ships' flag, classification register, insurance, banking services, the accounting, technical and commercial management of the ships and the crew, can be purchased i.e. bought or negotiated in the global market. Maritime shipping is becoming the service of the economy in general and, in doing so, has the tendency of strategic linking to higher level economic systems. The increase and extension of the demand scope in the maritime transport market has resulted in the fact that it cannot function as an industry outside the rest of the economy (Kunda, 2013).

3. THE ANALYSIS OF MARITIME SHIPPING

3.1 The analysis of maritime shipping in Croatia

In Croatia, since the middle of 1990s, there has been a process of conversion and privatization in progress and it does not have a positive impact on the existing merchant fleet. Likewise, the global maritime market has been influenced by a crisis which has led to a considerable drop of freight rates. The ship owners could not handle the emerging conditions, so some of the largest shipping companies went down, such as "Slobodna plovidba" from Sibenik and "Croatia Line" from Rijeka. The end of the last century brought market recovery and the freight rates were beginning to rise, but struggled Croatian shippers could not renew the fleet on such short notice.

Over time, the market and economy-integrated countries have developed a system of protectionism from the countries that are outside this group. Those measures require many adjustments on the part of other countries. Croatia is therefore oriented towards the maritime transport between the foreign ports. Bearing in mind that our country has a relatively small merchant fleet when compared to some global giants, it has to adjust to the rules of the associations with which it closely cooperates. In our case, it is the European Union. All these reasons disable us from being a part of an extensive overseas trade and from undertaking the specialization of the shipping companies for the specific cargo. "Mare Nostrum", the Croatian Shipowners' Association, was founded on 5 February 1991 at the initiative of 14 shipping organizations. The aim of the Association is to create agreeable business conditions and to promote Croatian shippers' interests, the cooperation with the related organizations and the European Union authorities.

Over the last 15 years, the total capacity of the Croatian maritime shipping has been changing. Table 1 shows a significant fall in the number of ships in the observed period. But, if we look at the total capacity of the vessels, we can notice that it has been growing. One can instantly perceive that some shipping companies have disappeared from the market. The reasons are mainly the impossibility of keeping up with the payments while in the crisis. Global economy crisis has made a great impact on the Croatian shipping market. Considering great devaluation of freight rates, our shippers have had difficulties in maintaining the existing fleet, and soon many, who had previous contracts for building new vessels, thereby counting on higher rates, have found themselves in problems as well. Under those circumstances, when a ship cannot repay its own credit, banks take over and become owners, thinking only on the profit. This then means that they hire the cheapest crew possible. Our sailors lose jobs, and the quality of the entire process is reduced. Up to the year 2004, the company which disappeared from the market is "Atlas". It barely survived the war years in the 1990s, and later on, its debts became too great. In 2012, shipping companies suffered the biggest stroke and some did not recover. Until the year 2015, the companies which became insolvent or went under are: Lošinjska plovidba d.d., Mediteranska plovidba d.d., Brodogradilište Cres d.d. and Sem marina d.o.o.. Tankerska

plovidba d.d. and Uljanik d.d. remain the only ones which managed to increase their fleet capacity between the year 2004 and 2015, and it was the increase of only one ship.

Table 1. Croatian merchant fleet capacity in 2000 and 2015 (Croatian Shipowners' Association, 2016)

2000			2015		
Number of ships	**GT**	**DWT**	**Number of ships**	**GT**	**DWT**
194	1.565.051	2.412.678	138	1.689.258	2.747.477

It can be said that the structure of Croatian maritime shipping is the result of our tradition, as well as the abilities of the ship owners to acquire ships which answer the needs of the maritime shipping market. According to the structure of the fleet, it is evident that most vessels are car ferries, their number reaching 41, then 33 bulk cargo ships and 20 tugboats. It is not strange that the fleet has most car ferry capacities, because the Republic of Croatia has many islands and the combined cargo ships are convenient. There also play an important role in the passenger transport, which is very important for a country with great tourism activity. For example, Jadrolinija, a company from Rijeka, owned by the government, holds monopoly on the majority of Croatian passenger traffic, and on the traffic between Croatia, Italy and Greece. Properties of Croatian maritime passenger traffic are the following:

1. continual growth of demand,
2. the society's commitment to support the development of the islands,
3. fleet renewal with the government support and
4. state subsidies for unprofitable ferry lines (Delibasic, Vidusic, 2003).

Croatia is definitely a country which takes the benefit of sailing under different flags. The reasons are various: some companies think it is cheaper to find the crew and other resources in other countries, and others simply cannot solve the status of ships and crew in the complicated Croatian legal system. Since the independence and the beginning of privatization, Croatian ships have sailed under different flags. Over more than two decades, the benefits of sailing under a different flag have been changing and there have always been more of those which sail under the Croatian flag. The drop in the number of ships under the national flag and international flags coincides with the general drop of Croatian merchant fleet capacity. In the end of 2015, Jadrolinija from Rijeka sailed under the Croatian flag with all its capacity, as well as Jadroplov from Split and Rapska plovidba from Rab. Brodosplit plovidba, a company from Split, owns one ship and it sails under the flag of the Marshall Islands. Atlantska plovidba from Dubrovnik owns 11 ships which also sail under their flag and half the number sail under the Croatian flag. Brodospas from Split has Croatian flag on 15 ships, Malta flag on 5 and St. Vincent flag on two ships. Jadranski pomorski savez from Rijeka, besides Croatian ships, owns two with Venezuela flag. Tankerska plovidba from Zadar has one with Malta flag and Uljanik plovidba from Pula two with the Bahamas flag.

Chart following on the next page

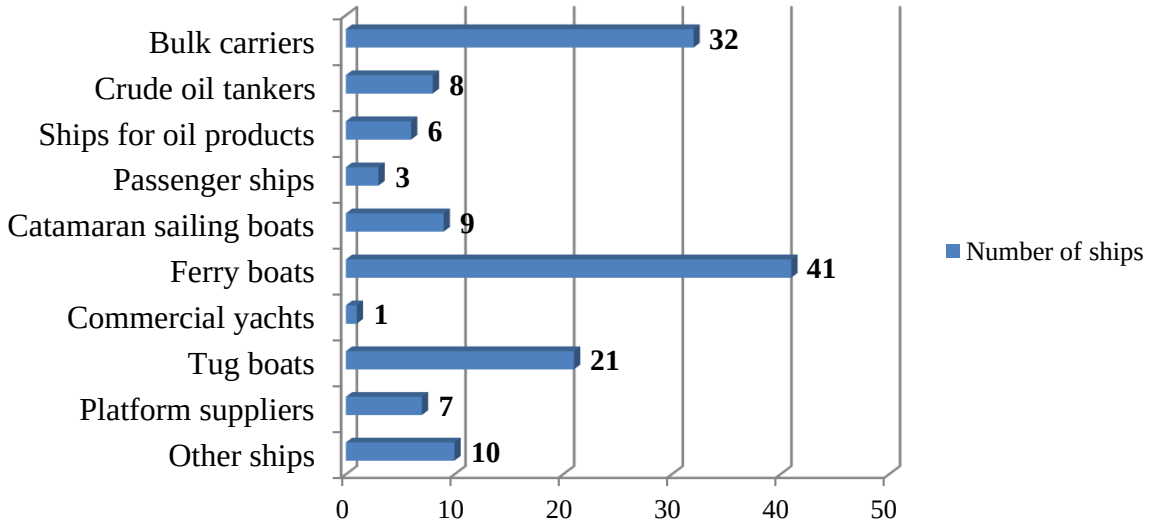

Chart 1: Fleet structure of the members of the 'Mare Nostrum" Association on 31 December 2016 (Croatian Shipowners' Association, 2016)

All participants in the transport should cooperate with the aim of solving the problems of Croatian ship owners, the government and the shippers themselves. There is a series of measures which can help with the development and successful business activities. Considering the current state of the global maritime market, development of modern technologies and the existing conditions, Croatian ship owners have the responsibility of undertaking different activities and measures with the aim of adjusting to the demands of the global maritime market (Dundovic, 2003). Despite financial problems shipping companies face, they have to ensure competitiveness in the global marine market if they want to survive in this important and dynamic market. In order to ensure the competitiveness, the government should provide funds, organize writing off of almost all ships older than 30 years and replace them with new ones from our domestic shipyards. In solving this problem, the strategy of reducing loss by importing cheaper crew can be used. In that case, Croatian seamen are replaced by Filipinos, Indians or Chinese. Leastways, it would be best to anchor the ship and let the crew go, waiting for better times.

3.2. The analysis of the global maritime shipping

Global maritime market can be defined as the total number of all shipping companies and users of transport services which at certain point supply or demand the available ship capacities with the aim of arranging contracts on the transport of goods by sea at the freight rates which are formed under the influence of supply and demand, along with other factors (Cerovic, Basic, 2008).

The times when leading maritime nations were confirming their status with “highest” capacities and great number of ships is behind us. Leading economic superpowers i.e. maritime nations, are giving away merchant fleet activities to those who have decided to specialize for this type of industry (Lusic, 2003). Greece is particularly prominent as one of those countries, whether it sails under the national or foreign flags, and then there are Japan, China and Germany, which fills this position only because of the navigation under the flag of convenience. It is relevant to mention one small country which has made its way to top 10 over the past decades and which proves that globalization and liberalization have helped it to become a superpower in the maritime shipping, by sailing exclusively under foreign flags - Bermuda.

Table 2: Top 10 countries by ownership of world fleet, 2016 (UNCTAD, 2016, p. 37)

RANK	COUNTRY	NATIONAL FLAG	FOREIGN FLAG	TOTAL
1.	Greece	728	3.408	4.136
2.	Japan	835	3.134	3.969
3.	China	3.045	1.915	4.960
4.	Germany	240	3.121	3.361
5.	Singapore	1.499	1.054	2.553
6.	Hong Kong (China)	854	594	1.448
7.	Republic of Korea	795	839	1.634
8.	United States	782	1.213	1.995
9.	United Kingdom	332	997	1.329
10.	Bermuda	14	404	418

Today, the development of shipping in highly developed countries, where the main flow of goods takes place, is not so significant i.e. capacities they own are not in line with their total traffic volume count. On the other hand, the question of how much their maritime shipping is developed i.e. is it more or less developed in relation to less developed countries which, because of lower costs attract foreign ships, is not that relevant. All those ships, no matter under which flag they sail, are a part of one communal global market of trade in goods and capital which, nevertheless, more or less depends on the developed countries (Lusic, 2003).

Table 3: World's leading shipping companies (Alphaliner, 2017)

		TOTAL	
RANK	COMPANY	TEU	Number of ships
1.	APM-Maersk	3.144.886	622
2.	Mediterranean Shg Co	2.742.292	495
3.	CMA CGM Group	1.794.987	448
4.	COSCO Container Lines	1.574.698	291
5.	Evergreen Line	939.296	186
6.	Hapag-Lloyd	927.696	171
7.	Hamburg Süd Group	646.178	127
8.	Hanjin Shipping	625.416	101
9.	OOCL	603.243	107
10.	Yang Ming Marine Transport Corp.	577.547	105

The three leading shipping companies stimulate the process of globalization, which is also evident in their merger with the aim of improving the business and service quality. Their merger will create a P3 group and it will provide services on the Asia – Europe route and across the Pacific and the Atlantic ocean (from northern Europe to the Mediterranean). Their merger will lead to the decline of other maritime shipping companies like Evergreen Line, Hapag-Lloyd and OOCL vessels (Juric, 2014).

Table 4: World merchant fleet by ship type, 000 DWT (UNCTAD, 2016, p. 31)

	2010	2011	2012	2013	2014	2015	2016
Oil tankers	450.053	439.932	469.516	472.890	482.017	488.308	503.343
Bulk carriers	456.623	547.192	623.006	686.635	726.319	761.776	778.890
General-cargo ships	108.232	81.159	80.825	77.589	77.552	74.158	75.258
Container ships	169.158	183.691	196.853	206.547	216.345	228.224	244.274
Other ships	92.072	163.135	166.667	182.092	189.395	193.457	204.886
TOTAL	1.276.137	1.415.110	1.536.867	1.625.750	1.691.628	1.745.922	1.806.650

It is evident from Table 4 that specialized ships are dominant in the share of total tonnage of the world's merchant fleet, the most of them being bulk cargo ships. Tank ships have lost absolute primacy they previously had in relation to others, but since 2012, there is a trend of growth of their capacity. Container capacities, ever since they entered the global shipping market, have had almost stable and relatively high growth in the world's merchant fleet. Besides being the youngest regarding age, their average size has also been increasing intensely. General cargo ships are recorded to have a drastic drop in tonnage over the last five years and are therefore at the far back end of the merchant fleet.

3.3. The influence of globalization on maritime shipping

The concept of globalization is hard to describe. Namely, literature provides several definitions and the positions on its importance are various. Many see globalization from a negative point of view, for it is considered to generate an unfair distribution of goods. All experts agree that globalization is an economic, political and social process which influences the world by crossing national borders. The process of globalization began in the second half of the 20th century, when European countries started to unite and then other parts of the world followed. Globalization arose as a consequence of production and traffic costs reduction, thereby retaining or increasing the quality of the process and the results of those activities.

World's maritime market is a part of the global market and its development is also influenced by economic, social and political factors. Globalization could not be possible without maritime shipping because it connects the world in the economic sense. The sea, as the widest and biggest waterway, knows no overload or separation; it is a free way which connects nations. Likewise, with the abolition of many borders and liberalization of the trade, as well as with the increase in demand for specific goods, globalization has significantly influenced the changes in the maritime shipping. The sudden rise in demand has led to building larger ships which resulted in cutting down transport costs.

In the global maritime shipping market competition is constantly coming up with new innovative solutions, so one should always keep track of the changes and plan new technological innovations with the aim of achieving better economic results. Only those who succeed in those endeavours can be competitive in the international market. Globalization has influenced situations where world renowned producers, while still designing their products in their own country, produce their parts in the countries where they can bring down the costs. Distributing production to various locations is called outsourcing. Shipbuilding is one of the

first industries where outsourcing began for its mobility of ships and for the possibility of ship registration under the flag of convenience. European shipyards, especially in the Netherlands and the UK are slowly disappearing because, with the expensive workforce and inputs, they cannot maintain high standards the market requires. Shipbuilding industry is being moved to countries where costs of building are much lower.

Liberalization of commerce has opened many possibilities for shipping. Companies which carry cargo with their ships between certain countries no longer have to be their economic entity. All resources of shipping, from capital, technical and human can be obtained or arranged by contracts in the global environment. It is one of the external manifestations of globalization (Domijan-Arneri, 2006). This way of functioning is made possible by the use of flags of convenience and special activities in the management of maritime shipping organizational functions. Flags of convenience have attracted ships of merchant fleets which have been imposing high costs to ships under their national flags. For example, countries like Panama, which until then had a very small fleet, are now among the leading naval powers.

Shipping companies which participate in the globalization process have a possibility to externalize certain functions. They can find specialized companies which will deal with finding clients, arranging contracts, and especially with recruiting workers which can come from any part of the world on condition that their fees are as lower as possible and that the quality stays the same. As early as in 1980s, after oil crisis, ship owners started to hire professional management consulting firms and left them to deal with managing the ships in order to exit the crisis. This especially applied to young nations which gained their independence after the World War II and saw economic development as their primary goal. They were guided by the fact that shipping industry is the source of income for the national economy since it can generate many jobs.

Regulations which govern sea navigation, as well as trade, are becoming more and more global. Many conventions have been adopted which help set common rules in order to facilitate maritime shipping and, in a positive sense, enable lower costs of business, faster communication and trade and more quality of the entire process.

4. CONCLUSION

The aim of this paper was to accentuate the importance of maritime shipping and present its role in the international commercial transport. Under today's market conditions, where there is high competition, economic transport by sea is becoming more and more prominent. The sea is an unlimited path which can be indefinitely exploited. Shipping companies use this natural resource very efficiently in the maritime transport of different types of goods to almost every part of the world.

The development of maritime shipping in Croatia is similar to global development, but the current state is somewhat different. While maritime shipping is globally becoming more and more important, cost effective and produces more capacities and better results every year, Croatian shipping is barely holding. This situation is a result of: the Croatian War of Independence, process of privatization and economic crisis. Because of the current excess in merchant shipping capacity, freight rates are decreasing and smaller shipping companies simply cannot survive in that market.

The results of research remark that cargo ships make most of the world's merchant fleet. Also, the country which owns most ships is Greece, whether it sails under its own or a foreign flag.

There is an interesting fact that small countries, like Panama and Bermuda, which had almost no maritime trading history, are today among leading shipping powers and this is precisely so due to the process of globalization. Globalization has helped eliminate the barriers and made entrance into the maritime market easier.

The final thought is that Croatia does not use the full potential of its position, knowledge and tradition related to maritime shipping. It is bounded by crises and poor management of this sector. The responsibility lies on the government institutions as well as on the ship owners who have not adjusted quickly enough to the changes in the market and have not managed their companies responsibly. The assumptions are that the importance of shipping industry in commerce will continue to rise globally due to its cost effectiveness and the demand for goods from other countries.

LITERATURE:

1. Bartulovic, I. (2000). *Prijevoz tereta morem*. Rijeka: Žagar.
2. Bendekovic, J.; Arzek, Z. (2008). *Transport i osiguranje*. Zagreb: Mikrorad.
3. Ceric, V. (1959). *Međunarodni transport sa transportnim osiguranjem.* Beograd: Savezna spoljnotrgovinska komora.
4. Cerovic, Lj.; Basic, H. (2008). Analiza i prognoza ponude i potražnje na tržištu svjetskog tankerskog brodarstva. *Ekonomska misao i praksa*, 18(1), pp. 29-46. Retrieved 09.03.2016. from http://www.unidu.hr/datoteke/500izb/ekonomska_misao_i_praksa_br._1-2008.pdf.
5. Croatian Shipowners' Association (2016). Statistics fleet 2016. Retrieved 10.01.2017. from http://www.csamarenostrum.hr/en/statistika/.
6. Delibasic, T.; Viducic, V. (2003). Međuovisnost putničkoga morskog brodarstva i turizma u Hrvatskoj. *Zbornik radova Ekonomskog fakulteta u Rijeci: časopis za ekonomsku teoriju i praksu*, 21(2), pp. 77-92. Retrieved 30.01.2016. from http://hrcak.srce.hr/103498.
7. Domijan-Arneri, I. (2006). Globalizacija i morsko brodarstvo. *Naše more*, 53(1-2), pp. 9-17. Retrieved 09.03.2016. from http://hrcak.srce.hr/index.php?show=clanak&id_clanak_jezik=12347.
8. Dundovic, C. (2003) *Pomorski sustavi i pomorska politika*. Rijeka: Pomorski fakultet u Rijeci.
9. Glavan, B. (1992). *Ekonomika morskog brodarstva*. Zagreb: Školska knjiga.
10. Jelinovic, Z. (1983). *Ekonomika prometa i pomorstva*. Zagreb: Informator.
11. Juric, L. (2014) *Strateški razvoj pomorstva u Republici Hrvatskoj* (diploma thesis). Rijeka: Pomorski fakultet u Rijeci.
12. Kunda, I. (2013). *Utjecaj globalizacije u svjetskom gospodarstvu na tržište morskog brodarstva* (diploma thesis). Rijeka: Pomorski fakultet u Rijeci.
13. Lusic, Z. (2003). Razvoj svjetskog brodarstva. *Naše more,* 50(5-6), pp. 189-196. Retrieved 05.06.2016. from: http://hrcak.srce.hr/8568.
14. Mencer, I. (1990) *Tržište morskog brodarstva*. Zagreb: Školska knjiga.
15. Mitrovic, F. (2008) *Ekonomika pomorstva*. Split: Pomorski fakultet Split.
16. The Top 100 Legaue. (12.01.2017.). Retrieved 12.01.2017. from http://www.alphaliner.com/top100/index.php.
17. United Nations Conference on Trade and Development (2016). *Review of maritime transport 2016*, New York and Geneva: United Nations Publications. Retrieved 08.01.2017. from http://unctad.org/en/PublicationsLibrary/rmt2016_en.pdf.

EDUCATION AND EMPLOYMENT FOR STUDENTS FROM UNDER-REPRESENTED GROUPS SUPPORTED WITH INFORMATION AND COMMUNICATION TECHNOLOGY

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ABSTRACT

The tertiary education system is developing the way it includes widening participation for students from under-represented groups. These under-represented student groups include students with disabilities, mature students, students from low income families, students from national minorities groups, international students, etc. The teaching and learning system supported by information and communication technology enables access for students with disabilities as well as other under-represented groups, such as gender in science.

The general objective of this research is to explore student knowledge of possible methods of increasing the quality of inclusion for students from under-represented groups in academic environments. The specific objective is to explore their attitudes and knowledge about usage of information and communication technology (ICT) during education and subsequent employment. Respondents are asked to estimate the importance of equal opportunities in studies.

Results show that there are governmental and institutional strategies and policies that enable students in the process of gathering academic competences, academic achievement and employment. The results are interpreted within the scope of Croatian national politics. Gender equality could be implemented in the education, career planning and employment procedures. Working experience is an important factor in gathering professional competences and can be done not only through formal working experience, but also through volunteering opportunities. The different types of institutional support for students with disabilities is explained and discussed.

These results could be used to enhance the quality of inclusion for students from under-represented groups within the educational system by usage of ICT, peer assistant support and collaborations between educational institutions at all levels of education and labour market.

Keywords*: Students with Disabilities, Gender Issues, ICT, Learning and Employment*

1. INTRODUCTION

The education and labour market opportunities need to be accessible to all students, including students from different under-represented groups. Students from under-represented groups are students with disabilities, students from different socio-economical family background, cultural backgrounds, members of national minorities groups, mature students, war veterans, students whose parents were war veterans, students without parents, students of a different gender, etc. (Vidaček Hainš, V., Horvatek, R., 2003). The UN Universal Declaration of Human Rights includes freedom in teaching and education, with equal opportunities for all students of different races, nationality, social economical background, disability, gender... The Croatian government announced and promulgated the UN Universal Declaration of Human Rights in 2009. (Universal Declaration of Human Rights, *adopted and promulgated by General Assembly Resolution 217*). The paper will explore the examples of good practice and case studies which

emphasise equal opportunities in education and employment for all students. The equal opportunities in education and employment are ensured according to different governmental institutional policy. There are different changes in current policy that enables equality between women and men in education and employment (Blanco-Garcia *et al*, 2014). This policy avoids the stereotypes linked to different types of education for men and women. The prevailing stereotype that exists within the STEM area of education (*S*cience, *T*echnology, *E*ngineering and *M*aths) is that STEM is predominantly reserved for male students. Institutional policy could be more successful if educators and practitioners have additional education and training in the field of gender equality (Popa and Bucur, 2014).

One of the under-represented groups of students who need equal opportunity for education and employment are students with disabilities. According to the United Nations Convention on the rights of persons with disability, disabilities 'include those who have long-term physical, mental, intellectual, or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others'. This convention includes respect for 'dignity, individual autonomy… individual autonomy including the freedom to make one's own choices… non-discrimination… inclusion in society… acceptance of persons with disabilities… equality of opportunity… accessibility… Equality between men and women… and respect for the right of children with disabilities to preserve their identities' (United Nations Convention on the Rights of Persons with Disabilities, 2006). The European Disability Strategy 2010-2020 (European Commission, 2010) contains a variety of actions that can have a positive impact to the quality of life for many people with special needs and people with disability. Their areas of actions are: accessibility, participation, equality, employment, education and training, social protection, health and external actions. The Croatian policy for ensuring equal opportunities in education for people with disability includes the accessibility of all civic, political, social, cultural and economic rights for all persons with disability (National Strategy of Equalisation of Possibilities for Persons with Disabilities from the Year 2007 till the Year 2015, 2007). The process of public hearing for creating a National Strategy of Equalisation of Possibility for Persons with Disability from the Year 2016-2020 involved discussion and suggestions. The proposals are linked to inclusive education for children and youth with disability and ensuring that support centres and teaching assistants are present at schools.

Education is facing different challenges and improvements. The biggest impact on the current educational process is made by digital technology and changes in designing the teaching process. Higher education is faced with different types of learning challenges: cognitive challenge, active learners, coping with reading materials, instructional problems, language barriers, time management, the burden of assignments and cultural differences in higher education (Fook *et al*, 2015). According to Ferrari (2013), the digital competences for teaching and learning include: digital content creation, safety, problem solving, information and data literacy and communication and collaboration. The research conducted by Lorenzo-Romero *et al* (2014) shows that ICT usage changes student learning styles and different learning techniques. Current learning scenarios are being changed by this different policy. A learning scenario is a unit of learning related to the learning method Koper (2003), that support active learning strategies such as problem-based or case-based learning. This learning scenario ensures the appropriate rationing of knowledge, competences or skills, through an active learning process. The web platforms used by students for learning are sometimes less attractive than social media (Papi, 2015), which means that non-formal communication between students plays an important role in team work and education. Research concluded by Hast and Healy (2016) shows that, in spite of the fact that students like to submit their papers online, students

reported the problem of feedback depersonalisation. The research of Scarinci (2015) emphasises the importance of using different strategies in distance education for science. Results show that pure online interactions are insufficient for teaching. Students like face to face interactions, which benefits the communication.

Equal opportunities for under-represented groups of students is important after they graduate for the employment and labour market. The gender issue could be one of the stereotypes that has an impact in lower representation of women at senior management levels: managers, mostly male, usually choose partners and colleagues who are the same sex as themselves (Mihalčová *et al* 2015). Gender responsive budgeting in public institutions and organisations could encourage positive discrimination in gender equality (Turan and Senturk, 2016). There are different ways of providing equal opportunities for employment: According to Alonso (2017), structured behavioural interviews need to be designed in order to enhance fair procedure without gender discrimination. Structured behavioural job interviews enables equal employment opportunities. These types of interviews are applied in different legal environments, including the United States and European Union. Research conducted in U.K, U.S, Canada, Australia and Greece emphasises the implementation of diversity, equality and inclusion in accounting area of employment (Kyriakidou *et al*, 2016).

2. RESEARCH GOALS

The overall objective of these studies is to explore the possibilities of equal opportunities in education and employment according to different under-represented groups of students and employers with regards to gender, disability etc. The specific objective is to explore student attitudes and the attitudes of young employees towards practice that ensures equal opportunities and equal rights in education and employment. The second specific objective is to present the case study of implementation the information and communication technology in education, which could help integration and inclusion of students with disabilities.

3. RESEARCH RESULTS AND INTERPRETATIONS: CASE STUDIES

3.1. Case Study 1: the Gender Issue in Employment Equality

The following research was designed in the form of the case study. The research will present the opinions of students and young employees towards education and employment opportunities for people that belong to a different gender. The aim of this study is to assess respondents' attitudes towards gender equality chances in education and career planning.
The measuring instrument was designed by Ana Marija Štaba for her Diploma thesis which was supervised by V. Vidaček Hainš. The whole instrument contents 30 items, among which are demographic variables (7 items), Likert Scale (16 items) and YES-NO (7 items). Respondents are asked to answer at the Likert Scale (1 - not agree at all to 5 - agree completely) if they think that:
1. In Croatia men and women have equal opportunities in general,
2. In Croatia men and women have equal chances in education, and
3. Gender is an important criterion in Croatia for career planning.

The survey was conducted on social network groups where respondents answered anonymously on a voluntary basis.
The number of respondents was 142 (105 female and 27 male respondents). Respondents were between 21 and 25 years (N=102). The majority have an academic degree (N=90), the rest completed secondary school. 112 respondents have had working experience, and of those, most had had 1-5 years of working experience.

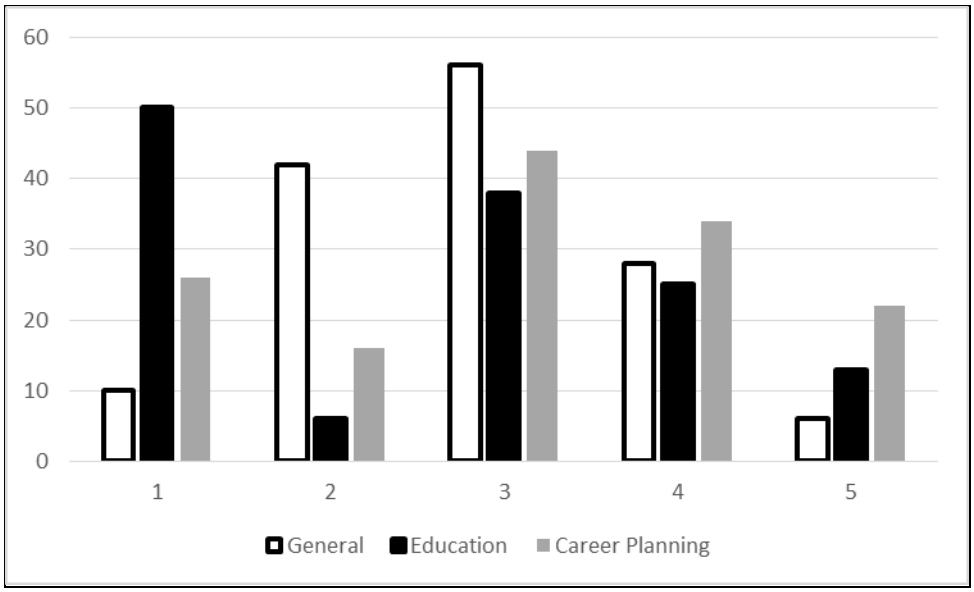

Figure 1: Estimates towards the Statement that Men and Women have Equal Opportunities in General, Education and Career Planning (N=142)
Legend: x = 1 Strongly Disagree, 2 Disagree, 3 Neutral, 4 Agree, 5 Strongly Agree
Y= Number of Answers

The summarised results (Figure 1) show that estimates towards gender equality in general and in education are ranked the same (SUM = 142), while the estimates towards gender equality in career planning have lower scores (SUM = 132). One of the possible explanations could be that, in spite of general equal gender opportunities, respondents think that specific possibilities in career planning still depend on gender. Another possible explanation is that respondents have more experience with gender issues in education and less in career planning, while the majority of respondents are students.

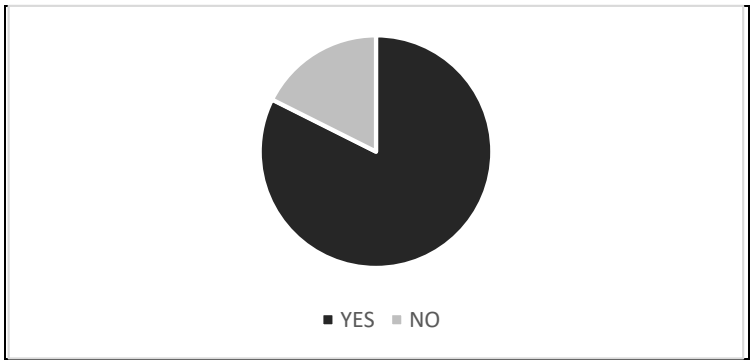

Figure 2: Respondents' Opinion as to whether Gender Discrimination Exists (N=142)
Question: do you think that gender discrimination exists?

Respondents were asked if they thought that gender discrimination exists. The data presented in Figure 2 shows that 82 % (N=117) of respondents thought that gender discrimination exists in general and 18 % (N=25) thought that no gender discrimination exists.

Answers show that, in spite of some positive movements towards gender equality, the issue of inequality and discrimination in gender still exists as a part of education, career planning or employment.

3.2. Case Study 2: Students with Disabilities in Tertiary Education

Students with disabilities are included in all levels of education. According to the 2011 Census in the Republic of Croatia, of the total of 4,284,889 Croatian citizens, 759,908 Croatia citizens (or 17.7% reported that they have difficulties in performing daily activities due to long-term illness, invalidity or old age (Croatia Bureau of Statistics, 2016, Statistical Reports based on the 2011 Population Census). According to the available data on institutional support for students with disabilities, there are 571 students with disabilities in Croatia studying at 7 universities. There are additional 110 students with disabilities studying at 34 polytechnics (Scukanec *et al*, 2015).

There are approximately 169 students with disabilities at the University of Zagreb. The categories of students with disabilities include: visual and hearing impairments, mobility impairments, motor impairments, multiple impairments, chronic illness and mental and learning disorders (Kis Glavas, 2016). The University has approximately 65,000 students in total. Those 169 students are registered as students with disabilities and they use different types of support, such as: peer support, special transportation, transportation, digital books, sign language interpretation, longer time for written examinations for students with dyslexia, scholarships aimed at students with disabilities, assistive technology etc. This assessment also states that there are a similar number of students with disabilities that are not registered and do not use any type of institutional or learning support (for example students with psychiatric diagnosis, non-visible mobility impairments or wheelchair users). The support for students with disabilities at the University of Zagreb includes different subjects: support is provided by the Coordinator for Students with Disabilities and the Student Coordinator at Faculty Level, peer assistants, teachers and staff support… (Kis Glavas, L., 2016). Additional support is provided by the Medical and Health Centres, the Centres for Social Work and other similar institutions outside the Faculty. The results can be compared with the results at the other Croatian tertiary education institutions.

3.3. Case study 3: Digital Learning Environments and ICT in Education

In order to support the inclusion of different under-represented groups, the possibilities of digital technology usage has been explored. A study was conducted among 1,508 students at different primary and secondary schools in Croatia. Respondents were between 13 and 16 years and were enrolled at the 7th and 8th classes of primary schools and 1st and 2nd classes of secondary schools/gymnasiums. All students were enrolled in the STEM school subjects of *S*cience, *T*echnology, *E*ngineering and *M*athematics. In Croatian educational systems STEM subjects are Biology, Chemistry, Physics and Mathematics. The following research is part of the Project 'E-schools/Establishing a System for Development of E-mature Schools' Part B5.
Part of the research is based on the Ferrari DIGCOMP model (2013), which includes the following dimensions of digital competences for teachers and students: digital content creation, safety, problem solving, information and data literacy and communication and collaboration. Students are exposed to new teaching methods on the basis of the learning scenario, which includes usage of the information and communication technology and active learning. The learning scenario is a way of teaching and learning which is supported with ICT and emphasises collaborative learning and learning based on student research and project method. The learning scenario within STEM is designed to develop digital mature schools, and is the part of the

Project 'E-schools: Establishing a System for the Development of E-mature Schools' (2016) Carnet/Croatian Academic and Research Network.

The whole 'Questionnaire SU UC' contains 19 items, 9 of which are in the form of a Likert Scale, 4 of which are items in the form of open ended questions and 6 are demographic variables. The measuring instrument 'Questionnaire SU UC' was designed by FOI Carnet Team E-schools B 5/The Establishing a System for Development of E-mature Schools' (2016), Carnet, part B5. The FOI part B is managing by Assoc. Prof. N. Begičević Redep at FOI; Students were asked to compare the traditional way of learning in the classroom with learning based on the learning scenario. Answers were collected online and answering was made on a voluntary, anonymous basis.

Students were asked to write down two differences between the classic learning approach and scenario based learning in the form of open ended questions. The results were analysed according to the content analyse and are presented at Table 1.

Table 1: Student Opinion about Differences between Traditional Learning and Teaching based on the ICT Supported Learning Scenario (N=1 508)

Teaching Based on Learning Scenario...		**Number of Answers**	**%**
1	It is more interesting (Answers: 'easy to remember, connected with the real life…')	891	59.08
2	ICT usage (Answers: 'no books, no writing in paper form, we use tablets, smart board, videos…')	239	15.85
3	Communication and team work (Answers: 'we are more active, no classical exams, the professors are better…')	204	13.53
4	Both learning is equal (Answers: 'boring, no interest at all…')	91	6.03
5	Harder than the classical learning (Answers: 'we miss explanation, it takes longer, problems with internet connections, the videos are all in English...')	62	4.11
6	I don't know/no answer at all…	21	1.39
TOTAL		**1,508**	**100**

The majority of students think that scenario based learning is more interesting and connected to real life (59.08%). They like information and communication technology, computer tools for communication and collaboration (15.85 %)/Table 1.

The challenge in E-school project is to prepare all learning materials in Croatian, improve internet access and provide enough digital devices to all students and teachers. Internet access and digital devices will help students from under-represented groups and geographically isolated schools have equal opportunities for education and learning in the STEM area of teaching. Those research findings could be integrated into the teaching process, with an emphasis on the benefits of different types of communication, both online and face to face.

3.4. Case Study 4: Employment Possibilities and Different Methods of Gathering Professional Competences

After finishing education, students are faced with the challenge of being competitive within the labour market. Working experience can be influenced by stereotypes that can effect employment opportunities. In order to explore how the attitudes of young students and employees are linked to employment opportunities or a lack of working experiences, students were asked to estimate the way professional experience was garnered through different types of activities: both volunteering and employment. Volunteering includes 'activities or services that are valuable for the Republic of Croatia as a way of increasing quality of life, building social resources, supporting individual self-development and promoting democracy in society' (Volunteering Act 2007). Volunteering policy includes the Volunteering Act (2007 and 2013) and the Ethical Codex of Volunteering (2008).

The core sample included 79 University students at the first year of the undergraduate Economy and Entrepreneurship Study Programme at the Faculty of Organization and Informatics. The students were 18-19 years old, (male 21.52%, female 78.48%).The SD PK Scale (designed by Vidaček-Hainš, 2015) was designed in order to explore student attitudes towards 10 different measuring objects. Measuring objects included volunteering, employment etc. The SD PK Scale uses a semantic differential rating scale, with 10 pairs of adjectives for each of 10 assessment objects (Osgood, 1957 in Strunga, A.C., 2014).

The whole PK SD Scale contains demographic variables such as gender and age and 10 objects for evaluation. Each object is evaluated with pair of adjectives (such as popular-unpopular, good-bad etc.). Answers were collected on voluntary basis and were anonymous.
The two items that measured attitudes towards different working experiences which are presented in Figure 3 include: 1. volunteering as non-formal way of gathering working experience and 2. employment (job) experience as a formal way of gathering professional competences.

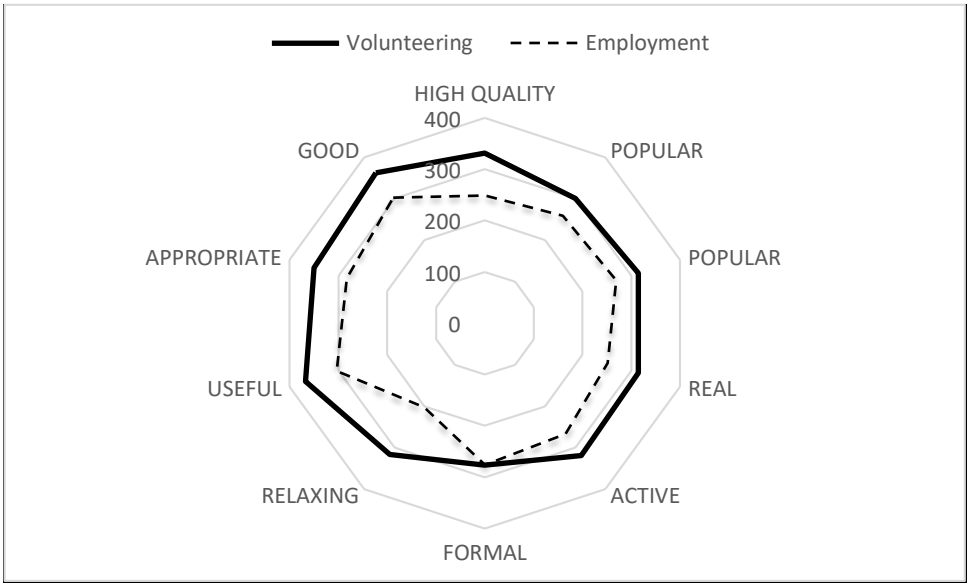

Figure 3: Attitudes towards Formal and Non formal Ways of Gathering Professional Competences and Work Experience for people from under-represented groups (N=79)

These results (Figure 3) show that students have slightly more positive attitudes towards volunteering comparing with the attitudes towards professional working experience. The reason

could be that some of them have positive volunteering experiences with people with disabilities, athletes with disabilities, children with special needs etc… Volunteering can be a good opportunity for gathering professional competences and working experience in a friendly and non-competitive environment.

4. CONCLUSION

The different case studies present practical examples of inclusion of students from different under-represented groups in the process of higher education. National policy supports the inclusion of students with disabilities and provide strategies for institutional support through peer support, students support centres, professors and staff support as well as the support of subjects outside educational institutions (Kiš Glavas, 2016.).

The usage of information and communication technology and scenario-based learning that enables the development of digital competences was evaluated as more interesting and connected to real life, then the classical method of learning. The project 'E-schools' provides web platforms and ICT tools that helps in the integration of students from under-represented learning groups.

Equal opportunities in employment can be improved by avoiding gender stereotypes and providing standardised procedures during job interviews and further career development. According to research results, students and young employees still think that there is gender inequality in career planning and discrimination issues in general. Further research could provide better insight for those designing national policy, mechanisms of institutional support for education and employment of students from under-represented groups.

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LITERATURE:

1. Alonso, P., Moscoso, S., Salgado, J.F. (2017). Structured behavioral interview as a legal guarantee for ensuring equal employment opportunities for women: A meta-analysis. *The European journal of psychology applied to legal context,* 9, (1), 15-23.
2. Blanco-Garcia, M., Sanchez-Antolin, P., Ramos, F.R. (2014). Are we close to achieve real equality under current policies? A view from the perspective of both education and employment. *Procedia - Social and behavioral sciences*, 116, 1468-1471-
3. Croatia Bureau of statistic (2016*). Statistical reports, census of population 2011; Households and drawings 2011. Persons with difficulties in performing activates of daily leaving.* Retrived 1.12.2016. from http://www.dzs.hr/
4. "E schools: The establishing a system for development of E-mature schools" (2016). *Project: Carnet / Croatian academic and research network*. Retrived 11.11.2016. from http://www.carnet.hr/e-skole/opis_projekta
5. Ethical Codex of volunteering / *NN 58/07* (2007). Retrived 15.12.2016. from http://narodnenovine.nn.hr/clanci/sluzbeni/339404.html
6. European Commission (2010): European disability strategy 2010-2020 / A renewed commitment to a barrier-free Europe. Communication from the Commission to the European Parliament, The Council, *The European economic and social Committee and the Committee of the regions.* Retrived 5.11.2016. from http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0636:FIN:en:PDF

7. Ferrari, A. (2013). "DIGCOMP: A Framework for developing and understanding digital competence in Europe. *JRC scientific and policy reports. Publications office of the European Union, Luxembourg".* Retrived 15.12.2016. from https://ec.europa.eu/jrc/sites/default/files/lb-na-26035-enn.pdf
8. Fook, C.Y., Sidhu, G.K. (2015). Investigating learning challenges faced by students in higher education. *Procedia - social and behavioral sciences,* 186, 604-612.
9. Hast, M., Healy, C. (2016). Higher education marking in the electronic age: Quantitative and qualitative student insight. *Procedia - Social and behavioral sciences,* 228, 11-15.
10. Kis Glavas, L. (2016). National group for improving the social dimension of higher education: *Guidelines for improvement the system support for students with disabilities in higher education in Croatia*. Retrived 16.12.2016. from http://public.mzos.hr/Default.aspx?art=15067&sec=3674
11. Koper, R. (2003). Combining re-usable learning resources and services to pedagogical purposeful units of learning. In A. Little John (Ed.). Reusing online resources: A sustainable approach to E-learning (pp. 46-59). London: Kogan Page.
12. Kyriakidou, O., Kyriacou, O., Özbilgin, M., Dedoulis E. (2016). Editorial: Equality, diversity and inclusion in accounting. *Critical perspectives on accounting,* 35, 1-12.
13. Lorenzo-Romero, C., Alarcón-del-Amo, M.C., Gómez Borja, M. A. (2014). Learning styles and Web technology use in business and economics university students. P*rocedia - social and behavioral sciences,* 141, 1281-1290.
14. Mihalčová, B., Pružinský, M., Gontkovičová, B- (2015). The Consequences of *Gender* Stereotypes in the Work of Managers. *Procedia Economics and Finance*, 23, 1260-1265.
15. National Strategy of Equalization of Possibility for Persons with Disability from the Year 2007 - 2015. (2007). *Government of the Republic of Croatia*,. NN 63/2007. Retrived 15.11.2016. from http://narodne-novine.nn.hr/clanci/sluzbeni/2007_06_63_1962.html
16. Papi, C. (2015). Digital Spaces: Between Educational Tools and Student Uses. *Procedia - Social and Behavioral Sciences,* 174, 3757-3764.
17. Public hearing for National strategy of equalization of possibility for persons with disability from the year 2016-2020. (2016). *Government or RH.* Retrived 15.11.2016. from https://esavjetovanja.gov.hr/ECon/MainScreen?entityId=3448
18. Popa, O.R., Bucur, N.F. (2014). Gender discrimination and education practitioners. reality, perception, possible solutions. Pr*ocedia - social and behavioral sciences,* 127, 459-463.
19. Scarinci, A.L. (2015). Evaluating resources for scientific modelling in a distance education course. .Pr*rocedia - social and behavioral sciences,* 167, 238-244.
20. Strunga, A.C. (2014). Osgood's semantic differential: a review of the Romanian social sciences literature. *Social sciences and education research review*, 2, 22-28. Retrived 10.10.2016. from http://sserr.ro/wp-content/uploads/2014/12/2-22-28.pdf
21. Šćukanec, N., Sinković, M., Bilić, R., Doolan, K. i Cvitan, M. (2015). Socijalni i ekonomski uvjeti studentskog života u Hrvatskoj: *Nacionalno izvješće istraživanja Eurostudent V za Hrvatsku za 2014. Zagreb: Ministarstvo znanosti, obrazovanja i sporta*. CIP: 978-953-6569-98-4
22. Štaba, A.M. (2015). *Gender Equality at the Labour market*. *(Diploma thesis).* Varaždin, Faculty of Organization and Informatics, University of Zagreb.
23. Turan, H., Senturk, A. (2016). Local Government budgeting for gender equality (2016). *Procedia economics and finance,* 38, 224-231.
24. United nations convention on the rights of persons with disabilities (2006). *United Nations*. Retrived 12.10.2016. from http://www.un.org/disabilities/documents/convention/convoptprot-e.pdf

25- Universal declaration of human rights (2009). *Adopted and proclaimed by General Assembly resolution 217 A (III) of 10 December 1948by Croatia Government.* Retrived 10.10.2016. from http://narodne-novine.nn.hr/clanci/medunarodni/2009_11_12_143.html

26.. Volunteering Low (2007., 2013). NN 58/7, 22/13 Retrived 15.12.2016. from http://www.zakon.hr/z/258/Zakon-o-volonterstvu

27. Vidacek-Hains, V. (2015). Institutional support in gathering student's professional and social competences through volunteering. *Proceedings of the global access for post secondary education (GAPS) Conference Kuala Lumpur 2015: Meeting the global challenge of building equitable knowledge economies* / Atherton, G. ; Crosling, G., Mee Fong, L. (ur.). Kuala Lumpur, Malaysiya : Emerald Publishing Service, 45-46.

28. Vidaček Hainš, V., Horvatek, R. (2003). Country overviews: Republic of Croatia. *International insights into widening participation: Supporting the success of under-represented groups in tertiary education* / Thomas, L.; Quinn, J. (Ed.). Staffordshire, U.K : The Institute for access studies Staffordshire University, 2003, p. 37-42.

COLLATERAL AND BANK CREDIT – A PUZZLE

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ABSTRACT
The impact of firms characteristics on bank debt financing has always been a field of conflicts among economists (e.g. trade-off theory vs. pecking order theory). The pecking order theory predicts that firms holding more tangible assets are less prone to asymmetric information problems and reduce the agency cost. Generally the supply of bank loans is expected to be higher for firms with higher collateral. In the empirical literature, this relationship is not always confirmed. We analyse this phenomenon from three points of view: meta-analysis of literature, country level data and case of Poland. This study provides a systematic analysis of the empirical literature on the usage of bank debt by conducting a meta-analysis. In particular the problem of publication selection bias is discussed. We explore the sources of heterogeneity among studies including moderator variables in random- and fixed effects regressions. Our results indicate that there is an evidence of publication selection. Based on country level data we conclude that the impact of collateral on bank credit is negative. For Polish case we find that the impact of collateral on debt is positive, except for the subsample of large enterprises.
Keywords: *bank credit, collateral, meta-regression analysis, Polish firms, publication selection bias*

1. INTRODUCTION

The aim of this study is to analyze a collateral and bank credit relation. On one hand, we conduct a meta-analysis, we make comparison of results differentiating between publications and verify publication selection bias, on the other, we explore the impact of collateral on bank loan financing based on the country level data and Polish firms level data.

Access to finance is key to business development. Investment, innovation and survival are not possible without adequate financing. In recent years, the uncertainty and instability caused by the economic crisis has affected businesses. The decreased international demand and increased competitiveness caused that both small and medium sized companies, and large firms faced greater difficulties in sustaining their profit levels and surviving in a unfavourable environment. Modigliani and Miller (1958) formed the basis of modern thinking on capital structure. They claimed that under the assumption of perfect markets where for example taxes and transaction costs do not exist the value of a company would be independent of the capital structure. Nevertheless, subsequent studies have examined the determinants of capital structure and provided new theories with different views on the determinants of capital structure: the pecking order theory, the trade-off theory, the agency theory, the market timing theory.

For collateral the pecking order theory predicts that firms holding more tangible assets are less prone to asymmetric information problems and reduce the agency cost. Generally the supply of bank loans is expected to be higher for firms with higher collateral. Firms operating in industries

characterized by a higher level of asset tangibility are expected to face lower credit constraints. Results of empirical researches are not always in line with this expectations.

We start with meta-analysis, the analysis of empirical analyses that attempts to integrate and explain the literature about some specific parameter. The purpose of meta-analysis is to provide objective and comprehensive summaries of researches conducted by different authors. Meta-analysis is aimed at finding explanation of variation in the regression results published by independent researchers and presenting a statistical conclusion (Sauerbrei and Blettner, 2003). In order to econometrically analyse the sources of heterogeneity in published effects of collateral on firms' bank loans financing, we reviewed existing empirical studies. 30 studies on the determinants of bank loan financing, for which the dependent variables were constructed in a similar way were selected from the review of literature on sources of business financing (over 130 articles). Then we analyse collateral – bank credit phenomenon based on country level data. In the last phase we estimate a dynamic econometric model, describing how the long-term and short-term credit contracted by non-financial companies in Poland is affected by collateral. In the estimation we control for three categories of factors: macroeconomic (WIBOR3M and the effective currency rate), microeconomic – associated with the internal financial situation and structural.

2. LITERATURE REVIEW

The pecking order theory predicts that firms holding more tangible assets are less prone to asymmetric information problems and reduce the agency cost. Generally the supply of bank loans is expected to be higher for firms with higher collateral. Firms operating in industries characterized by a higher level of asset tangibility are expected to face lower credit constraints. When firms use tangible assets as collateral, they reduce the cost of bank loans by limiting exposure and asset-substitution problems (Myers and Majluf, 1984; Detragiache, 1994; Boot et al., 1991; Leeth and Scott, 1989; among others). As a result higher levels of tangibility would imply more bank debt. Petersen and Rajan (1994) report that large firms with a high level of tangible assets use more bank credit. Cole (2008) shows that firms in certain industries, such as construction, manufacturing and transportation, are thought to be more creditworthy because they typically have more tangible assets that can be used as collateral than do firms in other industries, such as business services. Bougheas et al. (2004) confirm that the short-term debt share in total liabilities is higher for companies with a lower level of collateral. A higher collateral level provides greater access to long-term funding, thereby reducing the long-term debt share in total debt. Dewaelheyns and Van Hulle (2007) indicate that large companies with a high share of fixed assets in total assets use bank credit to a greater extent, while firms belonging to capital groups prefer internal financing, due to its lower cost. Cole (2010) finds that firms having less tangible assets do not use bank credit. According to findings presented by Liberti and Sturgess (2012), collateral – and non-specific collateral in particular – is a channel through which borrowers can mitigate bank-specific lending channel effects without turning to alternate lenders in the credit market. Firms with a low collateral level and a high probability of bankruptcy experience worst consequences of the shock. Companies pledging specific collateral (such as inventories, machinery and equipment, accounts receivable, guarantees and promissory notes) experience a smaller decline in lending when exposed to credit supply shock. Borrowers with a low creditworthiness, less collateral and generating lowest returns experience greatest declines in lending is response to the credit supply shock. Borrowers pledging non-specific collateral (real estate, cash and liquid securities) experience lower cuts in lending under a bank-wide credit supply shock. Jimenéz et al. (2013) prove that firms with more tangible assets or cash tend to contract less new loans, relying on internal financing rather. The decisions on granting loans to businesses with certain specifications differ

depending on the interest rate. Collateral is less important during the credit market constriction. The balance channel of monetary policy impulses transmission is based on the fact that the changes of interest rates lead to the changes in the values of collateral offered as security by potential debtors. The loss of value may force the businesses to limit the investment expenditure because their credit standing becomes weaker (Bernanke and Gertler, 1995). The increase of interest rates results in the drop of share prices and reduction of the cash flow value. It also decreases the value of the asset to be used as collateral and thus may lead to lower credit supply. The amount of the loan taken by businesses may be limited by the value of owned assets used as payment security.

3. PUBLICATION SELECTION BIAS

Stanley and Jarrell (1989) considered why do researchers come to such different findings when they are investigating the same phenomenon. Is it because of statistical methods, model misspecifications, different data sets? The authors offered a quantitative methodology for reviewing the empirical economic literature. Proposed meta-regression analysis is the regression analysis of regression analyses. Meta-regression analysis not only recognizes the specification problem but also attempts to estimate its effects by modelling variations in selected econometric specifications.

There is a probability that the results obtained by the researchers may be affected by the problem of statistical significance selection (so-called: publication selection bias). The selection of publications occurs when the researchers and reviewers prefer the statistically significant results.

The funnel graph is a classic method used for the identification of the publication selection bias. It is a distribution diagram for the precision (measured usually as the inverse of the standard error) from the estimated coefficient. In the case of the absence of the publication selection bias, the diagram should resemble an upside down funnel – wide at the base, tapering as the values on the vertical axis increase. The funnel diagram should also be symmetrical, regardless of the value of the true effect, at which the estimations should converge.
30 studies on the determinants of financing with bank loans, for which the dependent variables were constructed in a similar fashion were selected from the review of literature on business financing sources (over 130 articles). Finally, 119 regressions from 22 publications were selected for further analysis.

The publications to date obtained positive, negative and insignificant estimations for collateral coefficient (Table 2). The lack of publication selection is evident when the estimated parameters change randomly and symmetrically around the “true” population effect. The asymmetry of the graph can be used as an evidence of the presence of publication bias in the literature. Based on the graphical analysis, Figure 1 indicates publication selection. It is worth noting that man econometric decisions, such as omission of variables, selection of the estimation method or functional form can also change the shape of the chart. However, the discussed sources of variance may be described as bias related to wrong model specification. Furthermore, the heterogeneity of the “true effect” between the studies, caused by the application of different sets of data for different times and countries may be the reason for the asymmetry in the funnel chart, even in the case of the lack of publication selection bias.

In Figure 1, the top point approaches the value near 0 and the mean of all collateral estimations is 0,089 – far more than the top chart value. The expected upside down funnel shape is determined by heteroscedasticity. The studies on small samples characterised by larger standard

errors and the resulting lower precision are located on the bottom of the diagram which results in the more dispersed base of the chart. Figure 2 illustrates how the parameter estimations changed in time. There is no clear correlation visible for collateral.
In order to identify if there is publication bias in our meta-samples we follow Stanley et al. (2008) and we estimate equation (1).

$$t_i = \beta_{SE} + \beta_e \left(\frac{1}{SE_i}\right) + v_i \qquad (1)$$

where: $t_i - \ t - distribution,\ SE_i - \ standard\ deviation,\ \beta_{SE}, \beta_e \ - \ unknown\ parameters, v_i - \ random\ error.$
Testing whether the constant is equal to zero (H_0: β_{SE}= 0) is equivalent to the testing of distribution asymmetry and can be used as the measurement of the occurrence of the effect of the publication selection bias on the results referred to precision-effect test (PET) (Egger et al., 1997; Stanley, 2008; Stanley, Doucouliagos, 2012). Whereas, testing whether the β_e parameter is equal to zero (H_0: β_e = 0) shows the direction of the bias with the studied effect (Egger et al., 1997; Stanley, 2008).

However, like any regression model, the estimates can be biased when important explanatory variables are omitted. Therefore, we need to include moderator variables to control for the possible heterogeneity across studies. Finally we perform a meta-regression analysis, incorporating into the model 21 possible moderators that take into account the study heterogeneity.
Like in any regression model, the estimates of MRA's coefficients can become biased when important explanatory variables are omitted. MRA model (1) can be expanded to include variables, Z_k, that explain variation in estimates and other factors, and K_j, that are correlated with the publication selection process itself.

$$t_i = \beta_{SE} + \sum \gamma_j K_{ij} + \beta_e (1/SE_i) + \sum \alpha_k Z_{ik}/SE_i + v_i \qquad (2)$$

where: K variables may affect the likelihood of being selected for publication. Z variables may affect the magnitude of the estimator. In the meta-analysis the equation for the FAT and PET tests is estimated by both random and fixed effects models.[1]
In order to confirm the results on the chart, which are often a subjective assessment of the researcher, the regression described by formula (1) was estimated. The results from the FAT test indicate that type I publication bias is present only in the case of assets structure, company size investigation (Table 3 – publication selection bias). The FAT tests in other categories fail to prove its presence. The PET tests' reject statistical difference of these estimates from zero. Adding moderator variables to Eq. (1) yields a weighted least-squares meta-regression model (FE – fixed effects) and method-of-moments (RE – random effects) of heterogeneity and publication bias. We present the results of Tau2 test for within variance of residuals (Table 3). For models estimated by Method of Moments we got Q statistics. The null hypothesis states that fixed effects model is correct. Q statistics for our models are large and their p-values are equal to zero. The real value of the actual effect probably varies between research, what means that the data are not consistent with the assumptions of fixed effects models.
Testing whether the constant is equal to zero is used as the measurement of the occurrence of the effect of the publication selection bias. We find that the intercepts in regressions for

[1] The difference between the fixed effects and random effects estimates (for a weighted average estimates) can be the probable indicator of the effect of the selection of publications. This difference occurs because the less precise estimates are more biased in random effects models compared to fixed effects models. Random effects models reflect unobserved heterogeneity, which may be real or appears as the result of the methodology. Biase of the standard errors of estimates may also occur. It means that the more precise estimates may indicate on biease or inefficiency. Using random effects models can eliminate inefficiency or incorrect outliers. As a consequence of the foregoing we are using random effects and fixed effects models in this study

profitability, assets structure and company size are significant (Table 3 – publication selection bias). The inclusion of potential sources of heterogeneity removes publication bias just for the case of company size.

Potential explanatory variables included in meta-regression analysis are presented in Table 4. We include moderator variables to control for heterogeneity across studies. Table 3 presents the results of the reduced models, as during estimation, we observed that some moderator variables are not important in contributing to the potential source of heterogeneity, as they are not statistically significant.

We find now that precision coefficients in regressions for collateral (0,85) is significant (Table 3 – publication selection bias + heterogeneity). Estimates for the β_e parameter show the direction of the bias. In case of collateral we observe a negative bias. More often cited studies report collateral estimates that are larger (on average 5e-06 lower). Furthermore, analysis with higher number of firms included are likely to report lower collateral estimates (on average 0,007 higher).

In summary, the results of the meta-analysis show the occurrence of the publication selection bias in the case of collateral. One reason for that can be wrong model specification, another reason may be connected with pressure for obtaining a statistically significant estimator.

4. ANALYSIS OF COUNTRY LEVEL DATA

The objective of this part of the paper is to explore relation between collateral and bank credit in European countries. The sample was obtained from the database of the European Committee of Central Balance Sheet Data Offices (BACH / ESD, 2013) and encompasses European countries for the period 2000-2014. BACH (Bank for the Accounts of Companies Harmonized) is a database of aggregated and harmonized accounting data of non-financial companies in European countries, based on their national accounting standards. The database currently includes data for 11 countries (Austria, Czech Republic, France, Germany, Italy, Poland, Portugal, Slovakia, Spain and Belgium, Netherlands). The data sources for this database include financial statements (balance sheets and income statements) of individual non-financial corporations.

Based on Figures 8-12 we may see that macroeconomic effects are crucial as company financing methods differ significantly between countries. Equity is most prevalent among enterprises in Poland, Netherlands and Czech Republic while total debt is most widespread among enterprises in Austria, Portugal, Germany and Italy, where bank loans play a greater role. What we see in Table 5 is that at the country level tangibility, profitability, size of a companies and Interests on financial debts/Total Assets are significant for bank loans in case of whole sample. Based on estimation of parameters, we note that collateral significantly determines the bank loan financing in the investigated countries, when considering the small and medium-sized companies. For both groups the impact is negative. The profitability of companies doesn't differentiate the use of bank credit to finance activities in the analyzed countries, regardless the size of firms. Interests on financial debts in small and large companies significantly differentiate the use of bank credit in countries. A similar conclusion was obtained for logarithm of total assets.

5. A CASE OF POLAND

Database used in the article was created on the basis of the financial statements of companies listed on the Warsaw Stock Exchange, Newconnect or the Central Table of Offers (CeTO), operating in the years 1998-2015. We focused on non-financial enterprises, which, according

to the Central Statistical Office results in exclusion from the study firms operating (according to the Polish Classification of Activities, 2007) in section A (Agriculture, forestry, hunting and fishing), K (Financial and insurance activities) and O (public administration and defense, compulsory social security). In addition section T (Activities of households, households producing goods and providing services for their own needs) and Section U (extraterritorial organizations and bodies) were removed. Furthermore, some variables include outliers in only the upper values, so we truncate the sample at the 99 percentile to exclude these outliers. When variables include outliers in both the upper and lower values, we truncate at both the 0.5 and 99.5 percentiles of the sample.

Table 6 provides some summary statistics. As shown, the average share of total liabilities in the balance sheet total amounts is about 40%, which means that the Polish listed companies to a large extent finance with the foreign capital (Table 6). In the sample leverage ranges from 0 to 98%. Analyzing the chart of variation of leverage over time we see that the highest average amount of leverage was achieved in 2002, which was the result of significant increases in the stock market. A significant decrease in leverage in 2007 was a reaction to the restrictive monetary policy - a rise in interest EURIBOR3M and LIBOR3M, as well as the growing trend of market interest rates on bank loans, interest WIBOR3M. The increase in market interest rates on bank loans and interest WIBOR3M resulted in a decrease in debt lasting until the beginning of 2008. In 2011, an increase in leverage was observed in response to the decline in market interest rates on bank loans and interest rates in 2010. Restrictive monetary policy in 2000, 2004 and 2007 resulted in a decrease in leverage. On the other hand, the policy of low interest rates in 2003 and 2006 and in the years 2009-2010 (WIBOR3M and market interest rates on loans) caused an increase in leverage. This points to the fact that monetary policy determines the structure of financial companies.

A dynamic econometric model has been estimated, describing how the long-term and short-term credit contracted by non-financial companies in Poland is affected by three categories of factors: macroeconomic (WIBOR3M and the real effective currency rate), microeconomic – associated with the internal financial situation and structural. Parameters were estimated using the robust system GMM (Generalised Methods of Moments) estimator 13 (see: Arellano & Bover, 1995; Blundell & Bond, 1998).

According to the static and dynamic theory of trade-off the companies maintain the optimal level of leverage, and quickly adapt to the aimed value in the case of any deviations. The theory of the hierarchy of sources of funding and market timing exclude the existence of an optimal debt ratio. Researchers verify the validity of these theories by estimation of coefficient of the speed of adjustment. A high value of coefficient confirms the validity of the theory of trade-off. Based on the literature, it was observed that the coefficient reaching a value above 20% is considered to be high. However, the authors suggest that the slow rate of adjustment does not indicate a rejection of the hypothesis according to which the companies have an optimal capital structure. This slow rate may result from the existence of high adjustment costs that exceed the costs of staying outside the optimum. In our study the estimate of coefficient for lagged dependent variable is 58.45%. It means that companies adjust its current level of leverage to the optimal value at a rate of 41.55% per year (which means that companies need 1.3 years to reduce half of the distance to the optimum leverage). In comparison with results obtained by other researchers it is relatively high rate. The high values, 34% and 46% were received, among others, by Flannery and Rangan (2006) and Cook and Tang (2010) respectively. Fama and French (2002) and Huang and Ritter (2005) interpret the obtained slow rate of adjustment to support the theory of the hierarchy of sources of funding.

The size of the company shows a positive correlation with the level of leverage. This confirms the assumption of the theory of trade-off, the more profitable companies have a larger share of foreign capital in total assets. Large enterprises finance investments through external sources, in particular the long-term bank loan and sale of securities. Firms that generate higher revenues, having more bargaining power and better access to credit have lower credit margins and increased foreign capital in the capital structure. Smaller companies finance mainly with profits generated or contributions owners.

We find that debt decreases with increasing profitability and effective tax rate. The results confirm the validity of the theory of the hierarchy of sources of financing, according to which companies capable to generate high profits have a greater tendency to use equity than foreign capitals. High taxes result from the large revenues that reduce the need for debt.

Growing companies have a greater need of capital, and therefore rely on external financing. The increase in sales is not able to meet the financial needs due to the problem of gridlock. According to the theory of the hierarchy of sources of finance companies prefer debt issue than shares. Our results indicate a positive correlation between the level of leverage and growth opportunities, which confirms the validity of the theory.

Tangible fixed assets may be treated as a collateral. The higher share of fixed assets in total assets reduces the lender's risk and increases the access to external capital, which is consistent with the theory of trade-off. Agency costs and information asymmetry can cause that lenders require guarantees in the form of collateral on fixed assets, and therefore expected positive impact of this variable on the size of the debt ratio. The variable asset structure works with lags, as the basis for verification of the credit are the financial statements for the previous year.

Liquidity is defined as the company's ability to timely repayment of current liabilities. Companies with high liquidity have a greater ability to pay the debt and therefore should use the foreign capital as a main source of funding. We got a positive relation between the level of debt and liquidity, which testifies to the support of the theory of substitution.

Non-interest tax shield is an important factor affecting the capital structure. It arises as a result of the existence of other than interest on borrowed capital, items that reduce the tax base, such as depreciation. In our study, non-interest tax shield reduces debt, which indicates that companies use rather depreciation than the interest paid on the debt. The results are consistent with the theory of substitution. In turn, the interest tax shield has a positive impact on the level of leverage.

It is assumed that companies with high expenditure on research and development prefer equity financing. However, our results indicate a positive relationship between intangible assets and the debt ratio. According to the theory of signaling, a well-developing companies increase the involvement of foreign capitals to signal the good prospects for the future.

In the case of other explanatory variables used in the model, theories regarding the choice of the capital structure does not give a clear indication as to the direction of the expected impact on the level of debt. The negative impact of the inverted index bankruptcy on leverage points to the fact that companies having a higher probability of bankruptcy are less likely to benefit from the financing of foreign capital. This may involve the fact that the threatened with bankruptcy companies will not be able to repay its liabilities. The median leverage in the sector

is an important determinant of the debt ratio. Companies operating in the same industry are affected by a similar environment: market fluctuations, the impact of state institutions or changes in the market of suppliers and customers, which indicates the existence of a positive relationship between the variables.

The survey was repeated for industrial and service companies separately. High rate of adjustment of the current level of debt to the optimal level for both industrial (35.83%) and service companies (41%) proves the existence of an optimal capital structure and rapid effort to achieve it, regardless of the industry. The results are just slightly different in terms of the factors that influence the choice of debt in these two sectors of the economy. In both subgroups the same variables occurred to be significant determinants of debt. However, for industrial companies growth opportunities and the share of intangible assets in total assets have a negative impact on the dependent variable. The negative relationship between the debt and growth opportunities, according to the theory of substitution, reflects that costs of the financial risk (including bankruptcy) increase with the expected growth of the company, forcing managers to reduce debt in the capital structure. For service companies the relation is consistent with the theory of the hierarchy of sources of funding. Summing up, the influence of most variables used in the model indicates to the theory of substitution in case of Polish listed companies, irrespective of the sector of the business.

Due to the fact that the size of the company may affect its access to capital markets, the risk of bankruptcy and economies of scale in contracting capital, a model was estimated for small and large companies separately. An important conclusion derived from the analysis is that large companies slowly adjust the current level of debt to the optimal size. The adjustment rate for large companies is only 23.54%, while in the case of small firms it is 44.55%. This is because large companies are characterized by lower volatility of cash flow, and therefore meet lower costs associated with a deviation from an optimal debt. Although the adjustment process in large companies is slower than in small firms, based on the literature for both cases it is referred as fast.

It turns out that for large companies, as in the case of industrial firms, growth opportunities and the share of intangible assets in total assets are negatively correlated with the level of debt. This is because the highly developing smaller businesses have a greater financial needs, so they lend more. The increase in sales is not able to meet the financial needs of small businesses because of the gridlock. For large companies an increase in sales growth increase the possibility of self-financing, which reduces the need for external financing. In large companies, payment backlogs are of minor importance, and sales growth results in an increase in revenues from debt repayment. Another difference between small and large companies is the negative impact of collateral on the level of leverage in the case of large enterprises. Higher fixed assets increase the availability of external capital as they reduce the risk of the lender. Therefore, the positive impact of collateral on debt is expected. However, for large enterprises increase in fixed assets reduces the demand for foreign capital financing. For smaller companies assets held in year t-1 increase debt, as they constitute collateral. This is because the basis for verification of the creditworthiness is the financial statements for the previous year. Moreover, in the case of large companies, variable non-interest tax shield is irrelevant. This is due to the fact that large businesses borrow more in order to maximize tax benefits. Smaller companies receive tax savings mainly due to depreciation, rather than the interest paid on the debt. Despite minor differences in the estimates of parameters, the impact of most variables points to the application of the theory of substitution in Polish listed companies, regardless of company size.

6. CONCLUSION

In this study we analyze a collateral and bank credit relation. This study pursues two objectives: on one hand, we conduct a meta-analysis, we make comparison of results differentiating between publications and verify publication selection bias, on the other, we explore the determinants of bank loan financing based on the country level data and Polish firms level data. The described study is the continuation of the previous meta-analyses of the authors (Białek-Jaworska, Dzik-Walczak, Nehrebecka, 2015). The benefit of this work is that, by aggregating results across a large number of investigations and exploiting between-study design variation, we point variables that modify them more precisely than could be done through qualitative review.

In the publications regarding bank loans, the publication selection bias was found for collateral estimates. When analyzing the determinants of bank loan financing based on the country level data we found that equity is most prevalent among enterprises in Poland, Netherlands and Czech Republic while total debt is most widespread among enterprises in Austria, Portugal, Germany and Italy, where bank loans play a greater role. At the country level collateral is significant for bank loans and the impact that we get is negative. Based on the empirical analysis of Polish firms we conclude that the long-term and short-term debt contracted by non-financial companies is affected by three categories of factors: macroeconomic, microeconomic and structural. We find that the impact of collateral on debt is positive, except for the subsample of large enterprises.

LITERATURE:

1. Aghion P., Askenazy P., Berman N., Cette G., Eymard L. (2012), *CREDIT CONSTRAINTS AND THE CYCLICALITY OF R&D INVESTMENT: EVIDENCE FROM FRANCE*, Journal of the European Economic Association, 10(5), pp. 1001–1024.
2. Alonso P.D.A., Iturriaga F.J.L., Sanz J.A.R., Vallelado Gonzalez E. (2005), *Determinants of Bank Debt in a Continental Financial System: Evidence from Spanish Companies*, The Financial Review, 40(3), pp. 305-333.
3. Ang J., Peterson P. (1984), *The Leasing Puzzle*, The Journal of Finance, 39(4), pp. 1055-1065.
4. Atanasova Ch. (2007), *Access to Institutional Finance and the Use of Trade Credit*, Financial Management, pp. 49-67.
5. Atanasova C., N. Wilson (2003), *Bank Borrowing Constraints and the Demand for Trade Credit: Evidence from Panel Data*, Managerial & Decision Economics, 24(6/7)
6. Beattie V., Goodacre A., Thomson S. (2000), *Operating leases and the assessment of lease – debt substitutability*, Journal of Banking and Finance 24, pp. 427-470.
7. Beatty A., Liao S., Weber J. (2010), *Financial Reporting Quality, Private Information, Monitoring, and the Lease-versus-Buy Decision*, The Accounting Review American Accounting Association, Vol. 85, No. 4 DOI: 10.2308/accr.2010.85.4.1215, pp. 1215–1238.
8. Berger A.N., Cowan A.M., Frame W.S. (2011), *The surprising use of credit scoring in small business lending by community banks and the attendant Effects on credit availability, risk, and profitability*, Journal of Financial Services Research 39, pp. 1-17.
9. Bernanke B.S., Gertler M. (1995), *Inside the black box: the credit channel of monetary policy transmission* (No. w5146), National bureau of economic research.

10. Berrospide J., Meisenzahl R., Sullivan B. (2012), *Credit Line Use and Availability in the Financial Crisis: The Importance of Hedging*, Finance and Economics Discussion Series, Divisions of Research & Statistics and Monetary Affairs, Federal Reserve Board, Washington.
11. Białek-Jaworska A., Dzik-Walczak A., Nehrebecka N. (2015), *Determinanty finansowania działalności przedsiębiorstw kredytem bankowym: meta-analiza*, Bank i Kredyt, 46 (3), pp. 253 – 298.
12. Białek-Jaworska A., Dzik-Walczak A., Nehrebecka N. (2015), *Transakcyjne i finansowe motywy wykorzystania kredytu handlowego: meta-analiza*, Wiadomości Statystyczne, 7.
13. Białek-Jaworska A., Dzik-Walczak A., Nehrebecka N. (2015), *Kiedy firmy sięgają po leasing?*, Gospodarka Narodowa, 2
14. Blasio G. (2005), *Does Trade Credit Substitute Bank Credit? Evidence from Firm-level Data*, Economic notes, 34(1), pp. 85-112.
15. Boguszewski P., Kocięcki A. (2000), *Wpływ polityki pieniężnej na zachowania przedsiębiorstw w świetle danych GUS i badań ankietowych - wybrane zagadnienia*, Bank i Kredyt.
16. Boot A., Thakor A., Udell G. (1991), *Secured lending and default risk: equilibrium analysis and policy implications and empirical results*, Economic Journal 101, pp. 458-472.
17. Bougheas S., Mateut S., Mizen P. (2009), *Corporate trade credit and inventories: New evidence of a trade-off from accounts payable and receivable*, Journal of Banking and Finance 33, pp. 300-307.
18. Bougheas S., Mizen P., Yalcin C. (2006), *Access to external finance: theory and evidence on the impact of firm-specific characteristics*, Journal of Banking and Finance 30 (1), pp. 199–227.
19. Branson B.C. (1995), *An empirical reexamination of the leasing puzzle*, Quarterly Journal of Business and Economics, 34(3).
20. Brown M., Kirschenmann K., Ongena S. (2010), *Foreign Currency Loans - Demand or Supply Driven?* Swiss National Bank, 2011/2.
21. Brown M., Ongena S., Popov A., Yesin P. (2011), *Who needs credit and who gets credit in Eastern Europe?, Economic Policy*, 26 (65): 93-130 DOI: http://dx.doi.org/10.1111/j.1468-0327.2010.00259.x
22. Callimaci A., Fortin A., Landry S. (2011), *Determinants of leasing propensity in Canadian listed companies*, International Journal of Managerial Finance, 7(3).
23. Carbo-Valvrde S., Degryse H., Rodriguez-Fernandez F. (2011), *Lending Relationships and Credit Rationing: The Impact of Securitization*, Australasian Finance and Banking Conference.
24. Chigurupati V.R., Hegde Sh.P. (2009), *Capital market frictions, Leasing and Investment*. Working Paper.
25. Chu L., Mathieu R., Zhang P. (2008), *Why Firms Lease Short-Lived Assets: A Tax-Based Explanation*, Canadian Tax Journal.
26. Cole R.A. (2011), *Bank Credit, Trade Credit or No Credit: Evidence from the Surveys of Small Business Finances*, Office of Advocacy, U.S. Small Business Administration.

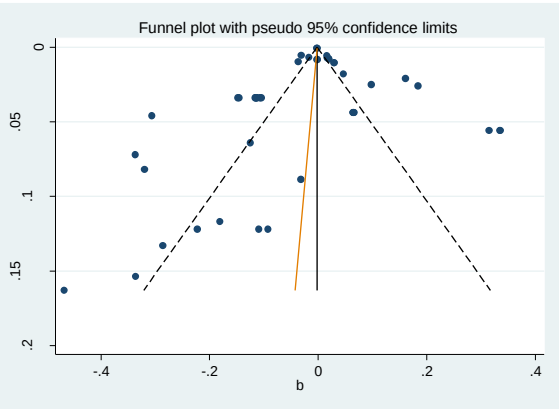
27. Cole R.A., Sokolyk T. (2016), *Who needs credit and who gets credit? Evidence from the Surveys of Small Business Finances*, Journal of Financial Stability, in Press, Accepted Manuscript
28. Cole R.A., Dietrich A. (2012), *SME Credit Availability Around the World, Evidence from World Bank's Enterprise Survey, Paper presented at the 2012 FMA European Conference in Istanbul, Turkey held June 7-8, 2012. Available at: http://ssrn.com/abstract=2043624*
29. Cook D.L. (1999), *Trade Credit and Bank Finance: Financing Small Firms in Russia*, Journal of Business Venturing, Vol.14.
30. Coulibaly B., Sapriza H., Zlate A. (2013), *Financial Frictions, Trade Credit, and the 2008-09 Global Financial Crisis, Board of Governors of the Federal Reserve System*, International Review of Economics and Finance 26, pp. 25-38.
31. Couppey-Soubeyran J., Hericourt J. (2011), *The relationship between trade credit, bank credit and financial structure: from firm-level non-linearities to financial development heterogeneity. A study on MENA firm-level data*, Documents de travail du Centre d'Economie de la Sorbonne.
32. Danielson M.G., Scott J.A. (2004), *Bank Loan Availability and Trade Credit Demand*, The Financial Review 39(4), pp. 579-600.
33. Deloof M., Lagaert I., Verschueren I. (2007), *Leases and debt: complements or substitutes? evidence from Belgian SMEs,* Journal of Small Business Management, Volume: 45 Issue 4, pp. 491-500.
34. Demiroglu, C., James, C., Kizilaslan, A. (2012), *Bank lending standards and access to lines of credit*, Journal of Money, Credit and Banking, 44(6), pp. 1063-1089.
35. Detragiache E. (1994), *Public versus private borrowing: a theory with implications for bankruptcy reform,* Journal of Financial Intermediation 3, pp. 327-354.
36. Detragiache E., Tressel T., Gupta (2008), *Foreign Banks in Poor Countries: Theory and Evidence, Journal of Finance*, American Finance Association, 63(5), pp. 2123-2160.
37. Dewaelheyns N., Van Hulle C. (2010), *Internal capital markets and capital structure: Bank versus internal debt*, European Financial Management, Vol. 16, Issue 3, pp. 345–373.
38. Doucouliagos C. H., Stanley T. D. (2009), *Publication selection bias in minimum-wage research? A meta-regression analysis,* British Journal of Industrial Relations 47(2), pp/ 406-428.
39. Duke J., Franz D., Herbert H, Toy D. (2002), *Firm-specific determinants of off-balance sheet leasing: A test of the Smith/Wakeman model*, Journal of Business and Management, *8*(4), pp. 335.
40. Egger M., Smith G.D., Schneider M., Minder C. (1997), *Bias in meta-analysis detected by a simple, graphical test*, Bmj, 315(7109), pp. 629-634.
41. Eisfeldt A.L., Rampini A.A. (2009), *Leasing, Ability to Repossess, and Debt Capacity*, Review of Financial Studies, 22 (4): 1621-1657. doi: 10.1093/rfs/hhn026.
42. Filareto-Deghaye M., Severin E. (2007), *Determinants of the choice leasing vs bank loan: evidence from the French SME by KACM*, Revista Investigacion Operacional, 28(2), pp. 120-130.
43. Finucane T.J. (1988), *Some empirical evidence on the use of financial leases*, The Journal of Financial reseaech, XI(4).

44. Franzen L.A., Rodgers K.J., Simin T.T. (2009), *Capital Structure and the Changing Role of Off-Balance-Sheet Lease Financing*, http://www.frbatlanta.org/filelegacydocs/seminars/seminar_simin_101609.pdf , 2009
45. Garcia-Appendini E., Montoriol-Garriga J. (2011), *Firms as Liquidity Providers: Evidence from the 2007-2008 Financial Crisis*, Journal of Financial Economics, Vol. 109 No. 1
46. Ge Y., Qiu J. (2007), *Financial development, bank discrimination and trade credit*, Journal of Banking and Finance, 31(2), pp. 513-530.
47. Grinblatt M., Titman S. (1998), *Financial Markets and Corporate Strategy*, Irwin-McGraw-Hill.
48. Ghosh S. (2010), *Firm Characteristics, Financial Composition and Response to Monetary Policy: Evidence from Indian Data*, Journal of Indian Business Research, 2(4), pp. 198-215.
49. Ghosh S., Sensarma R. (2004), *Does monetary policy matter for corporate governance? Firm-level evidence from India*, w: M. Hirschey, J. Kose, A. Makhija (ed.), *Corporate Governance*, Advances in Financial Economics, Vol. 9., Emerald Group Publishing Limited, pp. 327-353.
50. Goodacre A. (2003), *Operating lease finance in the UK retail sector*, The International Review of Retail, Distribution and Consumer Research, vol. 13, no. 1, pp. 99-125, http://dx.doi.org/10.1080/0959396032000065373
51. Graham J.R., Lemmon M.L., Schallheim J. S. (1998), *Debt, leases, taxes, and the endogeneity of corporate tax status*, The Journal of Finance, 53(1), pp. 131-162.
52. Guariglia A., Mateut S. (2006), *Credit channel, trade credit channel, and inventory investment: Evidence from a panel of UK firms*, Journal of Banking and Finance, 30(10) pp. 2835–2856.
53. Haan L., Sterken E. (2000), *Capital Structure, Corporate Governance, and Monetary Policy: Firm-Level Evidence for the Euro Area*, De Nederlandsche Bank, Research Memorandum WO&E No. 637/0032.
54. Haan L., Sterken E. (2006), *The Impact of Monetary Policy on the Financing Behaviour of Firms in the Euro Area and the UK*, European Journal of Finance, Vol. 12, No. 5, pp. 401–420.
55. Huang H. Shi X., Zhang S. (2011), *Counter-cyclical substitution between trade credit and bank credit*, Journal of Banking and Finance, 35, pp. 1859–1878.
56. Hunter J.E., Schmidt F.L (1990), *Methods of meta-analysis: Correcting error and bias in research findings.* Newbury Park: CA: Sage.
57. Huyghebaert N., Van de Gucht L., Van Hulle C. (2007), The Choice between Bank Debt and Trade Credit in Business Start-ups, *Small Business Economics*, 29(4), pp. 435-452.
58. Jimenéz G., Ongena S., Peydró J., Saurina J. (2009), Monetary Policy and Credit Crunch: Identifying Simultaneously the Bank Lending and Balance Sheet Channels, http://www.eea-esem.com/files/papers/EEA-ESEM/2009/1304/JOPS%20CC%202009-02-12.pdf
59. Jimenéz G., Ongena S., Peydró J., Saurina J. (2012), *Credit supply identyfying balance-sheet channel with loan applications and grantem loans*, AMERICAN ECONOMIC REVIEW, VOL. 102, NO. 5, AUGUST 2012 (pp. 2301-26)

60. Jimenéz G., Ongena S., Peydró J., Saurina J. (2012), *Credit Supply versus Demand: Bank and Firm Balance-Sheet Channels in Good and Crisis Times*, European Banking Center Discussion Paper No. 2012-003.
61. Jimenéz G., Ongena S., Peydró J., Saurina J. (2013), *Monetary Policy and Credit Crunch: Identifying Simultaneously the Bank Lending and Balance Sheet Channels*, Bank of Spain mimeo.
62. Koh J., Jang S. (2009), *Determinants of using operating lease in the hotel industry*, International Journal of Hospitality Management, Vol. 28.
63. Lasfer M.A., Levis M. (1998), *The Determinants of the Leasing Decision of Small and Large Companies*, European Financial Management, 4(2), pp. 159-184.
64. Leeth J.D., Scott J.A. (1989), *The incidence of secured debt: evidence from the small business community*, Journal of Financial and Quantitative Analysis, 24(03), pp. 379-394.
65. Lin J.R., Wang Ch.-J., Chou D.-W., Chueh F.-Ch. (2012), *Financial constraint and the choice between leasing and debt*, International Review of Economics & Finance, vol. 27, issue C, pp. 171-182.
66. Love M., Peria M. (2014), *How Bank Competition Affects Firm's Access to Finance*, World Bank Econ Rev, doi: 10.1093/wber/lhu003.
67. Love I., Preve L.A., Sarria-Allende V. (2007), *Trade credit and bank credit: Evidence from recent financial crisis*, Journal of Financial Economics, 83.
68. Marston F., Harris R.S. (1988), *Substitutability of leases and debt in corporate capital structures*, Journal of Accounting, Auditing and Finance, 3(2), pp. 147-164.
69. Marzec J., Pawłowska M. (2011), *Racjonowanie kredytów a substytucja między kredytem kupieckim i bankowym – badania na przykładzie polskich przedsiębiorstw*, Materiały i Studia NBP, Zeszyt 261.
70. Mateut S., Mizen P., Ziane Y. (2011), *No Going Back: The Interactions Between Processed Inventories and Trade Credit*, Centre for Finance and Credit Markets, Working Paper 11/04.
71. Myers S. C., Majluf N. S. (1984), *Corporate financing and investment decisions when firms have information that investors do not have*, Journal of financial economics, 13(2), pp. 187-221.
72. Neuberger D., Räthke-Döppner S. (2013), *Leasing by small enterprises*, Applied Financial Economics, 23(7), pp. 535-549.
73. Rauh J. D., Sufi A. (2012), *Explaining Corporate Capital Structure: Product Markets, Leases, and Asset Similarity, Oxford Journals, Arts & Humanities Social Sciences, Review of Finance, Vol. 16, Issue 1, pp. 115-155*
74. Robicheaux S.H., Fu X., Ligon J.A. (2008), *Lease Financing and Corporate Governance*, Financial Review, 43(3), pp. 403-437.
75. Rosenthal R., Rubin B.D. (1982), *Comparing effect sizes in independent studies*, Psychological Bulletin, 92, pp. 500-504.
76. Sauerbrei W., Blettner, M. (2003), *Issues of traditional reviews and meta-analyses of observational studies in medical research. Meta-Analysis New Developments and Applications in Medical and Social Sciences*, Cambridge, MA: Hogrefe and Huber, pp. 78-98.

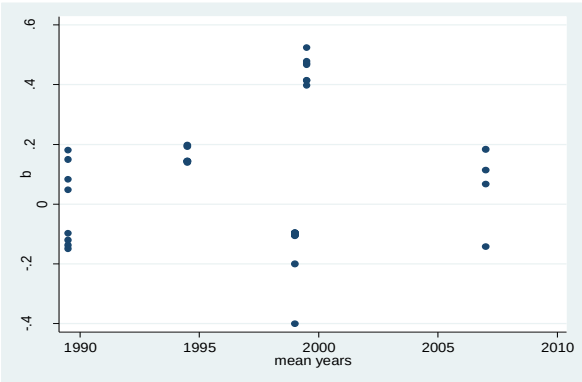
77. Schallheim J., Wells K., Whitby R. (2013), *Do Leases Expand Debt Capacity?*, Journal of Corporate Finance, Volume 23, pp. 368–381.
78. Sharpe S.A., Nguyen H.H. (1995), *Capital market imperfections and the incentive to lease*, Journal of Financial Economics, 39(2), pp. 271-294.
79. Singh A. (2011), An empirical investigation of the lease-debt relation in the restaurant and retail industry, International CHRIE Conference-Refereed Track.
80. Singh A. (2013), Is Leasing a Substitute or Complement to Debt? Evidence from the Restaurant and Retail Industry, Journal of Hospitality & Tourism Research, 37(2), pp. 155-183.
81. Slotty C. (2009), *Financial constraints and the decision to lease: Evidence from German SME*, Johann-Wolfgang-Goethe-Universität Frankfurt am Main, Fachbereich Wirtschaftswissenschaften Finance and accounting, No. 205.
82. Stanley T. (2005), *Beyond Publication Selection*, Journal of Economic Surveys, 19, pp. 309-345.
83. Stanley T. (2008), *Meta-regression methods for detecting and estimating empirical effect in the presence of publication bias*. Oxford Bulletin of Economics and Statistics, 70, pp. 103-127.
84. Stanley, T.D., Doucouliagos, H., Giles, M., Heckemeyer, J. H., Johnston, R. J., Laroche, P., Nelson, J. P., Paldam, M., Poot, J., Pugh, G., Rosenberger, R. S. and Rost, K. (2013), META-ANALYSIS OF ECONOMICS RESEARCH REPORTING GUIDELINES. JOURNAL OF ECONOMIC SURVEYS, 27: 390–394. doi:10.1111/joes.12008
85. Stanley T.D., Jarrell S.B.., *Meta-regression analysis: A quantitative method of literature surveys*, Journal of Economic Surveys, 1989, 3, pp. 161-170.
86. Uesugi I., Yamashiro G.M. (2008), *The Relationship between Trade Credit and Loans: Evidence from Small Businesses in Japan*, International Journal of Business, 13(2).
87. Yan A. (2006), *Leasing and Debt Financing: Substitutes or Complements?* The Journal of Financial and Quantitative Analysis, 41(03), pp. 709-731.
88. Zawadzka D. (2009), *Determinanty popytu małych przedsiębiorstw na kredyt handlowy*, Wydawnictwo Uniwersytetu Ekonomicznego w Poznaniu, Poznań

Figure 1. Collateral: relation between the parameter estimation and the inverse of the standard deviation.



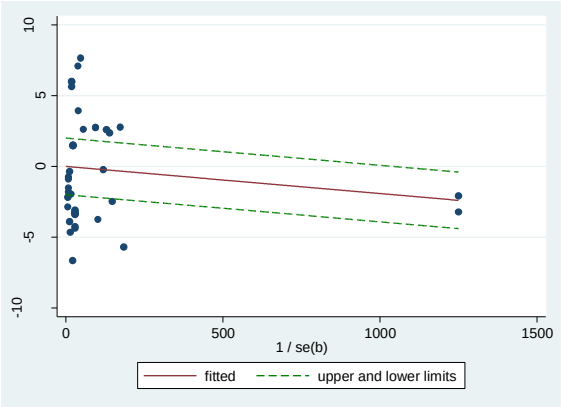
Source: own study based on the review of empirical literature.

Figure 2. Collateral: change of estimated values in time.



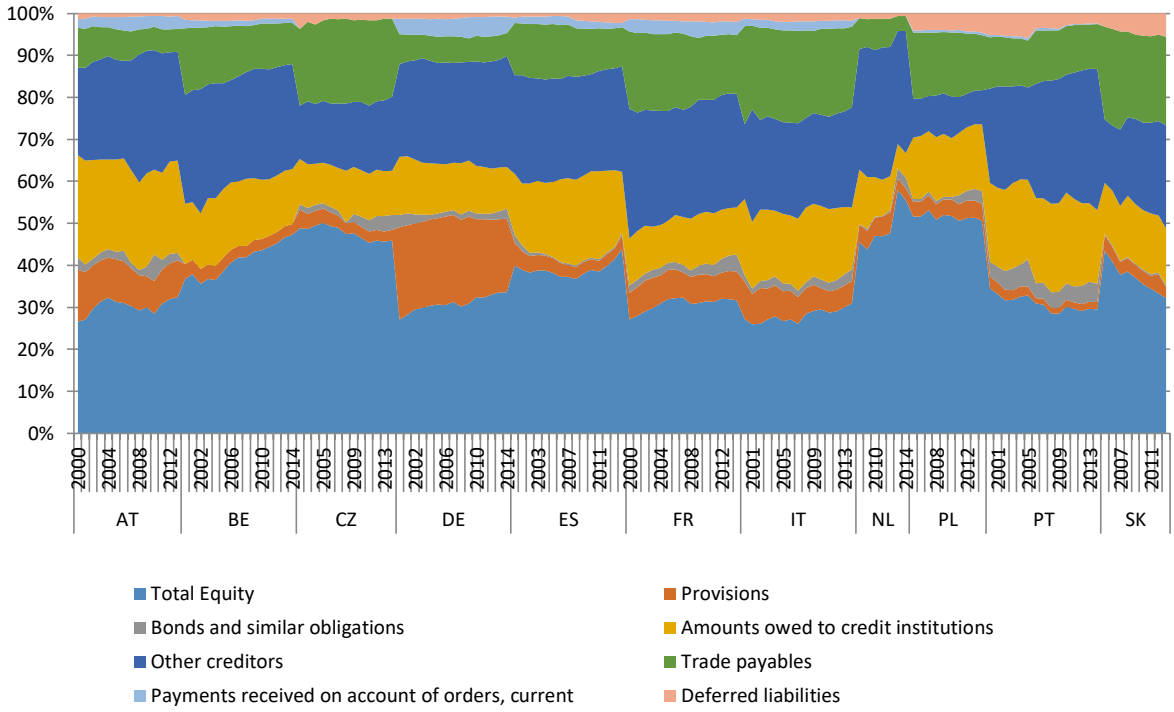
Source: own study based on the review of empirical literature.

Figure 7. Galbraith plot for the effect of collateral on bank credit financing



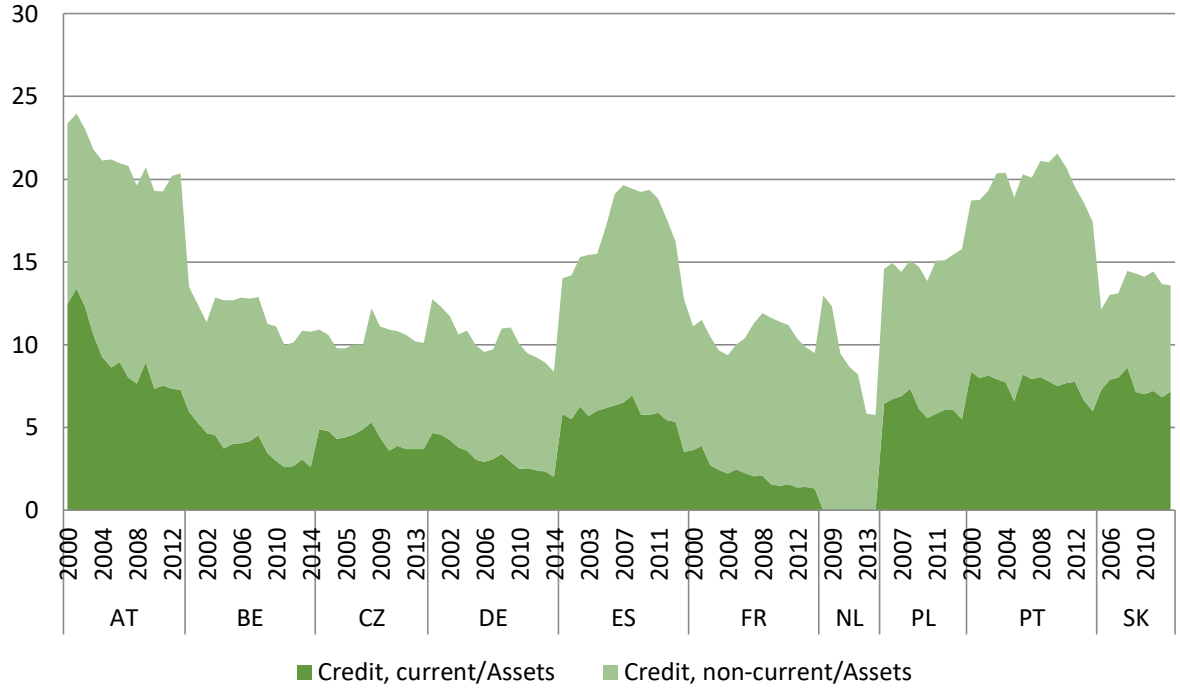
Source: own study based on the review of empirical literature.

Figure 8. Weight of each source of financing on total liabilities



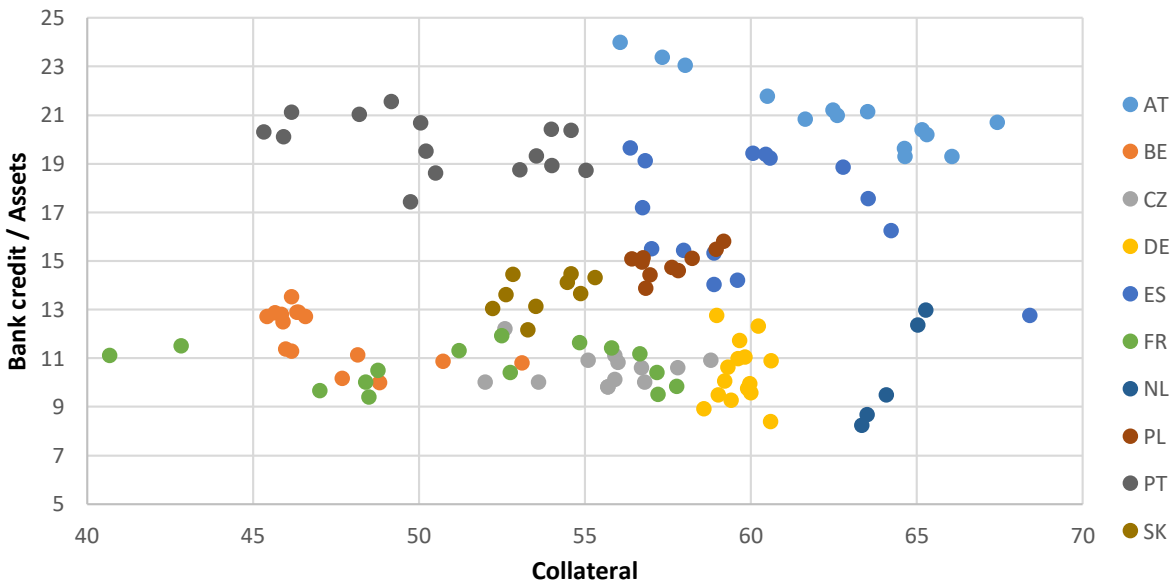
Source: own study based on BACH DATABASE.

Figure 9. Bank credit on total assets



Source: own study based on BACH DATABASE.

Figure 10. Bank credit and Collateral relation



Source: own study based on BACH DATABASE.

Table 1. List of articles included in the last phase of the meta-analysis

Authors and title	Years of research	Country	Publications
Alonso et al. (2005) Determinants of Bank Debt in a Continental Financial System: Evidence from Spanish Companies	1991-1996	Spain	The Financial Review, Eastern Finance Association
Białek, Dzik-Walczak, Nehrebecka (2014)	1995-2011	Poland	Materiały i Studia National Bank of Poland
Boguszewski, Kocięcki (2000) Wpływ polityki pieniężnej na zachowania przedsiębiorstw w świetle danych GUS i badań ankietowych - wybrane zagadnienia	1994	Poland	Bank i Kredyt
Bougheas et al. (2006) Access to external finance: theory and evidence on the impact of firm-specific characteristics	1990-1999	Great Britain	Journal of Banking and Finance
Brown et al. (2011)	2003-2007	Bulgaria	Economic Policy
Berrospide, Meisenzahl, Sullivan (2012), Credit Line Use and Availability in the Financial Crisis: The Importance of Hedging	2006-2008		FEDS Working Paper
Cole, Sokolyk (2016) Who needs credit and who gets credit? Evidence from the surveys of small business finances.	1993, 1998, 2003	USA	Journal of Financial Stability
Cole., Bank Credit, Trade Credit or No Credit: Evidence from the Surveys of Small Business Finances (January 14, 2011). Available at SSRN: http://ssrn.com/abstract=1540221 or http://dx.doi.org/10.2139/ssrn.1540221	1993, 1998, 2003	USA	Office of Advocacy, U.S. Small Business Administration
Cole, Dietrich (2012) SME Credit Availability Around the World, Evidence from World Bank's Enterprise Survey	2006-2011	80 countries	World Bank's Enterprise Survey
Cook (1999) Trade Credit and Bank Finance: Financing Small Firms in Russia	1995	Russia	Journal of Business Venturing
Demiroglu et al. (2012) Bank lending standards and access to lines of credit	1996-2004		Journal of Monetary, Credit and Banking
Dewaelheyns, Van Hulle (2010) Internal capital markets and capital structure: Bank versus internal debt	1997-2001	Belgium	European Financial Management
Ghosh, Sensarma (2004) Does monetary policy matter for corporate governance? Firm-level evidence from India.	1992-2002	India	Advances in Financial Economics
de Haan, Sterken (2000)	1990-1997	EU, Great Britain	De Nederlandsche Bank, Research Memorandum WO&E
de Haan, Sterken (2006)			European Journal of Finance
Huyghebaert, Van de Gucht, Van Hulle (2007), The Choice between Bank Debt and Trade Credit in Business Start-ups	1988-1991	Belgium	Small Business Economics
Jiménez, Ongena, Peydró, Saurina (2010), Credit supply identifying balance-sheet channel with loan applications and grantem loans,	2002-2008	Spain	European Central Bank Working Paper
Jimenéz et al. (2010)	2002-2008	Spain	AMERICAN ECONOMIC REVIEW
Jimenéz, Ongena, Peydró, Saurina, (2012) Credit Supply versus Demand: Bank and Firm Balance-Sheet Channels in Good and Crisis Times	2002-2010	Spain	European Banking Center Discussion Paper
Jimenéz, Ongena, Peydró., Saurina, (2009), Monetary Policy and Credit Crunch: Identifying Simultaneously the Bank Lending and Balance Sheet Channels	1992-2006	Spain	Bank of Spain mimeo
Love, Peria (2014)	2002-2010	80 countries	World Bank Econ Rev
Aghion, Askenazy, Berman, Cette, Eymard (2012)	1993-2004	France	Journal of the European Economic Association

Source: own study based on the review of empirical literature.

Table 2. Summary statistics for the effect of collateral on bank loan financing

Variable	The direction of impact	# regressions	Mean	Median	SE	Minimum	Maximum
Fixed Assets / Total Assets	+	27	0,089	0,139	0,202	-0,401	0,524
	-	15					
	Not	12					

Source: own study based on the review of empirical literature.

Table 3. Linear regression results for publication selection bias

Variables	b (se)	
Publication selection bias		
1/se	-0,1139*** (0,0362)	
constant	2,1118*** (0,5891)	
Publication selection bias + heterogeneity		
Model	**FE**	**RE**
Publication bias (K-variables)		
Constant	0,7868*** (0,1682)	0,8496*** (0,2086)
No. of firms	-5.44e-06*** (9.90e-07)	-5.63e-06*** (1.07e-06)
Study citations	0,00678** (0,0034)	0,0071*** (0,0033)
Genuine empirical effects (Z-variables)		
1/se	-0,1085*** (0,0096)	-0,1106*** (0,0107)
Sector fixed-effects /se	0,1445*** (0,0335)	0,1392*** (0,0323)
N	46	46
F (H_0: *K* variables are jointly not significant)	F(2, 41) = 17.31 Prob > F = 0.0000	F(2, 41) = 16.24 Prob > F = 0.0000
Test for residual between-study variance (of *tau2*=0)		Q_res (41 df) = 1001.21 Prob > Q_res = 0.0000

* Significant at 10%, ** Significant at 5%, *** Significant at 1%. Mean error values are enclosed in round brackets.
Source: own study based on the review of empirical literature.

Table 4. Potential Explanatory Variables for Meta-Regression Analysis

Variables	Definition
Data Characteristics	
Panel data	1 if panel data are used (cross-sectional data are the base)
Time span	The number of years of the data used
No. of firms	Sample size/time span
Average year	Average year of the data used
Year of publication	Year when an article was published
Large	1 if large enterprises are investigated
Capital groups	1 if capital groups are investigated
Estimation Characteristics	
Differences	1 if the regression is estimated in differences
Year fixed-effects	1 if year fixed-effects are included
Sector fixed-effects	1 if sector fixed-effects are included
OLS	1 if OLS used for estimations (random effects, GMM, WLS, and others as a base)
Macro	1 if macroeconomic conditions variables are included
One-step estimations	1 if coefficients are estimated in one-step
Specification Characteristics	
Firm size	1 if the specification controls for firm size (sector competition)
One country	1 if one country firms are included in the regression
Lagged spillover	1 if the coefficient represents lagged foreign presence
Europe	1 if European countries are investigated
Publication Characteristics	
Publication date	The publication year of the study
Published	1 if the study was published in a peer-reviewed journal
Study citations	Study citations in Google Scholar per age of the study, as of May 2016
Journal rank	1 if the study published in high journal rank, 2013 ISI impact factor
Working paper	1 if research is a working paper

Source: own study based on the review of empirical literature.

Table 5. Country data level analysis of bank loans ***(Continues on the next page)***

Variable	Whole sample		Small firms		Medium firms		Large firms	
	RE	GLS	RE	GLS	RE	Random-effects linear models with an AR(1) disturbance	RE	Random-effects linear models with an AR(1) disturbance
Collateral (*Fixed Assets / Total Assets*)	-0,187	-0,124	-0,041	-0,170	-0,269	-0,180	0,014	-0,045
	(0,035)	(0,038)	(0,069)	(0,057)	(0,063)	(0,054)	(0,053)	(0,042)
	[-5,3]	[-3,3]	[-0,6]	[-3,0]	[-4,3]	[-3,4]	[0,3]	[-1,1]
Profitability (*ROA = Net Income / Total Assets)*	-0,489	-0,225	0,122	-0,085	-0,429	0,067	-0,181	0,038
	(0,130)	(0,095)	(0,300)	(0,234)	(0,242)	(0,192)	(0,163)	(0,131)
	[-3,8]	[-2,4]	[0,4]	[-0,4]	[-1,8]	[0,4]	[-1,1]	[0,3]
Interests on financial debts/ Total Assets	0,743	1,325	1,844	1,423	-0,176	0,052	0,696	2,237
	(0,421)	(0,370)	(0,638)	(0,441)	(0,654)	(0,496)	(0,585)	(0,486)
	[1,8]	[3,6]	[2,9]	[3,2]	[-0,3]	[0,1]	[1,2]	[4,6]

Size (*Logarithm of Total Assets*)	-0,553 (0,336) [-1,7]	-0,961 (0,366) [-2,6]	-1,386 (0,589) [-2,4]	-3,121 (0,633) [-4,9]	1,522 (0,618) [2,5]	0,263 (0,683) [0,4]	-1,177 (0,486) [-2,4]	-0,651 (0,520) [-1,3]
Constant	37,341 (7,054) [5,3]	39,089 (7,893) [5,0]	45,209 (12,014) [3,8]	84,714 (12,890) [6,6]	6,552 (10,833) [0,6]	22,717 (12,577) [1,8]	33,412 (9,923) [3,4]	23,450 (10,193) [2,3]
N	143							
Diagnostic	**Statistical tests**	**p-value**	**Statistical tests**	**p-value**	**Statistical tests**	**p-value**	**Statistical tests**	**p-value**
Test for panel-level heteroskedasticity	151.33	0.0000	158.15	0.0000	2.13	0.9952	-84.94	1.0000
Test for panel-level autocorrelation	29.476	0.0003	13.669	0.0041	52.296	0.0000	-0.034	0.9731
Test of cross sectional independence	1.816	0.0694	0.802	0.4225	0.666	0.5057	8.147	0.0171

Mean error values are enclosed in round brackets, t Student – in square brackets.
Source: own study based on BACH DATABASE.

Table 6. Description of variables used in the debt of polish enterprises model

Variable	Definition
Debt1	(Long-term debt+ Short-term debt) / Total assets
Debt2	Short-term debt / Total assets
Debt 3	(Long-term debt+ Short-term debt) / (Total debt+Equity-Revaluation reserve)
Firms' characteristics	
Company size	Logarithm of revenues
Profitability	EBIT/ total assets
Collateral	Tangible assets/total assets
Non-interest tax shield	Depreciation/total assets
Interest tax shield	Interest/total assets
Intangible assets	Intangible assets /total assets
Growth opportunities	(Revenue from sales (t) – Revenue from sales (t-1)) / Revenue from sales $(t-1)_1$
Current ratio measure	Current assets/Short-term liabilities
Quick ratio measure	Current assets and inventories/Short-term liabilities
Effective tax rate	The current part of income tax/profit before tax
Inverted index bankruptcy	Nehrebecka, Dzik (2016)
Grants	Binary variable, takes 1 if firm got grants
IAS	Binary variable, takes 1 if firm have set of basic accounting records which are prepared and audited in line with IAS
Macroeconomic variables	
GDP	The growth of Gross Domestic Product
WIBOR3M	3-month WIBOR interest rate
REER	Effective rate of exchange

Tabel 7. Descriptive statistics of variables used in the model

Variable	Mean	Std. dev	Q1	Median	Q3	Min	Max
Debt	0,3928	0,2137	0,2240	0,3814	0,5493	0,0000	0,9821
Revenues	536923	2769538	22256	79039	255306	0,0000	79000000
Profitability	0,0691	0,0846	0,0015	0,0465	0,0965	0,0000	0,7770
Collateral	0,2661	0,2218	0,0729	0,2224	0,4102	0,0000	0,9673
Non-interest tax shield	0,0363	0,0334	0,0136	0,0294	0,0489	0,0000	0,4537
Interest tax shield	0,0066	0,0105	0,0000	0,0000	0,0101	0,0000	0,0354
Intangible assets	0,0312	0,0796	0,0008	0,0048	0,0198	0,0000	0,8654
Growth opportunities	0,1630	0,3772	-0,0537	0,0942	0,2989	-0,4331	1,1907
Current ratio measure	2,2986	1,9178	1,1179	1,5883	2,6870	0,5611	8,3258
Effective tax rate	0,0669	0,1103	0,0000	0,0000	0,1480	0,0000	0,3420
Inverted index bankruptcy	1,0447	2,2484	0,3887	1,0000	1,8662	-4,6108	6,1899
Median sector debt	0,3737	0,0949	0,3089	0,3552	0,4397	0,2477	0,6204

Table 8. Debt determinants – model estimation results. ***(Continues on the next page)***

Explanatory variable	Trade-off theory	Pecking order theory	Base model (Debt 1)	Models with effect of the sector		Models with effect of the size		Robust models	
				Manufactury	Services	Small	Large	Debt 2	Debt 3
Debt in t-1			0,5845 *** (0,0021)	0,6417 *** (0,0087)	0,5900 *** (0,0040)	0,5545 *** (0,0057)	0,7646 *** (0,0063)	0,4236 *** (0,0028)	0,5855 *** (0,0035)
Firms' characteristics:									
Company size	+	-	0,0071 *** (0,0003)	0,0122 *** (0,0005)	0,0063 *** (0,0004)	0,0041 *** (0,0007)	0,0135 *** (0,0017)	0,0104 *** (0,0002)	0,0081 *** (0,0004)
Profitability	+/-	-	-0,1169 *** (0,0076)	-0,1219 *** (0,0184)	-0,1747 *** (0,0109)	-0,0445 *** (0,0178)	-0,2777 *** (0,0123)	-0,0887 *** (0,0081)	-0,1383 (0,0070)
Collateral	+	-	0,1141 *** (0,0044)	0,0736 *** (0,0110)	0,0869 *** (0,0047)	0,0620 *** (0,0087)	-0,0323 *** (0,0099)	0,0277 *** (0,0039)	0,0971 *** (0,0042)
Non-interest tax shield	-		-0,3252 *** (0,0205)	-0,3911 *** (0,0740)	-0,1950 *** (0,0167)	-0,1605 *** (0,0432)	0,0068 (0,0452)	-0,1145 *** (0,0180)	-0,2587 *** (0,0209)
Interest tax shield			1,9304 *** (0,0322)	2,3922 *** (0,0862)	1,6665 *** (0,0575)	1,6955 *** (0,1044)	1,6507 *** (0,0680)	2,6585 *** (0,0417)	1,4653 *** (0,0383)
Intangible assets			0,2169 *** (0,0111)	-0,0871 *** (0,0407)	0,0682 *** (0,0142)	0,2219 *** (0,0234)	-0,0872 *** (0,0324)	0,2024 *** (0,0114)	0,1607 *** (0,0103)

Growth opportunities	-	+	0,0358 (0,0015)	***	-0,0124 (0,0055)	**	0,0760 (0,0021)	***	0,0197 (0,0027)	***	-0,0119 (0,0068)	*	0,0827 (0,0014)	***	0,0481 (0,0012)	***
Current ratio measure	+	-	0,0029 (0,0002)	***	0,0052 (0,0006)	***	0,0055 (0,0003)	***	0,0031 (0,0006)	***	0,0156 (0,0011)	***	-0,0008 (0,0002)	***	0,0025 (0,0004)	***
Effective tax rate			-0,0934 (0,0044)	***	-0,0509 (0,0062)	***	-0,0433 (0,0057)	***	-0,0631 (0,0108)	***	-0,0282 (0,0072)	***	-0,0696 (0,0044)	***	-0,0698 (0,0038)	***
Inverted index bankruptcy			-0,0032 (0,0003)	***	-0,0017 (0,0003)	***	-0,0045 (0,0003)	***	-0,0072 (0,0005)	***	-0,0018 (0,0003)	***	-0,0031 (0,0002)	***	-0,0035 (0,0002)	***
Investment rate			0,0079 (0,0010)	***	0,0135 (0,0036)	***	0,0026 (0,0009)	***	-0,0106 (0,0019)	***	0,0033 (0,0021)		-0,0047 (0,0009)	***	0,0080 (0,0012)	***
Median sector debt			0,2769 (0,0057)	***		***	0,1938 (0,0071)	***	0,2540 (0,0248)	***	0,1366 (0,0119)	***	0,2847 (0,0052)	***	0,3200 (0,0059)	***
Grants			-0,0092 (0,0020)	***	-0,0194 (0,0024)	***	-0,0197 (0,0053)	***	-0,0080 (0,0054)	***	-0,0197 (0,0029)	***	0,0092 (0,0011)	***	-0,0057 (0,0019)	***
IAS			0,0273 (0,0014)	***	0,0215 (0,0030)	***	0,0170 (0,0022)	***	-0,0152 (0,0051)	***	0,0322 (0,0022)	***	0,0256 (0,0013)	***	0,0168 (0,0016)	***
Macroeconomic variables																
GDP			0,0027 (0,0002)	***	0,0053 (0,0005)	***	-0,0008 (0,0005)		0,0008 (0,0008)		0,0037 (0,0005)		0,0049 (0,0002)	***	0,0030 (0,0002)	***
ΔWIBOR 3M			-0,0019 (0,0001)	***	-0,0032 (0,0002)	***	-0,0024 (0,0003)	***	0,0000 (0,0003)		-0,0009 (0,0003)	***	-0,0029 (0,0001)	***	-0,0015 (0,0001)	***
REER			-0,0012 (0,0001)	***	-0,0023 (0,0002)	***	-0,0008 (0,0002)	***	-0,0022 (0,0002)	***	-0,0012 (0,0002)	***	-0,0026 (0,0001)	***	-0,0013 (0,0001)	***
Constant			0,0510 (0,0094)	***	0,1680 (0,0176)	***	0,0645 (0,0204)	***	0,2267 (0,0207)	***	-0,0216 (0,0294)		0,1940 (0,0084)	***	0,0442 (0,0099)	***

	Test statistic (p-value)						
Test	-9,1414 (0,0000)	-6,0252 (0,0000)	-6,1344 (0,0000)	-6,2285 (0,0000)	-7,1728 (0,0000)	-9,6354 (0,0000)	-8,6573 (0,0000)
Arellano-Bond Test for the first-order autocorrelation	1,2471 (0,2124)	0,2628 (0,7927)	1,4605 (0,1442)	1,3520 (0,1764)	0,3436 (0,7312)	0,5665 (0,5711)	1,1904 (0,2339)
Arellano-Bond Test for the second-order autocorrelation	344,2584 (0,5765)	157,3900 (0,9804)	187,2700 (0,6416)	179,3050 (0,7832)	197,2016 (0,4424)	341,88 (0,6117)	344,51 (0,5727)

THE SOCIO-ECONOMIC DETERMINANTS OF TOURISM DEMAND: THE CASE OF PUSH FACTORS IN AN EMITIVE REGION

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ABSTRACT
This paper analyses the socio-economic determinants of outbound tourism demand. The relative and absolute importance of tourism in people's expenditure budgets has risen dramatically over past few decades. International tourists' expenditure has consequences not only on the wellfare of tourists themselves but also for the residents of the areas they visit. The significant level and repercussions of international tourism demand provide a strong case for better understanding of tourists' decision-makin process. The purpose of this paper is to analyse tourism demand determinants using panel data approach and to asertain whether variables of social as well as an economic nature are important in determinantion of international tourism for emitive region. The novelity of the paper is in the acknowledgement of the tourists' social environment to be an important driver of demand for outbound tourism besides the well teoretically and empirically aknowledged economic determinants. Furthermore, the paper departs from the existing empirical literature emphasis on the push and pull determinants of international tourism demand taken together, showing the need to use push and pull factors separately in specific cases. Finally, the paper provides the basis for the formulation of panel data models for estimating tourism demand, and hence, for more accurate results and more appropriate policy implications.
Keywords: *emitive tourism demand, international tourism, panel data, push factors*

1. INTRODUCTION

World international tourist flows have been intensely growing since the mid of 20th century. According to World Tourism Organization (UNWTO) data, tourist arrivals in the world soared from 25 million in 1950 to 278 million in 1980, 674 million in 2000, and 1186 million in 2015 (UNWTO, 2016). Likewise, international tourism receipts earned by destinations worldwide have surged from US$ 2 billion in 1950 to US$ 104 billion in 1980, US$ 495 billion in 2000, and US$ 1260 billion in 2015. Today tourism represents 7% of world's trade in goods and services and as a worldwide export category, ranks third after fuels and chemicals and ahead of food and automotive products. The growing importance of tourism for the world economy is mirrored by the soaring number of papers focusing on many of the themes that characterise this economic sector. One aspect that has cought the attention of economists is the analysis of the determinants of tourism demand. The present work can be catalogued in this stream of literature.

This present paper tries to innovate by analysing the determinants of international outbound tourism flows thus with the emphasis on push factors. According to Leiper (1990), tourist are pushed by their own motivation towards places where they expect their needs to be satisfied. The traveling decision is generated in an emitive country through tourist's decision making process. The emitive country represents the market that generates the primary initiative for traveling. At the end the group of push factors through tourist decision making process form the aggregate level of international tourism demand and domestic tourism demand. Candela and Figini (2012) describe tourist's decision making process as a multi stage process, that begins with the budget allocation between other needs and traveling, and ends with the traveling to a chosen destination. Fletcher (1996) differs the factors affecting aggregate tourism demand into push and pull factors. Push factors are characterised by the tourists' usual environment in the

country of residence or origin country and pull factors represent the characteristics of a destination country. Vanhoe (2005) points out that besides push and pull factors of tourism demand the propensity to travel of the residents of emitive region is valuable indicator of efective aggregate tourism demand (the demand that is actually realised, Cooper, Fyall, Gilbert, Vanhill, 2008). Middletone and Clarke (2001) underline that although the deeper insights into the motivational factors of individual tourists can be of a great value to marketing strategies experts in a destiantion country, the central focus of the tourism demand analysis should be on the determinants of aggregate tourism demand. The aggregate tourism demand is determined by different economical, social and psihological factors in an origin country or emitive region (Papatheodorou, 2010; Cooper, Fyall, Gilbert, Vanhill, 2008; Burkart, Medlik, 1981).
The analysis of socio-economic determinants of tourism demand in this paper will contribute to a better understanding of the demand for international outbound tourism. As a global phenomenom, the rise of outbound tourism drives the attention of researchers in defining its determinants. This paper aims to understand these determinants in the context of socio-economic environment in an emitive or origin country (Papatheodorou, 2010). The emitive region used as a sample for the study of determinants of outbound tourism demand in this paper is UNWTO defined tourist region Europe, the number one emitive tourist region in the world for more than 50 years (UNWTO, 2016).
The literature review and the empirical background for the analysis in this paper are presented in the paragraph followed after introduction. Tthe model used for the analysis is presented and the results are discussed in the subsiquent paragraphs. Based on the presented and discussed results of empirical analysis the author drows implications for tourism practitioners and recomendations for further research. The implications of the results for policy formation will also be discussed in the conclusions paragraph. The last paragraph of the paper gives the list of bibliography.

2. INTRODUCTION TO INTERNATIONAL TOURISM DEMAND ANALYSIS

International tourism demand of a certain country is defined as the sum of goods and services that satisfy tourist needs and comprises of outbound and inbound tourism demand (Vanhoe, 2005; Candela, Figini, 2012). Since international tourism demand besides the travelling or movement of people means expenditure as well (outflow from an emitive region and inflow to a destination), the analysis of international tourism demand and its determinants should start from analysing individual tourist-consumer's behavior and should finish with aggregate level of international tourism demand (Candela, Figini, 2012; Stabler, Papatheodorou, Sinclair 2010). Tourism demand is the foundation on which all tourism-related business decisions ultimately rest. Therefore, the objectives of analysing tourism demand and its determinants are three-fold. First, the analysis of tourism demand determinants provides information on tourism consumer behavior and the level of demand. Second, it gives the enough data to form accurate forecasting models of tourism demand which are essential for efficient planning by tourism-related bussinesses, particulary given the perishability of tourism products (Song, Witt, Li 2009). And third, it allows the analysis of the relationships between determinants of international tourism demand, demand level and the economic impact of tourism expenditure in both emitive and destination countries (Allen, Yap, Shareef, 2009). According to Jones and Chu Te (1995) the analysis of tourism demand determiants in general aims to define leading indicators. Therefore this study is examining leading indicators of outbound tourism demand since outbound tourism is generated in emitive country and is influenced by emitive countire's socio-economic environment.

2.1. Literature review

The analysis of tourism demand and its determianants has been droven to scientific attention with the aim to determine relevant factors that have impact on its level and tourists' preferences (for example expenditure decision between outbound and domestic tourism, the destination choise, type of tourism, etc.). First pioneer empirical studies are documented in 1960s (Guthrie, 1961; Gerakis, 1965; Gray, 1966; referenced by Song, Witt, Li, 2009). Since that time empirical studies have been ever developing in varieties of scientific interests, quality of theoretical backgrounds and improvements in methodological approaches. Frechtling (1996) classified the determinants of tourism demand in three groups of factors: push, pull and resistance. Push factors are determined in an emitive country such as number of population, income, GDP, age structure, educational attainments, free time, family structure and so on. Climate, fashion, relatives, manifestations and complementary destinations are in the group of pull factors. The resistance factors impose bounderies to traveling and consists of prices, distance, ime period in a year, border controls, visa requirements, security issues and so on. In the OECD study Dwyer, Forsyth and Prasada (2001) differ three groups of tourism demand determinants (i) socioeconomic and demographic determinants (those correspond to push factors defined by Fretchling (1996), (ii) qualitative determinants (image, service quality, marketing, attractions) and (iii) price factors (traveling costs, lodging costs, etc.). Middleton, Fyall and Morgan (2009) formed nine groups of factors that determine tourism demand: economic, competitive prices, demography, geography, socio-cultural, mobility, nationality, media nad ICTs.

There are two approaches to the analysis of tourism demand determinants (Görmüs and Göçer, 2010). Those which start with the analysis of theoretical backgrounds for defining determinants and later their analysis (Li, Song, Witt, 2005; Song, Li, 2008; Stabler, 2010) and those which are simply analysing elasticity of tourism demand and forecasting tourism demand for a certain destination with the model based on predifined determinants (for example Durbarry, Sinclair, 2003; Eilat, Einav, 2004). Görmüs and Göçer (2010) induce that differences in the empirical studies of tourism demand determinants emerge depending on these different approaches imployed in the studies. Nevertheless there are differences that emerge as a consequence of different proxy variables used to measure tourism demand and defined determinants likewise the different methodological approaches used as well.

In a review of recent empirical studies on tourism demand and its determinants Song and Li (2008) conclude that in last twenty years the measure for dependent variable tourism demand were mainly total international tourist arrivals for countries under consideration. According to Akal (2004) the second most frequently used variable in empirical studies as proxy for tourism demand has been tourism expenditure or revenue. Lim (2006) argues that measuring tourism demand by aggregate tourism expenditure or revenue is an appropriate measure of tourism demand especially if the aim of the study is, besides the analysis of determinants of tourism demand, also the analysis of economic impact that tourism demand has in a destination. There are also some empirical studies that have used other proxy variables for tourism demand depending on type of tourism analysed (business trips, visiting friends and relatives) (for example Turner, Witt, 2001; Kulendran, Wong, 2005). Li; Song and Witt's (2005) review of empirical studies for period 1960-2002 has accounted 420 studies that used different methodological approaches and different specification of countries or coutry groups for the analysis of tourism demand determinants and elasticities. In these studies most frequently used sample of destination countries individually or grouped have been France, Great Britain, United States, Australia and Spain. Furthermore, Japan and Germany are frequently classified as emitive regions, or generators of tourism demand (Song, Li 2008). In conclusion, United States and Western Europe are concidered to be traditional both, tourist destinations and emitive regions as well.

A literature review of studies investigating tourism demand indicate that the most frequently used explanatory (independent) variables of international tourism demand are income (Dirtakis, 2004), prices, exchange rates, transportation costs and some dummy variables (Wong, 2009). Lim (2006) summarized variables used in empirical studies of tourism demand determinants for 2000-2006 period. This review showed that mainly all (96%) of analyzed empirical studies have used income as one of explanatory variable, followed by prices (94% of studies) and costs of travel (52% of studies) (see references by Surugiu, Leitão, Surugiu, 2011). After 2010 the variables used as determinants of tourism demand have been more differenciated from GDP, relative prices, geographic distance, population, exchange rates and dummy variables (for crisis etc.) (see also Surugiu, Leitão, Surugiu (2011) for more references).

The variety of explanatory factors used in tourism demand determinants analysis is undoubtely very large. Nonetheless, the most prominent and frequently used variable in these studies is income in tourists' origin country. Income affects the ability of consumers to pay for their outbound travel (Lim, Min, McAleer, 2008). Besides income, prices determine the level of tourists' expenditure in destination country. Eilat and Einav (2004) argue that relative exchange rate is a good proxy for prices since it measures inflation as well. According to Seddighi and Shearing (1997) the elements of tourism products prices are the costs of travel to destination and the cost of living in the destination (referenced by Allen, Shareef, Yap, 2007). The review of the results in the empirical studies that used prices as one of explanatory variables for tourism demand showed also mixed results abouth the strenght of the influence. Ibrahim (2010) in the analysis of international tourism demand determinants showed that tourism demand is more sensitive on prices than income or trade patterns. Seetaram (2010) analyzed the elasticitiy of international tourism demand for Australia and showed that international tourism demand for Australia is inelastic on income, prices and international air travel costs. Suruguu, Leitao and Suruguu (2011) conclude that Romanian international tourism demand is positively determined by GDP, number of residents in Romania and external trade relationships between Romania and emitive country, while negative effects are founded in geographic distance between Romania nad emitive country. Neumayer (2003) also shows that the human relations proxied by crime, freedom and human rights situation also affect international tourism demand in general.

All the above mentioned empirical studies indicate that there are large sets of socioeconomic variables that influence tourism demand. There is still no scientific concensus on common set of leading indicators of international tourism demand (Morley, 1994). Furthermore, there is no general conclusion on the usefullness of leading indicators of international tourism demand in practice (Yap, Allen, 2011). Besides, Kulendran and Witt (2003) showed that the precision of the forecasting models of tourism demand based on determinants had not outperfomed simple time series forecasting models. Nonetheless, Jones and Chu Te (1995) and Allen, Yap, Shareef (2009) find useful the analysis of leading indicators of international tourism demand for the purpose of forecasting tourism demand and planning marketing strategies for international tourism and domestic tourism. According to Yap and Allen (2011) explanatory variables such as ours of paid work, household depts, expectations that are used in analysing economic activity have been neglected in tourism demand analysis. Their study showed that for Australian domestic tourism demand those variables were important. Papatheodorou (2010) gives critique to so far empirical studies of international tourism demand because they mainly combine push and pull factors together in the analysis which does not improve the insights about the generation of international tourism demand. The analysis of push and pull factors separatelly avoids simple elasticity analysis and thus provides more profound insights into leading indicators of tourism demand (Papatheodorou, 2010). According to Lim (2006) the analysis of determinants of international tourism demand should use dynamic dimensions, such as time lag between the decision to travel and actual travel, while Papatheodorou (2010) highlights the

need to base the international tourism demand model on consumer behaviour theory, multi stage decission process and budgeting, demonstration process and intertemporal dimmension of tourism consumption in the contemporary tourism.

2.2. Defining the determinats of international tourism demand in the study

In a multi stage decission-making process the most important stage us the first one – the allocation of income to other goods and services and to tourism. The first stage is mostly influenced by push factors and according to Candela and Figini (2012) the crucial stage in tourism expenditure decission. These push factors are reflections of consumer preferences and socioeconomic environment in the origin country (Frechtling, 1996; Lee, O'Leary, Lee, 2002). In line to what emerges from the recent empirical studies of international tourism demand determinants this study aim at detecting socioeconomic factors that affect the first-stage decision in the process of forming tourism demand. In other words, the outbound tourism demand determinants are analyzed based on the hypothesis that outbound tourism demand is influenced by socioeconomic factors in the tourist generating country or origin country. The interaction between tourism and macroeconomic variables such as income and prices has been discussed earlier in the paper. The inovation brought by this study is in incorporation of measurement of social factors in the model of outbound tourism demand determinants. In that way the defined model allows for the measurement of social factors influence that might bring into light some new insights. The aim of this paper is not in the elasticity analysis of tourism demand but in the analysis of leading indicators of outbound tourism. With this in mind, the study defines explanatory variables of outbound tourism demand with the aim to depict (i) the measure of 'the state of economic activity in origin country' (ii) the measure of international competitiveness of origin country and (iii) the measure of 'the state in social environment' in the origin county. In that way the paper should contribute to the empirical analysis of outbound tourism determinants. According to Dwyer, Forsyth and Prasada (2001) and Yap and Allen (2011) international tourism demand is not only influenced by the current level of income but by also by past earnings and expectations on future earnings. Therefore independent variables in this study are taken in lagged values, which is also novelity of the paper. Finally, the general model of outbound tourism demand (OTD) determinants in this study is presented as follows:

$$OTD=f(NNI_{t-1}, HSR_{t-1}, REER_{t-1}, OTD_{t-1}).$$

GDP is one of the variables used generally in estimating tourism demand since it describes the level of development. The novelity of this study is in using net national income (NNI) as a proxy for the level of development in origin country. Song, Witt and Li (2009) argue that if the analysis of international tourism demand determinats aims to model motivational factors for all types of tourism, which is the case for this study, the NNI is appropriate measure while gross domestic product is better measure if only business trips determinants are analyzed. In this study NNI is given per capita and in that way the size of an origin country is taken into the consideration as well. According to Papatheodorou (2010) the studies of international tourism demand have neglected expectations on future economic activity as important factor of tourism demand. To measure expectations this study employs the household saving rate (HSR) as proxy variable, indicated by the share of household saving in GDP of an origin country. The competitiveness of an origin country is measured by real effective exchange rate (REER) as proposed by Song, Witt and Li (2009). This is also the novelity, since majority of the studies in this field use simple exchange rate between countries, while this indicator is formed by dividing the nominal effective exchange rate (a measure of the value of a currency against a weighted average of several foreign currencies) by a price deflator or index of costs. The indicator in this study is presented by index value, base year is 2005, and the rise of index means loss of the

competitiveness. To measure 'social preference factor' this study uses the value of outbound tourism demand (OTD_{t-1}) from previous period. In that way, besides mentioned preferences, the effect of 'word of mouth' is also depicted, which is according to Papatheodorou (2010) one of the major indicators of outbound tourism and repeatedly visits to a certan destination countries. Finally, the appropriate measure of outbound tourism demand according to Lim (2006) is tourism expenditure of origin country residents on tourism abroad. Thus the value of expences on travelling abroad per capita is considered to be the proxy for dependent variable OTD.

The positive parameters are expected for NNI and OTD while the signs for HSR and REER parameters are still not clearly defined in the theory. Depending on the situation if the influence of expectations is higher than the influence of the statement 'once a tourist always a tourist' the expected sign for HSR parameter is mixed. If HSR rises this is the mirror to negative expectations in an economy but the effect on OTD can be negative or positive. The fall in OTD should outline the luxury nature of tourism product while the positive effect on OTD should mean that tourism is necessarily good and that once a touris stays always a tourist. Since REER shows international (trade) competitiveness and its rise means the fall of the competitiveness for origin country it is expected to have negative effects on OTD. Nevertheless, the loss of the competitiveness can make tourists to stay home or even go abroad, depending if the negative effect of the fall of origin country curreny's value is outperformed by inelasticity of OTD on the change of prices in origin country (see Song, Witt, Li, 2009). This is because REER measures the ability of tourists to pay for goods and services in a destination country. Thus the expected sign is not clear for this variable as well. The formulation of OTD model presented here brings into light some neglected socioeconomic indicators of OTD such as expectations, firs stage in tourism decission makin process and budgeting, and finally the effects of previous tourism experiences and propensity to travel of residents of origin country.

3. MODEL SPECIFICATION AND RESULTS

The analysis od tourism demand determinants in most of the studies presented in previous paragraphs was mainly performed using time series and econometric models. Nevertheless, in the post 2005-period the larger use of panel data analysis in the empirical studies can be observed (Garín-Munõz, 2006; Seetanah, Durbarry, Ragodoo, 2010).

Panel data analysis has some advantage over the time series econometric models. It incorporates much richer information from both time series and cross sectional data. This approach also reduces the problem of multicollinearity and provides more degrees of freedom in the model estimation. Therefore, it is suitable for analysing determinants of tourism demand and forecasting of tourism demand when the time series for all variables are relatively short and cross-sectional information on these variables are also available (Song, Li, 2008; Song, Witt, Li, 2009; Seetaram, Petit, 2012).

To analyze determinants of outbound tourism demand this study has choosen as representative sample the tourism region Europe defined by UNWTO. Tourism region Europe is the main source market of outbound tourism and takes first place in average tourism expenditures level globally. Annual data for all variables were obtained from the European Union Statistic Database (EUROSTAT, 2015). The data are compiled within a panel data framework. The panel data set includes 25 countries[1] in tourism region Europe (out of 33) and 12- years covering the period from 2002 to 2015. Since OTD is of a dynamic nature (it depends on past behaviour) the analysis is performed by dynamic panel model using Blundell-Bond two step estimator

[1] Belgium, Bulgaria, Czech Republic, Denmark, Germany, Estonia, Ireland, Spain, France, Italy, Cyprus, Latvia, Lithuania, Hungary, Netherlands, Austria, Poland, Portugal, Slovenia, Slovakia, Finland, Sweden, United Kingdom, Norway, Switzerland.

(detailed information on panel data analysis and static and dynamic modeling is given in for example Baltagi, 2008). The following dynamic panel data model is formed:

$$OTD_{it} = \mu + \gamma OTD_{i,t-1} + \beta_1 NNI_{i,t-1} + \beta_2 HSR_{i,t-1} + \beta_3 REEXR_{i,t-1} + \alpha_i + \varepsilon_{it}$$
$$i = 1, 2, 3 \ldots 32, 33; \quad t = 2002, 2003, \ldots 2014, 2015.$$

where i=1,2, ...,N counts for each country in the panel and t=1, ..., T refers to the time period. μ denotes an intercept, γ is a parameter of lagged dependent variable and β_1, β_2, β_3 are the parameters of lagged exogenous variables NNI, HSR and REEXR, respectivelly. It is assumed that ε_{it} are IID (0, σ_ε^2). α_i represents unobservable individual-specific effect that is time invariant and it accounts for any individual. Before model estimation[2] it is necessary to confirm there is no problem of multicollinearity among independent variables. As there is no formal test for multicollinearity in panels, the use of pair wise correlation matrix in this step is needed in detection of possible problem of correlation among independent variables (Baltagi, 2008). Most of the correlation coefficients show weak correlation between variables since pair wise correlations matrix consists of correlation coefficients between independent variables ranging from -0.1611 to 0.7957.[3] Gujarati and Porter (2008) point out that serious problem of multicollinearity exists only if some of Pearson's correlation coefficients between the two independent variables in the model exceed the value of 0.8 (referenced by Šimundić, Kuliš, 2016).

Two step Blundell Bond GMM estimator is used for model estimation because one step estimation assumes the error terms to be independent and homoskedastic across countries and over time (Višić, Škrabić Perić, 2011). Two step estimator relaxes the assumption of independence and homoscedasticity by using the residuals obtained from the first step estimation to construct a consistent estimate of the variancecovariance matrix. Thus, when the error term α_i is heteroskedastic the two step estimator is more efficient. The specification of the model has three satisfactory diagnostic statistics. Specifically, the Sargan test doesn't rejected the over-identification restrictions; the absence of first order serial correlation is rejected at statistical significance at 10% while the absence of second order serial correlation is not rejected. Thus the results of the diagnostic statistics confirm the validity of the model. Furthermore, the parameter of lagged dependent variable is positive and statistically significant justifying performed dynamic panel data analysis.

Table following on the next page

[2] Due to the lack of space the descriptive statistic is not given in this paper layout.
[3] To meet the page number requirements the pairwise correlation matrix is not given.

Table 1: Estimation Results (Blundel and Bond GMM System Estimator) for model of outbound tourism demand determinants (authors calculations; software Stata 13.0)

Explanatory variables	Coefficients ß
L.OTD	0,2508218 *** (0,0057635)
L.NNI	32,09433*** (0,314777)
L.HSR	-4704,653*** (551,5762)
L.REER	-3272,561*** (464,7153)
Number of observations	222
Number of groups	25
Number of instruments	24
Sargan test (p-value)	0,3105
m1 test (p-value)	0,2297
m2 test (p-value)	0,2566
Notes: * p< 0,1, ** p< 0,05, *** p< 0,01 Standard errors in parentheses.	

The results indicate that outbound tourism demand is influenced positivelly if net national income rises in previous period, which is in line with the theory. The importand issue is that the negative expectations about the trend of the economic activity in origin country measured by the rise in HSR in previous period reduce current outbound tourism. This confirms that outbound tourism is a luxury good for the tourists in the region under study. The value of the REER parametar shows that the loss of the competitiveness (the rise of the REER indicator) has negative influence on outbound tourism and this was expected. Although, Song, Witt and Li (2009) in their study captured positive sign for EXR variable, this was not the result in this study. This study results aknowledge that the negative effects of the fall in the value of local currency on outbound tourism demand outperforms the positive effects of inelasiticity of outbound tourism demand on price changes in origin county. Furthermore, the model confirmed the dynamic nature of outbound tourism demand and the positive influence of previous tourism and word of mouth on the level of present outound tourism demand.

4. CONSLUSION

Tourism has boasted virtually uninterrupted growth over time, despite occasional shocks, demonstrating the sector's strength and resilience. This study indicates the socioeconomic nature of outbound tourism and brings new insights to this streem of literature. The achieved level of economic development, word of mouth and previous tourism activities affect the level of present outbound tourism positively, while present outbound tourism is negativelly related to the previous rise in household saving rate meaning that tourism is luxury good sensitive on negative expectations about the trends in economic environment. Furthermore, the negative effects of the fall in competitiveness on outbound tourism suggests that maybe outbound tourism is replaced with domestic one, or postponed for some other better times. This can be usefull for toruism business practicioners and policy makers especially when such information are used to plan economic activites or development strategies.

There are some limitations of this study. The sample size and the time period for the analysis affect the generalizability of the results. However, the results are logical and as such reliable. There may also be other factors that are not analyzed in this study that affect outbound tourism.

Those determinants could be investment activity, labour productivity or even educational attainment in origin country. The further research could be extended on a larger number of countries or even different tourism regions and than compared. Findings of this study prove that even though examining of push motivators is very usefull, especially if tourism business practicioners and policy makers require additional information on source markets to plan marketing activities, the general model of outbound tourism demand determinants is yet not established.

LITERATURE:

1. Allen, D., Yap, G. (2009). Investigating Other Leading Indicators Influencing Australian Domestic Tourism Demand. *18th World IMACS/MODSIM Congress*. Cairns, Australia retrieved 12.06.2011 from http://mssanz.org.au/modsim09.
2. Allen, D., Yap, G., Shareef, R. (2009). Modelling Interstate Tourism Demand in Australia: A Cointegration Approach. *Mathematics and Computers in Simulation* 79(9).(pp. 2733-2740).
3. Baltagi, B. (2008). *Econometric analysis of panel data* 4th ed. New York: John Wiley & Sons.
4. Burkart, A.J., Medlick, S. (1981). *Tourism: Past, Present and Future* (2nd ed). Oxford: Heinemann.
5. Candela, G., Figini, P. (2012). *The Economics of Tourism Destinations*, Springler-Verlag: Berlin Heidelberg.
6. Cooper, C., Fletcher, J., Fyall, A., Gilbert, D., Vanhill, S. (2008). *Tourism: Principles and Practice* (4th ed). Harlow: Financial Times & Prentice Hall.
7. Durbarry, R., Sinclair, M. (2003). Market Shares Analysis: The Case of French Tourism Demand. *Annals of Tourism Research*, 30 (4) (pp. 927-941).
8. Dwyer, L., Forsyth, P., Dwyer, W. (2010). *Tourism Economics and Policy*. UK: Gutenberg Press Ltd.
9. Dwyer, L., Forsyth, P., Prasada, R. (2001). PPPs and the Price Competitiveness of International Tourism Destinations. *OECD Seminar on Purchasing Power Partities, Recent Advances in Methods and Applications*. Washington D.C.
10. Dwyer, L., Gill, A., Seetaram, N. (2012). *Handbook of Research Methods in Tourism: Quantitative and Qualitative Approach*. Edwar Elgar. Chelteman: UK.
11. Eilat, Y., Einav, L. (2004). Determinants of International Tourism: A Three-Dimensional Panel Data Analysis. *Applied Economic*s 36 (pp. 1315-1327).
12. Garín-Munõz, T. (2006). Inbound International Tourism to Canary Islands: A Dynamic Panel Data Model. *Tourism Management* 27(2) (pp.281–291).
13. Garín-Munõz, T., Amaral, T. P. (2000). An Econometric Model for International Tourism Flows to Spain. *Applied Economics Letters* 7(8) (pp.525–529).
14. Garín-Munõz, T., Montero-Martin, L.F. (2007). Tourism in the Balearic Islands: A dynamic model for international demand using panel data. *Tourism Management* 28(5) (pp. 1224–1235).
15. Görmüs, S., Göçer, I. (2010). The Socio-Economic Determinant of Tourism Demand in Turkey: A Panel Data Approach, *International Research Journal of Finance and Economics*, 55. Retrieved 17.10.2012 from http://www.eurojournals.com/finance.htm.
16. Habibi, F., Rahim, K. A., Ramchandran, S., Chin, L. (2009). Dynamic model for international tourism demand for Malaysia: Panel data evidence. *International Research Journal of Finance and Economics* 33. (pp.207-217).

17. Lee, G.J., O'Leary, S., Lee, A. (2002). Morrison Comparison and Contrast of Push and Pull Motivational Effects on Trip Behavior: An Application of a Multinomial Logistic Regression Model. *Tourism Analysis* 7 (pp. 89-104).
18. Leiper, N. (1990). *Tourism Systems*. (Department of Management Systems, Occasional Paper 2). Auckland, Massey University.
19. Middleton, V.T.C., Clarke, J. (2001). *Marketing in Travel and Tourism* (3rd ed). Oxford: Butterworth-Heinemann.
20. Morley, C.L. (1994). Experimental Destination Choice Analysis. *Annals of Tourism Research* 21. (pp. 780-791).
21. Papatheodorou, A. (2010). Empirical Studies of Tourism Demand. In M. Stabler, A. Papatheodorou, M.T. Sinclair, (2010). *The Economics of Tourism* (2nd ed.)(pp.45-77). New York: Routledge.
22. Schubert, S.F., Brida, J.G., Risso, W.A. (2011). The Impact of International Tourism Demand on Economic Growth of Small Economies Dependent on Tourism. *Tourism Management* 32. (pp.377-385).
23. Seetanah, B. (2011). Assessing the Dynamic Economic Impact of Tourism for Islands Economies. *Annals of Tourism Research* 38(1) (pp. 291–308).
24. Seetanah, B., Durbarry, R., Ragodoo, J.F.N. (2010). Using the Panel Cointegration Approach to Analyse the Determinants of Tourism Demand in South Africa. *Tourism Economics* 16(3). (pp. 715–729).
25. Seetaram, N. (2010). Use of Dynamic Panel Cointegration Approach to Model International Arrivals to Australia. *Journal of Travel Research* 49(4). (pp. 414–422).
26. Seetaram, N. (2012). Immigration and International Inbound Tourism: Empirical Evidence from Australia. *Tourism Management* 33(6). (pp. 1535–1543).
27. Seetaram, N., Petit S. (2012). Panel Data Analysis. In L. Dwyer, A. Gill, N. Seetaram, (eds.). *Handbook of Research Methods in Tourism: Quantitative and Qualitative Approach*. Chelteman, UK: Edwar Elgar.
28. Sharpley, R. (2000). Tourism and Sustainable Development. *Journal of Sustainable Tourism* 8(1). (pp. 1-19).
29. Song, H., Li, G. (2008). Progress in Tourism Management: Tourism Demand Modelling and Forecasting - A Review of Recent Research. *Tourism Management* 29 (pp. 203–220).
30. Song, H., Witt, S.F., Li, G. (2009). *The Advanced Econometrics of Tourism Demand*. Routlege: Taylor & Francis Group.
31. Stabler, M., Papatheodorou, A., Sinclair, M.T. (2010). *The Economics of Tourism* (2nd ed.). New York: Routledge.
32. Šimundić, B., Kuliš, Z. (2016). Tourism and Economic Growth in Mediterranean Region: Dynamic Panel Data Approach. *Acta Economica Et Turistica*. 2(1) (pp. 65–84).
33. UNWTO. (2016). *Tourism Highlights*. World Tourism Organisation.
34. Urry, J. (2002). *The Tourist Gaze*. Sage: London.
35. Vanhoe, N. (2005). *The Economics of Tourism Destinations.* Oxford: Elsevier Butterworth-Heinemann.
36. Višić, J., Perić, Š.B. (2011). The determinants of the value of incoming cross-border mergers & acquisitions in European transition countries. *Communist and Post-Communist Studies*. 4(3) (pp. 173-182).
37. Wang, Y.S. (2009). The Impact of Crisis Events and Macroeconomic Activity on Tailand's International Inbound Tourism Demand. *Tourism Management* 30. (pp. 75-82).

MANAGING EMPLOYEES WORK EFFICIENCY WITHIN ERP SYSTEM IN CROATIAN COMPANIES

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ABSTRACT
In the past, main focus of businesses was a satisfied user of the product or service. Needs and wishes of employees were not considered because it was thought that an employee works only in order to receive his salary. Today, employee became very important factor for the success of the company. If the employee is satisfied, then he will be motivated and more productive doing his assignments. The goal of this research is to reveal the situation in Croatian companies about managing employees work efficiency. The questions that paper cover are: Do companies monitor their human resources? Are they using separate application or ERP system for that purpose? Do they have reward system for their employees and which functionalities they use for tracking their employees? The study is based on 86 responses that were received for this research. After analyzing the survey results, it is found that most company in Croatia monitor their human resources in some way and that a lot of companies have a reward system for their employees. To reveal which ERP system would be the best fit for Croatian companies, regarding to module for human resources management, this paper also includes an analysis of 5 leading on-premise ERP solutions and one Cloud ERP solution. The goal of this analysis is to reveal which functionalities for monitoring human resources offer these solutions.
Keywords: *Employee efficiency, ERP systems, Human Resources, Performance management, Reward system, Setting goals for employees*

1. INTRODUCTION

Every company is a community composed of people who are running and enabling successful business. Today, more attention is given to the employee, his needs, his own progress and development. His knowledge, skills and ideas improve products and services and thus bring the company a competitive advantage. It is considered, if the employee is satisfied, then he will be more productive and more motivated at work. Proper reward system can increase employee's motivation, productivity and efficiency. There are various separate applications for monitoring human resources which offer partial information. On these information managers have to make important business decisions. Companies need an integrated system that supports the entire business, including effective human resources management in a simple and intuitive way. Such systems are Enterprise Resource Planning (ERP) systems. ERP system is helping in planning and tracking all resources within company, including human resources.

This paper is structured as follows. In second section, the related work is listed. In a third section the aim of this research, research instrument, target audience and structure of questionnaire were described. In next section research results were given. In final section functionalities for monitoring human resources of 6 ERP solutions were compared.

2. RELATED WORKS

It is not found similar research conducted within Croatian companies, but in the research that was conducted by Picek, Mijač and Andročec [11], was found that 87% of surveyed companies

use an information system for managing human resources. This information indicates that a lot of Croatian companies monitoring their human resources in some kind of software.
Literature review that follows shows that many authors wrote about issue of monitoring human resources within the company. Most of them emphasize the human factor as the main factor for the success of the company. Authors Jambrek and Penić [6] said that *motivation of employee* is very important factor for successful business. According to them, it is very important for manager to find a way to motivate their employees because if employees are motivated they will give their best in their daily assignments. Except managing motivation, these authors mention that it is also really important to know how to *manage stress* of the employee. According to them, managing stress is important because employees who are stressed are less motivated and thus less productive.
Authors Karaman Aksentijević, Ježić and Đurić [7] said that quality human resource management *lead to innovation and success* of the company. The authors attempted to prove that employees with their constant development and use of their resources become the main factor of business efficiency. They said that good strategic management of human resources will lead to better performance of the employees and increase in innovations. That will create a new business environment in which innovations will become the driving force of business development.
While previously mentioned authors state that motivation and innovation are the main factors for success of the company, the authors Bartolić and Kovačević [2] said that *reward system* and *monitoring employee's competence* brings satisfied and productive employees. These authors support the idea that managing human resources means long term value creation in company which is realized through employee's development, his motivation and reward system.
On the other hand, lots of authors are studying *benefits of ERP system* like Bendoly and Schoenherr [3] and Gefan and Ragowsky [5]. Shang and Seddon [16] categorized ERP benefits. They identified 5 dimensions of benefits which are operational, managerial, strategic, IT infrastructure and organizational dimension. Each dimension has sub dimensions, and there are 21 of them in total. For this research, the best dimension that can apply on human resources is managerial dimension with following sub dimensions: better resource management, improved decision making and planning and performance improvement.
Al these references indicate that managing human resources is very important for every company. *It can increase employee's motivation, innovation, productivity and satisfaction and thus bring success to the company*. Also, ERP systems bring a lot of benefits to company so it can be concluded that will be the best if company monitoring their human resources within an ERP system because than they will manage all resources within one software.

3. RESEARCH METHOD

The aim of this research was to reveal the situation in Croatian companies about managing employees work efficiency. This aim will be achieved by gathering information about the following issues:

1. Does enterprise use ERP systems for managing human resources and which functionalities do they use for tracking their employees?
2. Does company have reward system for employees who had achieved their objectives and does company measure employee's performance?

A research instrument that was used for this survey is a questionnaire that has been created using Google forms. The questionnaire was divided into several sections to which participants could access based on their answers. The first section was equal for all participants and it was about the size of the company, company's primary business activity and using an ERP system

in the business. Remaining sections were about managing human resources, functionality in that area, setting objectives for employees, reward system and plans for the future.
Target audience for this research was Croatian companies, no matter of their size, geographical location or primary business activity to which they belong. In order to obtain relevant data, the questionnaire was sent to randomly selected 240 companies listed in newspaper *Privredni vjesnik*, entitled *"Najvećih 400 hrvatskih tvrtki u 2014. godini"*. Also, a questionnaire was sent to acquaintances of the authors, employed in any of the company operating in Croatia. In total, 86 responses were received for this research.
The survey questions were structured as single or multiple choice checkboxes, linear scale selections and short answers. The questionnaire was analyzed using the same Google's tool in which it was created. For the further and detailed analyzes, Microsoft Excel was used.

4. RESULTS AND DISCUSSION

Results of conducted survey were divided into 4 sections. First one shows profile of surveyed companies. Second section is about monitoring human resources followed by section about reward system and plans for the future.

Structure of the surveyed companies

From 86 responses, 39,5% of them were from small companies up to 50 employees, 37,2% were from big companies with more than 250 employees and 23,3% were from middle sized companies with 50 to 250 employees. The Figure 1 displays the structure of the surveyed companies according to their size.

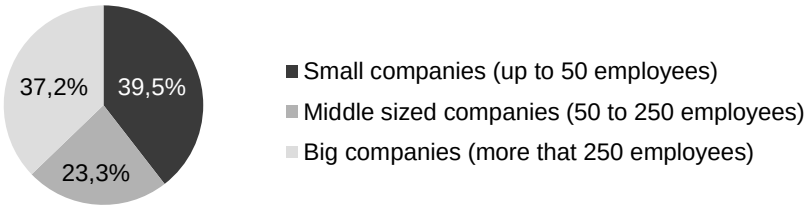
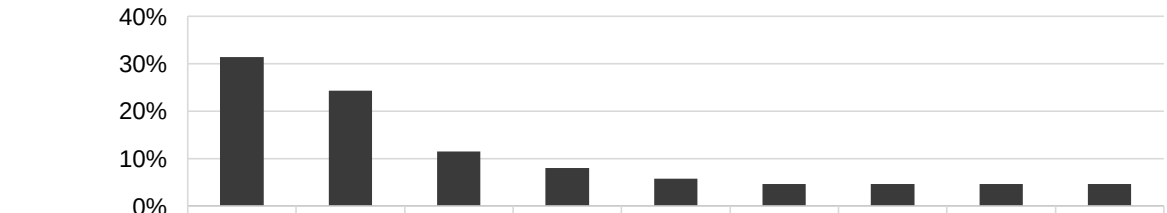


Figure 1 Companies distribution according to their size

Most of the surveyed companies is in private ownership (82,6%), while only a smaller percentage (17,4%) are the companies owned by the state. Regarding to the core business, 31,4% of companies belong to *information technologies (ICT)*, 11,6% belong to *manufacturing*, 8,1% to *construction*, 5,8% to *sales*, 4,7% to *services*, *health care*, *hospitality* and *finance*, while 24,4% of companies are classified as *other* core business. The Figure 2 displays the structure of the surveyed companies according to their core business.



	ICT	Other	Manufacturing	Construction	Sales	Services	Health care	Hospitality	Finance
Core business	31,4%	24,4%	11,6%	8,1%	5,8%	4,7%	4,7%	4,7%	4,7%

Figure 2 Companies distribution according to their core business

Regarding the usage of ERP system in business, the large percentage of companies are not using it (68,6%) while other 31,4% of respondents use the ERP system to support their business; what is similar to research described in [11]. Detailed analysis of this results shows that more than half (53,1%) of the total of 31,4% companies that use an ERP system are large companies, followed by the middle sized companies (30%) and the small companies (11,8%). It is noticed the increase of usage of an ERP system with the increase of the company size.
Of the 27 surveyed companies that use an ERP system, most of them use the Microsoft ERP system (40,7%), followed by the Oracle ERP system (25,9%) and the SAP ERP system (14,8%). Remaining 18,6% are using an ERP system from other vendors. The Figure 3 displays this distribution which is in the line with the research that was conducted by Panorama Consulting Solutions [10]. In this research was investigated selected ERP software by surveyed companies. Based on this research, most frequently selected vendor is Microsoft, then Oracle, followed by SAP.

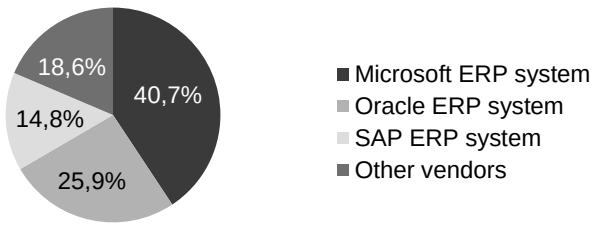
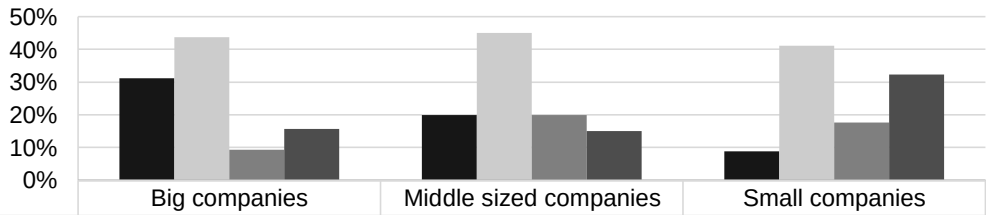


Figure 3 Using ERP system according to vendors

Monitoring human resources

Tracking human resources within an ERP system is practiced by 20% of the surveyed companies, the largest percentage of surveyed companies (42%) are using the separate tool for that purpose, 15% are still using paper, while remaining 22% not tracking human resources at all. A detailed analysis shows that tracking human resources within the ERP system is practiced mostly by the big companies (31,3%), then the middle sized companies (20%) and the then the small companies (8,8%). It is a little bit worrying that five big (15,6%) and three (15%) medium sized companies are not monitoring the human resources in their companies at all. Figure 4 displays the way companies monitor the human resources within the company according to their size.



	Big companies	Middle sized companies	Small companies
Within an ERP system	31,3%	20%	8,8%
Using a separate tool	43,8%	45%	41,2%
In paper form	9,4%	20%	17,6%
Without tracking	15,6%	15%	32,4%

Figure 4 Way of tracking human resources according to the size of the company

The companies which are monitoring human resources are using following functionalities. The largest percentage of companies (88,6%) are using functionality for entering data about employees, then the functionality for tracking their absence (76,1%), the functionality for printing the data about employees (71,6%), the functionality for calculating employee's salaries

(70,1%), the functionality for appraisal of employees competences (55,2%) and the functionality for setting the goals for employees (46,3%). The functionalities which are most relevant for the managing of employee's efficiency are the least used in surveyed companies. Figure 5 below displays this distribution.

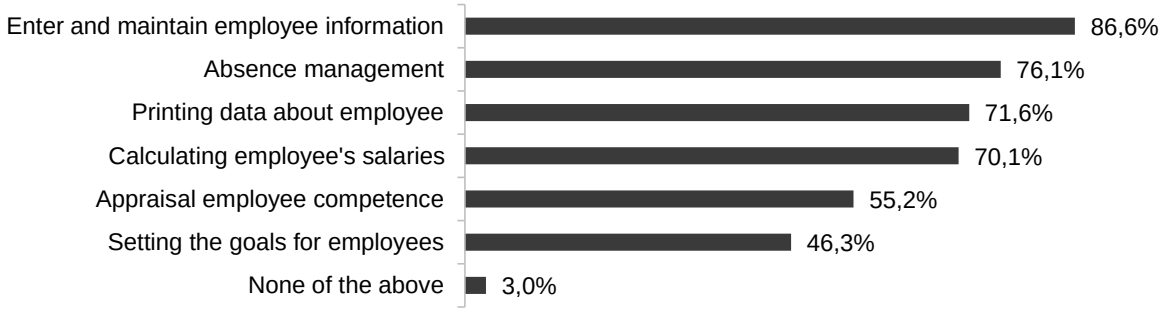
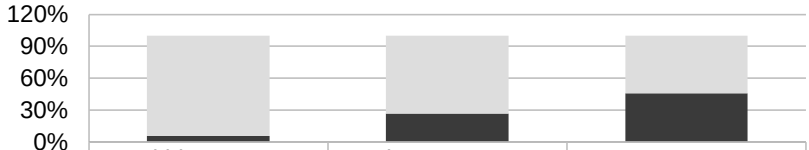


Figure 5 Functionality that companies use for the monitoring human resources

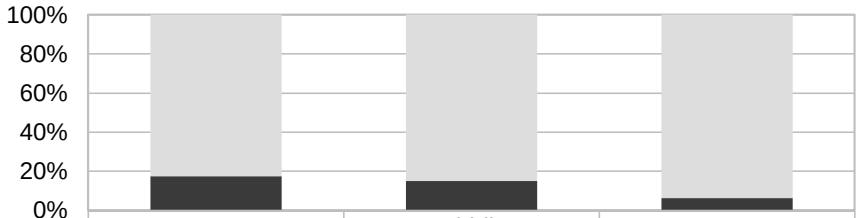
A more detailed analysis about appraisal of employees competence shows that this functionality is mostly used by companies that monitor their human resources within ERP system (64,7%) while companies that use this functionality the least are the companies that still monitor their human resources in the paper form (38,5%).
The 75% of the surveyed companies are setting the goals for their employees. Detailed analysis of this results shows that companies which monitor human resources within an ERP system are mostly setting the goals for their employees (94,1%). On the other hand, companies that monitor the human resources in the paper form are less often setting goals for their employees (53,8%). The Figure 6 displays this distribution.



	Within an ERP system	Using a separate tool	In paper form
Setting goals to employees	94,1%	73,0%	53,8%
Not setting goals to employees	5,9%	27,0%	46,2%

Figure 6 Setting the goals for employees

Further analysis shows a slight increase of the percentage of setting the goals for employees with increasing the size of the company. The percentage for small companies is 69,6%, for medium sized companies the percentage is 76,5% and for big companies it is 77,8%.
It is really positive result that 87% of companies think that the need for tracking human resources in their companies exists or the need for that is very big. In line with expectations, big companies have largest percentage. The Figure 7 below displays this distribution.

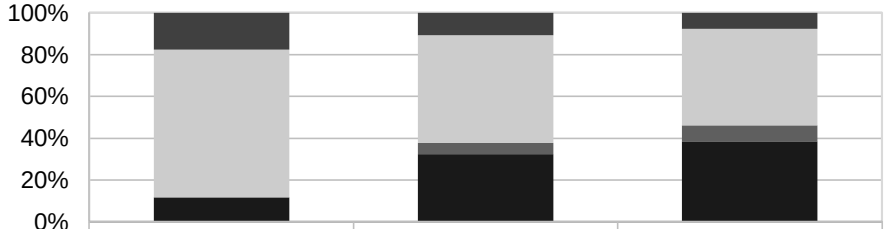


	Small companies	Middle sized companies	Big companies
The need exists or it is very big	82,4%	85,0%	93,8%
There is no need or the need is small	17,6%	15,0%	6,3%

Figure 7 The need for monitoring human resources according to the size of the company

Reward system

The 71,6% of the surveyed companies are using a rewarding system for employees who successfully completes their objectives. Companies mostly reward employees with bonuses on salary (55%), then with a salary increase (12%), while 5% of them, as a reward, give an extra day off. A large percentage of companies (28%) do not reward their employees in any way. That may cause the employees to feel less motivated for performing their assignments. Detailed analysis shows that companies that are using an ERP system for monitoring human resources mostly reward their employees, while the companies that monitor their human resources in paper form reward their employees the least. The Figure 8 below displays this distribution.



	Within an ERP system	Using a separate tool	In paper form
Rewarding with a salary increase	17,6%	10,8%	7,7%
Rewarding with certain bonus on salary	70,6%	51,4%	46,2%
Rewarding with an extra day off	0,0%	5,4%	7,7%
Without rewarding	11,8%	32,4%	38,5%

Figure 8 The way of rewarding employees, according to the way companies monitor their human resources

Further analysis shows that the middle sized companies mostly reward their employees, with 83,3% of them using some sort of rewarding system. On the other hand, it's concerning that almost a half of big companies (46,7%) do not have a reward system at all.

Plans for the future

More than a half of the surveyed companies that are still not monitoring their human resources, plan to do that in future because they believe that this is very important nowadays. On the other hand, it is still a large percentage of those companies that believe that monitoring human resources is unnecessary cost which not gives anything good for them. The Figure 9 displays this distribution.

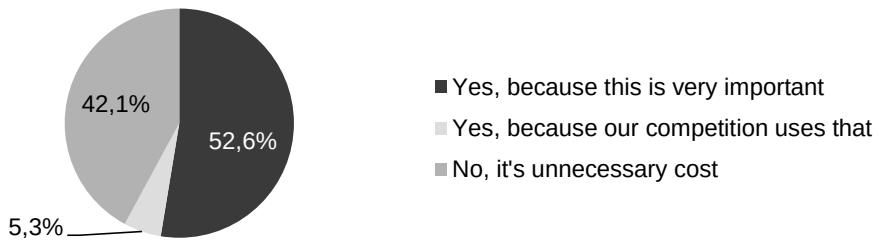


Figure 9 Plans for the future about monitoring human resources of companies that are still not monitoring that

This research shows that there is still a relatively small percentage of usage an ERP system in the business. This percentage is very low in small enterprises and it is noticed increase of that percentage with increasing the size of the company. The increase of this percentage is logical because it is harder to manage resources within larger companies. Companies mostly use separate application for managing human resources, while only 20% of surveyed companies use ERP system for this purpose. More than 37% of surveyed companies which use an ERP system in business are not using a module for managing human resources. Those companies should be educated about the importance of tracking all resources, including human resources, within the ERP system.
Almost 60% of surveyed Croatian companies which still not monitor their human resources plan to do that in future. According to that information, it can be expected an increase in the number of companies that will start monitoring their human resources.

5. ANALYSIS OF ERP SOLUTIONS

To reveal which ERP system would best fit for Croatian companies, regarding to functionalities of module for human resources management, an analysis of leading on-premise ERP solution and one Cloud ERP solution was made. The aim of this analysis was to reveal which functionalities for monitoring human resources offer these solutions. An analysis is made according to the online documentation of observed ERP solutions. It was analyzed 6 ERP solutions according to 23 functionalities for monitoring human resources. The ERP solutions, for this analysis, were chosen according to research from Panorama Consulting Solutions [10]. During a twelvemonth period (March 2015 - February 2016) Panorama Consulting Solutions developed the *2016 Report on ERP Systems and Enterprise Software* to investigate software selection. A total of 215 respondents completed the surveys upon which this data is based. Based on this research, Microsoft (32%) is the vendor most frequently selected, followed by Oracle (23%), SAP (20%) and Epicor (7%). For analysis, to this list of vendors is added one Cloud solution named Ramco. Table 1 displays this analysis where the functionalities are marked according to legend below table.

Table following on the next page

Table 1 Functionalities for monitoring human resources which enables ERP solutions

Functionalities \ ERP solutions	Microsoft Dynamics NAV	Microsoft Dynamics AX	SAP ERP	Epicor ERP	Oracle EBS	Ramco
Enter and maintain employee information						
Absence management						
Monitoring qualifications						
Monitoring competences	■					
Recruitment management	■					
Learning management	■					
Time and attendance	■					
Setting the goals for employees	■					
Objective library	■	■	■	■		■
Loading document (eg.CV)						
Monitoring termination of employee				■		
Making reports about employees						
Workforce analyses	■				■	
Succession planning	■	■		■		
9 box matrix	■	■		■		
Calculating employee's salaries						
Benefits management						
Compensation management	■					
360-Degree Appraisal	■					
Creating a questionnaire to assess employee	■		■	■		
Printing data about employee						
Self Service for employee	■					
Suitability matching	■	■		■		

Legend: The solution have the functionality ■ The solution does not have

There are 8 out of 23 functionalities that allow all observed ERP solutions. These functionalities are: enter and maintain employee information, absence management, monitoring qualifications, loading document (eg.CV), making reports about employees, calculating employee's salaries, benefits management and printing data about the employee. Creating objective library of reusable goals offers only Oracle EBS.

Figure 11 displays percentage of functionalities that particular ERP system offers. The least number of functionalities (9) offers Microsoft Dynamics NAV because this solution is intended for small companies. Epicor offers 17, Microsoft Dynamics AX 19 and SAP 21 functionalities. Oracle EBS and Ramco have 22 out of 23 functionalities which is the best score among these observed ERP solutions.

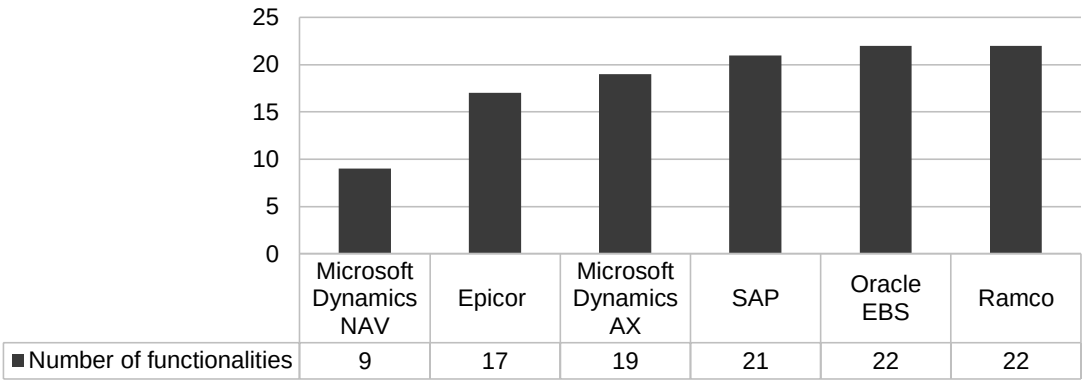


Figure 11 Number of functionalities for monitoring human resources which enables ERP solutions

Comparing functionalities used by surveyed companies with functionalities that provides ERP solutions, it can be concluded that solution which will be good fit for Croatian companies is Microsoft Dynamics NAV. This solution offers the smallest number of functionalities, but on the other hand, it offers basic functionalities that most companies in Croatia use. Companies that use advanced functionalities for managing employees work efficiency will not be satisfied with Microsoft Dynamics NAV and they will have to consider other ERP solutions like Epicor, Microsoft Dynamics AX, SAP, Oracle EBS and Ramco.

This research shows that Oracle EBS and Ramco are providing a lot of functionalities, but in Croatia need for these functionalities is still relatively low, especially in small companies. On the other hand, big companies should have to feel the need for this solution because of that wide range of functionalities.

6. CONCLUSION

The purpose of this paper is to show contemporary issue about managing human resources in Croatian companies. Today, more attention is given to employees than in the past when his satisfaction, motivation and ideas weren't that important as the profit of the company. Now employees are seen as the key to success of the company. To reveal situation in Croatia about managing human resources, this paper contains research that is based on 86 responses from Croatian companies no matter about their size or primary business activity. Positive result is that most of the companies in Croatia monitor their human resources in some way and that a lot of companies have a reward system for their employees. On the other hand, negative result that was found is that only small amount of company monitor their human resources within ERP system.

To reveal which ERP system would be the best fit for Croatian companies, regarding to module for human resources management, this paper also includes an analysis of 5 leading on-premise ERP solutions and one Cloud ERP solution. ERP solutions were analyzed according to 23 functionalities for monitoring human resources. There were some basic functionalities like managing employee's information, monitoring his absence and calculating his salary. Because of the basic functionalities that Croatian companies mostly using, best fit for them is Microsoft Dynamics NAV solution. Those companies that are using advanced functionalities for managing employees work efficiency will not be satisfied with this solution and they will have to consider other ERP solutions from other vendors.

In the future it can be expected growth in monitoring human resources in Croatian companies because more than a half of companies that are still not monitoring their human resources, plan to do that in future.

LITERATURE:

1. Arur G. (2010). *Oracle Performance Management Implementation and User Guide*. http://docs.oracle.com/cd/B53825_07/current/acrobat/121perfmiug.pdf
2. Bartolić Z., Prelas Kovačević A. (2011). *Sustav praćenja kompetencija, radne uspješnosti i nagrađivanja radnika.* Dostupno 30.8.2016. na http://hrcak.srce.hr/index.php?show=clanak&id_clanak_jezik=107059
3. Bendoly E., Schoenherr T. (2005). *ERP System and Implementation-Process Benefits: Implications for B2B E-Procurement. https://www.researchgate.net/profile/Tobias_Schoenherr/publication/228634756_ERP_system_and_implementation-process_benefits_Implications_for_B2B_e-procurement/links/00b4951c8837bd9a8e000000.pdf*
4. Epicor. (2014). *Human Capital Management*. http://www.epicor.com/Content-Documents/Epicor-Human-Capital-Management-Suite-BR-ENS.pdf
5. Gefan D., Ragowsky A. (2005). *A multi-level approach to measuring the benefits of an erp system in manufacturing firms.* https://pdfs.semanticscholar.org/d2ff/155173a2e18930195bbd71f4a9e602adf4c9.pdf
6. Jamrek I., Penić I. (2008). *Upravljanje ljudskim potencijalima u poduzećima – ljudski faktor, motivacija zaposlenika kao najbitniji čimbenici uspješnosti poslovanja poduzeća.* http://hrcak.srce.hr/40704
7. Karaman Aksentijević N., Ježić Z., Đurić K. (2008). *Upravljanje ljudskim potencijalima kao pretpostavka inovativnosti i uspješnosti poslovanja*. Dostupno 6.8.2016. na http://hrcak.srce.hr/21829
8. Microsoft (2014). Human resources roadmap [AX 2012]. https://technet.microsoft.com/en-us/library/dn783393.aspx
9. Oracle Applications. *Introduction to Oracle HRMS*. https://docs.oracle.com/cd/E18727_01/doc.121/e13511/T6652T6654.htm
10. Panorama Consulting Solutions (2016). *2016 report on ERP systems and enterprise software.* http://panorama-consulting.com/resource-center/2016-erp-r
11. Picek R., Mijač M., Andročec D.(2015). *Use of business information systems in Croatian companies.*http://search.proquest.com/openview/2d2003e7d1c085aed6bf9223c888e029/1?pq-origsite=gscholar&cbl=2033472
12. Privredni vjesnik (2015). Najvećih 400 hrvatskih tvrtki u 2014. godini. https://issuu.com/nestar/docs/400naj2014
13. Pyden J. (2011). *The Real Difference between Microsoft Dynamics NAV and AX*. http://www.erpsoftwareblog.com/2011/03/the-real-difference-between-microsoft-dynamics-nav-and-ax/
14. Ramco. (2016). *Ramco HCM on Cloud*. http://www.ramco.com/erp-suite/hcm/
15. SAP. (2010). *SAP ERP Human Capital Management.* http://223.197.92.31/e_doc/SAP_HCM_Overview.pdf
16. Shang S., Seddon P.B. (2000). *A Comprehensive Framework for Classifying the Benefits of ERP Systems.* Dostupno 6.8.2016. na http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.361.5523&rep=rep1&type=pdf
17. TheIBISinc. (2014). *HR in Microsoft Dynamics AX 2012 R2*. https://www.youtube.com/watch?v=afWEa5SeD7o

SOCIAL INCLUSION: A KEY TO EFFECTIVE AND EQUITABLE SOCIAL DEVELOPMENT

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ABSTRACT

In response to the criticism that many marginalized populations were overlooked in the Millennium Development Goals, the 2030 Development Agenda specifically states the objective of a 'just, equitable, tolerant, open and socially inclusive world in which the needs of the most vulnerable are met'.

In fact, six of the seventeen Sustainable Development Goals (SDGs) aim for "inclusion" or "inclusive" progress in development. The SDGs aim to promote inclusive and equitable quality education; inclusive and sustainable economic growth; inclusive and sustainable industrialization; inclusive, safe, resilient and sustainable cities and human settlements; peaceful and inclusive societies; accountable and inclusive institutions at all levels; and the social, economic and political inclusion of all. What precisely is social inclusion and what is an inclusive society?

This paper explores the concept of social inclusion as both a principle and an outcome that can promote more just and equitable communities. It will explore multiple definitions of social inclusion adopted by a number of organizations from developed and developing countries.

The identity of the marginalized populations will vary from nation to nation, but may for example include persons from minority ethnic, racial or cultural groups, women and girls, persons with a disability, the elderly, the poor or delinquent youth.

Using persons with a disability as a case study this paper explores the inclusive SDG goals and strategies for ensuring that everyone, including the most marginalized benefits from 2030 Development Agenda.

Keywords: *Marginalized populations, Social Inclusion, Sustainable Development Goals*

Full paper has not been published, upon Author's request.

CORPORATE GOVERNANCE IN INDIA: AN ANALYSIS

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ABSTRACT

Corporate governance is a process, relation and mechanism set up for the corporations and firms based on certain guidelines and principles by which a company is controlled and directed. The principles provided in the system ensure that the company is governed in a way that it is able to set and achieve its goals and objectives in the context of the social, regulatory and market environment, and is able to maximize profits and also benefit those whose interest is involved in it, in the long run. The division and distribution of rights and responsibilities among different participants in the corporation (such as the board of directors, managers, shareholders, creditors, auditors, regulators, and other stakeholders) and inclusion of the rules and procedures for making decisions in corporate affairs are identified with the help of Corporate Governance mechanism and guidelines.

The need to make corporate governance in India transparent was felt after the high profile corporate governance failure scams like the stock market scam, the UTI scam, Ketan Parikh scam, Satyam scam, which were severely criticized by the shareholders. Thus, Corporate Governance is not just company administration but more than that and includes monitoring the actions, policies, practices, and decisions of corporations, their agents, and affected stakeholders thereby ensuring fair, efficient and transparent functioning of the corporate management system.

By this paper, the authors intend to examine the concept of corporate governance in India with regard to the provisions of corporate governance under the Companies Act 2013. The paper will highlight the importance and need of corporate governance in India. We will also discuss the important case laws which contributed immensely in the emergence of corporate governance in India.

Keywords: *Corporate governance Mechanism, Companies, Firms, Companies Act 2013*

1. INTRODUCTION

Corporate governance defined as "the set of conditions that shapes the ex post bargaining over the quasi-rents generated by a firm."[1]

Corporate governance has also been more narrowly defined as "a system of law and sound approaches by which corporations are directed and controlled focusing on the internal and external corporate structures with the intention of monitoring the actions of management and directors and thereby, mitigating agency risks which may stem from the misdeeds of corporate officers."[2]

[1] Luigi Zingales, 2008. "corporate governance," The New Palgrave Dictionary of Economics, 2nd Edition. Abstract.
[2] Sifuna, Anazett Pacy (2012). "Disclose or Abstain: The Prohibition of Insider Trading on Trial". Journal of International Banking Law and Regulation.

We may infer that Corporate governance is a process, relation and mechanism set up for the corporations and firms based on certain guidelines and principles by which a company is controlled and directed. The principles provided in the system ensure that the company is governed in a way that it is able to set and achieve its goals and objectives in the context of the social, regulatory and market environment, and is able to maximize profits and also benefit those whose interest is involved in it, in the long run. The division and distribution of rights and responsibilities among different participants in the corporation (such as the board of directors, managers, shareholders, creditors, auditors, regulators, and other stakeholders) and inclusion of the rules and procedures for making decisions in corporate affairs are identified with the help of Corporate Governance mechanism and guidelines.

The framework of corporate governance consists of:

(1) Express or implied contracts between the stakeholders and the company for the distribution of rights, duties, rewards and liabilities,etc among different participants in the corporation.

(2) Procedure for proper control and supervision of information flow in the company, i.e., a proper mechanism of checks-and-balances, and

(3) Procedures for resolving and reconciling the conflicting interests and decisions of different participants in the corporation.

This mechanism ensures accountability of the Board of Directors to all stakeholders of the corporation i.e. managers, shareholders, suppliers, creditors, auditors, regulators, employees, customers and society in general; for giving the company a fair, clear and efficient administration. So it is not just mere company administration but a corporate management system. It is a code of conduct that must be followed for running and proper functioning of a corporate entity.

2. CORPORATE GOVERNANCE FRAMEWORK IN INDIA

Ever since India's biggest-ever corporate fraud and governance failure unearthed at Satyam Computer Services Limited, the concerns about good Corporate Governance have increased phenomenally.

Internationally, there has been a great deal of debate going on for quite some time. The famous Cadbury Committee defined "Corporate Governance" in its Report (Financial Aspects of Corporate Governance, published in 1992) as "the system by which companies are directed and controlled".

The Organisation for Economic Cooperation and Development (OECD), which, in 1999, published its Principles of Corporate Governance gives a very comprehensive definition of corporate governance, as under:

"a set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined. Good corporate governance should provide proper incentives for the board and management to pursue objectives that are in the interests of the company and shareholders, and should facilitate effective monitoring, thereby encouraging firms to use recourses more efficiently."

2.1. Regulatory framework on corporate governance

The Indian statutory framework has, by and large, been in consonance with the international best practices of corporate governance. Broadly speaking, the corporate governance mechanism for companies in India is enumerated in the following enactments/ regulations/ guidelines/ listing agreement:

1. The Companies Act, 2013 inter alia contains provisions relating to board constitution, board meetings, board processes, independent directors, general meetings, audit committees, related party transactions, disclosure requirements in financial statements, etc.

2. Securities and Exchange Board of India (SEBI) Guidelines: SEBI is a regulatory authority having jurisdiction over listed companies and which issues regulations, rules and guidelines to companies to ensure protection of investors.

3. Standard Listing Agreement of Stock Exchanges: For companies whose shares are listed on the stock exchanges.

4. Accounting Standards issued by the Institute of Chartered Accountants of India (ICAI): ICAI is an autonomous body, which issues accounting standards providing guidelines for disclosures of financial information. Section 129 of the New Companies Act inter alia provides that the financial statements shall give a true and fair view of the state of affairs of the company or companies, comply with the accounting standards notified under s 133 of the New Companies Act. It is further provided that items contained in such financial statements shall be in accordance with the accounting standards.

5. Secretarial Standards issued by the Institute of Company Secretaries of India (ICSI): ICSI is an autonomous body, which issues secretarial standards in terms of the provisions of the New Companies Act. So far, the ICSI has issued Secretarial Standard on "Meetings of the Board of Directors" (SS-1) and Secretarial Standards on "General Meetings" (SS-2). These Secretarial Standards have come into force w.e.f. July 1, 2015. Section 118(10) of the New Companies Act provide that every company (other than one person company) shall observe Secretarial Standards specified as such by the ICSI with respect to general and board meetings.

3. CORPORATE GOVERNANCE UNDER THE COMPANIES ACT, 2013

Many high profile corporate governance failure scams like the stock market scam, the UTI scam, Ketan Parikh scam, Satyam scam, which was severely criticized by the shareholders, called for a need to make corporate governance in India transparent as it greatly affects the development of the country.

The Indian Companies Act of 2013 introduced some progressive and transparent processes which benefit stakeholders, directors as well as the management of companies. Investment advisory services and proxy firms provide concise information to the shareholders about these newly introduced processes and regulations, which aim to improve the corporate governance in India.

Corporate advisory services are offered by advisory firms to efficiently manage the activities of companies to ensure stability and growth of the business, maintain the reputation and reliability for customers and clients. The top management that consists of the board of directors is responsible for governance. They must have effective control over affairs of the company in the interest of the company and minority shareholders. Corporate governance ensures strict and efficient application of management practices along with legal compliance in the continually changing business scenario in India.

Corporate governance was guided by Clause 49 of the Listing Agreement before introduction of the Companies Act of 2013. As per the new provision, SEBI has also approved certain amendments in the Listing Agreement so as to improve the transparency in transactions of listed companies and giving a bigger say to minority stakeholders in influencing the decisions of management. These amendments have become effective from 1st October 2014.

3.1. A Few New Provision for Directors and Shareholders

•One or more women directors are recommended for certain classes of companies

•Every company in India must have a resident directory

•The maximum permissible directors cannot exceed 15 in a public limited company. If more directors have to be appointed, it can be done only with approval of the shareholders after passing a Special Resolution

•The Independent Directors are a newly introduced concept under the Act. A code of conduct is prescribed and so are other functions and duties

•The Independent directors must attend at least one meeting a year

•Every company must appoint an individual or firm as an auditor. The responsibility of the Audit committee has increased

•Filing and disclosures with the Registrar of Companies has increased

•Top management recognizes the rights of the shareholders and ensures strong co-operation between the company and the stakeholders

•Every company has to make accurate disclosure of financial situations, performance, material matter, ownership and governance

3.2. Additional Provisions

• Related Party Transactions – A Related Party Transaction (RPT) is the transfer of resources or facilities between a company and another specific party. The company devises policies which must be disclosed on the website and in the annual report. All these transactions must be approved by the shareholders by passing a Special Resolution as the Companies Act of 2013. Promoters of the company cannot vote on a resolution for a related party transaction.

•Changes in Clause 35B – The e-voting facility has to be provided to the shareholder for any resolution is a legal binding for the company.

•Corporate Social Responsibility – The company has the responsibility to promote social development in order to return something that is beneficial for the society.

•Whistle Blower Policy – This is a mandatory provision by SEBI which is a vigil mechanism to report the wrong or unethical conduct of any director of the company.

4. NEED FOR CORPORATE GOVERNANCE

The need for corporate governance is highlighted by the following factors:

(i) Wide Spread of Shareholders:

Today a company has a very large number of shareholders spread all over the nation and even the world; and a majority of shareholders being unorganised and having an indifferent attitude

towards corporate affairs. The idea of shareholders' democracy remains confined only to the law and the Articles of Association; which requires a practical implementation through a code of conduct of corporate governance.

(ii) Changing Ownership Structure:

The pattern of corporate ownership has changed considerably, in the present-day-times; with institutional investors (foreign as well Indian) and mutual funds becoming largest shareholders in large corporate private sector. These investors have become the greatest challenge to corporate managements, forcing the latter to abide by some established code of corporate governance to build up its image in society.

(iii) Corporate Scams or Scandals:

Corporate scams (or frauds) in the recent years of the past have shaken public confidence in corporate management. The event of Harshad Mehta scandal, which is perhaps, one biggest scandal, is in the heart and mind of all, connected with corporate shareholding or otherwise being educated and socially conscious.

The need for corporate governance is, then, imperative for reviving investors' confidence in the corporate sector towards the economic development of society.

(iv) Greater Expectations of Society of the Corporate Sector:

Society of today holds greater expectations of the corporate sector in terms of reasonable price, better quality, pollution control, best utilisation of resources etc. To meet social expectations, there is a need for a code of corporate governance, for the best management of company in economic and social terms.

(v) Hostile Take-Overs:

Hostile take-overs of corporations witnessed in several countries, put a question mark on the efficiency of managements of take-over companies. This factors also points out to the need for corporate governance, in the form of an efficient code of conduct for corporate managements.

(vi) Huge Increase in Top Management Compensation:

It has been observed in both developing and developed economies that there has been a great increase in the monetary payments (compensation) packages of top level corporate executives. There is no justification for exorbitant payments to top ranking managers, out of corporate funds, which are a property of shareholders and society.

This factor necessitates corporate governance to contain the ill-practices of top managements of companies.

(vii) Globalisation:

Desire of more and more Indian companies to get listed on international stock exchanges also focuses on a need for corporate governance. In fact, corporate governance has become a buzzword in the corporate sector. There is no doubt that international capital market recognises only companies well-managed according to standard codes of corporate governance.

5. IMPORTANCE OF CORPORATE GOVERNANCE IN INDIA / CONCLUSION

A company that has good corporate governance has a much higher level of confidence amongst the shareholders associated with that company. Active and independent directors contribute towards a positive outlook of the company in the financial market, positively influencing share prices. Corporate Governance is one of the important criteria for foreign institutional investors to decide on which company to invest in.

The corporate practices in India emphasize the functions of audit and finances that have legal, moral and ethical implications for the business and its impact on the shareholders. The Indian Companies Act of 2013 introduced innovative measures to appropriately balance legislative and regulatory reforms for the growth of the enterprise and to increase foreign investment, keeping in mind international practices. The rules and regulations are measures that increase the involvement of the shareholders in decision making and introduce transparency in corporate governance, which ultimately safeguards the interest of the society and shareholders.

Corporate governance safeguards not only the management but the interests of the stakeholders as well and fosters the economic progress of India in the roaring economies of the world.

LITERATURE:

1. T. N. Satheesh Kumar, ‘Corporate Governance: Principles and Practices’, Pearson Education India; 4 edition (2011).
2. Prasad K, ‘Corporate Governance’, Prentice Hall India Learning Private Limited; 2 edition (2011).
3. Asish K. Bhattacharyya, ‘Corporate Governance in India: Change and Continuity’, Oxford University Press (19 September 2016).
4. Indian Institute of Corporate Affairs, “Corporate Governance’, Taxmann; 2015 edition (2016).
5. Das S. C., Corporate Governance in India: An evaluation, Taxmann; 2015 edition (2016).
6. Fernando, ‘Business Ethics and Corporate Governance’, Pearson Education India; 2 edition (2012).
7. Tricker, ‘Corporate Governance: Principles, Policies and Practices’, Oxford University Press India; Second edition (14 January 2013).

NEGATIVE MENTORING EXPERIENCE QUESTIONNAIRE DESIGN AND TESTING

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ABSTRACT

To adapt new staff nurses to their work, most hospitals have implemented mentoring programs. However, many new nurses encountered negative mentoring experience during their mentorship. This study aimed to establish and test a theory-based negative mentoring experience questionnaire (NMEQ) for management. This study adopted questionnaire-survey method with new staff nurses of hospitals. The overal research was divided into two stages. In the first stage, 30 valid pre-trial questionnaires were collected. In the second stage, 255 valid questionaires were gathered. The first stage involved the drafting of preliminary items and expert validity analysis. The second phase included a reliability, construct validity and criterion-related validity analysis. After proposing 48 preliminary items, an expert validity test was carried out by requesting five senior nursing managers with mentoring experience. After the expert validity test, a content validity index (CVI) was constructed, with an average of 0.82. Items with a CVI of less than 0.8 were removed, leading to the deletion of 15 items. The remaining 33 items were then subjected to a reliability test; four items found to have an item-to-total correlation of less than 0.5 were deleted. A total of 29 items of NMEQ were proposed: four nursing manager items, four institutional items, three other medical staff items, twelve mentor items, and six mentee it. Exploratory factor analysis, confirmatory factor analysis and correlation analysis proved that this questionnaire had good construct validity and criterion-related validity. NMEQ was composed of five elements of institutional dimension, mentor dimension, nursing manager dimension, other medical staff dimension, and mentee dimension with a total of 29 items.Managers could use NMEQ to understand the effectiveness of mentoring program and provide the directions for improving it. Additionally, managers should provide interpersonal skills training to improve mentor- mentee interaction.

Keywords: *Mentorship, Negative Mentoring Experience, Human Resource,Nurse*

1. INTRODUCTION

Previous research studies have revealed that interactions between mentors and mentees can sometimes lead to conflicts. The resulting negative experiences, when accumulated over a long period, have the potential of reducing the efficacy of mentoring programs, and defeating these programs' goal of transfer of knowledge from mentor to mentee. This can lead to mentoring dysfunction and decreased relationship effectiveness (Omansky, 2010; Weng et al., 2010) . In reality, Eby(2000) showed that positive and negative experiences often coexist within the course of interactions. Their study revealed that more than half of new nurses encountered negative mentoring experiences (NME), but mentees with the same mentor could also have positive and negative experiences. The negative effects of NMEs should not be underestimated, and the negative effects of these mixed experiences often outweigh the benefit of positive experiences (Eby, Butts, Durley, & Ragins, 2010). The NMEs often lead to mentees' poor learning experience, low psychological and career support, a higher level of frustration in the

workplace and shirking of duties, low work satisfaction, high turnover tendency, and greater work-related pressure (Eby, Butts, Lockwood, & Simon, 2004; Omansky, 2010). When the interactions in a relationship are more negative than positive in nature, one or both parties may choose to leave the relationship (Ragins, Cotton, & Miller, 2000; Scandura, 1998). Eby(2007) believes that when problems or NMEs affect the professional growth of the mentee, the mentee may choose to leave the relationship.

The effect of NMEs on the mentee can range from a modest impact on work performance to resulting in the mentee's disappointment and decision to leave the mentorship. The mentorship can also ebb and flow in difficulties, which nurse managers would not want to see. When new staff nurses enter the workforce, the pressures from all sides can cause a period of maladjustment. In the past, we have been able to observe only the most superficial effects of this, such as high turnover rates. However, if we are able to develop a metric to quantify and record NMEs to help with the early diagnosis of negative experiences, it may be possible to find appropriate ways to manage the sources of serious problems, thereby reducing NMEs and the turnover rate of mentees. Thus, assessing mentees' NMEs has theoretical and practical importance; however, as previous research mainly focused on the positive aspects of mentorships, such as mentoring function; there has been a lack of research that provides data on NMEs, such as NME questionnaires (Chen & Lou, 2014; Chen, 2013; Hu, Wang, Yang, & Wu, 2014). Therefore, this study aimed to establish the practical and theory-based negative mentoring experience questionnaire (NMEQ) as a reference tool for nursing management.

2. LITERATURE REVIEW

The NMEs imply that dysfunctional mentoring outcomes can occur after the implementation of mentoring programs, which have effects on both the mentor and mentee (Burk & Eby, 2010). This can include the relationship failing to meet the needs of one or both parties, causing dissatisfaction (Scandura, 1998), the cost of the relationship outweighing its benefit (Feldman, 1999), the mentor being overly selective or demanding, or the mentor being too authoritarian. Eby et al.(2000) clearly define NMEs as specific issues that arise between mentor and mentee, such as the way in which a mentor responds to a mentee or the mentor's personalitiy, which may inhibit the ability of the mentor to provide instruction to the mentee. These issues include the mentor not providing assistance when the mentee encounters problems in achieving certain career goals, or difficulties in the mentor-mentee relationship that restrict the interaction between the pair. This research uses nurses in Taiwanese hospitals as subjects. Huang's(2013) research not only employs a rigorous grounded theory analysis in Taiwannese context, but also uses a theoretical basis in line with the current state of nurse mentoring programs. This study covers the elements proposed by Eby et al.(2000) and develops the scale advocated by Huang.(2013)

3. METHODS

Design, sample, and setting

The collection of research materials was divided into two stages. In the first stage, 30 valid pre-trial questionnaires were collected. In the second stage, 255 valid questionaires were gathered, with a collection rate of 87.93%. The subjects were nurses in mentorship programs in two regional Taiwanese hospitals who had been working for less than two years. In the pre-trial phase, all subjects were female, 40% were between 26 and 30 years old, 73.33% held a Bachelor of Science (BSc) degree, 73.33% were unmarried, and 93.33% had been working for the hospital for between 1 year and 7 months, and 2 years. In the second phase, 97.25% of

respondents were female, with 60.39% between 20 and 25 years old, 67.84% held a BSc or higher, and 218 respondents were unmarried. Of the respondents, 29.02% had worked for the hospital for between 1 year, and 1 year and 6 months, with 59.6% of respondents having experience of working for other hospitals, and 34.9% of respondents having worked in fields related to internal medicine. In terms of mentors, 59.6% belonged to Level III and 71.4% had experience of mentoring other nurses, 99% of who had spent 0–6 months mentoring new nurses. Of the mentees, 52.2% said that they regularly interacted with their mentors.

Questionnaire Framework and Study Process

This study follows the assertions of Huang(2013) and related literature concerning NMEs in Taiwan and abroad as a basis for the development of NMEQ. In this study, the first stage involved the drafting of a round of preliminary items, and expert validity and reliability analyses were conducted. The second phase included a reliability analysis, exploratory factor analysis (EFA), and confirmatory factor analysis to verify the scale's construct validity. Finally, using a mentoring function scale as a criterion, we tested the criterion-related validity.

4. RESULTS

EFA

The results of a Kaiser-Mayer-Olkin (KMO) index and Bartlett's test of sphericity revealed a KMO of 0.924, and a Bartlett value of 6418.098 ($df = 435$, $p < 0.01$), showing that this study's scale is suitable for carrying out an EFA. We then used a principal component analysis with the varimax method to conduct a principal axis factoring. We took factors with eigenvalues greater than 1 as the number of extracted factors, and groups with factor loading greater than 0.5 as our selected factors. According to this scale, we extracted five factors with eigenvalues greater than 1, explaining 70.05% of the total variance. Because the factor loadings of G1 on factor 3 and factor 5 all reached 0.5, this item was deleted, leaving 29 items explaining 70.00% of the total variance. The factors and items are listed below (See Table 1).

The first factor: Mentor dimension

The first factor was included in the following 12 items. My mentor does not actively instruct me. My mentor does not actively assist me. My mentor is unqualified for the role of mentor. My mentor has made personal attacks against me. My mentor, together with others, has isolated me. My mentor is unwilling to acknowledge my thoughts and feelings about nursing. My mentor does not remind me to participate in important meetings and discussions. I am unable to adapt to my mentor's leadership style. My mentor has poor emotiomal management. When I ask my mentor a question, he/she is often unable to provide a satisfactory answer. After I have already finished my shift, my mentor has asked me to remain to help colleagues. I am unable to accept my mentor's style of instruction. These items were able to explain 43.51% of the variance. Because these items imply a negative experience caused by the mentor, they are called the "mentor dimension" of NME (Cronbach's $\alpha = 0.96$).

The second factor: Mentee dimension

The second factor was described by the following six items. Sometimes I am too inflexible at work. My learning attitude is not active enough. When my mentor is busy, I do not dare ask him/her questions. My work stytle and value on nursing care are different from my mentor's. I am not passionate about nursing. Because of my unfamiliarity with the workflow, I often have to stay late. These items explained 10.47% of the variance and, because they deal with negative

experiences caused by the mentee, their factor is referred to as the "mentee dimension" (Cronbach's α = 0.84).

The third factor: Nursing manager dimension

The third factor was included in the following four items. I think that my nursing manager has poor emotiomal management. My nursing manager and I have poor communication. I think that senior nursing managers have no way of knowing the issues of junior staff. I have immediately reported issues to my nursing manager, but she did not help to resolve the problem. The responses to these items explained 6.84% of the variance and, because these items point to negative experience caused by nursing managers, the factor is referred to as the "nursing manager dimension" (Cronbach's α = 0.92).

The fourth factor: Institutional dimension

The fourth factor was included in the following four items. My mentor's method of instruction is different from my school's. I feel that when I am not prepared to do something on my own, my mentor will ask me to do the task anyway. My current workload exceeds my working capacity. When my mentor instructs me, his attitude is harsher than others. These items explained 5.13% of the variance and, because they indicate instituational problems leading to negative experience, their factor is referred to as the "institutional dimension" (Cronbach's α = 0.72).

The fifth factor: Other medical staffs dimension

The fifth factor was included in three related items. I feel that myself and other medical staff have poor communication. Other medical staff are often strict when correcting me. Physicians are often strict when correcting me. These items explained 4.04% of the variance and, because they indicate negative experiences caused by staff other than nurses, such as physicians and other medical staff, the factor is referred to as the "other medical staff dimension" (Cronbach's α = 0.88).

CFA

Construct validity was examined using CFA with AMOS 18.0. The internal consistency of the measurement model was assessed by computing composite reliability (CR), and average variance extracted (AVE) indicated the percentage of variance of the dimension explained by an individual item. The CR and AVE values of more than 0.6 and 0.5, respectively, and the factor loadings of all items that reached statistically significant levels indicate good construct reliability and adequate convergent validity of the measurement model. In case of discriminant validity, when the square root values of all the AVE values of every dimension are higher than the pairwise correlation coefficients, it showed that the measurement model of NME had good discriminant validity.

All of model fit indices of CFA results for first-order model and second-order model were acceptable(Bagozzi & Yi, 1998). In other words, there was a good fit between the measurement model of NME and the questionnaire data. The CFA results also showed that the range of composite reliability values for each dimension demonstrated a reliability of 0.72–0.96. The factor loadings of all the items reached statistically significant levels ($p<0.01$). Bedsides of institutional dimension, average variance extracted (AVE) values of other dimensions were higher than 0.5. This indicated that NMEQ possesses good internal consistency and convergent validity. In addition, the CFA results also showed that the square roots of all the AVE values of every research dimension were higher than each pairwise

correlation coefficient. In sum, the measurement models of NME all had acceptable discriminate validity. Finally, this study used target coefficient to evaluate the relation between the first-order model and the second-order model. The target coefficient of NME is 0.96(848.379/884.275) and statistically significant ($p<0.01$). This showed that the first-order factors could be well accounted for by a more restrictive model (the second-order model) (Marsh & Hocevar, 1985).

Criterion-related validity

This research used Weng and Huang's(2012) scale of mentoring function (including the three elements of role modeling function, career development function, and psychosocial support function) as positive mentoring experience, and an inverse criterion for NMEQ, with an inverse relationship between mentoring function and NMEs indicating that NMEQ has good criterion-related validity. Pearson's *r* correlation results indicated that overall, as well as within each dimension, NMEQ and mentoring function exhibited a negative correlation.

5. CONCLUSION

If nurse managers hope to reduce the negative experiences of new staff nurses, they can use the results of this study to measure the effectiveness of mentoring program and provide the directions of improving mentoring program in the future. Specific benefits could include finding ways to encourage nursing managers to monitor the relationship between new nurses and mentors, and new nurses' adaptability to their work environment, or planning activities that can help new nurses to feel welcome in the workplace. In addition, this study revealed that there is an apparent phenomenon of workplace bullying of new staff nurses, and that the current method of nurses reporting such behavior directly to their nursing managers suffers certain weaknesses, such as suppression of complaints or aversion of new nurses to raising these issues with their managers. This study therefore suggests that a formal complaint system be established in the form of an online portal or another formal avenue that does not rely on nursing managers. This study also found that poor interaction between mentees, mentors, nursing managers, and other medical staff was a significant contributor to negative experiences. Consequently, we recommend that in the course of mentorship training programs, in addition to instructing mentors on how to train their mentees effectively from a medical perspective, attention should be paid to interpersonal skills training, in order to improve interaction between mentors and mentees.

The empirical results furnished by this study's NMEQ of hospital nurses can be used as important data for human resource theory related to nursing, as well as a practical reference for those in the field. Additionally, it can help nursing managers to assess the positive aspects (mentoring function) of their mentoring programs, as well as to reveal, and help to analyse, their weaknesses related to negative experience. Furthermore, this study can help nursing managers to clarify the possible range of negative experiences that their new staff nurses are likely to face in the implementation of mentoring programs. In addition to providing a reference for potential future research, we hope that this study can help nursing managers to improve their mentoring programs by boosting mentoring effectiveness and reducing negative experiences, and to strengthen the efficiency and quality of care provided by new staff nurses, thereby improving health care quality as a whole.

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LITERATURE:

1. Bagozzi, R. P., & Yi, Y. 1998. On the Evaluation of Structural Equation Models. ***Journal of the Academy of Marketing Science***, 16(1): 76-94.
2. Burk, H. G., & Eby, L. T. 2010. What keeps people in mentoring relationships when bad things happen? A field study from the protégé's perspective. ***Journal of Vocational Behavior***, 77(3): 437-446.
3. Chen, C. M., & Lou, M. F. 2014. The effectiveness and application of mentorship programmes for recently registered nurses: a systematic review. ***Journal of Nursing Management***, 22(4): 433-442.
4. Chen, Y. C. 2013. Effect of Reverse Mentoring on Traditional Mentoring Functions. ***Leadership & Management in Engineering***, 13(3): 199-208.
5. Eby, L. T. 2007. Understanding relational problems in mentoring, ***The handbook of mentoring at work: Theory, research, and practice***: 323-343. Los Angeles: In B. R. Ragins, & K. E. Kram (Eds.).
6. Eby, L. T., Butts, M., Lockwood, A., & Simon, S. A. 2004. Protégés' negative mentoring experiences: Construct development and nomological validation. ***Personnel Psychology***, 57(2): 411-447.
7. Eby, L. T., Butts, M. M., Durley, J., & Ragins, B. R. 2010. Are bad experiences stronger than good ones in mentoring relationships? Evidence from the protégé and mentor perspective. ***Journal of Vocational Behavior***, 77(1): 81-92.
8. Eby, L. T., McManus, S. E., Simon, S. A., & Russell, J. E. A. 2000. The protege's perspective regarding negative mentoring experiences: The development of a taxonomy. ***Journal of Vocational Behavior***, 57(1): 1-21.
9. Feldman, D. C. 1999. Toxic mentors or toxic proteges? A critical re-examination of dysfuctional mentoring. ***Human Resource Management Review***, 9: 247-278.
10. Hu, C., Wang, S., Yang, C. C., & Wu, T. y. 2014. When mentors feel supported: Relationships with mentoring functions and protégés' perceived organizational support. ***Journal of Organizational Behavior***, 35(1): 22-37.
11. Huang, C.-Y., & Weng, R.-H. 2012. Exploring the Antecedents and Consequences of Mentoring Relationship Effectiveness in the Healthcare Environment. ***Journal of Management & Organization***, 18(5): 685-701.
12. Huang, C. Y., Weng, R. H., & Wu, T.-C. 2013. ***The Negative Mentoring Experience among New Nurses in Taiwan***. Paper presented at the 2nd Annual Global Healthcare Conference, Singapore.
13. Marsh, H. W., & Hocevar, D. 1985. Application of confirmatory factor analysis to the study of self-concept: First-and higher-order factor models and their invariance across groups. ***Psychological Bulletin***, 97(3): 562-582.
14. Omansky, G. L. 2010. Staff nurses' experiences as preceptors and mentors: an integrative review. ***Journal of Nursing Management***, 18(6): 697-703.
15. Ragins, B. R., Cotton, J. L., & Miller, J. S. 2000. Marginal mentoring: the effects of type of mentor, quality of relations, and program design on work and career attitudes. ***Academy of Management Journal***, 43(6): 1177-1194.
16. Scandura, T. A. 1998. Dysfunctional Mentoring Relationships and Outcomes. ***Journal of Management***, 24(3): 449-467.
17. Weng, R. H., Huang, C. Y., Tsai, W.-C., Chang, L. Y., Lin, S. E., & Lee, M. Y. 2010. Exploring the impact of mentoring functions on job satisfaction and organizational commitment of new staff nurses. ***BMC Health Services Research***, 10(1): 240.

Table 1 Results of exploratory factor analysis

No.	Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
D4	My mentor does not actively instruct me	0.89	0.11	0.11	0.10	0.03
D8	My mentor does not actively assist me	0.88	0.09	0.10	0.11	0.05
D9	My mentor has made personal attacks against me	0.83	0.07	0.13	0.22	0.19
D12	My mentor is unqualified for the role of mentor	0.82	0.20	0.20	0.11	0.16
D11	My mentor is unwilling to acknowledge my thoughts and feelings about nursing	0.81	0.07	0.14	0.20	0.17
E6	My mentor does not remind me to participate in important meetings and discussions	0.80	0.07	0.23	0.16	0.10
D4	My mentor, together with others, has isolated me	0.79	0.03	0.06	0.27	0.24
D8	My mentor has poor emotiomal management	0.78	0.18	0.31	-0.02	0.16
D9	I am unable to adapt to my mentor's leadership style	0.77	0.25	0.25	0.05	0.18
D12	When I ask my mentor a question, he/she is often unable to provide a satisfactory answer	0.73	0.28	0.22	0.11	-0.07
D11	After I have already finished my shift, my mentor has asked me to remain to help colleagues	0.67	0.19	0.24	0.12	0.14
E6	I am unable to accept my mentor's style of instruction	0.66	0.36	0.33	0.18	0.06
E3	Sometimes I am too inflexible at work	0.02	0.77	-0.06	0.22	0.07
E2	My learning attitude is not active enough	0.15	0.75	0.13	0.27	0.15
E4	My work stytle and value on nursing care are different from my mentor's	0.24	0.66	0.24	0.09	0.14
E1	I am not passionate about nursing	0.06	0.66	0.22	0.26	0.20
E7	Because of my unfamiliarity with the workflow, I often have to stay late	0.25	0.65	0.09	0.13	0.12
E5	When my mentor is busy, I do not dare ask him/her questions	0.19	0.65	0.16	0.04	0.13
F1	I think that my nursing manager has poor emotiomal management	0.32	0.17	0.83	0.14	0.09
F2	My nursing manager and I have poor communication	0.34	0.19	0.81	0.17	0.13
F3	I think that senior nursing managers have no way of knowing the issues of junior staff	0.16	0.21	0.78	0.16	0.05
F4	I have immediately reported issues to my nursing manager, but she did not help to resolve the problem	0.41	0.05	0.77	0.21	0.06
G3	Other medical staff are often strict when correcting me	0.21	0.33	0.19	0.80	0.07
G4	I feel that myself and other medical staff have poor communication	0.21	0.30	0.25	0.76	0.12
G2	Physicians are often strict when correcting me	0.30	0.27	0.15	0.73	-0.01
C1	I feel that when I am not prepared to do something on my own, my mentor will ask me to do the task anyway	0.14	0.05	0.02	0.07	0.76
C2	My current workload exceeds my working capacity	0.11	0.18	0.14	0.26	0.69
C4	My mentor's method of instruction is different from my school's	0.07	0.20	0.11	-0.05	0.67
D1	When my mentor instructs me, his attitude is harsher than others	0.35	0.22	-0.01	-0.07	0.63
	Eigenvalue	13.07	3.14	2.05	1.54	1.21
	Explained variance	43.51	10.47	6.84	5.13	4.04

FINANCIAL LIBERALIZATION AND STOCK MARKET DEVELOPMENT IN THE MENA REGION

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ABSTRACT

We investigate the impact of financial liberalization on stock market development in the MENA region using data over the period from 1979 to 2014. We report a positive relationship between financial liberalization and stock market development. The size effect of this relationship tends to increase over time following the liberalization policy decision. We also find that a variation in the impact of financial liberalization on stock market development across countries in the MENA region. The effect of financial liberalization on stock market development is significantly larger in countries with common law origins, higher level of democracy, earlier liberalization policy date and smaller government sector.

Keywords: *Financial Liberalization policy; MENA, Stock market development*

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MERCHANDISE EXPORTS AND RELATIVE LABOUR PRODUCTIVITY IN THE REPUBLIC OF CROATIA

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ABSTRACT
This paper explores causality between Croatian merchandise exports and its relative labour productivity. The empirical results confirm positive effect of increase in merchandise exports on relative labour productivity but not positive effect of increase in relative labour productivity on merchandise exports. Such established direction of the effect, from merchandise exports to relative labour productivity may potentially be due to labour law rigidity in the Republic of Croatia. Therefore, direct stimulation of exports can potentially provide better effects than the economic measures which are directed toward productivity growth.
Keywords*: commodity export, labour productivity, Republic of Croatia, European Union*

1. INTRODUCTION

Merchandise exports and labour productivity can be related in several ways. A country can export due to its comparative advantages in labour productivity, in which case merchandise exports are a consequence of comparative advantages in labour productivity. On the other hand, a growth of merchandise exports by exploiting economies of scale can affect an increase in labour productivity. Given the nature of the relationship between labour productivity and merchandise exports, some merchandise export-oriented measures of economic policy can appear to be more efficient than others. Would it be more appropriate to streamline all horizontal and sectoral incentives and other measures toward enhancing merchandise exports or are the measures focused on, for example, research and development or innovation more efficient in increasing both merchandise exports and, consequently, relative labour productivity? Answers to these questions depend on a number of factors and are therefore not identical for each country. Different theories point out different conclusions on causality between labour productivity and merchandise exports and for this reason conclusions must be made based on empirical evidence.

Given all of the above mentioned, this paper investigates causality between total merchandise exports and labour productivity in the Republic of Croatia comparing to other European Union member states.

The paper is divided in five parts. Following the first, introductory part, the second part considers the theoretical background to the link between merchandise exports and labour productivity. The third part of the paper describes the data and methodology used. The fourth part interprets the results and the fifth, final part, delivers main conclusions of the conducted research.

2. THEORETICAL BACKGROUND ON THE LINK BETWEEN MERCHANDISE EXPORTS AND LABOUR PRODUCTIVITY

Due to the recent financial and economic crisis, which brought recession in many countries, the hypothesis on the export-driven growth has gained considerable attention of scientific community and professionals. The potential solution to the crisis is increasingly seen in exporting to the markets of those countries that are reported to have experienced greater economic growth and, in line with this, greater demand for goods (Santos, Ribeiro and Carvalho, 2013). According to the traditional export-led growth theory and hypothesis, export growth causes a growth of productivity through various externalities (Beckerman, 1965; Kaldor, 1970). For small open economies, foreign demand allows economies of scale to be exploited and makes domestic companies internationally competitive. This can stimulate productivity growth and cause labour price inflation damping as the salaries are not fully aligned in accordance with productivity indices. Lower salary costs and inflation damping can improve price competitiveness and increase export growth even more. An initial export incentive can, accordingly, cause cumulative causality mechanism relative to the growth of productivity and export incentive measures can significantly affect productivity. This is the core reasoning behind the Kaldor's export-led growth, which was originally presented in his paper in 1970, and was subsequently formalised by Dixon and Thirlwall (1975, 1979). The export-driven growth model sees export as a key determinant of productivity growth. Export determines the concentration of investment in the most efficient sectors of economy, that is, the sectors in which a country holds its comparative advantage. A higher degree of specialisation in those sectors in which a country has its comparative advantage positively affects productivity growth both in these sectors and in the overall economy. Furthermore, export growth through international market access or through economies of scale can enhance productivity. The exposure to international competition can exert pressure on exporters' costs and, consequently, on production technology changes. This way, a positive effect on the exporting country's economic productivity can eventually be created. Export can positively influence productivity of an overall economy through the impact of external factors (Bhagwati, 1978). International trade theories which see the sources of competitiveness of merchandise exports in the production technology, unlike the export-led growth theory, assume that productivity growth impacts export growth. Comparative advantage in an export market is determined by innovation (Vernon, 1966). According to Ricardo's theory of comparative advantage, countries trade because of comparative advantages in labour productivity. Bearing in mind Ricardo's theory of comparative advantages, the direction of influence would be from labour productivity to export (Grgić and Bilas, 2008). While two mentioned approaches assume a one-direction relationship, the neoclassical trade theory and intra-industrial trade mention a two-way impact. Export affects productivity, and *vice-versa*. Imperfect competition, economies of scale and product differentiation through trade with countries of similar abundance of production factors positively affects productivity and productivity then positively affects trade in goods (Helpman and Krugman, 1985). According to the analysis conducted on the example of the Republic of Croatia, international trade in goods of Croatia is closer to inter than intra-industrial trade (Škuflić and Vlahinić-Dizdarević, 2004). As mentioned in the introduction, research on this topic does not present uniform results. The empirical evaluation using the example of the United States of America (USA) confirmed the effect of labour productivity on the USA merchandise exports (Bernard and Jensen, 1999). The effect of labour productivity on merchandise exports was also empirically confirmed on the example of the Republic of Austria (Kunst and Marion, 1989). On the other hand, the export-driven growth theory which assumes the effect of export on labour productivity, was also confirmed using empirical evaluation (Proudman and Redding, 1998; Loecker, 2007). The results of empirical evaluation of causality between merchandise exports and productivity growth can potentially highlight the efficiency of national

policies. If a country's export growth causes productivity to increase, an initial export incentive can lead to productivity growth through economies of scale and price competitiveness (Atesoglu, 1994; Beckerman, 1965), which can then trigger a number of positive effects for domestic economy. In this case, when export growth causes productivity growth, the recommendation for national policies would be some kind of a strategic trade policy. On the other hand, if causality is reverse and productivity growth causes export growth, recommendations for national policies would involve more direct incentives to boost productivity, such as more significant investment in research or tax relieves for investment in research and development and various forms of educational support. In order to provide recommendations for more efficient trade and economic policies, it is necessary to identify the direction of activity or causality. Identifying the direction of influence is mostly an empirical problem.

3. METHODOLOGY AND RESEARCH RESULTS

Economic time series often do not have the characteristic of stationarity due to containing different trends. In order to test stationarity in the observed time series Augmented Dickey–Fuller unit root (ADF) tests has been applied. ADF test results for the observed time series i.e are showen in Table 1.

Table 2 : Augmented Dickey–Fuller test results for Croatian merchandise exports, labour productivity in Croatia and merchandise exports to merchandise imports ratio of trade between Croatia and EU27 countries

VARIABLE	VARIABLE DESCRIPTION		P - VALUE
RI	Croatian merchandise exports	around zero	0.98
		around the constant	0.67
		in first differences	0.01
PR	Labour productivity in Croatia comparing to EU27 countries	around zero	0.77
		around the constant	0.73
		in first differences	0.03
RI/RU	Merchandise exports to merchandise imports ratio of trade between Croatia and EU27 countries	around zero	0.61
		around the constant	0.55
		in first differences	0.00

Source: Authors' calculation.

Like it's shown in Table 1 with significance level of 5% all of the observed variables are integrated of first order I(1). Since all of the observed variables are integrated of the same order they might be co-integrated, so we apply cointegration approach to establish the relationship between relative labor productivity and merchandise exports in Croatia. In order to test the relationship between variables, the error correction model or the Engle-Granger Cointegration Approach (Engle and Granger, 1987) was assumed. Following the procedure we firstly estimate the relationship between labor productivity and merchandise exports.

According to Granger (1988), if two time series are cointegrated then there must be Granger-causality at least in one direction. To empirically check causality between merchandise exports and labour productivity, the Granger causality test must be applied. The Granger (1969) causality test is one of the earliest methods developed to quantify causal effects in time series.

It is based on a generally acknowledged fact that the cause precedes the effect, which it consequently creates. It can be said that X Granger-causes Y if the past values of X can contribute to anticipating the future values of Y, better than using the past values of Y alone. The Granger causality test can be carried out for stationary or cointegrated time series.
The Granger causality test assumes the evaluation of the following model:

$$Y_t = \mu_t + \sum_{i=1}^{p} \alpha_i \cdot Y_{t-i} + \sum_{j=1}^{q} \beta_i \cdot X_{t-i} + \varepsilon_t$$

Where, μ_t is the deterministic component and ε_t is white noise. The null hypothesis can be tested using F-test. If the p-value is lower than the defined level of significance, the null hypothesis is not accepted and the conclusion is that the first observed time series Granger-causes the second time series.
In order to explore Granger-causality, the following two variables were observed: (1) total merchandise exports (data by the Croatian Bureau of Statistics) at constant prices and (2) labour productivity in the Republic of Croatia compared to the EU 27 average (data by the Eurostat, EU27=100) for the period 2000-2012. Most merchandise exports of the Republic of Croatia are directed to the European Union market and labour productivity compared to EU27 was selected as an indicator of international competitiveness in labour productivity. On the other hand, total merchandise exports, rather than merchandise exports to the EU27 market alone, affect labour productivity, and therefore total merchandise exports of the Republic of Croatia (RC) were accordingly selected as the observed variable in this model. According to this approach, a linear regression model is defined on non-stationary time series and then stationarity of residuals in the estimated regression model is tested. A linear regression model with non-stationary time series in which labour productivity in RC compared to EU27 average is a dependent variable and merchandise exports of RC is an independent variable is illustrated in Table 2.

Table 3 Long-run equilibrium between labour productivity and merchandise exports in Croatia

Dependent Variable: PR
Method: Least Squares
Date: 02/22/15 Time: 14:18
Sample: 2000 2012
Included observations: 13

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.622339	0.013999	44.45444	0.0000
RI	2.31E-06	2.52E-07	9.160649	0.0000

R-squared	0.884110	Mean dependent var	0.747385
Adjusted R-squared	0.873574	S.D. dependent var	0.031508
S.E. of regression	0.011203	Akaike info criterion	-6.004611
Sum squared resid	0.001381	Schwarz criterion	-5.917696
Log likelihood	41.02997	Hannan-Quinn criter.	-6.022476
F-statistic	83.91749	Durbin-Watson stat	1.960643
Prob(F-statistic)	0.000002		

Source: Authors' calculation.

A linear regression model on non-stationary time series (Table 2) represents long-run equilibrium of the observed time series. Following the test of stationarity of the residual of the illustrated linear regression model, the null hypothesis on the unit root of the residual was rejected (the empirical level of significance of the ADF test is 0.0015).

After defining long term equilibrium between the observed variables and establishing stationarity of the residuals and the observed variables in the first differences, it was possible to define the error correction model (Table 3).

Table 3 Error correction model between labour productivity and merchandise exports in Croatia

DependentVariable: DPR
Method: LeastSquares
Sample (adjusted): 2001 2012
Includedobservations: 12 after adjustments
DPR=C(1)*DRI+C(2)*U(-1)

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	1.92E-06	6.35E-07	3.023195	0.0128
C(2)	-1.111070	0.341190	-3.256456	0.0086

R-squared	0.582432	Mean dependent var	0.009250
Adjusted R-squared	0.540675	S.D. dependent var	0.016875
S.E. of regression	0.011436	Akaike info criterion	-5.953008
Sum squared resid	0.001308	Schwarz criterion	-5.872190
Log likelihood	37.71805	Hannan-Quinn criter.	-5.982930

Source: Authors' calculation.

Furthermore, the following model was assumed:

$$DPR_t = C(1) \cdot DRI_t + C(2) \cdot U(-1)$$

Where:
DPR - is the first difference of labour productivity variable,
DRI - is the first difference of merchandise exports variable,
U(-1) - are residuals with leg one from regression equation that represents long-run equilibrium.
The variables of the assumed model are significant and in line with the initial assumptions.
If merchandise exports increase by one million HRK, relative labour productivity compared to EU 27 will increase by 1.92E-06.
The coefficient C(2) is significant and negative, therefore in accordance with theoretical assumptions. If two observed variables move away from the state of their long-run equilibrium over a period of time, in the next time period they will speedily return to the state of their long-run equilibrium and there is a strong relationship between relative productivity and merchandise exports in the long-run.

In order to check the assumptions of the illustrated model, the White's test for homoscedasticity of variance, the Jarque-Bera test for normality of residuals and the test for the autocorrelation of the residuals (correlogram) were run. Following these, it was established that the assumptions of the model were met at a confidence level of 95 %.

Table 4 The Granger-Causality test between labour productivity and merchandise exports in Croatia

PairwiseGrangerCausalityTests
Lags: 1

NullHypothesis:	Obs	F-Statistic	Probability
PRdoesnotGrangerCause RI	12	0.07948	0.7844
RIdoesnotGrangerCause PR		6.56699	0.0306

Source: Authors' calculation.

According to the Granger-Causality test, with the confidence level of 95 %, it was possible to reject the null hypothesis according to which merchandise exports do not Granger-cause labour productivity (Table 4). Following the same procedure we wanted to establish the relationship between labour productivity in Croatia compared to the EU27 (PR in Table 1) and Croatian merchandise exports to the EU27 over Croatian merchandise imports from EU27 ratio (RI/RU in Table 2). Like one can see in Table 2 the aforementioned variables are integrated of the same order therefore error correction model can be estimated for the observed pair of variables.

Table 4 Pairwise Granger Causality Tests

Sample: 2000 2012
Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
PR does not Granger Cause RI/RU	12	5.26523	0.0474
RI/RU does not Granger Cause PR		2.91184	0.1221

Source: Authors' calculation.

Like one can see in Table 4, out of Granger causality test, hypothesis that PR does not Granger Cause RI/RU can be rejected at significance level of 5%. In accordance to Granger causality test, labour productivity Granger-causes merchandise exports to imports ratio between Croatia and EU27.

Table 5 Long-run equilibrium between labour productivity and merchandise exports to imports ratio between Croatia and EU27

Dependent Variable: RI/RU
Method: Least Squares

Sample: 2000 2012
Included observations: 13

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.442989	0.684510	3.568961	0.0051
@TREND	0.028587	0.007871	3.632113	0.0046
PR	-2.850708	0.972806	-2.930396	0.0150

R-squared	0.583227	Mean dependent var	0.483933
Adjusted R-squared	0.499872	S.D. dependent var	0.062462
S.E. of regression	0.044173	Akaike info criterion	-3.202234
Sum squared resid	0.019512	Schwarz criterion	-3.071862
Log likelihood	23.81452	Hannan-Quinn criter.	-3.229032
F-statistic	6.996934	Durbin-Watson stat	1.061259
Prob(F-statistic)	0.012575		

Source: Authors' calculation.

Following the test of stationarity of the residual of the illustrated model in Table 5, the null hypothesis on the unit root of the residual was rejected (the empirical level of significance of the ADF test is 0.0081).

Table 6 Error correction model between labour productivity and merchandise exports to imports ratio between Croatia and EU27

Dependent Variable: D(RI/RU)
Method: Least Squares
Date: 02/22/15 Time: 12:40
Sample (adjusted): 2001 2012
Included observations: 12 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PR)	-1.291876	0.425621	-3.035271	0.0126
U(-1)	-0.897954	0.218867	-4.102742	0.0021

R-squared	0.730854	Mean dependent var	0.000508
Adjusted R-squared	0.703939	S.D. dependent var	0.050400
S.E. of regression	0.027423	Akaike info criterion	-4.203829
Sum squared resid	0.007520	Schwarz criterion	-4.123011
Log likelihood	27.22297	Hannan-Quinn criter.	-4.233750
Durbin-Watson stat	1.305077		

Source: Authors' calculation.

Like we can see in Tables 5 and 6 we found negative and significant relationship between labour productivity and merchandise exports to imports ratio between Croatia and EU27. In accordance to estimated models in Tables 5 and 6, the higher the labour productivity in Croatia compared to EU27 the lower the merchandise exports to merchandise imports from Croatia to EU27. Empirical results confirm that Croatia does not export to EU27 in regards to labour productivity. Furthermore the higher the labour productivity in Croatia the higher imports from EU27 and that might be the case due to income elasticity of import demand in Croatia, assuming that the higher labour productivity means the higher income level in Croatia.

4. DISCUSSION

The identified direction of influence can potentially be explained by the labour rigidity in Croatia. Stringent labour laws negatively affect the growth of productivity in such way that they hamper the processes of downsizing and creating new jobs. This can impede companies' restructuring processes and shifting of jobs. Shifting employment can be an important source of effectiveness or productivity because this way labour is shifted from companies and/or sectors with low productivity to those with higher productivity. Labour rigidity represents an obstacle when opening new companies is concerned, that can has negative influence on productivity as well, given that new companies are more dynamic than the old ones and hence contribute more to total productivity and to creation of new jobs (Author, Kerr and Kugler, 2007; World Bank, 2005). Negative effects between layoff costs and labour productivity have been confirmed in several scientific papers (Micco and Pages, 2006; Scarpetta and Tessel, 2004). According to the analyses of the World Bank, labour laws in the Republic of Croatia are relatively rigid (World Bank, 2011). Due to stringent labour, direct effect on labour productivity can potentially be hampered and export growth could eventually be more efficient in the direction of raising labour productivity. The research was entirely focused on interconnection between merchandise exports and relative labour productivity so the certain limitations are present in this research. The limitations of the research at the first place come out of its scope.

We found no available data on an industry/mezzo level or on a company/micro level, so we took the available data on a macro level. Analysis on an industry or company level may provide additional evidence on the relationship between the merchandise exports and relative labour productivity.

5. CONCLUSION

The empirical results point out the conclusion that in the Republic of Croatia the merchandise exports growth Granger-causes relative labour productivity growth compared to other member states of the European Union. Furthermore, empirical results show that labour productivity growth in Croatia comparing to other European Union member states decreases merchandise exports to merchandise imports ratio between Croatia and other European Union member states. The established relation might be explained by income elasticity of import demand in Croatia since higher labour productivity can be correlated with higher income level. The results of this research suggest that export-led growth model can be acceptable for the economic growth and development in Croatia. Trade policy toward merchandise exports growth might help Croatia to converge with more developed European Union member states in terms of labour productivity. Therefore, direct measures toward merchandise exports can potentially provide better effects on the overall economic development than measures directed toward productivity growth.

The results obtained can be interpreted in the context of labour law in Croatia and its rigidity having as a consequence high costs of employment and layoff.

The main aim of the research was to establish interconnection between total merchandise exports in Croatia and labour productivity comparing to other European Union member states. Nonetheless certain limitations were present in this research. The limitations of the research at the first place come out of its scope. We found no available data on an industry/mezzo level or on a company/micro level, so we took the available data on a macro level. Analysis on an industry or company level may provide additional evidence on the relationship between the merchandise exports in Croatia and relative labour productivity.

Recommendations for further research would involve also exploring to what extent the rigidity of labour laws defines the direction of mutual influence between labour productivity and merchandise exports.

LITERATURE:

1. Atesoglu, H. S. (1994).: “An application of a Kaldorian export-led model of growth to the United States”, *Applied Economics*, 26: 479-483.
2. Autor, D. H., Kerr, W. R. Kerr, Kugler, A. D., (2007). “Do Employment Protections Reduce Productivity? Evidence from U.S.”, NBER Working Papers 12860.
3. Bassanini, A., Nunziata, L., Ven, D., (2008). “Job Protection Legislation and Productivity Growth in OECD Countries”, IZA Discussion Paper No. 3555. Bonn: IZA.
4. Beckerman, W., (1965). “Demand, Exports and Growth, in W. Beckerman, and Associates”, *The British Economy in 1975*, The National Institute of Economic and Social Research, 44-72.
5. Bernard, A. B., Jensen, J. B., (1999). “Exceptional Exporter Performance: Cause, Effect, or Both?”, *Journal of International Economics* 47 (1): 1-26.
6. Bhagwati, J. N., (1978). *Foreign Trade Regimes and Economic Development: Anatomy and Consequences of Exchange Control Regimes*, (Cambridge: Ballinger).
7. Dixon, R. J., Thirlwall, A. P., (1975). “A model of regional growth differences on Kaldorian lines”, *Oxford Economic Papers*, 27: 201-214.
8. Croatian Bureau of Statistics. Available at: www.dzs.hr [15.01.2014.].

9. Engle, R. F., Granger, C. W. J., (1987). "Co-Integration and Error Correction: Representation, Estimation, and Testing", *Econometrica*, 55 (2): 251-276.
10. Eurostat. Available at: www.eurostat.org [15.01.2014.].
11. Granger, C. W. J., (1969). "Investigating Causal Relations by Econometric Models and Cross-spectral Methods", *Econometrica*, 37(3): 424-438.
12. Grgić, M., Bilas, V. (2008). *Međunarodna ekonomija (International Economics)*, (Zagreb: Lares plus).
13. Helpman, E., Krugman, P., (1985). *Market Structure and Foreign Trade,* (Cambridge: MIT Press).
14. Kaldor, N., (1970). "The case for regional policies", *Scottish Journal of Political Economy*, 17: 337-348.
15. Kunst, R. M., Marion, D., (1989). "Notes on Exports and Productivity a Causal Analysis", *Review of Economics and Statistics*, 71: 699-703.
16. Loecker, J. D., (2007). "Do exports generate higher productivity? Evidence from Slovenia", *Journal of International Economics,* 73: 69-98.
17. Micco, A., Pages, C., (2006). "The Economic Effects of Employment Protection: Evidence from International Industry-Level Data", IZA Discussion Paper, 2433.
18. Nickell, S., Layard., R., (1999). Labor Market Institutions and Economic Performance. In Ashenfelter, O., Card, D. (eds.), *Handbook of Labor Economics*, Edition 1, (Paris: OECD).
19. Proudman, J., Redding, S., (eds), (1998). *Openness and Growth*, (London: Bank of England).
20. Ricardo, D., (1821). *The Principles of Political Economy and Taxation*, (New York, Everyman's Library, 1973).
21. Santos, P. G., Ribeiro, A. P., Carvalho, V. M., (2013). "Export-led Growth in Europe: Where and What to Export?", FEP Working Papers.
22. Scarpetta, S., Tressel. T., (2004). "Boosting Productivity via Innovation and Adoption of New Technologies: Any Role for Labor Market Institutions?", The World Bank Policy Research Working Paper Series, 327378.
23. Škuflić, L., Vlahinić-Dizdarević, N., (2004). "Koliko je hrvatska robna razmjena intra-industrijska?", *Ekonomski pregled*, 55(9-10): 727-751.
24. Vernon, R., (1966). "International Investment and International Trade in the Product Cycle", *Quarterly Journal of Economics,* 80: 290-307.
25. World Bank, (2005). *Enhancing Job Opportunities. Eastern Europe and the Former Soviet Union,* (Washington, DC: World Bank).
26. World Bank, (2011). *Employment Protection Legislation and Labour Market Outcomes: Theory, Evidence and Lessons for Croatia,* (Washington, DC: World Bank).

CREDIBILITY OF SUSTAINABILITY REPORTS OF MINING SECTOR COMPANIES IN AUSTRALIA: AN INVESTIGATION OF EXTERNAL ASSURANCE

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ABSTRACT

The recent trend towards company's responsibility for social, environmental and economic performance has resulted in sustainability reporting in varying levels. Even though there is a growing trend towards sustainability reporting which is of voluntary nature, not much attention is given to the credibility of such information through external assurance. The paper investigates the extent of sustainability reporting in the mining sector companies in Australia and their assurance practices. The annual reports were examined for top 100 ASX listed companies in the mining sector in Australia for 2013-2014. This study identified 18% of companies had a sustainability report, however, only 44% of the sustainability reports were audited either by accountants or independent assurance providers. However, majority of the companies (62.5%) were assured by accountants. Criteria used for assurance varied resulting in providing limited assurance by majority of the assurance providers. This study showed that there is variability in assurance practices for sustainability reports. Companies also used various assurance standards, as there were no universally accepted assurance standards for non-financial reporting. One of the major limitations for this variability is the lack of standardized indicators. This study shows that there is a need to develop generally acceptable criteria for assurance of non-financial information in sustainability reports. The criteria that can be applied by assurance providers would be a significant contribution for auditing profession and independent providers as well as standard setters, which will provide credible information for users of such information. This paper identified the importance of acceptable criteria for assurance of non-financial information in sustainability reports for companies in the mining sector which are considered to have greater environmental and social impact.

Keywords: *Sustainability Reporting, Assurance, Assurance Criteria, Corporate Responsibility*

1. INTRODUCTION

Sustainability is the ability for a company to continue in the long-term (Zadek and Raynard 2004). Ninety five percent of the world's largest corporations publish some form of sustainability reports (GRI. 2013). Eighty five percent of ASX 200 companies in Australia provides some level of reporting on sustainability factors (ACSI. 2014).This is also accompanied by investor expectations for corporate disclosures beyond what is disclosed in financial reporting, which has driven much attention to disclosures of Environmental, Social and Governance (ESG) information by corporations. In comparison to financial reporting, sustainability reporting is an integral part of the communication between the company and key stakeholders (Wallage 2000).

Investors, especially the institutional investors, tend to look at longer investment horizons (Chartered Accountants of Canada 2010) and believe that "the indicators they use to assess

performance with respect to Environmental, Social and Governance issues are essential to analyse a company's ability to sustain competitive advantage over the long term (Goldman Sachs 2008). Non-financial reporting in the 1990s was dominated by environmental concerns. However, the trend towards sustainable business practices which arose due to corporate governance scandals has brought the attention for companies to be aware of the need to be accountable for a wider audience on all aspects of the performance of a company, thereby reporting on environmental, social which includes ethical issues together with economic performance to communicate corporate responsibility to stakeholders (KPMG. 2005).

Increased demand for sustainability reporting has also come about with the need for credibility of the information requiring independent assurance. This rise in the assurance of sustainability reporting has been mainly in response to business and public concerns about sustainability challenges such as global warming. Prior research reports several benefits of assurance such as reduced agency costs and greater user confidence in the accuracy and validity of information provided (Simnett, Vanstraelen et al. 2009).

Assurance is an evaluation process that uses specific principles and standards to assess the quality of the organisation's underlying systems, processes and competencies that underpin performance (Zadek and Raynard 2004). Assurance provides credibility of information in annual reports through auditing, verification and validation process. Existing criteria for audit assurance for financial statements are relevance, reliability, neutrality, understandability and completeness. However, lack of unified established standards constitute a problem for assurance of sustainability reports (Manetti and Becatti 2009).

Independent assurance of sustainability information is intended to increase the robustness, reliability, accuracy and trustworthiness of disclosed information, because high quality information is considered more trustworthy and ultimately more useful for the organization and for users of information (GRI. 2013). Independent assurance enhances credibility of information used in the decision-making and provides confidence to investors, stakeholders, directors and senior management. It is also a tool for mitigating risks associated with the potential disclosure of inaccurate or misleading information (KPMG. 2011). Accounting and environmental consulting professionals have continued to argue the importance of assurance to increase trust in assurance reporting (Fonseca 2010).Therefore, assurance focuses on quality of data or processes to determine what data to collect, with the underlying intention to improve the quality of final disclosure (Zadek and Raynard 2004, GRI. 2013). Sustainability Reporting Guidelines of the GRI is considered an important driver to improve the quality of social environmental reports.

The purpose of this study is to investigate the sustainability reporting and the extent of independent assurance in the mining sector companies in Australia.

2. LITERATURE REVIEW OF ASSURANCE OF SUSTAINABILITY REPORTS

2.1 Sustainability Reporting

Sustainability reporting is gaining prominence around the world due to the importance of corporate responsibility. A company's value is impacted by the quality of its relationship with internal and external stakeholders through communicating companies actions that impact the society. As a result, companies are increasingly reporting on environmental and social aspects of their performance publicly (O'Dwyer, Owen et al. 2011) through sustainability reports, integrated reports, corporate social responsibility reports and also through their websites. This form of reporting is referred to as Corporate Responsibility (CR) reporting in the KPMG survey. Studies conducted by KPMG shows that there is a steady growth in reporting on environmental and social aspects (KPMG 2013). Two principal factors have driven sustainability reporting. Firstly, issues related to sustainability affect a company's long-term economic performance

materially. Secondly, the business community need to respond to issues related to sustainable development appropriately (KPMG 2008).

There are no universally accepted definitions of sustainability reporting. One of the accepted definitions for sustainability reporting is put forward by Global Reporting Initiative (GRI 2011). *"Sustainability reporting is the practice of measuring, disclosing, and being accountable to internal and external stakeholders for organizational performance towards the goal of sustainable development. 'Sustainability reporting' is a broad term considered synonymous with others used to describe reporting on economic, environmental, and social impacts (e.g., triple bottom line, corporate responsibility reporting, etc.). A sustainability report should provide a balanced and reasonable representation of the sustainability performance of a reporting organization – including both positive and negative contributions"*

2.2 Assurance of Sustainability Reports

The rise in sustainability reporting is also accompanied by the need for assurance by third parties for credibility of the information provided for both internal and external audiences. Reliable and credible information provides information to management to manage company's environmental and social risks, whereas from the stakeholders perspective, assurance represents efforts and achievements in relation to corporate responsibility reporting (KPMG 2002). According to Auditing and Assurance Standards Board, assurance engagement means "an engagement in which an practitioner expresses a conclusion designed to enhance the degree of confidence of the intended users other than responsible party about the outcome or evaluation or measurement of a subject matter against criteria" (CPA Australia 2013).

It can be seen that, a motivation to provide assurance statements with sustainability reports is to demonstrate that the management is committed to corporate responsibility. However, according to literature, there is suspicion that assurance practices for sustainability reporting lack credibility due to the managerial influence which diminishes accountability and transparency to stakeholders (Owen, Swift et al. 2000, Gray 2001, Adams and Evans 2004). Furthermore, managers may control the production of sustainability reports provided that it increases the corporate image rather than seeking transparency and accountability to stakeholders (Owen, Swift et al. 2000). However, Hodge, Subramaniam et al. (2009) states independent assurance add value to users of sustainability report in two ways. It increases the probability of finding material errors and omissions which would improve the quality of information and assurance provided by an independent assurer increase the credibility of information. Consequently, information accompanied by an assurance statement is likely provide greater confidence to report users.

Kolk and Perego (2010) refers to the 2002 KPMG Survey of corporate responsibility reporting which states that adoption of sustainability assurance arises from '… the demand for reliable and credible information from management, for managing the company's environmental and social risks, and from stakeholders who want assurance that the report truly represents the company's efforts and achievements'.

However, inclusion of an assurance statement for sustainability reporting could add value is questionable as these are usually prepared under management instructions and not as a result of independent enquiry (Gray 2000). Therefore, usefulness of the assurance of sustainability reports are challenged (Hodge, Subramaniam et al. 2009). Firstly lack of generally accepted criteria for sustainability reports results in variability in content and format of the assurance statements (Deegan, Cooper et al. 2006). Secondly, lack of specific assurance guidelines for assurance of sustainability reporting can result in inconsistent approaches used to address similar issues (Hodge, Subramaniam et al. 2009).

2.3 Assurance Practices

Assurance of non-financial information has posed problems to auditors' who has guidelines for auditing of financial reports. There is no specific guidance to address assurance of sustainability reports, however, there are two standards for guidance of assurance engagement. In Australia, Australian Standard of Assurance Engagement (ASAE) ASAE 3000 covers assurance engagements other than audits or reviews of historical financial information, which is also the focus of International Standard of Assurance Engagement (ISAE) ISAE 3000. These standards advocate two types of assurance referred to as reasonable assurance and limited assurance. Reasonable assurance aims to report a high level of assurance, not absolute level of assurance. This is due to limitations in the clients internal control system and the process employed for assurance itself, which is provided in a positive form. The limited assurance refers to a limited level of assurance. In a limited assurance the report indicates that it has not come to the attention of the practitioner that the information is not presented fairly in accordance with the identified criteria, which is referred to as the negative form (Hodge, Subramaniam et al. 2009). Mock, Strohm et al. (2007), identified three categories of assurance statements in their study, which were classified into positive, negative and hybrid or mixed.

2.4 Assurance Criteria

Criteria are established to evaluate or measure a subject matter of an assurance engagement. Criteria are considered to be the standards or benchmarks that enable reasonably consistent evaluation or measurement of the subject matter within the context of professional judgement (Wallage 2000). According to Auditing and Assurance Standards Board (2014) "suitable criteria are required for reasonably consistent measurement or evaluation of an underlying subject matter within the context of professional judgement. Without the frame of reference provided by suitable criteria, any conclusion is open to individual interpretation and misunderstanding. Suitable criteria are context-sensitive, that is, relevant to the engagement circumstances. Even for the same underlying subject matter there can be different criteria, which will yield a different measurement or evaluation".

Currently there are no generally accepted criteria that have been developed for assurance of sustainability reporting. A study conducted by (O'Dwyer and Owen 2005) reported lack of specific criteria as a major constraint on the level of assurance provided such as a directly applicable assurance standards.

2.5 Assurance providers

Traditionally, assurance was provided by auditors from the accounting profession for assurance of financial statements. Increase in the importance of reporting on environmental and social factors that impact a company, has resulted in growth of consultants who have experience in assurance of environmental and social activities (Hodge, Subramaniam et al. 2009) and are competing with the accounting profession to provide assurance for sustainability reports (Wallage 2000). The fact that consultants are quite often small in size and their scope tend to be narrow as well as focus on compliance related to environmental regulatory requirements (Owen and O'Dwyer 2004). However, the accounting profession is represented by high profile accounting bodies and tend to be concerned about the absence of generally accepted standards for assurance of sustainability reports (Hodge, Subramaniam et al. 2009). The skills and competencies they possess in performing financial audits by the accountants can be used to audit non-financial information. A study conducted by Deegan, Cooper et al. (2006) reported, assurance statements provided by accountants do not include recommendations, praise or commentary about the organisations processes and systems, where as consultants provide this type of additional commentary. As a result, assurances provided by consultants are more informative and provide greater clarity for users of such reports. Furthermore, consultants tend to focus more on completeness, fairness in comparison to accountants (Hodge, Subramaniam et al. 2009). The study conducted by Mock, Strohm et al. (2007) reports that assurance for

sustainability reports were issued by 35% of big four accounting firms and the remaining 65% was assured by local and national firms and consultants.
However, a study conducted by O'Dwyer and Owen (2005) reported accountants (53%) who were providing assurance was more likely to state the exact level of assurance pursued than their consultants (30%). Accountants tend to indicate the limitations in the degree of assurance provided stating, for example "we have not conducted an audit as defined in auditing standards, and we do not express an audit opinion on the performance data and information in the report".

3. THEORETICAL PERSPECTIVE

This study draws attention to agency theory, stakeholder theory and legitimacy theory to discuss the assurance practices of sustainability reporting
From the perspective of agency theory, Kolk and Perego (2010) refers to a study conducted by Chow (1982). They states that the demand for assurance of non-financial information stems due to the need to mitigate agency costs as a result of information asymmetry with institutional creditors.
Cooper (2015), refers to CFO of Westpac, Peter King who states that "the value of the company comes from doing the right thing for a wide group of stakeholders". To facilitate this, companies are producing sustainability reports, web pages and more recently, integrated reports. Therefore, according to the stakeholder theory, the value of a company comes from serving a wider group of stakeholders. A stakeholder is defined as "any group of individuals who can affect or is affected by the activities of the firm, in achieving the objectives of the firm" (Freeman 1984). A company's responsibility is not only to shareholders, it also has responsibility to suppliers, customers, employees, the government and the community, which means under the social responsibility model they must be accountable to the other stakeholders (Thorne, Ferrell et al. 2011). Accordingly, in the current business environment way of thinking is changing from shareholder wealth maximization to stakeholder wealth maximization. A company's value management system is based not only on economic profit maximization, but also on Environmental Social Governance (ESG) maximization, which ESG can be reached only if stakeholder engagement process is implemented in the management system of the company (Martirosyan and Vashakmadze 2013). ESG disclosures made by the companies are regarded as issues important to a wide range of stakeholders. They cover issues that are more than economic concern and also can impact economic concerns (Gray, Kouhy et al. 1995, Jenkins 2004). This shows that in order to be successful, companies not only have to be responsible to shareholders, but also rely on management of a variety of stakeholders who have a stake in the social and financial performance of the firm (Donaldson and Preston 1995).
Legitimacy theory is also considered important because a firm is accountable to the society for the use of resources that belong to the society. Legitimacy theory provides similar insights to Stakeholder theory. Legitimacy theory is based upon the notion that there is a social contract between the society and an organisation. A firm receives permission to operate from the society and is ultimately accountable to the society for how it operates and what it does, because society provides corporations the authority to own and use natural resources and to hire employees (Deegan 2004). If society feels that an organisation has breached its side of the social contract, then the survival of the organisation will be threatened. Events such as the Alaskan oil spill in Valdez in 1989, may have a detrimental impact on society's perception of both an organisation and the industry to which it belongs (Patten 1992). Thus legitimacy is considered to be a resource which an organisation is dependent upon for survival (Dowling and Pfeffer 1975). The legitimacy theory emphasizes that an organization must consider the rights of the public at large, not merely the rights of the investors. Failure to comply with societal expectations may result in sanctions being imposed in the form of restrictions on firms operations, resources and demand for its products. Social and environmental researchers particularly tend to utilize

legitimacy theory, to explain why corporate management undertake certain actions such as disclosing particular items of social and environmental information. It does not provide prescription about what management ought or should do and is a positive theory which seeks to explain or predict particular managerial activities (Deegan 2014).

Much empirical research has used legitimacy theory to study social and environmental reporting, and proposes a relationship between corporate disclosures and community expectations (Deegan 2004) and according to Tilling (2004) legitimacy theory provides a powerful mechanism for understanding voluntary social and environmental disclosures made by corporations. According to Deegan (2002) due to the desire to legitimise an organisations operations, legitimacy theory has been used as the theoretical basis for the environmental social disclosures. Furthermore, Lindblom (1994) and Patten (2005) has also suggested practice of environmental disclosures as a tool of legitimisation. Therefore, in relation to legitimacy theory, a strategy used for legitimacy is disclosure.

Gray, Owen et al. (1996), state that "the more important the stakeholder to the organization, the more effort will be exerted in managing the relationship. Information is a major element that can be employed by the organization to manage (or manipulate) the stakeholder in order to gain their support and approval, or to distract their opposition and disapproval". Accordingly, manager's will have an incentive to disclose information on various programs and initiatives to those stakeholders who have a particular interest in the organisation to indicate that they are conforming to stakeholder expectations (Deegan 2002).

Therefore, it is incorrect to treat legitimacy theory and stakeholder theory as two distinct theories, because it can be argued that there is an overlap between legitimacy theory and stakeholder theory (Gray, Kouhy et al. 1995).

4. MINING SECTOR IN AUSTRALIA

Contribution of the mining sector to the Australian economy is relatively high. Mining boom in the recent past has had a significant impact on the living standards of Australians. Nearly 6% of Australia's GDP is contributed by the mining industry and more than 35% of receipts were from exports. It's contribution to national employment was about 1.3%, and 20% of market capitalisation was contributed to mining comprising of nearly one-third were listed companies (Galbreath 2013). However, the negative impacts of mining operations have brought the attention of institutional investors to focus on ESG issues.

Mining industry is also associated with many challenges related to economic, environmental and social issues. Even though it has economic benefits related to employment and wealth creation, on the other hand it has variety of environmental impacts, including depletion of non-renewable resources, disturbance of the landscape and above-average threats for health and safety of workers and citizens (Azapagic 2004). Depletion of mining resources as a result of mining is a major concern for sustainability development. Mining is regarded as one of the most environmentally and socially disruptive activities undertaken by business. According to Warhurst A. (2001) incidents related to environmental disasters & human rights are related to mining or petroleum industries. Maintaining a licence to operate is a constant challenge for mining sector companies. For example resistance by social organisations, impact on the agriculture, pollution, health impacts and lack of community engagement (Jenkins and Yakovleva 2006).

Furthermore, Jenkins (2004) reports that CSR in the mining industry is about balancing the diverse demands of communities and protecting the environment whilst making profit. Therefore, from the perspective of mining sector, CSR is about responding to the shareholders as well as stakeholders including employees, customers, affected communities and the general public on issues such as human rights, employee welfare and climate change (Hamann R. 2003).

Azapagic (2004) has identified many different stakeholders related to mining sector as industry stakeholders, employees, trade unions, contractors, suppliers, customers, shareholders, creditors, insurers, local communities, local authorities, government and NGO's.

5. CONCEPTUAL FRAMEWORK

Based on the literature review on sustainability reporting practices and the assurance of sustainability reporting, aim of this study is to investigate the sustainability reporting practices of Australian companies and to determine the assurance practices of the sustainability reports. Even though the cost of independent assurance is rather high, the reports that have been assured will provide net benefits that are greater, such as reduced agency costs and increase user confidence as to the accuracy and validity of information (Simnett, Vanstraelen et al. 2009).

To understand the assurance practices of sustainability reporting, the conceptual framework of this study is designed to investigate the following specific aims of the study.

- Investigate the Sustainability Reporting practices (Sustainability Reporting, CSR Reporting, Integrated Reporting etc).
- Investigate the compliance with GRI guidelines
- Determine whether there is an assurance process? Who provides assurance? Auditing profession or other assurance providers?
- Examine the criteria used for assurance of non-financial information

Based on the literature review and the conceptual framework following assertions were investigated in this research.

1 Relationship between type of reporting and Assurance
2 Relationship between type of reporting and compliance with GRI guidelines
3 Relationship between type of reporting and level of assurance

6. METHODOLOGY

6.1 Research Sample

To investigate the assurance practices for sustainability reporting and the criteria used for independent assurance of sustainability reports, the sample for the study was selected from top 100 ASX companies in the Metal and Mining sector in Australia. This sector is considered to have a greater environmental and social impact. Companies in the mining sector are extracting non-renewable resource, which are subject to major environmental and social risks than those in other areas. Due to the risk factors the companies in the mining sector possess, it is important to increase user confidence through independent assurance which provide credibility for reported information (Simnett, Vanstraelen et al. 2009).

This study was conducted using secondary data from the corporate websites. Companies report their corporate social responsibility reporting practices through the website as standalone sustainability reports, Integrated reports, CSR reports or through their websites. Therefore, company websites were investigated for corporate reporting practices for year 2013-2014. Annual reports are considered to be more publicised and visible document and provide important social and environmental information and are produced more regularly by companies (Tilt 1994, Neu, Warsame et al. 1998).The final sample for this study consisted of 97 companies.

6.2 Research Method

In order to understand the extent of reporting this research used frequency distribution. Frequency distribution simply counts whether something occurs or not an if it occurs, how often (Neuman 2012). It shows the percentage of what occurs. This study uses the frequency distribution to understand the sustainability reporting practices, investigate the extent of

compliance with GRI guidelines, determine whether there is an assurance process and examine the criteria used for assurance of non-financial information.
Second stage of the analysis is to investigate the relationships between reporting practices and assurance. This is tested using Chi-Square tests. Following procedure has been used to do the Chi-Square test for this study. The Fisher's exact test is used in cases where there are cells with an expected frequency (fe) less than 5. The method of calculation of the Fisher's exact test is different to the chi-square statistic and is calculated by determining the probability of getting the observed frequency distribution by establishing and comparing to all other possible distributions where the column and row totals remain the same as the observed distribution. In this case the null hypothesis indicates that all the cells would be close to equal (Fisher, Marshall, and Mitchell, 2011), which means there is no relationship between the selected variables.

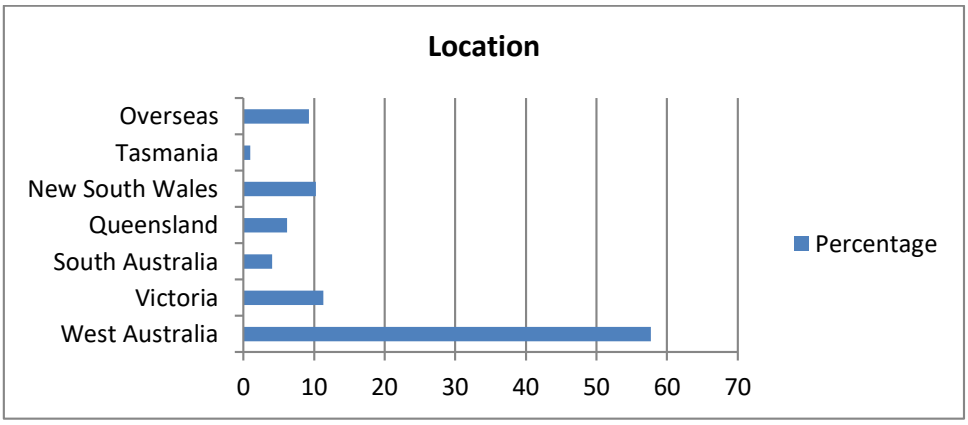
7. RESULTS

7.1 Frequency of Sustainability Reporting and Assurance

Demographics

The results from the study reported the extent of sustainability reporting and their assurance practices for the top 100 ASX Listed companies in Australia for 2013-2014. The companies investigated were located in Western Australia, Victoria, South Australia, Queensland, New South Wales, Tasmania and Overseas. However, majority 57.7% (56) of the companies in sample is based in Western Australia, 11.3% (11) in Victoria and 10.3% (10) in New South Wales (graph 1).

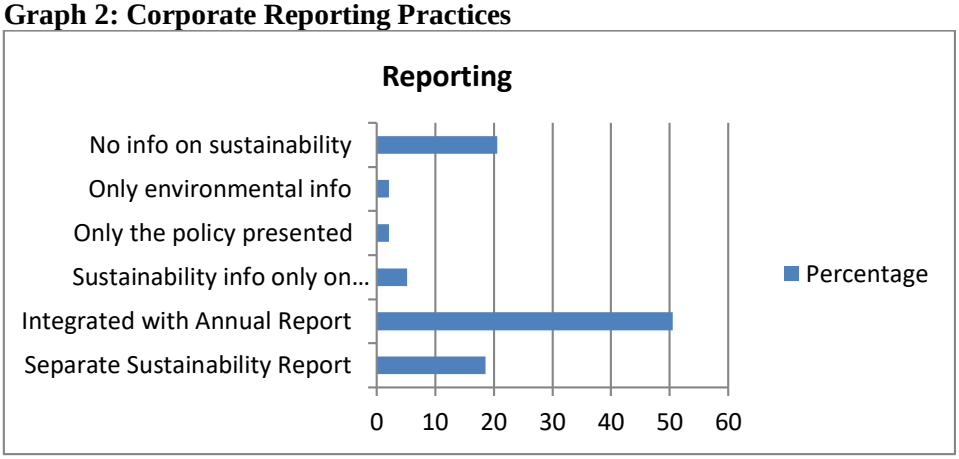
Graph 1: Location of the companies



Sustainability Reporting

Investigation of corporate reporting practices in the sample reported, 18.5% (18) had a sustainability report (graph 2) and 50% (9) of the companies that had sustainability report, complied with GRI guidelines. However, 50.5% (49) of the companies had an integrated report, yet only 1 provided assurance for sustainability. Preparation of the sustainability reports were reported as the responsibility of audit and risk management committees by 46.4% (45) and the users of sustainability report were mainly the Board of Directors and Stakeholder 60.8% (59).

Graph 2: Corporate Reporting Practices

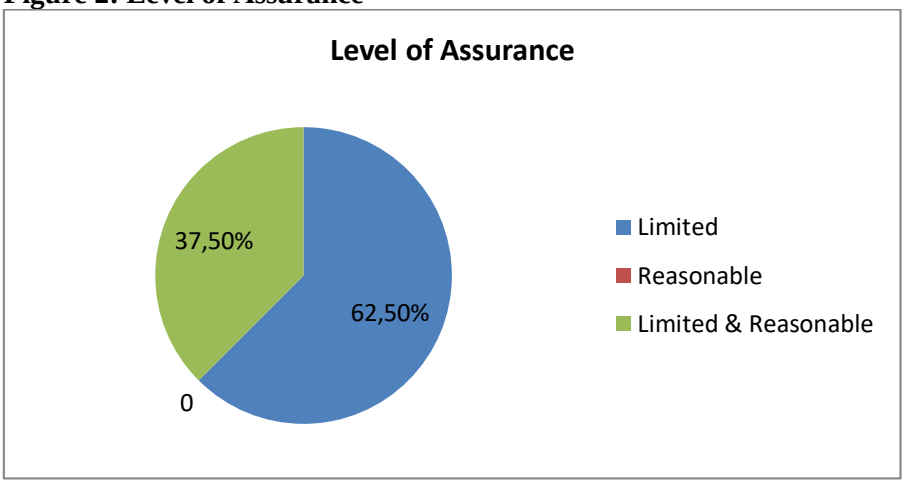


Assurance practices

Results also reported the assurance of sustainability reports. Only 44.4% (8) of the sustainability reports were independently assured, 2% (1) provided assurance for integrated report. 50% (9) of the companies that were independently assured complied with the GRI framework. The reports were assured by the accounting profession for 62.5% (5) and 37.5% (3) were assured by consultants who were not from the accounting profession.

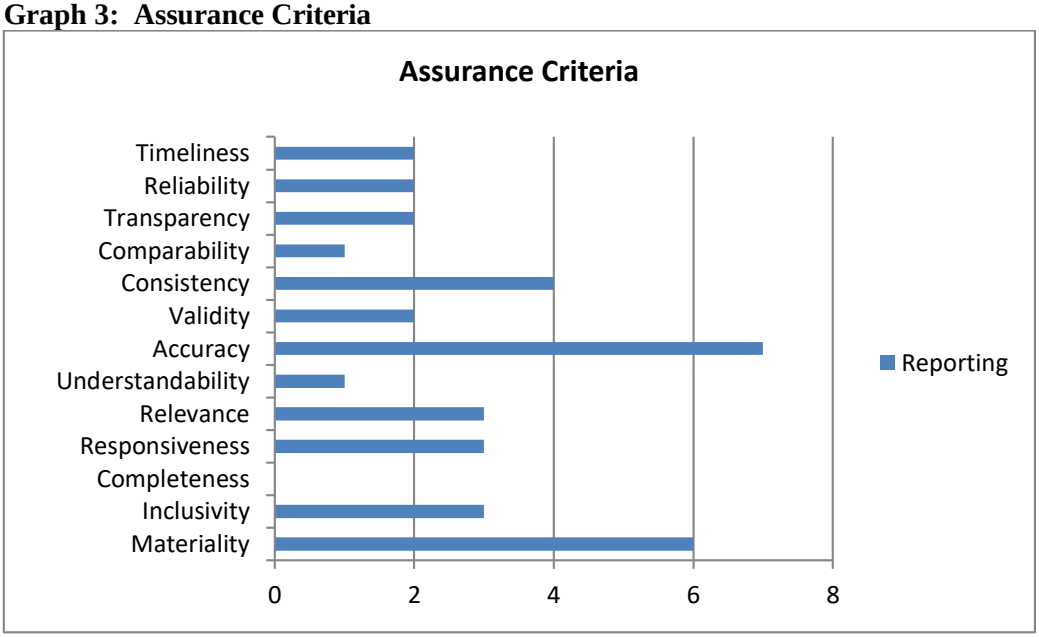
Level of assurance provided was also investigated in this study (fig 2). Level of assurance provided was either limited assurance or reasonable assurance. Limited assurance was provided to 62.5% (5) of sustainability reports and 37.5% (3) of reports provided both (limited and reasonable assurance). None of the companies based their opinions on the basis of reasonable only.

Figure 2: Level of Assurance



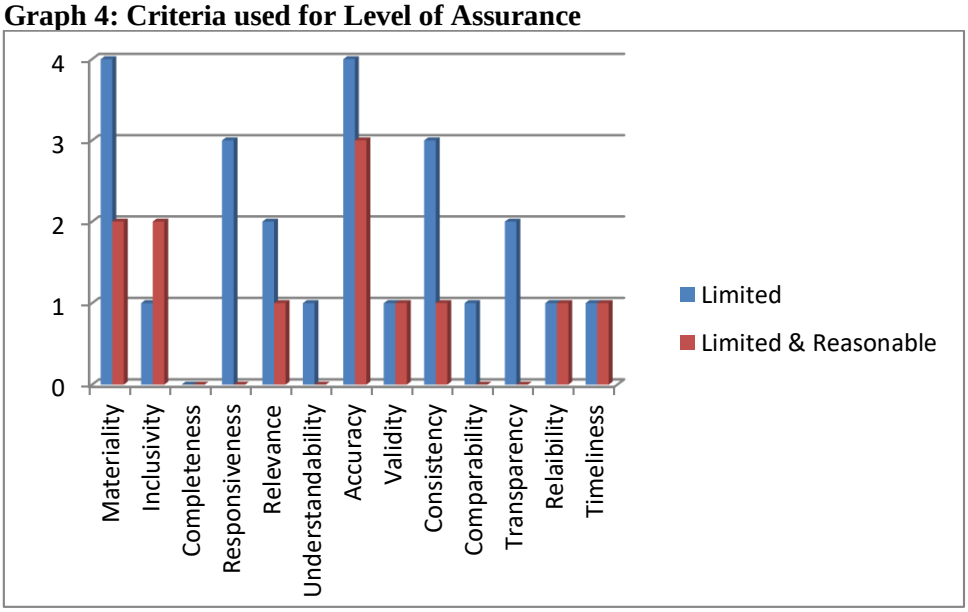
The criteria used for assurance were reported as follows. Materiality 67% (6), inclusivity 33% (3), completeness o, responsiveness 33% (3), relevance 33% (3), understandability 11% (1), accuracy 78% (7), validity 22% (2), consistency 44% (4) comparability 11% (1), transparency 22% (2), reliability 22% (2) and timeliness 22% (2) (graph 3).

Graph 3: Assurance Criteria



This study also investigated the criteria used for level of assurance. Among the most reported criteria accuracy, materiality, consistency and responsiveness is associated with limited assurance. However, inclusivity was mostly used for opinions based on both limited and reasonable assurance (Graph 4).

Graph 4: Criteria used for Level of Assurance



Responsibility for the performance of assurance was reported as Board of directors by all the companies that provided assurance and 62.5% (5) stated it is the responsibility of both the Board of Directors and Sustainability committee.

The indicator that brought the attention of most assurance reports was the emissions. This was reported in 67% (6) of the assurance reports.

Assurance standards applied by the assurance providers in this study were AA1000, ISAE3000, ISAE3000, ISAE3001, ISEA3410, ASAE3000 and American institute of Certified Public accountants attestation standards.

7.2 Pearson Chi-square Test

Table 1: Relationship between variables

Hypothesis	Relationship between variables	Chi-square	p-value
H1	There is a relationship between the type of Report and compliance with GRI Guidelines	63.485[a]	.026
H2	There is a relationship between the type of Report and Assurance	32.158[a]	.000
H3	There is a relationship between the type of Report and Level of Assurance	37.818[a]	.007

Table 1 reported the relationships between the variables investigated in this research.
H1 investigated the type of report and compliance with GRI Guidelines. The exact p value based on Pearson's statistic is 0.026. At the 0.05 level of significance, the null hypothesis would be rejected and it is concluded that there is evidence that type of report and compliance with GRI Guidelines are related. The results show that, majority of the companies in this study that have a sustainability report also complied with GRI guidelines.
H2 investigated the type of report and assurance. The exact p value based on Pearson's statistic is 0.000. At the 0.05 level of significance, the alternate hypothesis would be accepted and it is concluded that there is a relationship between type of report and assurance, which provides support for independent assurance for sustainability reports.
H3 investigated the type of report and level of assurance. The exact p value based on Pearson's statistic is 0.007. At the 0.05 level of significance, the null hypothesis would be rejected and it is concluded that there is evidence that the type of report and the level of assurance are related.

8. DISCUSSION OF RESULTS

The primary objective of this study is, firstly to investigate the extent of sustainability reporting by mining sector companies in Australia, and secondly to determine extent the independent assurance provided for sustainability reports and to examine the criteria used for independent assurance for non-financial information.
Companies in the top end of the study produced a sustainability report. In 2014, 58% of companies in the ASX 200 produced a standalone sustainability (ACSI. 2014), which shows that there is a correlation between the size of the company and the sustainability report. Research also shows that the value of a company is impacted by how they communicate actions that impact society to internal and external stakeholders, through their sustainability reports (O'Dwyer, Owen et al. 2011). Therefore, companies that are large in size consider reporting on sustainability information enhance their reputation. From the perspective of stakeholder theory, sustainability reports demonstrate how a company influences and influenced sustainable development. Sustainability report also assists stakeholders to compare the performance within a company and with different companies (KPMG 2008).
External assurance is voluntary for sustainability reports in Australia, despite this 44.4% of the companies provided external assurance for sustainability reports. Similar results were achieved in a survey in N100 companies in 2013 (KPMG Survey 2013). This was due to the need to demonstrate the credibility with external stakeholders and also the value assurance can create internally through more reliable data (KPMG Survey 2013).

Assurance provided by accounting firms were considered more credible by majority of the firms in this study (62.5%) and similar results (64%) were achieved in the N100 companies and 71% of G250 companies surveyed by KPMG. (2011). The study conducted by Simnett, Vanstraelen et al. (2009) also reported that the companies with a higher need to enhance credibility tend to use auditing profession for assurance of sustainability reports. They also reported that countries that are more stakeholder orientated choose assurance providers from the auditing profession. The fact that the reputation and the credibility of the accounting firms were an incentive for the use of accounting firm rather than non-accounting firms.

Companies report various social and environmental issues that impact the organization and their stakeholders. However, not all that is reported is important, therefore, companies need to identify which issue is material. GRI reporting process has identified materiality as a critical process for corporate responsibility reporting (KPMG 2013). This study identified 67% of the assurance providers reported materiality as an important element of the assurance process.

Criteria used for assurance has been a major issue as there are no currently accepted framework for assurance of corporate responsibility reporting. Current auditing framework ASAE3000 and ISAE3000 that covers auditing engagements other than audits or reviews of historical financial information can be applied to corporate reporting. It refers to relevance, completeness, reliability, neutrality and understandability as criteria that can be used for assurance on non-financial information. This study used number of criteria, however, accuracy was considered the most important criteria by the assurance providers, because omission or misstatement of material information could influence decision-making for intended users. Materiality was identified the second most important criteria used by assurance providers. Accordingly Cooper and Owen (2007) states, the materiality principle relates to determining if an issue is relevant and significant to the organization and its stakeholders. Consistency was considered the third important criteria. Relevance, responsiveness and inclusivity is considered the fourth most important criteria in this study. According to Cooper and Owen (2007) stakeholder-centered approach is emphasized explicitly in the three guiding principles that underpin AccountAbility approach, which are inclusivity, materiality and responsiveness. Reliability, timeliness, transparency and validity were the criteria used next. Reliable criteria allow reasonably consistent measurement or evaluation of the underlying subject matter including, where relevant, presentation and disclosure, when used in similar circumstances by different assurance practitioners. Understandable criteria result in subject matter information that can be understood by the intended users. This was the least used criteria.

This study also brings the attention to the level of assurance provided by the assurance providers for sustainability reports. The fact that, majority of assurance reports indicated limited assurance shows that, lack of acceptable criteria for assurance of sustainability reports is an indication of the limited level of assurance.

From the perspective of agency theory Board of directors have a responsibility to monitor the management on behalf of the shareholders and the demand for assurance of non-financial information arise as a result of the need to mitigate agency costs. From the stakeholder theory perspective board of directors are also responsible to the other stakeholders, because the value of a company comes from serving a wider group of stakeholders. According to legitimacy theory, failure to comply with societal expectations can result in sanctions being imposed on the firms operation, resources and demand for products. Therefore, legitimacy theory has been used as a basis for environmental and social disclosures, which require board attention. Therefore, it can be seen from this study that the performance of assurance is a responsibility of board of directors.

9. CONCLUSION, LIMITATIONS AND FUTURE RESEARCH

Even though sustainability reporting is gaining prominence, company's reporting on standalone sustainability reports seems low in the mining sector companies in Australia. Yet, companies report sustainability factors that impact their organisations on their websites or in the form of integrated reports. This research shows that mainly the large companies seem to be issuing standalone sustainability reports.

This study aimed to understand the assurance of sustainability reporting in the mining sector companies in Australia. Independent assurance increase the credibility of the sustainability reports, yet, less than 50% of the companies in the sample provided assurance for sustainability reports. Lack of guidelines or regulatory requirement for assurance of non-financial information and the voluntary nature may be factors that impact the lower level of assurance for sustainability reports. Reputation of assurance provider enhances the credibility of sustainability reports for users of the information. Therefore, the results of this study shows, majority of companies are using accounting profession for providing external assurance. However, criteria used for assurance was rather vague by the companies studied as there were no generally accepted principles or regulatory requirement as for financial reporting. This also brought the attention to the level of assurance provided for sustainability reports. As this study is a part of a larger study, it shows the need to develop criteria that can be applied for the assurance of non-financial information. This study is an extension of prior research which investigated Environmental, Social and Governance indicators used in the mining sector companies in Australia. However, lack of standardized indicators for environmental and social issues, as well as lack of standard guidelines for assurance is a major limitation for assurance of environmental and social information in sustainability reports. The scope of this study is limited to assurance of sustainability reporting in the mining sector. This study also does not show assurance of non-financial information in integrated reports. Future research on a larger sample of sustainability reports that has been assured would help to draw conclusions on criteria and to develop a framework. Furthermore, assurance of GRI indicators for ESG would be an area for future research and the extent of assurance of sustainability reporting in integrated reports. In conclusion, majority of the companies are reporting on their corporate social responsibility practices but providing assurance for non-financial information is still limited. In order to address this limitation, acceptable criteria needs to be developed for reporting of non-financial information for CSR reporting.

LITERATURE:

1. ACSI. (2014). Corporate Reporting in Australia: Disclosure of sustainability risks among S&P/ASX200 companies. The Sustainability Reprting Journey, Australian Council of Superannuation Investors.
2. Adams, C. and R. Evans (2004). "Accountability, completeness, credibility and the audit expectations gap." Journal of Corporate Citizenship **14**: 97-115.
3. Auditing and Assurance Standards Board (2014). Framework for Assurance Engagements Melbourne, Australian Government.
4. Azapagic, A. (2004). "Developing a framework for sustainable development indicators for the mining and minerals industry." Journal of Cleaner Production **12**(6): 639-662.
5. Chow, C. W. (1982). "The Demand for External Auditing: Size, Debt and Ownership Influences." Accounting Review **57**(2): 272.
6. Cooper, S. and D. Owen (2007). Assurance Practice in Sustainability Reporting. In Sustainability Accounting and Accountability. J. Unerman, J. Bebbington and B. O'Dwyer. London and New York, Routledge.
7. Cooper, T. (2015). "Casting the Net Wider." Reporting **April**(9): 4-7.

8. CPA Australia (2013). Auditing, Assurance and Ethics Handbook 2013. French Forest, NSW, Pearson.
9. Deegan, C. (2002). "Introduction: The legitimising effect of Social and Environmental Disclosures - A Theoretical Foundation." Accounting, Auditing & Accountability Journal **15**(3): 282-311.
10. Deegan, C. (2004). Financial Accounting Theory. NSW, McGraw-Hill Australia Pty Ltd.
11. Deegan, C. (2014). An Overview of legitimacy theory as applied within the social and environmental accounting literature. Sustainability Accounting and Accountability. J. Bebbington, J. Unerman and B. O'Dwyer, Routledge**:** 248-272.
12. Deegan, C., et al. (2006). "An Investigation of TBL Report Assurance Statements:UK and European Evidence." Managerial Auditing Journal **21**(4): 329-371.
13. Donaldson, T. and L. E. Preston (1995). "The stakeholder theory of the corporation: concepts, evidence and implications." Academy of Management Review **20**(1): 65-91.
14. Dowling, J. and J. Pfeffer (1975). "Organisational legitimacy: social values and organisational behaviour." Pacific Sociological Review(January): 122-136.
15. Fonseca, A. (2010). "How credible are mining corporations' sustainability reports? a critical analysis of external assurance under the requirements of the international council on mining and metals." Corporate Social Responsibility and Environmental Management **17**(6): 355-370.
16. Freeman, R. E. (1984). Strategic Management a Stakeholder Approach. Bostan, MA, Pitman.
17. Galbreath, J. (2013). "ESG in Focus: The Australian Evidence." Journal of Business Ethics **118**(3): 529-541.
18. Gray, R. (2000). "Current Developments and Trends in Social and Environmental Auditing, Reporting and Attestation: A Review and Comment." International Journal of Auditing **4**(3): 247-268.
19. Gray, R., et al. (1995). "Constructing a research database of social and environmental reporting by UK companies." Accounting, Auditing & Accountability Journal **8**(2): 78-101.
20. Gray, R., et al. (1995). "Corporate Social and environmental reporting: a review of the literature and a longtitudinal study of UK disclosures." Accounting, Auditing & Accountability Journal **8**(2): 47-77.
21. Gray, R., et al. (1996). Accounting and Accountability; Changes and Challenges in Corporate Social Environmental Reporting. Harlow, Prentice -Hall Europe
22. Gray, R. H. (2001). "Thirty years of social accounting, reporting and auditing: what (if anything) have we learnt?" Business Ethics: A European Review **10**(1): 9-15.
23. GRI (2011). Sustainability Reporting Guidelines, Global Reporting Initiative. **Version 3.1**.
24. GRI. (2013). The external assurance of sustainability reporting. . Research & Development Series, Global Reporting Initiative.
25. Hamann R. (2003). " Mining companies' role in sustainable development: the 'why' and 'how' of corporate social responsibility from a business perspective." Development South Africa **20**(2): 237-254.
26. Hodge, K., et al. (2009). "Assurance of Sustainability Reports: Impact on Report Users' Confidence and Perceptions of Information Credibility." Australian Accounting Review **19**(3): 178-194.
27. Jenkins, H. and N. Yakovleva (2006). "Corporate social responsibility in the mining industry: Exploring trends in social and environmental disclosure." Journal of Cleaner Production **14**: 271-284.

28. Jenkins, H. M. (2004). "Corporate social responsibility and the mining industry: conflicts and constructs." Corporate Social Responsibility and Environmental Management **11**: 23-34.
29. Kolk, A. and P. Perego (2010). "Determinants of the adoption of sustainability assurance statements: an international investigation." Business Strategy and the Environment **19**(3): 182-198.
30. KPMG (2002). International Survey of corporate sustainability reporting. De Meern, Netherlands, KPMG Global Sustainability Services.
31. KPMG (2008). Sustainability Reporting, KPMG.
32. KPMG (2013). The KPMG Survey of Corporate Responsibility Reporting 2013, KPMG.
33. KPMG. (2005). KPMG International Survey of Corporate Responsibiity Reporting 2005. KPMG Global Sustainability Services, University Van Amsterdam.
34. KPMG. (2011). Sustainability Reporting - What you should know, KPMG.
35. Lindblom, C. K. (1994). The implications of organisational legitimacy for corporate social performance and disclosure. Critical Perspectives on Accounting Conference. New York, NY.
36. Manetti, G. and L. Becatti (2009). "Assurance Services for Sustainability Reports: Standards and Empirical Evidence." Journal of Business Ethics **87**(1): 289-298.
37. Martirosyan, E. and T. Vashakmadze (2013). "Introducing Stakeholder-Based Frameworks for Post-merger Integration (PMI) Success." Journal of Modern Accounting and Auditing **9**(10).
38. Mock, T., et al. (2007). "An examination of worldwide assured sustainability reporting." Australian Accounting Review **17**(1): 67-77.
39. Neu, D., et al. (1998). "Managing Public Impressions: Environmental Disclosures in Annual Reports." Accounting, Organizations and Society **23**(3): 265-282.
40. Neuman, W. L. (2012). Nonreactive Research and Secondary Analysis. Basics of Social Research, Pearson**:** 242.
41. O'Dwyer, B. and D. L. Owen (2005). "Assurance statement practice in environmental, social and sustainability reporting: a critical evaluation." The British Accounting Review **37**(2): 205-229.
42. O'Dwyer, B., et al. (2011). "Seeking legitimacy for new assurance forms: The case of assurance on sustainability reporting." Accounting, Organizations and Society **36**(1): 31-52.
43. Owen, D. and B. O'Dwyer (2004). "Assurance Statement Quality in Environmental, Social and Sustainability Reporting: A Critical Evaluation of Leading Edge Practice." Research Paper Series
44. (23).
45. Owen, D. L., et al. (2000). "The new social audits: accountability managerial capture or the agenda of social champions?." European Accounting Review **9**(1): 81-98.
46. Patten, D. M. (1992). "Intra-industry environmental disclosures in response to the Alaskan oil spill: A note on legitimacy theory." Accounting, Organizations and Society **17**(5): 471-475.
47. Patten, D. M. (2005). "The Accuracy of Financial Report Projections of Future Environmental Capital Expen- ditures: A Research Note', Accounting." Organizations and Society **30**(5): 457-468.
48. Simnett, R., et al. (2009). "Assurance on Sustainability Reports: An International Comparison." Accounting Review **84**(3): 937-367.
49. Thorne, D., M.,, et al. (2011). Business & Society: Strategic Approach to Social Responsibility and Ethics. USA, South-Western Cenagage Learning.

50. Tilling, M. V. (2004). "Some thoughts on legitimacy theory in social and environmental accounting." Social and Environmental Accountability Journal **24**(2): 3-7.
51. Tilt, C. A. (1994). "The Influence of External Pressure Groups on Corporate Social Disclosure." Accounting, Auditing & Accountability Journal **7**(4): 47-72.
52. Wallage, P. (2000). "Assurance on Sustainability Reporting: An Auditor's View." AUDITING: A Journal of Practice & Theory **19**(s-1): 53-65.
53. Warhurst A. (2001). "Corporate citizenship and corporate social investment: drivers of tri-sector partnerships." Journal of Corporate Citizenship **1**(1): 57-73.
54. Zadek, S. and P. Raynard (2004). The Future of Sustainability Assurance. ACCA Research Report, ACCA.

STRATEGIC PLANNING FOR SUSTAINABLE TOURISM DEVELOPMENT IN CENTRAL ZAGROS MOUNTAINS

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ABSTRACT

The Central Zagros Mountains Region in Iran with unique natural attractions has high ability to attract domestic and foreign tourists and improve the economy of local community in the area. However, these great capabilities are not properly utilized due to various reasons; therefore, region could not achieve its proper position in tourism industry either among Iranians or among foreign countries tourists. In this study as a part of United Nation Development Program and Iran Environment Organization joint research project in 2014-15, with regard to extensiveness of the region about 10 sample villages were selected by cluster random sampling for required data collection through standard questionnaires and open interview with local inhabitants and authorities. Description analytic method and Strength Weakness Opportunity Threat model were used for data analyses with SPSS software. Results imply that there is no adequate coordination among local and regional dignities for tourism industry development in the region and also adoption of aggressive strategy is not appropriate for this purpose at the present situation. So conservative approach can be designed and wt_1 *strategy that is protective-defensive plan may be given first priority for tourism development in the region. This strategy must be followed by an expert working group from various related local and national offices to apply an integrated and coordinated program for sustainable and improved tourism industry. The nature of this strategy will decrease many current problems such as the lack of private sector investment, low performance of tourism development enterprises, stockpile of trashes in the area, informal settlement of tourists, low knowledge of related individuals, therefore attraction and income of tourisms industry will be solved or ameliorated. Finally, on the bases of research findings and outcomes some applicable strategies will be suggested.*

Keyword: *Central Zagros, Eco-tourism, Strategic planning, sustainable development, SWOT*

1. INTRODUCTION

In modern age, tourism and tourism economy is changing into the quickest growing industry in the world and a tool for national income which is the most main economic factor of the world and also is the concept, form and element of sustainable development. Countries of the world use tourism industry as an approach to develop their regions. Nevertheless, researchers believe that tourism is one of the most important patterns of development. Nowadays, tourism is so

important in social-economic development of countries that economists call it as invisible export (Bidokhti, 2010). Importance of this activity caused local, regional and national managers and planners to plan for its development (Genning, 2002). Therefore, development of tourism as a new approach in the field of sustainable development may have important role in varying economic and predispose new opportunities including profitable employment in nonagricultural sections, income increase of villagers and decrease of income difference between villagers and urban, decrease of villagers' emigration to cities and problems due to vastness of cities. However, development of this activity may cause unsuitable rough in distribution and designation of sources, high usage of sources and facilities and even conflict between various organs without having determined planning pattern. On the other hand, long term planning for tourism development is a fundamental case for reaching to its successful development and management because long term planning may prevent its possible losses and threats in addition to its benefits, maintaining consent of tourist and people of tourism centers. Therefore, a comprehensive study of internal effective factors (weak and strength points) and external effective factors (threats and opportunities) should be performed by predisposing development of all tourism elements and mutual relation between tourism attractions, activities, facilities, service and tourism markets from one hand and creating a basis for effective performance of tourism policies in the region in direction of the state patterns and policies in order to determine position of tourism in the studied region by providing approaches and landscapes.

Innumerous factors have role in tourism development. Reaction and relation between them forms tourism development. The factors effective on tourism development are as follows:

Informing and advertisement in national level and then international level- development of transportation- security for people and tourists- cooperation between organizations related to tourism affairs. Three main factors in tourism development are: tourists, people of the region and destination specifications (Alvani, Piroozbakht, 2011). In other words, guests, hosts and attractions are three main factors in tourism development.

Therefore, the main purpose of this study is to consider strength and weakness, opportunities and environmental limitations in CZ, planning for effective strategies and providing appropriate and applicable policies for sustainable tourism development in CZ Area.

2. INTERNATIONAL IMPORTANCE OF TOURISM

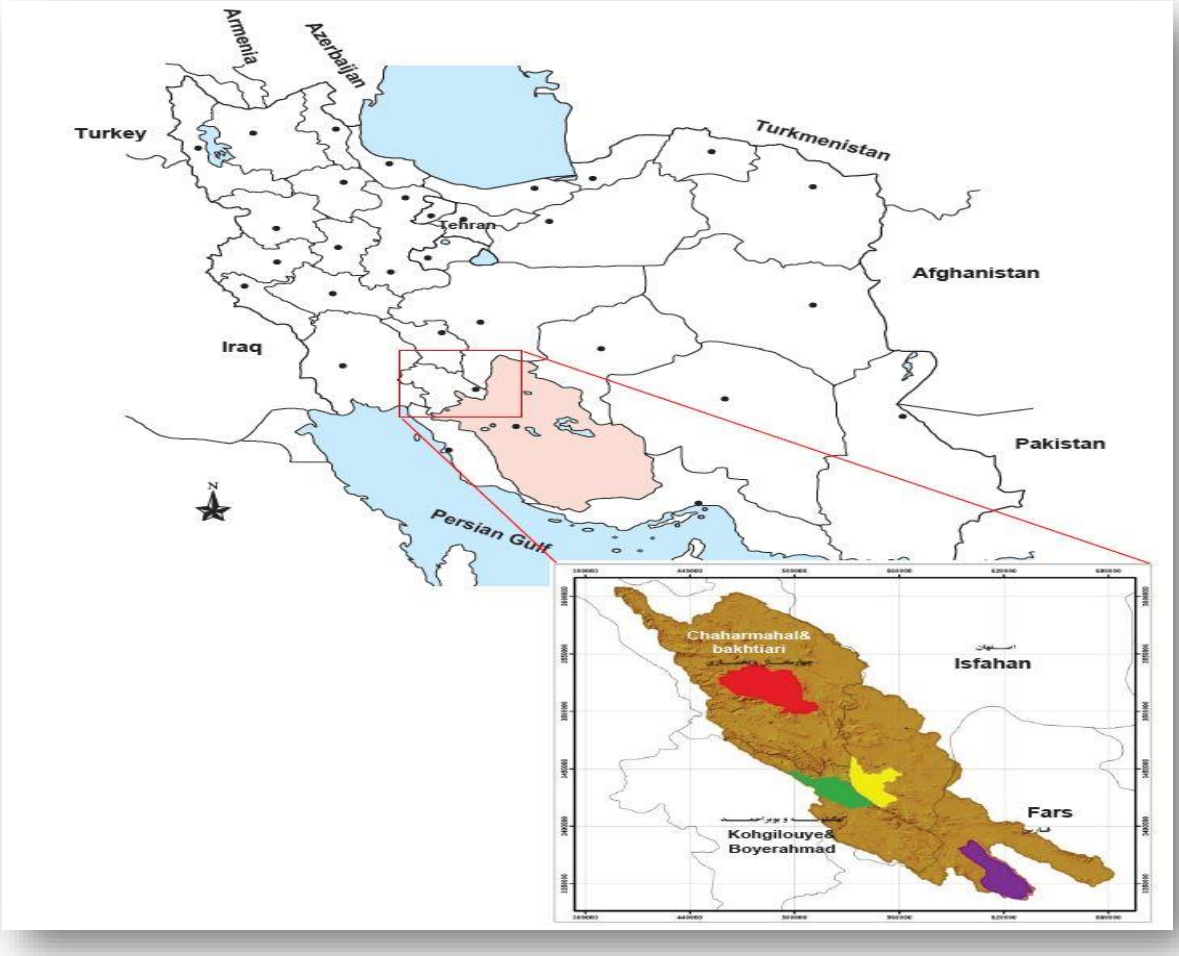
Despite economic shocks during last 6 decades, grow of tourism industry is almost uninterrupted so that 25 million in 1950 reached to 278 million in 1980 and 528 million in 1995 reached to 1087 million in 2013. According to notification of united world tourism organization (UNWTO) IN 2014, international tourists have reached to 1138 million which has increased 4.7% more than previous years. According to UNWTO, America and Asia and pacific continents recorded 7% and 5% growth of international tourism and also Europe, Middle East and Africa had 4%, 4% and 2% growth. In 2013, international tourism income reached to 1197 milliard dollars which was 230 milliard dollars more than incomes before crisis in 2008. UNWTO predicts in 2015 that arrival of international tourism will grow between 3 to 4 percent. According to predictions by global tourism organization, global tourism industry will grow 3.3% up to 2030 and reaches to 1.8 milliard persons in 2030.

2.1 Importance of Tourism in Iran

Iran has been host of 2 million and 938 thousand tourists in 2010. This has increased in 2011 and reached to 3 million and 354 thousand tourists and increased about 500000 tourists in 2012.

Critical statistics of tourists in Iran have not yet published by global tourism organization in 2013. Income of Iran for tourism is about 2400 and 2300 million dollars in 2010 and 2011 respectively which has descending flow. Income of Iran from tourism reached to 1100 million dollars in 2012. A precise statistics of tourists in Iran have not yet published by global tourism organization in 2013. Iran is 9th country in terms of having historical monuments and is in first 10 countries in terms of ecotourism attractions (Armaghan 2006). This is while 400 billion dollars' income of tourism should be used along with these capacities and it portion should be 5% income of Iran, But annual income of Iran is very lower and less than 0.5% distribution portion and has ranked 92 in the world.

2.2 Specifications of Central Zagros Mountains Area



Central Zagros (CZ), measuring 114 square kilometers in area of Iran, with 5 million people covers central part and some west provinces of Iran. This wide region with various mountainous spaces, auriferous regions in addition to geo-approach importance, necessary of economic organization is considered as ultra-regional priority. Clear specification of this region is rich sources, suitable climate and high natural capacity which is deprived region due to various reasons. Also Central Zagros has rare and unique forest ecosystem which are necessary to be considered in comprehensive management of forests due to their ecological importance. Therefore, present status of Central Zagros has been recognized using field and library studies

and then, its weak and strength points and external threats and opportunities were determined. Short and long term approaches were designed for confronting threats using strength points and future opportunities and meantime, attraction and importance of approaches were studied by Quantitative Strategic Planning Matrix (QSPM). Statistics notified by Iran statistics center are as follows for 4 provinces in Central Zagros Area.

Table 1- Tourism data of Central Zagros Mountains Provinces in 2014

province	*Tourism Travelers*		
	TOTAL	*Without night stay*	*With night stay*
ISFEHAN	*5,212,782*	*2,793,698*	*2,419,084*
CHAHARMAHAL&BAKHTIARI	*1,084,794*	*499,653*	*585,141*
FARS	*3,519,545*	*1,678,711*	*1,840,834*
KOHGILOUYE&BOYERAHMAD	*740,262*	*276,956*	*463,306*
Total	*10,557,383*	*5,249,018*	*5,308,365*

3. LITERATURE REVIEW

Various internal and international researches have been performed by approach of guiding planning and application of literacy in rural tourism planning. (Ebrahimzadeh et al, 2011) stated plurality of decision makers, management issues, shortage of substructures and weakness of advertisement as barriers of employment, exchange income, substructure investment and important opportunities and also historical monuments, natural, entertainment and sport attraction as strength point and the most important approaches they stated are correctness of management organs and cooperation of officials with people by using SWOT model, concentrated on tourism development factors in Chabahar beach region. In another research by (Nourbakhsh et al, 2013) namely "use of SWOT analysis and QSPM matrix for development and evaluation of ecotourism strategies" acted to evaluate a region in Mazandaran province and recognized internal and external factors by a group of experts. After forming IFE and EFE matrixes, they concluded that weak points are more than strength points and also environmental opportunities are more important threats. They designed 39 strategies from weak and strength points and opportunities and threats and evaluated invasive approaches by SPACE method. In next step, they classified approaches in 4 priorities in QSPM matrix and finally concluded that approaches of planning for ecotourism development have the most importance for increase of ecotourism activities in the region and decrease of bad effects on environment (Nourbakhsh et al, 2013).

4. MATERIALS AND METHOD

In this research, description analectic method were used and required data collected from official documents and field work by interview and questionnaires from local community, dignities and existed tourists in four research pilot area as shown in Central Zagros map. For

this purpose tourism attraction, facility, services and overall condition were considered to determined strange, weakness, opportunities and threats (SWOT) points and grade for strategies policy adjustment. Interpretation results provide tourism development strategies by utilization of SWOT model. On the basis of recognized appropriate strategies such as defensive, aggressive, competitive and conservative traced. Then by using QSPM manner, priority and preferred strategies for tourism development were evaluated and results outcome were provided as applicable approaches. Respectively the sample selection, questionnaires field up, Matrix formation and appraisal for internal and external factories are illustrated.

5. MATRIX OF STRENGTH, WEAKNESS, OPPORTUNITIES AND THREATS (SWOT)

This matrix is one of the most important tools by which managers compare information and may provide four approaches by it: SO approaches, WO approaches, ST approaches, WT approaches. To enforce SO approaches, the organization tries to use external opportunities by using internal strength points. All managers prefer that their organization is placed in a situation in which they may use external occurrences and procedures by using internal strength points. Usually organizations use WT, ST and WO approaches to reach to such situation so that they may use SO approach. When an organization has important weak points, it tries to remove them or change them into strength points. When an organization faces with important threats, it tries to get rid of them and notice to use of opportunities. Purpose of WO approaches is that the organization tries to improve internal weak points using external available opportunities. There are sometimes some suitable opportunities outside the organization but the organization cannot use these opportunities due to internal weak points. To enforce ST approaches, the companies try to decrease or remove he effects due to external threats using its strength points. It doesn't mean that a strong company will face with some threats in external environment. The organizations that perform WT approaches have defensive status and their purpose is to decrease internal weak points and keep away from external threats. To compile approaches in above four columns with WO, ST, SO and WT, we may consider that the compiled approaches should be in direction of macro-approaches gained from IE matrix, for example if macro-approach of IE matrix is development, the above four approaches should have nature of development. A list of approaches is gained from SWOT matrix that is not effective all together. Therefore, some approaches should be selected from the list to be used using scientific and logical method. The proposed ST, WO, SO and WT approaches are typically the approaches that have been produced by interaction between an environmental factor and internal factor. There is less possibility to consider to all environmental and internal factors for designing above approaches.

Table 2- SWOT four strategies and their determination method

	Opportunities	***Treats***
Strengths	*Invasive SO approaches*	*Competitive ST approaches*
Weaknesses	*Conservative WO approaches*	*Defensive WT approaches*

5.1. Determination of internal and external factors

To determine important internal and external factors, some questionnaires were used which had been performed during project of studying sustainable living of the region by environment conservation organization in central Zagros region. These questionnaires have asked many questions about economic and social aspects of habitants, officials and tourist; therefore, only tourism information was used. Finally, 1825 questionnaires were filled of which 1529, 178 and 1/18 ones were filled by local persons, tourists and local officials respectively. Views of addressees were evaluated by 5 steps Likert base and average of results are shown in following table. After study of results and interview with local people and local officials, tables of internal and external factors were provided as follows. There are 28 external factors of which 13 factors are a kind of tourism opportunities and 15 factors are a kind of threats. Also, 25 internal factors have been determined which include weak and strength points of tourism in central Zagros region. Therefore, 11 strength points and 14 weak points were placed in matrix.

Table 3- Internal factors, weakness and Strength of the CZ Mountain Region
(Continues on the next page)

	strength point	*weak point*
Economic	*- Region liable for investment and its introduction as tourism zone* *- tendency of local people to sell their product to tourists*	*- Low tendency of local people to invest in tourism section due to illiteracy* *- Lack of comprehensive planning and governmental investment in wide scale*
Social &Cultural	*- Hospitality of local people* *- Rich customs of habitants*	*Unofficial inhabitancy and crudity, crime and guilt in the region*
Ecological &Structural	*- Being adjacent to crowed regions* *- Easy and suitable access of tourists* *- Exist of unique natural landscapes such as springs, summits, falls, caves, watery rivers, forests…* *- High variety of plant and animals* *- Pleasant climate in warm seasons*	*- Inadequacy of welfare, residential and entertainment facilities* *- Weakness of road transportation lines* *- Lack of passenger signposts for tourism attractions* *- Unsuitability of health services facilities* *- Destruction of trees for carbon due to lack of gas* *- Illegal hunt of animals and threat of rare animal species*

Institutional	*- Believe of officials to create employment and tourism development as sustainable approaches* *- High tendency of local managers to rural development culture and employment by tourism development*	*- Not presence of cultural experts in the region* *- Weak supervision on operation of service units* *- Weak operation of travel agencies* *- Weak planning and governmental investment in tourism section* *- Lack of advertisement and information about natural and cultural attractions of the region by multi medias*

Table 4- External factors, Opportunities and Threats of the CZ Mountain Region
(Continues on the next page)

	opportunities	*Threats*
Economic	*- Increase of government attention to planning and investment for tourism* *- Increase of private section motivation for tourism investment* *- Credits allocation to economic firms as capital accumulation approach* *- To make employment opportunities*	*- Non-allocation of land to private section for tourism facilities* *- Long return period of investment in tourism section*
Social &Cultural	*- Presence of great population and other urban and rural center* *- Increase of motivation for travel and among urban and rural people* *- Attention to handicrafts, customs and preservation of cultural heritage.* *- Cultural exchange and extension in other regions and countries.* *- Increase in people knowledge about benefits of tourism income.*	*- Increase of tourist's tendency to travel to other entertainment regions* *- Increase of services and facilities in competitive regions in future* *- Low knowledge of tourists about culture of the region* *- High density of tourists in some months* *- Flood of people's immigration from villages to cities* *- Fading local customs and culture* *- Increase of social guilt and crime by arrival of tourist than before*
Ecological and Structural	*Various and suitable climates*	*- Increase of environmental pollutions and decrease of field & area quality* *- Construction of highways, and destruction of CZ natural sources* *- Mass of garbage in crowed regions and unsystematic repellence*

Institutional	*Presence of various private and public organs to provide services and facilities* *Quality improvement of tourism services by creating tour training* *Support of government from tourism industry by employment and CS sustainable development approach*	*Not offer of license by government for development of services, equipment and installations of tourism* *Lack of coordination in tourism planning and management* *Presence of various organizations responsible for decision making in tourism affairs*

5.2 Matrix evaluation for internal and external factors

This stage has performed in 4 steps. First, the determined factors were weighed from zero to 10 based on their importance by some tourism experts. Next, scale of factors was normalized and placed in relative scale column and consequently, numbers from zero to one were gained. Third, each factor is allocated a rank gained from questionnaires. These numbers are among 1 to 5. Fourth, relative scale of factors is multiplied with their ranks and point of each factor is calculated. Then, point of all internal and external factors is summed in order to gain total point of internal and external factors. Main factors abridged with Min and Max points and grade in table 5 are; Opportunities for indexes as mentioned in table 3&4 from O1-O11, Threats from T1-T14, Strengths indexes from S1-S11 and Weakness from W1-W14.

5.3 Matrix of quantitative Strategic planning

Matrix of quantitative guiding planning is completed by IE and SWOT matrixes. In this matrix, conservative approach should be selected as box 5 was gained in IE matrix based on calculated points. As conservative approach should be selected in design of SWOT matrix, all designed approaches have ability of entering into Matrix of quantitative guiding planning. Therefore, WT, WO, ST and SO approaches have placed above matrix.

Table following on the next page

Table 5- QSPM quantitative guiding planning Matrix

Types of Effective strategies															
Main Factors (MIN-MAX)	*Importance ratio*	*SO_1*		*SO_2*		*SO_3*		*ST_1*		*ST_2*		*ST_3*		*WT_1*	
	Scale	*Grade*	*Point*	*Grade*	*Point*	*Grade*	*Point*	*Grade*	*Point*	*Grade*	*Point*	*Grade*	*Point*	*Grade*	*Point*
Opportunities O1-O11	*0.05* *0.1*	*1* *4*	*0.00* *0.36*	*0* *4*	*0.00* *0.48*	*0* *4*	*0.00* *0.51*	*0* *3*	*0.00* *0.51*	*0* *3*	*0.00* *0.39*	*0* *4*	*0.05* *0.48*	*0* *4*	*0.00* *0.51*
Threats T1-T14	*0.07* *0.14*	*0* *2*	*0.00* *0.42*	*0* *1*	*0* *0.14*	*0* *3*	*0.00* *0.42*	*0* *4*	*0.00* *0.52*	*0* *4*	*0.00* *0.56*	*0* *4*	*0.00* *0.28*	*0* *4*	*0.00* *0.48*
Strength points S1-S11	*0.09* *0.2*	*0* *4*	*0.00* *0.8*	*0* *4*	*0.00* *0.54*	*0* *2*	*0.00* *0.2*	*0* *4*	*0.00* *0.48*	*0* *2*	*0.00* *0.4*	*1* *4*	*0.09* *0.57*	*0* *4*	*0* *0.4*
Weak points W1-W14	*0.06* *0.14*	*0* *4*	*0.00* *0.56*	*0* *1*	*0.00* *0.09*	*0* *4*	*0.00* *0.56*	*0* *3*	*0.00* *0.27*	*0* *4*	*0.00* *0.42*	*0* *4*	*0.00* *0.52*	*0* *4*	*0.0* *0.56*
TOTAL			*9.03*		*5.09*		*6.71*		*6.48*		*6.73*		*9.07*		*9.6*

6. CONCLUSION AND SUGGESTION

Priority of sustainable tourism development of central Zagros was determined by analysis of internal and external factors effective on tourism with SWOT matrix and quantitative approach planning. Considering to situation of natural tourism of the region based on box 5 of internal and external matrix, use of conservative approaches and keeping present status as suitable approach were considered for designing approaches. Therefore, in SWOT matrix, 7 main approaches were designed for sustainable tourism of the region and keeping present status which some of them reused in two kinds due to being multilateral. In next step, the best approach and priority approaches were determined by using quantitative approach planning matrix. Conceptual model of executive process of the research will be providing as follows:

Among designed approaches, WT1 approach with 9.6 point which is a conservative defensive approach gained the most point in quantitative approach planning matrix.
This approach has considered forming a special working group among local and provincial officials for united planning of tourism development. The approaches with lower priority are as follows:

Table 7- Priority of Designed Approaches

Point	*Approach*
9.07	*ST3: figurative and field advertisement and information about tourism attractions of the region by public organizations NGOs in environs cities*
9.03	*SO_1: To determine private user of tourism sites along with precise supervision methods*
6.73	*ST_2: to reinforce and improve urban and rural services such as garbage collecting and elution of urban environments*
6.71	*SO_3: to improve tourism services rendering and more supervision on it*
6.48	*ST_1: to plan economic businesses with low capital and proportional to climate of the region and support of operation such as medical plants production*
5.09	*SO_2: to support private investors who are active in handmade industries production by holding charitable markets*

As a result, WT1 approach with the most point has the first priority. This approach is going to solve organizational and administrative problems of tourism industry by forming a working group among local and provincial officials and coordinate plans of various custodian organizations. This approach will decrease or remove present problems such as unwelcoming private investors, weak operation of tourism institutes, urban disorder including accumulation of garbage and unofficial habitation, inefficient information of people and tourists about tourism attractions and power and many other issues.

LITERATURE:

1. Alvani, Seyed Mehdi, and Masoumeh Pirouzbakht, 2011, process of tourism management, Tehran, office of cultural researches.
2. Amiri, Hedayat, 2012, Nowruz and introduction to green nature of Semirom (Tangekhoshk), 816.
3. Amirian, Nematollah, 2009, Abmalakh, a village in Dena hillsides, 6-16.
4. Ebrahimzadeh, Eisa, Shamsollah Kazemizad, and Mohammad Eskandari Sani, 2011, "strategic planning for tourism, human geographical researches Journal, 15: 141-115.
5. Armaghan. Simin, 2006, Tourism and its Role in Geography, Azad University, Iran.
6. Bidokhti, Amir, 2013, combined Strategic Marketing in Tourism Industry, Studies in Strategic Management Journal, 3: 49-68.
7. Fazelnia, Gholamhossein, and Abbas Hedayati, 2010, "suitable approaches for tourism development of Zarivar lake", Geography and Development magazine, 19: 145-170.
8. Ghaderi, Esmaeil, 2003, role of rural tourism in sustainable development, thesis of PhD, Tehran, Tarbiat Modarres University.
9. Genning, G. 2002. "Traditional of sustainability in tourism studies." annals of Tourism research 33: 1121-1140.
10. Hossein Mohammadi, Maryam and Daryoush Hayati, 2012, "development of rural tourism, a new approach for rural sustainable development", national conference of rural development, Tehran.

11. Iran Statistics Center, 2012, results of national tourists' demography, Iran Statistics Center.
12. Karim, Mohammad Hossain, 2014, "Rural Development and Economy", chapter 10, Noore Elam publication, Tehran- Iran.
13. Karim, Mohammad Hossain, 2014, "Natural Resources Economics", Noore Elam publication, Tehran- Iran.
14. Nohegar, Ahmad, Mohammadmehdi Hosseinzadeh, and Asma Pirasteh, 2008, "evaluation of nature tourism capabilities in Qeshm island using SWOT model", geography and development magazine (Zahedan university), 15:151-173.
15. Nourbakhsh, S Zahra, Sudabe Shahba, Mahnaz Mozafari, and marzieh Nourbakhsh. 2013. "Using SWOT Analysis and QSPM Matrix for Developing and Evaluating Strategies of Ecotourism." Caspian Journal of Applied Sciences Research 116-125.
16. Sanaei, Vahid, 1995, "sustainable development of tourism" economic and political information monthly, 134-137.
17. Sharifinia, Zahra, Mohammadreza Noura, and Homeira Mehdibeigi, 2011, guide planning for tourism industry development, an approach of economic development of cities", conference of urban economy, Tehran.
18. Sharifzadeh, Abolghasem, and Homayoun Moradnejadi, 2002, "sustainable development and rural tourism", Jahad magazine, rural development and agricultural promotion monthly, 52-63.
19. Zahedi, Shamsolsadat, 2003, "challenges of sustainable development in terms of ecotourism", instructor of humanities, 89-103.

AN INTRODUCTION TO EMPIRIC APPROACH TO THE RESOURCE CURSE PHENOMENON IN SMALL ISLAND DEVELOPING STATES (SIDS)

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ABSTRACT

The dependence on natural resources exports and its effects on economic growth represent one of the fields of study in political economy. This paper represents an empiric analysis of sets of macroeconomic data for several Small Island Developing States (SIDS). Data was analysed for Bahrain, Barbados, and the Dominican Republic. This paper searches for the potential mechanism of transmission of the resource curse. The countries which were selected are dependent upon either tourism as a source of revenue, natural resources or are to a degree dependent upon both. In order to avoid potential problems from using cross-section data, individual time series analysis methods were used. By using a Vector Autoregressive framework, this paper concludes that there is evidence of both direct transmission from natural capital towards economic growth, as well as indirect transmission through political instability and increased level of corruption. These finding are overall conclusive with the previous works discussing the research curse hypothesis.

The key policy recommendation is ensuring that funds obtained from the exploiting of resources or tourism are used to develop a more stable and long-term sustainable economy.

Keywords: *resource curse, GDP growth, SIDS, political instability, natural capital*

1. INTRODUCTION AND LITERATURE REVIEW

The main intention of this paper is to study the research hypotheses empirically, by comparing the role of natural capital in the small economies that are dependent on natural resource exports or tourism (economies that primarily depend on foreign guests and consumption, i.e. receptive tourist countries), respectively. There is a well-known differentiation between different forms of capital: natural, financial, foreign, real, human, and social (Gylfason, 2004: 23). Goodwin (2003: 1) on the other hand differentiates between five kinds of capital: financial, natural, produced, human, and social. He states, “All are stocks that have the capacity to produce flows of economically desirable outputs. The maintenance of all five kinds of capital is essential for the sustainability of economic development.” All these forms of capital represent determinants of (economic) growth. However, of all the different types of capital, only natural capital can influence growth negatively in a direct way. Natural capital is an economic construct that describes the natural world, its ecosystems, and their value to society (Farley, 2012: 264). The key is utilizing the forms of natural capital that are present in the environment in order to form

a long-term stable economy, rather than favour short-term investments or exclusive development of one branch of the industry. There are multiple concepts and definitions of natural capital. For example, the UK Natural Capital Committee defines natural capital as the elements of nature that directly and indirectly produce value or benefits to people, including ecosystems, species, freshwater, land, minerals, the air and oceans, as well as natural processes and functions. International Institute for Sustainable Development: natural capital is the land, air, water, living organisms and all formations of the Earth's biosphere that provide us with ecosystem goods and services imperative for survival and well-being. Furthermore, it is the basis for all human economic activity[1]. Natural capital can be defined as the world's stocks of natural assets, which include geology, soil, air, water and all living things. It is from this Natural capital that humans derive a wide range of services, often called ecosystem services, which make human life possible[2]. The GLOBE natural capital initiative emphasises that natural capital refers to those aspects of the natural environment that deliver socio-economic value through ecosystem services[3]. OECD statistical glossary defines natural capital as follows: Natural capital are natural assets in their role of providing natural resource inputs and environmental services for economic production[4]. Usually the definitions of natural capital include environmental assets, as well as ecosystems. In the last 40 years, there is a negative robust correlation between the share of resource exports in GDP and economic growth. This correlation remains even when many other factors are controlled for. The robustness of the correlation between resource abundance and growth, even when we control for many other factors, gives us an indication that there may be a causal effect from resources to growth—but only an indication. And this is the main challenge of the empirical literature on the resource curse as it now stands. It is not hard to predict that the empirics of the resource curse will continue to attract considerable research interest; there are simply still so many unanswered questions—in particular, the most important: is there a causal effect from resource abundance to growth? (Torvik, 2009: 244)[5]. The resource curse features especially during the last four decades, but before countries such as the United States seemed to have harnessed resources for growth. Is this because those countries that industrialized first also had good institutions and those countries that remained underdeveloped had bad institutions and when resources were exploited at a later stage they led to corruption, rent seeking, and strife? Key is the contractual basis for exchange (van der Ploeg, 2011: 370)[6]. Those resource-abundant countries, which are interested in balancing the well-being of future and the present and are simultaneously in the process of liquidating natural wealth, should pursue a policy of prudently saving and investing the rents from resource extraction. This has led to a focus upon extended national accounting aggregates (such as net or ''genuine'' savings) that provide information on the extent to which

[1] http://www.iisd.org/natres/agriculture/capital.asp.
[2] http://www.naturalcapitalforum.com/what-is-natural-capital.
[3] http://www.globeinternational.org/natural-capital-policy-home.
[4] http://stats.oecd.org/glossary/detail.asp?ID=1730.
[5] The effect of resources may have shifted over time is the weak or non-existent connection between income levels and resource abundance, despite the close correlation between income growth and resource abundance over the last decades. One hypothesis is that the eventual change in the growth effect of natural resources is to be found because countries with different levels of institutional quality industrialized at different times.
[6] The share of produced assets in total wealth is more or less the same irrespective of how poor or rich a country is. However, the share of natural capital in total wealth is much higher in poorer countries while the share of intangible capital in total wealth is substantially higher in richer economies. Interestingly, richer countries have a substantially higher value of natural capital per capita despite having lower shares of natural capital in total wealth. The results confirm what we know from the literature on economic growth that intangible capital is the main engine of growth and wealth (van der Ploeg, 2011: 372).

resource abundant countries are accumulating net wealth. (…) This relationship can be measure using a direct measure of natural resource abundance: the share of resource rents in GDP for a range of natural resources including energy and mineral and timber resources, pointing to the inability of resource-rich economies to transform the natural good fortune into saving that explains the curse (Atkinson and Hamilton, 2003: 1793-4). Genuine savings measure the extent to which countries are, on balance, liquidating or creating national wealth. In other words, observation of the genuine savings rate contains useful information regarding the extent to which the proceeds of resource depletion have been used to finance investment (rather than current consumption), whereas conventional investment and saving ratios measure only gross accumulation (Atkinson and Hamilton, 2003: 1801). The importance of genuine savings is also embraced and accentuated by van der Ploeg (2011)[7]. Natural resource extraction (in this context we primarily refer ourselves to fuels and/or minerals and ores) and exports, if not accompanied by industrial production in the countries of origin, in most cases cause economic stagnation or even regression, rising social inequality, keep or increase widespread poverty, rise corruption, hinder democratic processes and "kill" political freedom and civil liberties. At least that is what various proponents of the "resource curse" thesis (Robinson, Torvik and Verdier, 2006; Rosser, 2006; Schubert, 2006; Humphreys, Sachs and Stiglitz, 2007; Brunnschweiler and Bulte, 2009; Torvik, 2009; van der Ploeg, 2011; Hendrix and Noland, 2014) claim. There are only a couple of exceptions to that rule, hence actually verifying it. The best exception due to the cultural and historical patterns of social and economic development is most probably Norway. Exceptions due to the planned government policies of economic transformation include Qatar and Dubai, which in the recent two decades have been able to diversify their economies. In our intention to move beyond the discussion on the ubiquitous "resource curse" thesis, we are inclined to accept the claim that natural capital, if used directly, negatively influences economic growth. The level of transformation of natural capital into other forms of capital is the lowest exactly in resource extraction and export activities. Tourism, if it is not completely based on artificial objects (as large cities, or completely artificial objects as Las Vegas or Disneyland for example), is also mostly dependent (like resource extraction, agriculture, and forestry) on natural capital i.e. the natural environment that is preserved enough and suitable for tourist development. The level of transformation of natural capital into other forms of capital is of course higher, but compared to some other forms of economic activity, is lower. In most cases, tourism does not demand highly educated work force, and is very dependent on external factors (economic situation in the countries that emit tourists, security challenges etc.). Therefore, tourism that is mainly dependent on foreign tourists, suffers from external shocks, and is in that sense similar resource extraction. On the other hand, the fluctuations of prices of commodities represent a major economic shock for resource extraction dependent countries. Geopolitical challenges, sabotages, terrorist attacks represent major security threats to resource extraction and tourism respectively. Nevertheless, tourism is much more vulnerable to the afore-mentioned security challenges than resource extraction is. The research resource curse in natural capital or tourism dependent small economies was focused on small economies of the world (classified by the size of their GDP) that are either highly dependent on natural resources rents as percentage of

[7] The Hartwick rule of investing all resource rents in other forms of capital provides a pragmatic guide for sustainable development. Genuine saving is the traditional concept of net saving, namely public and private saving minus depreciation of public and private investment, plus current spending on education to capture the change in intangible (human) wealth, minus the value of net depletion of exhaustible natural resources and renewable resources (forests), minus damages of stock pollutants (carbon dioxide and particulate matter) (van der Ploeg, 2011: 396).

GDP or highly dependent on tourism as a sector of their economies. Natural capital affects economic growth directly as well as indirectly by crowding out other types of capital through the five channels of transmission, shows Gylfason (2004: 25). The long-term stagnation of growth or negative growth, as well as the fluctuations of growth, experienced by resource dependent countries, can be pinned to this fact, and fluctuations of prices of commodities on the world market, respectively[8]. GDP and economic growth is improved by liquidating natural capital (Naidoo, 2004). But the real question is – should the natural capital be transformed into some other form of capital before leaving the country, in order to maintain a higher and long-term GDP growth. The proponents of the resource curse thesis mentioned before have no doubts about it. For a country that has natural capital, it is better to transform it into some other form of capital before exporting it. In resource extraction dependent countries, natural capital is usually exported without its transformation, and in most cases, resource curse is a consequence. In tourism dependent countries, natural capital is used as a means to attract tourists (mostly foreign). In that way, services are exported and natural capital does not leave a country, hence it is of a different kind (landscapes, natural environments etc.). The negativities of small economies, besides other features, usually include vulnerability to external shocks (albeit resilience as well, especially in some cases), less opportunities to diversify the economy, smaller workforce base, small resource base (in most cases). The small size of the market (in terms of land area and population) may lead to less diversification of raw materials and resources, which restricts domestic production (Castello and Ozawa, 1999). Smaller island states tend to be particularly prone to exogenous shocks such as natural disasters, international political instability and fluctuations in prices of raw materials. Despite this, the idea of vulnerability should be considered in the context of the degree to which economies manifest resilience in tackling shocks (Camilleri and Falzon, 2013: 135)[9].

Small island developing states (SIDS) have often been depicted as powerless, dependent, and sometimes failed, states (McGillivray et al., 2010). Guillaumont (2010) stated that only 15 per cent of SIDS were low-income economies (in: Philpot, Grey and Stead, 2015: 33). Indeed, Armstrong and Read (2000: 288-289) asserted: 'islandness' has virtually no impact on the economic performance of microstates. Greig, Turner and D'Arcy (2011), studying the case of Mauritius as a small island developing state, pointed that Mauritius is often offered as a 'success story' or 'economic miracle'. Philpot, Grey and Stead (2015) who studied Seychelles as a SIDS, did another study of a particular small island developing state (SIDS). Globalisation, tourism (transborder movement of tourists), transborder capital movements, rapid transference and adoption of institutional design and policies from some countries to others – influences on small states (Bourne, 2003: 2-3). Nevertheless, tourism, due to its specificities, also can have negative characteristics on economies, which are too dependent on it[10].

[8] Gylfason (2004: 24-25) has shown, on the sample of 105 countries in the sample, the negative and highly significant relationship between economic growth and natural resource intensity (the latter is measured by the share of the primary sector in total employment). The Spearman correlation is -0.85. The adjustment for initial income entails a speed of convergence of about two percent a year (not shown), a common result in empirical growth research. An increase of 11 or 12 percentage points in the primary labour share from one country to the next goes along with a decrease in per capita growth by one percentage point per year on average, for given initial income.

[9] The authors have studied the productivity growth rates in Malta and Cyprus, proposing at the same time policies as to how these island states might augment their productivity and competitiveness (Torvik, 2009: 250).

[10] Tourism, a mature industry, displays the characteristics of the economically aged, i.e. outmoded products, production inflexibility, high cost-returns ratios and vulnerability to newcomers (Bourne, 2003: 10-11).

2. METHODOLOGY

The data was extracted for the selected Small Island Developing States (SIDS) where data was available and where they were relevant for this research study. As the goal is to study the empiric effects of natural capital, we include the variable Gross Value Added (GVA) as a proxy variable for natural capital. Further, as the proxy variable for economic growth we standardly account by measuring the inflation adjusted Gross Domestic Product (GDP), while for measuring political stability we use two variables constructed by Kaufmann, Kraay and Mastruzzi (2010). There is generally limited data available for the small economies of the world, which represented a significant research constraint.

The goal is to study whether natural capital causes negative impulses in these variables, thus creating the forefront of what is variously known as the ‘’resource curse’’. The resource curse is a phenomenon which is mostly caused by lack of diversity, something that impacts most small economies. Thus, as a working hypothesis, this paper assumes that such a lack of diversity is one of the key factors in creating a negative economic impact. The countries selected are described in Table 1, with the descriptions and sources of the variables.

Table 1. Description of variables

Country	Variable	Abbreviation used	Measurement	Source
Bahrain	Gross Domestic Product	GDP	Constant LCU	World Bank
Barbados	Genuine Savings	GS	Percentage of GDP	World Bank
Dominican Republic	Political stability and absence of violence/terrorism	PolStab	On a scale of -2.5 to +2.5	Kaufmann, Kraay and Mastruzzi (2010)
	Corruption	Corruption	On a scale of -2.5 to +2.5	Kaufmann, Kraay and Mastruzzi (2010)

The VAR framework is described by the following basic equation:

$$GDP_t = \alpha_0 + \alpha_1 GDP_{t-1} + \cdots + \alpha_{1,2} GDP_{t-n} + \alpha_2 GS_{t-1} + \cdots + \alpha_{2,1} GS_{t-n} + \alpha_3 PolStab_{t-1} + \cdots + \alpha_{3,1} PolStab_{t-n} + \alpha_4 Corruption_{t-1} + \cdots + \alpha_{4,1} Corruption_{t-n} + \varepsilon_{t,1} \quad (1)$$

From that basic equation, the only difference which exists is viewing the differences of GS on various dependent variables, meaning that not only the relevance of natural capital on GDP is tested, but also the variables which account for corruption and political stability. In order to test these relations, Impulse Response Functions (IRFs), are used. This form of analysis will allow us to test the impact of change of one of the variables on the dependent variable, with the assumption that we hold the level of the other variables constant.

The preliminary hypothesis is that through these IRFs we will manage to prove both a direct link (an adverse impact of natural capital on GDP) and an indirect link where natural capital has a long-term negative impact on political stability.

3. RESULTS AND DISCUSSION

Prior to conducting the IRFs, the variable GDP was transformed into the form of its natural logarithm. This is done in order to prevent issues regarding heteroscedasticity, with all of the necessary tests to ensure the stability of the models provided in the appendix. The first model concerns Bahrein.

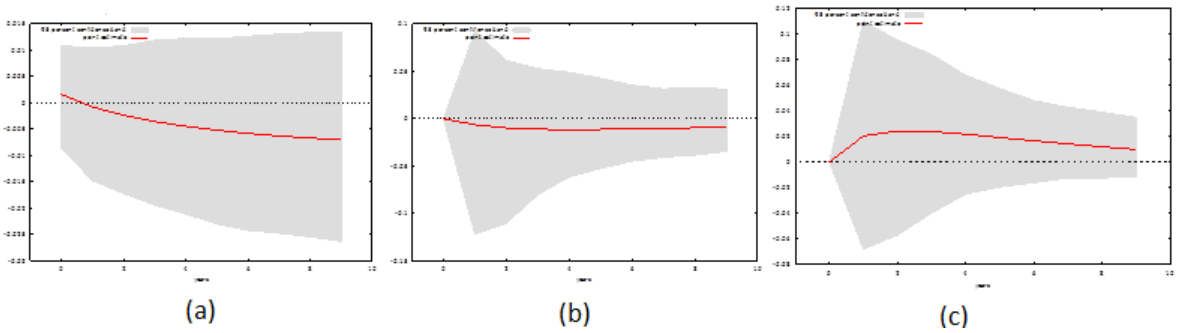

Figure 1. IRF for Bahrein

Source: Authors' calculations and GRETLE software

Note: (a) displays the response of GDP to an impulse of GAS; (b) displays the response of Corruption to an impulse of GAS; while (c) displays the response of PolStab to an impulse of GAS.

As can be seen from the IRFs, there is empiric evidence of several channels of transmission. Notably, for the case of Bahrein, which is heavily dependent on export of oil resources, there is a long and persisting negative trend going from natural capital towards GDP. While the first impulse is slightly positive, there is clear evidence of a persisting negative trend. The evidence is not so conclusive in the case of corruption, though the responses are constantly negative. Political stability, based on our research, seems not to be a channel of transmission for the resource curse to Bahrein, though the cause of that may be that the variable used accounts for both political stability and the absence of violence and terrorism.

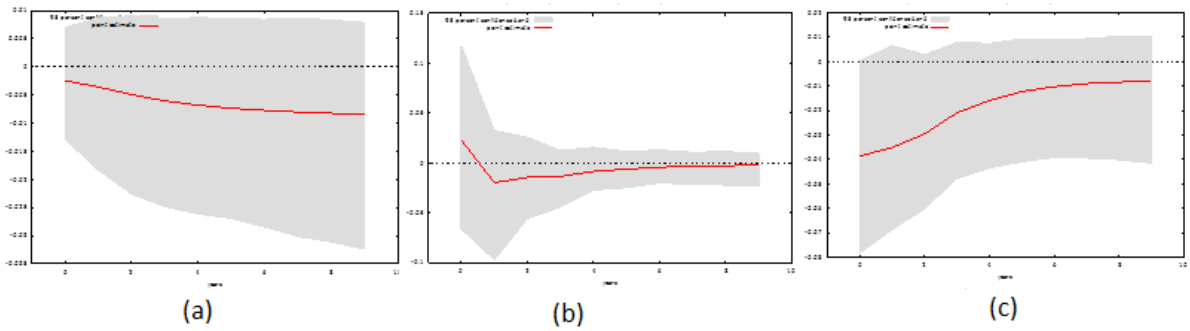

Figure 2. IRF for Barbados

Source: Authors' calculations and GRETLE software

Note: (a) displays the response of GDP to an impulse of GAS; (b) displays the response of Corruption to an impulse of GAS; while (c) displays the response of PolStab to an impulse of GAS.

The results indicate a similar trend for Barbados. There is a clear and persistent long-term negative trend going from natural capital towards economic growth. This is likely due to the fact that the evolution and focus of only one element crowds out other potential areas of development. In the case of Barbados, it is also clear that these elements are also impacted by variables related to political stability. Most significantly, an increase in corruption, which is associated with an increase of both political instability and decreased economic growth (de Vaal and Ebben, 2011). Equally significantly, the negative initial reaction of political stability to natural capital is very strong. Such an increase in political stability, essential to modern-day economies, crowds potential investments and limits economic growth. Thus for the case of the Barbados, we find that there is empiric evidence similar to many other countries which suffer from the natural resource curse. This curse does not really have to be associated with natural resources, but may be found in any economy that is insufficiently diverse and highly dependent upon exogenous factors.

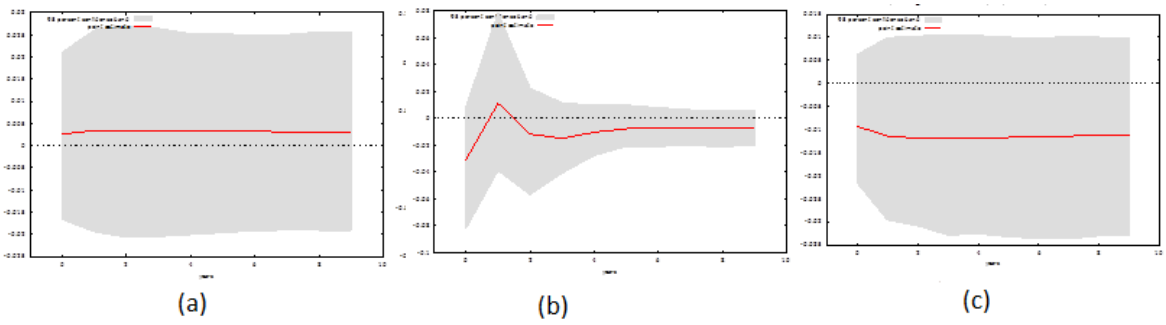

Figure 3. IRF for Dominican Republic

Source: Authors' calculations and GRETLE software

Note: (a) displays the response of GDP to an impulse of GAS; (b) displays the response of Corruption to an impulse of GAS; while (c) displays the response of PolStab to an impulse of GAS.

The results for the Dominican Republic are slightly different than those of Barbados or Bahrein. Namely, we find that natural capital has slightly positive impulses which start at the first impulse and persist throughout the observed periods. The result for corruption indicates mostly negative impulses, while there is a strong persistent negative trend of natural capital causing political instability. Several factors should be considered, notably that Barbados is a country strongly dependent on tourism, Bahrain on resource exports, while the Dominican Republic has a slightly more diverse economy. The main conclusion is that the dependency on a single sector of the economy increases the negative effects by crowding other potential sources of growth. Also, all of these small economies are highly dependent upon external shocks; making perceived political instability a highly relevant factor in maintaining investor confidence in their economies.

4. CONCLUSION

This paper observed three SIDS and has conducted an empiric analysis of possible methods of transmission of the so called natural resource curse. The preliminary findings are that there is evidence of both indirect methods of transmission through political instability, as well as direct transmission through harming economic growth in countries where economic growth is almost entirely dependent on one source of revenue. In Bahrain and the Barbados we find that there is a direct element of transition directly through natural capital towards economic growth. There are two distinct and almost unrelated difficulties in conducting further research on the topic.

One difficulty is the lacking consensus of which variable should be used to account for natural capital and the diverse results across the scientific community which have largely been impacted by the use of completely different variables.

The second is overcoming difficulties resulting from the ''smallness'' of the economy, especially, as noted by Castello and Ozawa (1999), their insufficient diversification and danger to exogenous shock. While diversification may not provide immediate positive impacts, it is a necessary element in ensuring the sustainability of these small economies.

LITERATURE:

1. Armstrong, H.W. and R. Read (2000). Comparing the economic performance of dependent territories and sovereign microstates. *Economic Development and Culture Change*, 48 (2) 285-306.
2. Bourne, C. (2003). *Small States in the Context of Global Change*. Fourth Annual Conference of Sir Arthur Lewis Institute of Social and Economic Studies. University of the West Indies, Barbados.
3. Brunnschweiler, C. and E. Bulte (2009). *Natural Resources and Violent Conflict: Resource Abundance, Dependence and the Onset of Civil Wars*. Oxford: University of Oxford.
4. Camilleri, S.J. and J. Falzon (2013). The Challenges of Productivity Growth in the Small Island States of Europe: A Critical Look at Malta and Cyprus. *Island Studies Journal*, 8 (1) 131-164.
5. Castello, S. and T. Ozawa. (1999). *Globalization of Small Economies as a Strategic Behavior in International Business*. Garland Publishing Inc., New York.
6. De Vaal, A. and W. Ebben. (2011). Institutions and the Relation between Corruption and Economic Growth. *Review of Development Economics* 15 (1) 108-123.
7. Farley, J. (2012). Natural Capital. In: R.K. Craig, J.C. Nagle, B. Pardy, O. Schmitz and W. Smith: *Berkshire Encyclopedia of Sustainability: Ecosystem Management and Sustainability*. Gt Barrington: Berkshire Publishing: 264-267.
8. Goodwin, N. (2003). *Five Kinds of Capital: Useful Concepts for Sustainable Development*. Global Development and Environment Institute Working Paper No. 03-07.
9. Greig, A., Turner, M. and P. D'Arcy (2011). The Fragility of Success: Repositioning Mauritian Development in the Twenty-First Century. *Island Studies Journal*, 6 (2) 157-178.
10. Guillaumont, P. (2010). Assessing the economic vulnerability of small island developing states and the least developed countries. *Journal of Development Studies*, 46 (5) 828-854.
11. Gylfason, T. (2004). *Natural Resources and Economic Growth: From Dependence to Diversification*, http://www.cer.ethz.ch/resec/sgvs/029.pdf (Retrieved 23/11/2016).
12. Hendrix, C.S. and M. Noland (2014). *Confronting the Curse: The Economics and Geopolitics of Natural Resource Governance*. Washington, D.C.: Peterson Institute of International Economics.
13. Kaufmann, D., Kraay, A. and M. Mastruzzi (2010). The Worldwide Governance Indicators: Methodology and Analytical Issues. Available from: www.govindicators.org (23.12.2016)
14. Humphreys, M., J. Sachs, and J. Stiglitz (2007). *Escaping the resource curse*. New York: Columbia University Press.
15. McGillivray, M., Naudé, W. and A.U. Santos-Paulino (2010). Vulnerability, trade, financial flows and state failure in small island developing states. *Journal of Development Studies*, 46 (5) 815-827.
16. Naidoo, R. (2004). Economic Growth and Liquidation of Natural Capital: The Case of Forest Clearance. *Land Economics*, 80 (2) 194-208.

17. Philpot, D., Gray, T.S. and S.M. Stead (2015). Seychelles, a vulnerable or resilient SIDS? A local perspective. *Island Studies Journal*, 10 (1) 31-48.
18. Robinson, J.A., R. Torvik and T. Verdier (2006). Political Foundations of the Resource Curse. *Journal of Development Economics*, 79 (2) 447-468.
19. Rosser, A. (2006). *The Political Economy of the Resource Curse: A Literature Survey*. IDS Working Paper 268. Brighton: IDS Publications.
20. Schubert, S.R. (2006). Revisiting the Oil Curse: Are Oil Rich Nations Really Doomed to Autocracy and Inequality? *Oil and Gas Business*, (2) 1-16.
21. Torvik, R. (2009). Why do some resource-abundant countries succeed while others do not?, *Oxford Review of Economic Policy*, 25 (2) 241-256.
22. Van der Ploeg, F. (2011). Natural Resources: Curse or Blessing? *Journal of Economic Literature*, 49 (2) 366-420.
23. http://www.iisd.org/natres/agriculture/capital.asp (Retrieved 08/12/2016).
24. http://www.naturalcapitalforum.com/what-is-natural-capital (Retrieved 10/12/2016).
25. http://www.globeinternational.org/natural-capital-policy-home (Retrieved 12/12/2016).
26. http://stats.oecd.org/glossary/detail.asp?ID=1730 (Retrieved 11/12/2016).

APPENDIX

The Table A1 displays the figures regarding autocorrelation, proving that no model suffers from the issue of autocorrelation.

Table A1. Autocorrelation test

Country Model	Test-statistic value	P-value
Bahrain	1.448	0.229
Barbados	0.9508	0.329
Dominican Republic	0.2716	0.602

Source: Authors' calculations and GRETLE software

Figure A1 displays all of the VAR inverse roots. As all of the VAR inverse roots are within the unit circle, we find that there is no evidence of parameter structural instability.

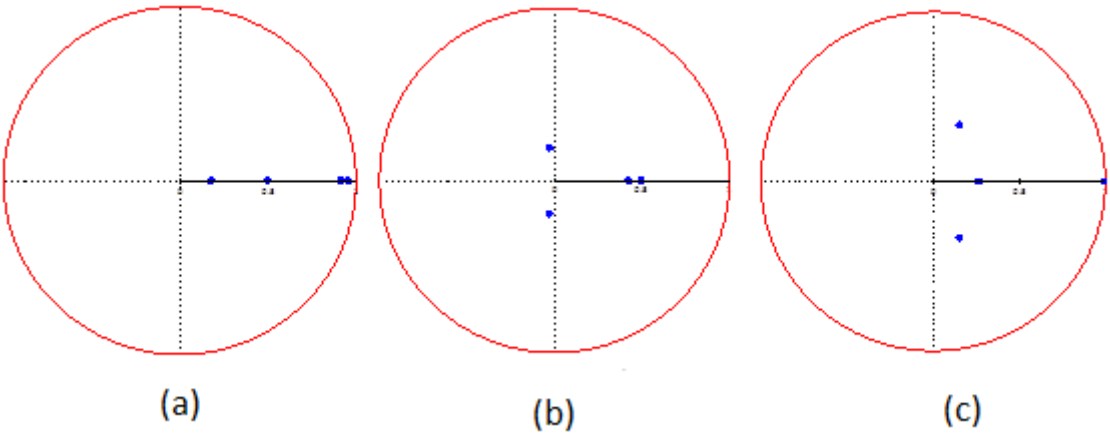

Figure A1. VAR Inverse Roots

Source: Authors' calculations and GRETLE software
Note: (a) displays the inverse roots for Bahrein; (b) displays the inverse roots for the Barbados; while (c) displays the inverse roots for the Dominican Republic.

CHARACTER STRENGTHS AS A TOOL OF RESILIENCE-ORIENTED VOCATIONAL TRAINING FOR MANAGERIAL STAFF IN A LIFE-LONG LEARNING PERSPECTIVE

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ABSTRACT
The main purpose of this paper is to contribute to building Resilient Organization issues. The author discusses a psychological approach to resilience, from Robert Jay Lifton's to Martin Seligman's conceptual perspectives. The main objective of the paper is to discuss the chance of using so called character strengths as a useful tool in resilience- oriented training courses dedicated to managers of various types of organizations. The author has conducted a workshop on "character strengths in the workplace". The empirical basis for the mentioned workshop is a qualitative, narrative research which was carried out a few years back. This initial result of the study reveals some of the examples of collective categories in which two groups of managers (from public administration and sales industry) foresee a possibility of using character strengths in the optimization of managerial work tasks.
Keywords: *resilience, character strengths, training course, managerial vocational training*

1. INTRODUCTION

The presented text is a conceptualization of the author's experience, rooted in empirical research, in introducing resilience issues to managerial vocational training courses. Herein, the vocational training is understood broadly, not so much as acquiring professional competences required in a given field of business, but rather as improving skills that are to a smaller or larger extent needed in any type of managerial work. Undoubtedly, resilience constitutes such a skill, or rather a social competence. Resilience tends to be ascribed to both the organization, and more widely – to its social environment, as well as to managers and employees. It is worthwhile reminding that in its first meaning resilience is frequently understood in a systemic perspective as "the capacity of a system to absorb disturbance and re-organize while undergoing change so as to still retain essentially the same function, structure, identity and feedbacks" (Missimer et al. 2017:36). In the broadest perspective, organizational resilience is strictly linked to sustainable management (Missimer et al. 2017, Tarba et al. 2017, both texts contain detailed references to the literature). Consistently, resilient organization calls for resilient leadership (see e.g. Zehir and Narcikara 2016). This directly evokes the issue of training managerial social skills and – at a deeper level of reflection – ventures to factor in the already rich tradition of psychological approach to resilience treated as a personal competence ascribed to organization members as human beings.

2. PSYCHOLOGICAL RESILIENCE AND ORGANIZATIONS. A SHORT OVERVIEW.

The term "resilience" was borrowed from engineering science, where it stands for the physical resistance of materials, expressed by a rapid return to their original state after deformation. Initially, the term was used by clinical child psychologists, then, the concept was gradually adopted by theorists and practitioners working with adults, indicating the type of psychological toughness. It is not about resistance in terms of hardness ("managers do not cry"), but – generally speaking – a flexible approach to stress, easily returning to normal functioning after a failure, after a misfortune, after encountering adversity, including traumatic experiences (Seligman 2011b; Stix 2011; see also Meredith, Sherbourne, Gaillot et al. 2011 and others).

More than twenty years ago, Robert Jay Lifton (1993) described the "The Protean Self" which, in his opinion, a modern man has. That is why a man is capable of unexpectedly high flexibility and variability, even fluidity of behavior and psychological processes. In this context, Lifton wrote about resilience of the human psyche in the era of "fragmentation". However, the recent research on psychological difficulties in changing human behavior, habits or beliefs especially in organizations (Gardner 2004) makes us treat the mentioned theoretical construct, proposed by Lifton ("The Protean self"), as a description of a certain potential rather than as traits given once and for all. Furthermore, these are the potentials that need to be squandered within reasonable limits, and yet there is no precise research data defining these boundaries. However, this does not diminish, but, on the contrary, stresses the importance of the modern man's resilience. Some researchers suggest that resilience, together with psychologically operationalized hope, optimism and a sense of effectiveness, is considered a component of "positive psychological capital" (cf. Forgeard, Seligman 2012). Currently, there is a discussion among psychologists whether it is necessary to commonly implement the training of resilience, at least in professional groups that particularly need it, or whether the natural ability to achieve this competence in individuals should be checked first, and help be given only to those who have deficiencies in this area (cf. Seligman 2011a, b vs. Stix 2011 and Tarba et al. 2017). Martin E.P. Seligman (2011b), a supporter of the first of these options, believes that psychological fitness is a relatively stable basis of human resilience. According to the concept of Seligman, psychological fitness consists of six components: 1. overall satisfaction (life satisfaction); 2. strengths, operationalized by character strengths (awareness of possessing them and their use); 3. emotional fitness (in this case also the risk of post-traumatic stress disorder [PTSD] and depression); 4. social fitness (job satisfaction and rewarding, social contacts); 4. the so-called family fitness (partner and family relationships generating support); 5. "spiritual" fitness (a set of values and beliefs that gives a person reinforcement outside the family, institutional and societal sources of support). Since 2008, Seligman (2011a, b) has been implementing, on commission of the U.S. Army, a program allowing to identify (with the use of the "General Assessment Test" (GAT)) and to develop (using the training methods) a condition of psychological fitness of individuals and professional groups. It was also supplemented by a program operating under the name of "Comprehensive Soldier Fitness" (CSF, see Comprehensive… 2011), already applied by the U.S. Army, that addresses the problems of physical development. Presently, an extended version of the program, "Comprehensive Soldiers and Family Fitness 2", is run (CSF2, see Comprehensive… 2014), covering soldiers, their families and army civilians. According to Seligman (2011a), the psychological fitness training modelled on the CSF is useful also for other organizations outside the army, including business organizations. The CSF came under the fire of severe criticism, seemingly of a more ideological than scientific nature (see e.g. Eideslon 2012), its diagnostic part has been initially validated (Vie et al. 2016), and experience stemming from the program has gained recognition among prominent researchers as a substantiation of the thesis that resilience can be trained. This belief is shared by the editors of a special issue of the *Applied Psychology Journal* to be devoted to the topic of "Resilience in Organizations" (Tarba et al. 2017).

3 THE PROPOSAL OF THE "CHARACTER STRENGTHS IN THE WORKPLACE" MANAGERIAL WORKSHOP

The workshop proposed in this article derived from the author's conviction that elements of resilience training should be present in any and all forms of education that improve managerial skills, and not just be covered by separate programs only. The targeted forms are not so much the ones related to elementary education, but to various examples of managerial life-long learning, such as studies for working people, postgraduate studies, trainings that improve managerial skills for professionals or MBA studies. The application of resilience in

management requires personal maturity of the manager. The author will subject this conviction to a wider analysis in a different paper (cf. Meredith et al. 2011). Managerial education in such a country as Poland required a relatively intercultural component of resilience training (CSF and its derivatives have not been studied in terms of cultural realities yet) as well as a component that would, during a limited duration of the training devoted to more comprehensive problems, offer ample opportunity to develop elements of resilience in participants. In the opinion of the author of this article, the above conditions were met by the part of Seligman's theory and practice of building resilience that concerned "character strengths". Seligman assumed that the first two of the listed components of psychological fitness which build psychological resilience (see above) – life satisfaction and the strengths – should not be changed, and should only be identified and used to optimize the psychological functioning. According to Seligman, character strengths are universal strengths of an individual that are to be found in relatively every culture. Contrary to talents that are inborn to a large extent, strengths may be successfully developed throughout the lifespan. Also, possession of a strength substantially depends on the individual. Signature strengths form sets, identified by Seligman's team in intercultural research as universal as well. It turned out that six sets of strengths postulated by different cultures in various historical periods can be identified. To their surprise, the researchers realized that the sets of strengths they had identified are of a moral nature. Hence, they named them "virtues" (Seligman 2002, Peterson and Seligman 2004; critical approach see Banicki 2014)[1]. The list of character strengths structured in larger groups – the virtues – is as follows (Seligman 2011b): wisdom and knowledge (creativity/originality/ingenuity; curiosity/interest/novelty-seeking/openness to experience; judgment/critical thinking; love of learning; perspective/wisdom); courage (bravery/valor; perseverance/persistence/industriousness; honesty/authenticity/integrity; zest/vitality/enthusiasm/vigor/energy); humanity (love; kindness/generosity/nurturance/care/compassion/altruistic love/"niceness"; social intelligence/emotional intelligence/personal intelligence); justice (teamwork/citizenship/social responsibility/loyalty; fairness; leadership); temperance (forgiveness; humility; prudence; self-regulation/self-control), transcendence (appreciation of beauty and excellence/awe/wonder/elevation; gratitude; hope/optimism/future-mindedness/future orientation; humor/playfulness; spirituality/faith/purpose).

Every human being possesses several signature strengths that constitute their personal strengths. Identifying them and using them as frequently as possible in the course of implementation of professional tasks makes it easier, according to Seligman, for both managers and their subordinates to foster psychological fitness. Americans are provided with a diagnostic tool (accompanied by a manual) to define signature strengths, developed by Christopher Peterson and Martin Seligman (2004), the "Values in Action Inventory of Strengths" (VIA) questionnaire, and its new version "The Abbreviated Character Strengths Test" (ACST), which has been initially validated (Vanhove et al. 2016). Managers in the majority of countries outside the USA still lack such tools. In Poland, managers have solely access to literal translations of the VIA available in the translations of Seligman's books *Authentic Happiness* (Polish version 2005) and *Flourish* (Polish version 2011). However, they cannot serve any diagnosis before they have undergone standardization procedures and cultural adaptation. Polish managers may, for the time being, only resort to the mentioned publications as an aid in their independent,

[1] More specifically, Seligman's team first identified relatively universal virtues based on a critical reading of works constituting major world civilizations (the Upanishads, Aristotle and Plato, Aquinas and Augustine, the Old Testament and the Talmud, Confucius, Buddha, Lao-Tze, Bushido (the Samurai code), the Koran and Benjamin Franklin). Subsequently, 24 character strengths leading to these virtues were identified through psychological analyses (Seligman 2002).

highly preliminary observations of themselves in terms of possessed signature strengths. This may suitably take place at a workshop within the frame of a training course run by an experienced expert. Such a proposed workshop, which has been provided for 10 years by the author of this article, comprises the following stages that use the techniques developed by Seligman (2002, 2011b, cf. points 1–4 of the workshop) and Liz Hoggar (2005, cf. points 5–6 of the workshop):

1) Participants, individually, but sitting in one room, identify their character strengths, following the instruction, which is provided by a trainer. Compared to the original assumptions made by Seligman, some modifications were made in the way of identifying the strengths. Firstly, the respondents are asked to read descriptions of the traits and to determine on a scale of 1 to 10 points (where 1 is chosen if a person does not recognize the possession of the trait, and 10 if in the opinion of this person the strength occurs at a very high level) to what extent the strength occurs, and only then are they asked to complete a non-standardized version of the VIA questionnaire. To select the most important strengths, both indicators are taken into account (both the self-assessment based on the description of the various strengths and the points received as a result of completing the questionnaire). This way, every person receives a list of their strengths, 5 to 8 on average. To be specific, the trainer's instruction contains information that in a moment he/she will present a slide show in the following order: first, a description of the virtue that should be read only – no scoring. Then, one slide (or two in the case of a longer text), which describes a specific strength. After reading that information, participants are asked to do the self-assessment – on a scale of 1 to 10 points. The following slide includes, after a translation of Seligman's book *Authentic Happiness* (2002, Polish version 2005), two questions from the short version of the VIA test, and each of them is assigned to the response from "this matches my character well" – 5 points – to "this does not match me at all" – 1 point. These points are supposed to be added up and written (under the already written name of the strength) next to each other, both the results of the self-assessment and of the test.
2) The above procedure is repeated for the six virtues and the twenty-four signature strengths. Every participant identifies their character strengths, taking into account both the self-assessment and the VIA questions. As a result of this procedure, each of the participants receives two numerical indicators of each strength. The pace of the slide presentation is imposed by the trainer, with due regard for the needs of the participants.
3) The participants are asked to write down the strengths that, within the two categories – that is, both the result of the self-assessment as well as the result of the VIA test – scored relatively the highest number of points (compared to the other strengths of that person).
4) The participants are asked to check which strengths from the list obtained at the previous stage meet the additional criteria of character strengths provided by Seligman (2002:214). And this verified set of character strengths is used in a further interpretation.
5) Each participant is asked to write down their character strengths on a piece of paper and highlight the one which they consider the most important.
6) The respondents are asked to express in a narrative writing how they can use their most significant character strength in their work during the next two weeks. Sometimes this final part of the workshop is fulfilled as participant's homework.

   In view of personal content evoked at this workshop, its results are not discussed in the training group. However, participants are encouraged to take advantage of individual consultations with the trainer. The workshop usually includes two training hours (90 minutes). It is sometimes advisable to have a break before point 6.

4. PRELIMINARY NARRATIVE RESEARCH: THE POSSIBLE OPERATIONALIZATION OF PERSONAL STRENGTHS AT THE WORKPLACE IN THE PERSPECTIVE OF MANAGERS' PROFESSIONAL EXPERIENCE[2]

Having run the workshop for several years, in the academic year 2011/ 2012 the author and Monika Strocka, a reflexive manager-practitioner who was then graduating from the Faculty of Management at the University of Warsaw, carried out a preliminary study of narratives obtained in point 6 of the workshop from two groups of managers or potential managers: public administration executives (Prison Service, N=27) and sales industry representatives (N=35).

The unconstrained narratives of the members of these groups regarding the possible use of their own character strengths to carry out professional tasks were considered as the qualitative indicator of the possible operationalization of these character strengths in managerial work. The research question was as follows: *What are the possible patterns of using character strengths in management work reported by the managers themselves?* The term "pattern" was understood as an order of particular professional tasks assigned to the key areas of management, which are: (1) managing internal organizational environment, (2) managing client-related activities, and (3) managing actions against competitors. The study was strictly of a qualitative nature. The goal was to identify potential patterns of using character strengths, without deciding whether the results would be complete and representative in a statistical sense.

The public administration representatives participated in a managerial course for the Prison Service executives provided on April 17 and 20, 2012. The representatives of sales industry were part-time students of the first year of management studies at the Faculty of Management at the University of Warsaw, specialization – sales. The research was carried out in the second semester of the academic year 2011/2012. Not all the members of both groups were managers, but the educational forms they participated in inclined them to adopt a manager's perspective. The Prison Service representatives completed a writing task during the management course. The representatives of sales services completed the task at home[3] (partly point 2 and points 3–6 of the workshop). The respondents granted their consent to an analysis of their written narratives. However, a personal and "sensitive" nature of these narratives (as mentioned above) justifies the postponement of the publication of results until the present day. This is the reason why the researchers refrained from collecting any personal data from the respondents. Respondents' narratives were collectively assigned to the above-mentioned key areas of management, within corresponding strengths, and analyzed purely qualitatively, intuitively.

The representatives of the public administration group identified 14 out of 24 character strengths to optimize the performance of professional tasks. They omitted 10: curiosity/interest/novelty-seeking/openness to experience; perspective/wisdom; love; forgiveness; humility; self-regulation/self-control; appreciation of beauty and excellence/wonder/elevation; gratitude; humor/playfulness and spirituality/faith/purpose. The representatives of the "sales services" group identified 15 out of 24 character strengths to optimize the performance of professional tasks. They omitted 9: perspective/wisdom; bravery and valor; forgiveness; humility; prudence; self-regulation/self-control (i.e. all qualities that make up the virtue of temperance); appreciation of beauty and excellence/wonder/elevation; gratitude and spirituality/faith/purpose.

[2] Monika Strocka is the co-author of this part of the article (see Ochinowski and Strocka 2012).
[3] The differences in the performance of the task within the two groups make their comparison not fully pure in the methodological sense. However, we consider it still acceptable for the qualitative model of our research.

At the narrative (operationalizing) level, the conducted study shows that the groups of respondents pointed to the following areas of using strengths: 1. communication (however, the Prison Service saw it more in terms of the flow of information, top-down and bottom-up, and the sales representatives looked at it through the lens of "activities", such as networking, or acquiring information); 2. development (including self-development); 3. maintaining good interpersonal relationships, problem-solving (although officers indicate a little narrower category, talking mainly about technical difficulties); 4. organization of work, group/team management, including the ones internally diverse; 5. flexibility in reactions (public administration points to the concept of changes – their monitoring and response to them); 6. motivation, evaluation (of own and others' work); 7. decision-making; 8. increasing the efficiency of the employees in the organization; 9. monitoring and supervision of non-standard activities and projects, and 10. showing initiative. In addition, there were ways of using the strength – indicated only by the Prison Service – such as correcting and eliminating errors, dealing with backlog, drawing consequences (also positive), penitentiary activities. At the same time, only the representatives of the sales specialization indicated the influence or even manipulation of others, engraving in someone's (mainly clients') memory, drawing conclusions, deriving job satisfaction, maintaining good atmosphere, mitigating conflicts, coping with stress, consistent performance of duties and commitment to goals, planning, process management, shaping attitudes (towards work, influencing clients' perception of the organization), creating vision, forgiveness, reconciliation of task and people orientation, creating own image and reputation, cognitive activities (aimed at the employees or at the world), and the "trade" tasks such as positioning the company in relation to competition, standing out, monitoring and analyzing the market (competition and preferences of buyers). Clearly, the possible ways of using the character strengths mentioned in the described study are potential cognitive tools for managers' trainers. The strengths ignored in either of the two groups or in both groups altogether pose an interesting challenge as well. The research has shown a number of models of using the character strengths as the tools of management coaching. Of course, the qualitative nature of research, small size of randomly chosen groups, intuitive analysis of the results and the mentioned differences during the completion of tasks by both groups, as well as the diversity of the groups limit the applicability of the results.

5. CONCLUSION

The workshop described in this article has been provided in Poland since 2005 (till 2012, it bore no relation to resilience issues) as a permanent component of courses for the management staff of the Prison Service (till 2015), certain training courses ordered by companies, part-time and postgraduate studies in sales management, public administration, health care management, higher school management, IT management, as well as – in a simplified version – international MBA studies. At a present stage of training experience, it is worthy of taking actions aimed at standardization of the workshop and comparative studies in different countries concerning the opportunities for and limitations in its application.

LITERATURE:

1. Bnicki, K. (2014). Positive psychology on character strengths and virtues. A disquieting suggestion. *In New Ideas in Psychology*, no 33, pp. 21–34.
2. *Comprehensive Soldiers and Family Fitness*. (2014). Retrieved 10.01. 2017 from http://armymedicine.mil/Documents/CSF2Brochure_finalv2.pdf.
3. *Comprehensive Soldier Fitness.*(2011). Retrieved 10.08.2012 from http://www.acsim.army.mil/readyarmy/ra_csf.htm
4. Eidelson, R. (2012). Claims about the CSF program's effectiveness are not supported by the research. In *Psychology today*. Retrieved 04.01. 2017 form

https://www.psychologytoday.com/blog/dangerous-ideas/201206/the-army-s-flawed-resilience-training-study-call-retraction
5. Forgeard, M. J. C. and Seligman, M. E. P. (2012). Seeing the glass half full: A review of the causes and consequences of optimism. In *Pratiques Psychologiques,* no 18, pp. 107-120.
6. Gardner, H. (2004). *Changing Minds*. Brighton: Harvard Business Review Press.
7. Lifton, R. J. (1993). *The Protean Self: Human Resilience in an Age of Fragmentation*. New York: Basic Books.
8. Hoggar, L. (2005). *How to Be Happy*. London: BBC.
9. Meredith, L.S., Sherbourne, C.D., Gaillot, S., Hansell, L., Ritschard, H.V., Parker, A.M., and Wrenn, G. (2011). In *Promoting Psychological Resilience in the U.S. Military*. Santa Monica, CA: RAND Corporation.
10. Missimer , M., Robert, K. H. and Borman, G. (2017). A strategic approach to social sustainability. Part 1. In *Journal of Cleaner Production*, no 140, pp. 32-41.
11. Ochinowski, T. and Strocka, M. (2012). *The Character Strengths as a tool of using the positive psychology in coaching*, unpublished working paper.
12. Peterson, Ch. and Seligman, M. E. P. (2004) *Character Strenghts and Virtues: A Handbook and Classification*. Oxford: Oxford University Press.
13. Seligman, M. E. P. (2002). *Authentic Happiness*. New York: Free Press.
14. Seligman, M. (2011a). Building resilience. In *Harvard Business Review*, April, pp. 100-106.
15. Seligman, M. E. P (2011b). *Fluorish.* New York: Free Press.
16. Stix, G. (2011). The neuroscience of true grit: When tragedy strikes, most of us ultimately rebound surprisingly well. Where does such resilience come from? In *Scientific American,* no 3, pp. 29-33.
17. Tarba, S.Y., Cooper, S. C., Ahammad, M. F., Khan, Z. and Rao-Nickolson (2017), Special iussue- call for papers: Resilience in Organizations In *Applied Psychology*, no 66, pp. 196-201.
18. Vanhove, A. J., Harms, P. D. and DeSimone, J. A. (2016). The Abbreviated Character Strengths Test (ACST): A Preliminary Assessment of Test Validity. In *Journal of Personality Assessment*. Issue 5, pp. 536-544.
19. Vie, L.L, Scheier, L. M., Lester, P. B. and Seligman, M. E. P. (2016). Initial Validation of the U.S. Army Global Assessment Tool. In *Military Psychology*, no 6, pp. 468–487.
20. Zehira , C. and Narcıkara, N. (2016). Effects of Resilience on Productivity under Authentic Leadership. In: *Procedia - Social and Behavioral Sciences,* no 235, pp. 250 – 258.

FACTORS DETERMINING SUICIDE RATES IN THAILAND

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ABSTRACT

This study seeks to find out whether or not economic background, as well as alcohol, contributes largely to the suicide rates in Thailand. In addition, this paper attempts an empirical exploration of the factors leading to suicide rates in Thailand. The statistics provided in this study derived from the 2011 collection from the National Statistics Bureau of Thailand, the Ministry of Public Health, and the Center of Alcohol Problem Research. To start, the descriptive analysis is presented in order to see all information of suicide rates in Thailand with various aspects. Then, the regression results are provided. The results drawn from this study suggest that both alcohol and household income do statistically have a more positive impact on suicide rates in Thailand whereas household debt is shown to have a negative impact on suicide rates. Other social factors which contribute to the higher suicide rates are divorce rates, age of individuals (60+), as well as the type of employment; such as corporate firms and government-related sectors. On the other hands, the population density and the percentage of woman that are counted as the head of the family are negatively related to suicide rates in Thailand.

Keywords: *Alcohol, Economic Status, Suicide Rates*

1. INTRODUCTION AND THEORETICAL FRAMEWORK

The question of whether or not economic factors such as level of income, debt, unemployment rate, as well as social factors would leads to high suicide rates of individuals has received wide attention among scholars. A huge number of empirical studies using data of developed economies have been reviewed in an attempt to combat rising suicide rates worldwide (Hamermesh and Soss, 1974, Khimenyi and Shugart, 1986, Yang, 1992, Ausendar, 1993, Chuang and Huang, 1997, Lin, 2006, Chen, Choi and Sawada, 2008, Minoiu and Andres, 2008, Halicioglu and Andres, 2010). However, the research on this topic in Thailand is very limited. In particular, there is only the work of Punyasawatsut, 2011, which used time-series exploration in order to find out the determinants which may explain the suicide rate in Thailand. My research, in contrast, employs the cross-sectional analysis, as it can better explain the impact of cultural, social, and economic differences among regions. From economics viewpoint, the relationship between economic factors and suicide rates began with Hamermesh and Soss' article in 1974. According to the theory, income and age of an individual determine the probability of the suicide.

Utility Maximization Model is adopted and detailed as follows:

$$Z(a,I) = \int_a^d e^{-r(m-a)} U[C(m,I) - K(m)]P(m)dm$$

$U[\cdot]$ and $C[\cdot]$ utility and consumption function, respectively.

where m is life expectancy

I is permanent income which is average income expected over a person's lifetime.

K is cost of living

d is maximum life expectancy

$P(m)$ is probability of living till age m, where the current age is a

a is current age at which an individual decides to commit suicide

r is discount rate

Utility of a person is function of consumption, which is determined by permanent income as well as current age of an individual. As a person tends to consume more as he is getting older, there is a positive association between age of individual and consumption. This is also true for the relationship between income and consumption. Thus, $\frac{\partial C}{\partial m} > 0, \frac{\partial C}{\partial I} > 0$ However, cost of living *(K)*, which has a negative association with utility, is expected to rise with ages, $\frac{\partial K}{\partial m} > 0$ When we examine the lifetime utility in present value at age a, we can see that this lifetime utility would reduce as current age rises or $\frac{\partial Z}{\partial a} < 0$, whereas $\frac{\partial Z}{\partial I} > 0$.

An Economic theory of suicide of Hamermesh and Soss (1974) is developed further by Crouch (1979). He suggested that a person commits suicide when the combination between enjoyment of life and distaste for suicide is larger or equal to zero.

$$E + D \leq 0$$

where D is distaste for suicide

E is enjoyment from life, which is determined by their family income and cost of living of their family.

In conclusion, the theory delivered five assumption as follows (Lester and Yang, 1997.

1. The more the income, the less the probability of the suicide.
2. The more the expenditure or cost of living, the more the probability of suicide.
3. As one is getting older, one tends to have more expenditure. Thus. the probability of suicide is expected to magnify for elderly.
4. Divorce lead to the reduction of household income. Therefore, an individual who experiences such a circumstance is more likely to commit suicide.

2. MODEL AND DATA

From a theoretical viewpoints in the previous section, the factors which may have relationship with suicide rates can be presented in the following models.

2.1 Model

To test the hypothesis, the following regression equation is adopted.

Model 1

$$SUICIDE = \beta_0 + \beta_1 EXPENDITURE + \beta_2 INCOME + \beta_3 DEBT + \beta_4 U + \beta_5 FEMH + \beta_6 AGE60 + \beta_7 POPD + \beta_8 DIV + \beta_9 NAGRI + \beta_{10} ALR20 + \varepsilon$$

Model 2

$$SUICIDE = \beta_0 + \beta_1 EXPENDITURE + \beta_2 INCOME + \beta_3 DEBT + \beta_4 U + \beta_5 FEMH + \beta_6 AGE60 + \beta_7 POPD + \beta_8 DIV + \beta_9 NAGRI + \beta_{10} ALR15 + \varepsilon$$

The dependent variable is suicide rates (suicide). INCOME is average household income. EXPENDITURE and DEBT are average household expenditure and debt, respectively. U is unemployment rate. Other social control variables which the literature has found to affect the suicide rates are as follows:

FEMH is the percentage of woman that are counted as the head of the family.

AGE60 is the percentage of individual above 60.

POPD is the population density in urban regions.

NAGRI is the percentage the type of employment in corporate firms and government-related sectors.

DIV is divorce rates.

ALR20 is the prevalence of alcohol consumption for adult (age 20+)

ALR15 is the prevalence of alcohol consumption for youth (age 15-19). Note that this is prohibited by Thai law.

2.2 Data

Table 1: Data

The data used in the analysis is provincial data in 2011. Thus, there are seventy six observations in the model. The source of data can be found on Table 1 below.

Table following on the next page

Table 1 – Variable / Source

Variable	Source
SUICIDE	The Ministry of Public Health
U EXPENDITURE INCOME DEBT	The National Statistics Bureau of Thailand
ALR20 ALR15	The Center of Alcohol Problem Research
FEMH AGE60 POPD NAGRI DIV	The National Statistics Bureau of Thailand

3. RESULTS

The results derived from both model in Table 2 show that suicide rates in Thailand is significantly driven by alcohol and household income. That is, for example, for model 1, for every additional unit of population consuming alcohol as well household income, one can expect suicide rates to increase by an average of 0.086 and 0.010, respectively. The findings show that divorce rates as well as other social backgrounds do statistically have impact on the suicide rates. To be more specific, the results drawn from the study suggest that factors leading to the higher suicide rates are divorce rates, age of individuals (60+), as well as the type of employment; such as corporate firms and government-related sectors. In contrast, the population density in urban regions and the percentage of woman that are counted as the head of the family are negatively related to suicide rates in Thailand.

Table following on the next page

Table 2: OLS regression results

Model 1		Model 2	
Variable	**Coefficient**	**Variable**	**Coefficient**
ALR 20	0.086**	ALR 15	0.090*
INCOME	0.010**	INCOME	0.008
DEBT	-0.015**	DEBT	-0.015**
U	-0.784	U	-0.885
AGE 60	0.704***	AGE 60	0.755***
FEMH	-0.396***	FEMH	-0.401***
POPD	-0.001**	POPD	-0.001**
NAGRI	0.071***	NAGRI	0.063**
DIV	0.508***	DIV	0.670***
R^2 = 0.609 Durbin-Watson =1.964 F-Statistic = 11.271 (prob = 0.000)		**R^2 = 0.595 Durbin-Watson =1.948 F-Statistic = 10.603 (prob = 0.000)**	

หมายเหตุ : * Significance at 0.1 level

** Significance at 0.05 level

*** Significance at 0.01 level

4. CONSLUSION

The results suggest that income level does correlate with suicide rates. This implies that, for the case of Thailand, families and communities should focus more on quality of time spending with children, rather than valuing money or other material possessions. People would then grown up with maturity and could combat any obstacles, which may occur at any point in their lives. Next, the findings show that alcohol leads to more suicide rates. Therefore, fiscal policy such as an alcohol tax should be raised that may lower the suicide rates. In addition, the results imply that violations of laws regarding underage drinking (under 20) results in higher suicide. Thus, an effective law enforcement on such issue should be under urgent consideration of Thai government. Moreover, proper social security programs for elderly should be improved which will consequently lead to lower suicide rates of those with age higher than 60.

LITERATURE:

1. Hamermesh, D. S., and Soss, N.M. (1974). An Economic Theory of Suicide. Journal of Political Economy 82: 83-98.
2. Halicioglu, F. and Andres, A.R. (2010). Determinants of Suicides in Denmark: Evidence from Time Series Data. MPRA Paper No. 24980, Munich Personal RePec Archive.Kimenyi M, and Shughart. W.F. (1986). Economics of Suicide: Rational or Irrational Choice. Atlantic Economic Journal 14:121.
3. Lester, D. and Yang, B. (1997). The Economy and Suicide: Economic Perspectives on Suicide. New York: Nova Science Publishers, Inc.

4. Lin, S. (2006). Unemployment and Suicide: Panel Data Analysis. Social Science Journal 43: 727-732.
5. Marcotte E. D. (2003). The Economic of Suicide, Revisited. Southern Economic Journal 69(3): 628-643.
6. Minoiu, C. and Andres, A. R. (2008). The Effect of Public Spending on Suicide: Evidence from U.S. State Data. Journal of Socio-Economics 37: 237-261.
7. Noh, Y. (2009). Does Unemployment Increase Suicide Rates? The OECD Panel Evidence. Journal of Economic Psychology 30: 575-582.
8. Punyasavatsul, A. (2011). Business Aycle and Rates of Suicide. Research report no.5/2011. Department of Economics, Faculty of Economics, Kasetsart University.

MEDIATING ROLES OF GRATIFICATION TOWARDS RELATIONSHIPS BETWEEN EXPECTATION AND CONTINUANCE INTENTION TO USE YOUTUBE TO WATCH MOVIES

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ABSTRACT

This study aims to identify the relationships between expectations, gratification and continuance intention of using YouTube to watch movies among Malaysians; and has hypothesized that gratification mediates the relationship between expectations (towards content, process, social; and technology) provided by YouTube for movie watching experience; with continuance intention of using YouTube to watch movies. With such, this study uses Uses and Gratifications Theory (UGT) and Expectation Disconfirmation Theory (EDT) for model development. The minimum sample size was determined by Israel Glenn sampling table. An online questionnaire using Google Forms were distributed to 400 YouTube users in Malaysia, selected through purposive sampling techniques. All variables and items were extracted from reviews of literatures and were checked for convergent and discriminant validity using Confirmatory Factor Analysis (CFA). Structural Equation Modelling (SEM) under AMOS software was used in the analysis. Results of the SEM indicated that the model fits the data. Based on the Three-Variable Nonrecursive Causal Model By Baron and Kenny's (1986), it was found that gratification acts as a mediator for 2 (two) variables as there were positive and significant relationships between expectation towards social and technology gratification with gratification from the use of YouTube for movie watching experience among Malaysians. Findings from this study will be able to guide movie content providers in Malaysia to work hand in hand with Google in regards to online platform distribution for movies and to shed some light towards the potential of YouTube as a new movie watching platform in Malaysia.

Keywords: *Movie, YouTube, Expectation, Gratification, Continuance Intention*

1. INTRODUCTION

Videos has arisen a long way since the analog times of VHS. The outwardly perpetual progression of digital video technology has intruded upon an industry once dominated by films and movies as its sole medium. Film and movie industry is one of the main providers to many national income of various countries. According to Herwina and Zarith (2012) research attentions in the movie industry have increased in recent years as it has appeared as a new vibrant industry in world trade. "Movie" is more frequently used in the United States (US) than in the United Kingdom (UK). In the US, "film" can also refer to a solo motion picture, but it is less usual and has a more thoughtful connotation, while "movie" is the more conversational term. This study will use the term "Movie" in all its chapters. While Hasrul and Jamaluddin (2014) stated that the local movie industry's swift expansion is often translated into income, movie industry in Malaysia should look far into the future and past the contented zone.

The local movie industry is being deserted by the entry of foreign films that drowned the native market not only through cinema platform but also through the new online media platform as well. Relative to other sectors in the economy, the size of the Malaysian film industry is little.

2. PROBLEM STATEMENT

Although the total population in Malaysia was at 31.7 million people in 2016 (Population and Demography, 2016), the Malaysian domestic market for its movie products is viewed as little. According to The National Film Development Corporation Malaysia (abbreviated FINAS), viewers for all local feature films combined for 2015 was at only RM52 million. The year before, an outstanding RM74 million revenue was recorded (FINAS, 2016). These decreasing numbers are worrying as the National Film Development Corporation Malaysia (FINAS) director-general Datuk Kamil Othman said that the government has funded as much as RM800 million in the movie industry. This is with the accordance to the Ninth and Tenth Malaysian Plan. However, it has not seen expectant expansion and improvement. The worrying state of our local movie industry is mostly reflected in the quantity spent in films. However, it was accompanied with no well return as local box office collection scarcely ever help films making profit, wrote Sia (2015, November 27). Interestingly, Mustaffa, Ibrahim, Mahmud, Ahmad, Kee, and Mahbob (2011) claimed that 5.14 percent out of 28,552,712 citizens of Malaysia in 2011 used YouTube for various purposes in the stipulated year. Simon (2012) later stated that 90 percent of Malaysian Internet users have access to unlimited utilizations of web-based social networking platforms. The study found that 80 percent of Internet clients in Malaysia stream online video content every month and 51 percent have active YouTube profiles. Becker (2002) indicated that patterns of watching movies were changing from a relationship-oriented consumption to a personal consumption, from a sociable act to an routine act, and from a viewing only to a maneuvering act. Researchers such as Henkel, James, and Croce (2016), Cho and Ha (2011), Moon, Bergey and Iacobucci (2010), Jancovich and Stubbings (2003); and Hennig-Thurau, Walsh and Wruck (2001) has generally stated that new movie consuming culture and movie using patterns via different areas of expectations, gratifications and intent to continue usage of movie watching medium must be celebrated and studied. This study hypothesizes that:

H 1 : Gratification (GAT) mediates the relationship between expectation towards content gratification (ETCG) provided by YouTube for movie watching experience; with continuance intention (CI) of using YouTube to watch movies.

H 2 : Gratification (GAT) mediates the relationship between expectation towards process gratification (ETPG) provided by YouTube for movie watching experience; with continuance intention (CI) of using YouTube to watch movies.

H 3 : Gratification (GAT) mediates the relationship between between expectation towards technology gratification (ETTG) provided by YouTube for movie watching experience; with continuance intention (CI) of using YouTube to watch movies.

H 4 : Gratification (GAT) mediates the relationship between expectation towards social gratification (ETSG) provided by YouTube for movie watching experience; with continuance intention (CI) of using YouTube to watch movies.

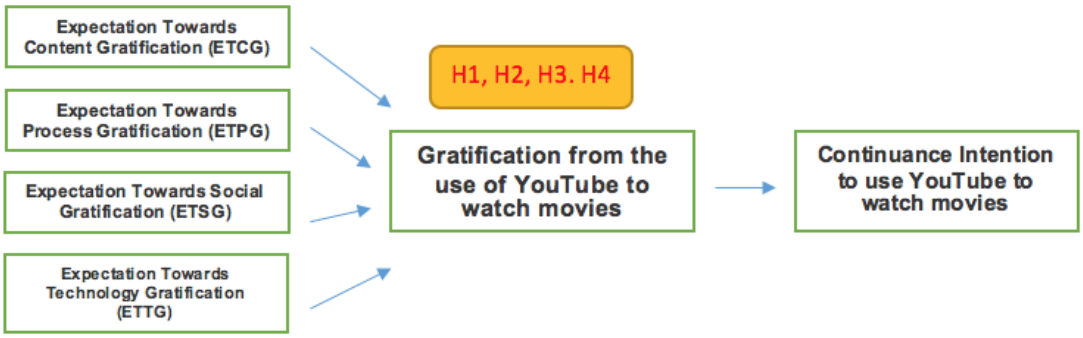

Figure 1: Research Hypotheses of Study

3. METHODOLOGY

An online survey of 66 items using Google Forms was done to 400 Malaysian YouTube users. All items where adapted from literature reviews and later tested for reliability. Respondents for this study has been strained by only allowing those whom are 1) Currently residing in Malaysia, 2) Have used YouTube to watch movies; and 3) Have experienced of using/heard of iFlix and Astro First. Those who clicked 'Yes' was directed to the next section of the survey; and those who clicked 'No' was made to leave. The "Only permit one response per person" feature in the "Form Settings" was also initiated. This is to ensure that a person only responds to the form, once. Respondents were selected using non-probability purposive sampling because the research respondents must meet certain characteristics and criteria. The sample number for this study is 400 respondents by referring to Israel (1992) table. This study believed that 5.14 percent out of 31.7 million citizens of Malaysia in 2016 (Population & Demography, 2016) that have used YouTube to watch movies can be equal to 400 sample of respondents with 95% confidence. The research instrument in this study comprises of 7 sections, namely Demographics, ETCG, ETPG, ETTG, ETSG, GAT and CI. A 5-point scale anchored with YouTube performance in regards to movie watching are "Much lower than my expectation (1)", "Lower than my expectation (2)" "Just the same as my expectation (3)"; "Higher than my expectation (4)"; and "Much higher than my expectation (5)" were used to measure ETCG, ETPG, ETTG and ETSG. A 4-point Likert-scale "Strongly Disagree" to "Strongly Agree" were used to measure GAT and CI.

AMOS 4.0, a leading Structural Equation Modeling (SEM package, was used for this study to identify mediating roles of Gratification towards the relationships between ETCG, ETTG, ETPG, ETSG and Continuance Intention. SEM is a multivariate statistical methodology, which takes a confirmatory approach to the analysis of a structural theory. SEM provides researchers with the ability to accommodate multiple interrelated dependence relationships in a single model. CFA is often used to confirm a factor structure known beforehand. In this study, since the constructs are known, CFA was executed to validate the model. The standardized factor loadings obtained from the measurement model (CFA) indicates that all indicators loaded to the respective factors significantly. The model was tested in three stages. Reliability of the measurement tools was found at the first stage. A Confirmatory Factor Analysis (CFA) was performed to check validity of the model. This ensured the overall fit of measurement model. The third test was to check the data support for the proposed structural model and the hypotheses stated. Most target level of minimum reliability was established in the 0.70 to 0.80 range (Awang, 2015). All variables in this study recorded great level of reliability (.984 for ETCG, .969 for ETPG, .986 for ETTG, .983 for ETSG, .916 for GAT and .967 for CI). CFA was used to test the model fit of the measurement model for ETCG, ETTG, ETPG, ETSG,

Gratification and Continuance Intention to use YouTube to watch movies. Hair (2010) recommended using of at least one fitness indices from each category of model fit. It was found that RMSEA was at 0.57; GFI (.798); X^2/df (2.299); AGFI: (.777); CFI (.934); NFI (.888); and TLI (.932). This study uses all fitness indices recommended in the literature, including indices recommended by Awang (2015) to prove how fit is the model to the data. It was found that four fit indices met the recommended value (RMSEA, X^2/df, CFI and TLI). The values show an acceptable overall fit and show that the measurement model is theoretically and statistically acceptable.

4. THE MEDIATING ROLES RESULT

It was found that YouTube did posses the potential to grow as a new movie watching platform as 68.5 percent of respondents have been using YouTube to watch movies for more than 3 years. 64.5 percent of them use computer/personal computer as their main viewing platform to watch online movies on YouTube. 52.8 percent of them spent one hour and more in a day to visit YouTube for online movie watching. 83.3 percent of the respondents preferred using YouTube to watch movies at home. This confirms the readiness of increased adoption of premium mobile content, more high-tech handsets, flat rate pricing for mobile broadband, development in mobile video and broadcast mobile TV services and increased 3G network coverage in the country (Goi, 2008; Salman and Hasim, 2011; Azman, Salman, Razak, Hussin, Hasim and Sidin (2015). In other words, YouTube generally has to potential to be used in movie or television Internet marketing in Malaysia as it has been long utilized by the respondents in this study.

In order to test the mediating role that gratification has on the relationship between set of independent variables (ETCG, ETSG, ETTG, ETPG) and a dependent variable (continuance intention), this study adopts Baron and Kenny's (1986) procedure. This procedure for determining if an independent variable affects a dependent variable through some mediator is so well known that it is used by authors and requested by reviewers almost reflexively. Many research projects have been terminated early in a research program or later in the review process because the data did not conform to Baron and Kenny's criteria, impeding theoretical development. According to Social Sciences Citation Index, Baron and Kenny's (1986) article had been cited by 12,688 journal articles as of September 2009, with citations per year growing each year, including 1,762 by then in 2009. The procedure is so well known that it is used by authors and requested by reviewers almost reflexively—even when experimental approaches other than statistical ones might be more appropriate (Iacobucci, Saldanha and Deng 2007; Mitra and Lynch 1995; Spencer, Zanna and Fong, 2005). Both researchers suggest that a variable role out as a mediator when it meets the following three conditions:

1. The independent variable significantly influences the mediating variable (path A),
2. The mediating variable significantly influences the dependent variable (path B)
3. When path A and B are controlled, a previously significant relation between the independent variable and the dependent variable is no longer significant.

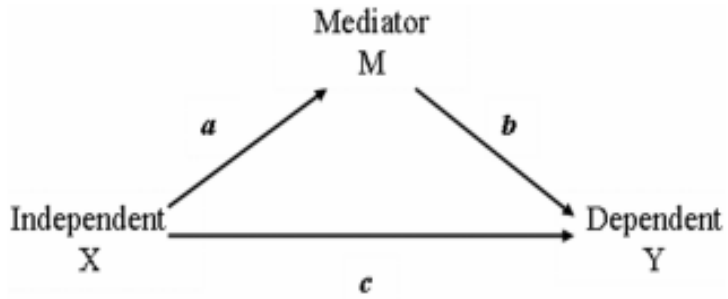

Figure 2. A Three-Variable Nonrecursive Causal Model By Baron and Kenny's (1986).

Preacher and Hayes (2004) have suggested the use of Sobel test (Sobel, 1982). Oftenly called a product of coefficient strategy (MacKinnon & Fairchild, 2009), this test was commonly used to test the significance of an indirect effect. However, Figueredo, Garcia, Cabeza De Baca, Gable and Weise (2013) have argued that the use of such test was logically unnecessary, especially when it already involves the use of SEM analysis (Figueredo and Gorsuch, 2007), which this study has applied. Thus, this study has firmly adopted the Three-Variable Nonrecursive Causal Model By Baron and Kenny's (1986) to describe and report its mediation roles findings. In regards to mediating roles that gratification has on the relationship between Expectation Towards Content Gratification (ETCG) on YouTube for movie watching experience and continuance intention to use the UGC sites, it was found that gratification does not mediate the relationships between the two variables. There were no significant relationships between ETCG and gratification (the mediating variable) (Path A), and does not meet the first of three criteria, suggested by Baron and Kenny's (1986). Thus H1 is rejected. Kim and Ko (2010) found that high quality content of a UGC sites is the most critical factor that tends to attract high user's gratification and led to continuance intention. Thus, there is a possibility that YouTube is lacking of in terms of movie selections and collections in the eyes of the respondents that contributes to this result. Respondents in this study were not satisfied with the movie content provided on YouTube. However, there is a significant relationship between gratification to continuance intention (Path B), which has surely supported Heinonen (2011) findings. The researcher claimed UGC sites users will keep coming back to usage for other reasons besides the content itself, such as communication opportunities, social relationship and entertainment values provided by the UGC sites. Simply put, respondents in this study will still continue to use the UGC sites for other reasons even though their expectations towards the movie contents were not fulfilled. However as stated above, when path A and B are controlled, a previously significant relation between the independent variable and the dependent variable is no longer significant. Overall, there is no significant relationships between ETCG and continuance intention to use YouTube to watch movies (Path C), meaning the respondents in this study will not continue using YouTube to watch movies as the contents are not up to their expectations.

In regards to mediating role gratification has on the relationship between Expectation Towards Process Gratification (ETPG) and continuance intention to use YouTube to watch movies, it was found that there was no significant relationship between ETPG and gratification (the mediating variable) (Path A). Briefly put, respondents in this study are not gratified with the use of YouTube to watch movies because their expectations towards the process of using the UGC sites was not met. However, there was a significant relationship between gratification to continuance intention (Path B), meaning that the respondents in this study will still continue to use YouTube to watch movies, regardless of the tedious process as there are other motivations to use to use the UGC site. Nevertheless, it still does not meet the above three criteria, suggested by Baron and Kenny's (1986). Thus, H2 is rejected as gratification does not mediate those two variables and does not fulfil the criteria suggested. There is also a significant relationship between ETPG and continuance intention (Path C), meaning that respondents will still use the UGC sites nevertheless. However, as stated above, when path A and B are controlled, a previously significant relation between the independent variable and the dependent variable is no longer counted in. In regards to mediating roles gratification has on the relationship between Expectation Towards Technology Gratification (ETTG) and continuance intention to use YouTube to watch movies, it was found that there is a significant relationship between ETTG and gratification (the mediating variable) (Path A). There is also a significant relationship between the mediating variable and the dependent variable (Path B) thus without a doubt giving gratification a mediating roles on the relationships between the two variables. As gratification

does mediate the relationships and has fulfilled the criteria suggested by Baron and Kenny's (1986), H3 is accepted. This finding is similar to Chiu and Wang (2008) findings, which fulfilled expectations on simplicity of use, playfulness and convenience of information technology are considered important causation in continuous usage. There was no significant relationship between ETTG and continuance intention to use YouTube to watch movies (Path C). This means that they need to be gratified and their expectations need to be met before they continue watching movies on YouTube. However, it does not matter as when path A and B are controlled, any relation between the independent variable and the dependent variable is no longer counted in. In regards to mediating roles gratification has on the relationship between Expectation Towards Social Gratification (ETSG) and continuance intention to use YouTube to watch movies, it was found that gratification does mediate the relationships between the two variables. There is a significant relationship between ETSG and gratification (the mediating variable) (Path A). There is also a significant relationship between the mediating variable and the dependent variable (Path B). Thus without a doubt, gratification does mediate the relationships between ETSG and continuance intention to use YouTube to watch movies. Thus, H4 is accepted as variables has fulfilled the criteria suggested by Baron and Kenny's (1986). These findings are similar to the findings of both Heiberger and Harper (2008) and HERI (2007) that found positive college student social engagement on UGC sites was mediated by gratification from the networking website used as the medium has met their expectations. There is also a significant relationship between ETPG and continuance intention (Path C) meaning that respondents will continue using the UGC sites to watch movies. However, as stated, when path A and B are controlled, a previously relation, between the independent variable and the dependent variable is no longer counted in.

Hypothesized Path	**Estimate, *b***	**P-Value**	**Result**
Direct Model (Path C)			
ETCG ---- > CI	-.015	.784	Not Significant
Mediation Model (Path A)			
ETCG ---- > GAT	.069	.077	Not Significant
(Path B)			
GAT ---- > CI	1.340	.000	Significant

Table 1. Mediating Roles of Gratification Between ETCG and Continuance Intention

Hypothesized Path	**Estimate, *b***	**P-Value**	**Result**
Direct Model (Path C)			
ETPG ---- > CI	.192	.019	Significant
Mediation Model (Path A)			
ETPG ---- > GAT	-.012	.834	Not Significant
(Path B)			
GAT ---- > CI	1.340	.000	Significant

Table 2. Mediating Roles of Gratification Between ETPG and Continuance Intention

Hypothesized Path	**Estimate, *b***	**P-Value**	**Result**
Direct Model (Path C)			
ETSG ---- > CI	-.153	.028	Significant
Mediation Model (Path A)			
ETSG ---- > GAT	267	.000	Significant
(Path B)			
GAT ---- > CI	1.340	.000	Significant

Table 3. Mediating Roles of Gratification Between ETSG and Continuance Intention

Hypothesized Path	Estimate, *b*	P-Value	Result
Direct Model			
(Path C)			
ETTG ---- > CI	.064	.252	Not Significant
Mediation Model			
(Path A)			
ETTG ---- > GAT	.095	.016	Significant
(Path B)			
GAT ---- > CI	1.340	.000	Significant

Table 4. Mediating Roles of Gratification Between ETTG and Continuance Intention

5. CONCLUSION

Such findings indicated that the respondents of this study were not "prosumers" – group consumers that are gratified from a use of a UGC, as claimed by Ritzer and Jurgenson (2010). This must be looked into by Google as a UGC site only became valuable when it encompasses sourcing, planning, production, distribution, and consumption processes, which led to the participation of users (Feijóo, Maghiros, Abadie, and Gómez-Barroso, 2009;Vickery and Wunsch-Vincent, 2007). Future studies should look into the content and process of using YouTube for movie watching experience as there were no significant relationships between ETCG and ETPG with gratification from the use of YouTube to watch movies. The content of movies in YouTube thus worth to be reviewed as Kim et al., (2010) found that high quality content of a UGC sites was the most critical factor that tends to attract high user's gratification and led to continuance intention. YouTube also should consider to fully utilizations of content, participations and chain productions of movie content as Heinonen (2011) found that these elements users keep coming back to UGC sites (Facebook, in her study). Li and Lin (2009) argued that the value of digital content was associated principally with its content quality.

With such result, it can be concluded that the quality of movies on YouTube is below user's expectations. Users may discontinue the use of UGC if they find it uninteresting (Kim, Jin, Kim and Shin, 2012). YouTube has to also look into the process of using it sites for movie watching experience.

LITERATURE:

1. Awang, Z. (2015). SEM Made Simple: A Gentle Approach to Learning Structural Equation Modeling.
2. Azman, H., Salman, A., Razak, N. A., Hussin, S., Hasim, M. S., & Sidin, S. M. (2015). Determining Critical Success Factors for ICT Readiness in a Digital Economy: A Study from User Perspective. *Advanced Science Letters, 21*(5), 1367-1369.
3. Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, *51*(6), 1173.
4. Becker, H. S. (2002). Studying the new media. *Qualitative Sociology*, *25*(3), 337-343.
5. Chiu, C. M., & Wang, E. T. (2008). Understanding Web-based learning continuance intention: The role of subjective task value. *Information & Management*, *45*(3), 194-201.
6. Cho, Y., & Ha, J. (2011). Users Attitudes Toward Movie-Related Websites And E-Satisfaction. *Journal of Business & Economics Research (JBER)*, *2*(3).

7. Feijóo, C., Maghiros, I., Abadie, F., & Gómez-Barroso, J. L. (2009). Exploring a heterogeneous and fragmented digital ecosystem: Mobile content.*Telematics and Informatics*, *26*(3), 282-292.
8. Figueredo, A. J., Garcia, R. A., Cabeza De Baca, T., Gable, J. C., & Weise, D. (2013). Revisiting mediation in the social and behavioral sciences. *Journal of Methods and Measurement in the Social Sciences*, *4*(1), 1-19.
9. Figueredo, A.J. & Gorsuch, R. (2007). Assortative mating in the jewel wasp: 2. Sequential canonical analysis as an exploratory form of path analysis. *Journal of the Arizona Nevada Academy of Sciences,39*, 59-64.
10. FINAS (2015, November 27). Retrieved November 5, 2015, from http://www.finas.gov.my/index.php?mod=industry&sub=cereka
11. Goi, C. L. (2008). A Review of Development and Adoption of Internet and ICT in Malaysia. *Journal of Internet Banking and Commerce*, *13*(1), 1.
12. Hair, J. F. (2010). *Multivariate data analysis*. Pearson College Division.
13. Hasrul & Jamaluddin (2014). Filem Dan Revolusi Teknologi: Persepsi Penggunaan CGI Dari Aspek Estetik & Kreativiti. *Jurnal Komunikasi; Malaysian Journal of Communication*, 30, 95-106.
14. Heiberger, G., & Harper, R. (2008). Have you Facebooked Astin lately? Using technology to increase student involvement. *New Directions for Student Services*, *2008*(124), 19.
15. Heinonen, K. (2011). Consumer activity in social media: Managerial approaches to consumers' social media behavior. *Journal of Consumer Behaviour*, *10*(6), 356-364.
16. Henkel, L., James, M., & Croce, N. (2016). Would You Like Popcorn with That Download? A Uses and Gratifications Study Into the Motivations of Legal and Illegal Film Consumption. *Quarterly Review of Film and Video,33*(1), 46-63.
17. Hennig-Thurau, T., Walsh, G., & Wruck, O. (2001). An investigation into the success factors of motion pictures. *Academy of Marketing Science Review*, *5*(7).
18. Higher Education Research Institute (2007) *College freshmen and online social networking sites*. Retrieved from http://www.gseis.ucla.edu/heri/PDFs/pubs/briefs/brief-091107-SocialNetworking.pdf
19. Herwina & Zarith (2012). Film business in Malaysia: challenges and opportunities. *International Journal of Humanities and Social Science*, 2(12), 198-202. Chicago
20. Israel, G. D. (1992). *Determining sample size*. University of Florida Cooperative Extension Service, Institute of Food and Agriculture Sciences, EDIS.
21. Jancovich, M., Faire, L., & Stubbings, S. (2003). *The place of the audience: Cultural geographies of film consumption*. British Film Institute.
22. Kim, A. J., & Ko, E. (2010). Impacts of luxury fashion brand's social media marketing on customer relationship and purchase intention. *Journal of Global Fashion Marketing*, *1*(3), 164-171.
23. Kim, C., Jin, M. H., Kim, J., & Shin, N. (2012). User perception of the quality, value, and utility of user-generated content. *Journal of Electronic Commerce Research*, *13*(4), 305.
24. Iacobucci, D., Saldanha, N., & Deng, X. (2007). A meditation on mediation: Evidence that structural equations models perform better than regressions. *Journal of Consumer Psychology*, *17*(2), 140-154.
25. Li, Y. M., & Lin, C. H. (2009). Pricing schemes for digital content with DRM mechanisms. *Decision Support Systems*, *47*(4), 528-539.
26. MacKinnon, D. P., & Fairchild, A. J. (2009). Current directions in mediation analysis. *Current directions in psychological science*, *18*(1), 16-20.

27. Mitra, A., & Lynch, J. G. (1995). Toward a reconciliation of market power and information theories of advertising effects on price elasticity. *Journal of Consumer Research*, *21*(4), 644-659.
28. Moon, S., Bergey, P. K., & Iacobucci, D. (2010). Dynamic effects among movie ratings, movie revenues, and viewer satisfaction. *Journal of Marketing*, *74*(1), 108-121.
29. Mustaffa, N., Ibrahim, F., Mahmud, W. A. W., Ahmad, F., Kee, C. P., & Mahbob, M. H. (2011). Diffusion of Innovations: The Adoption of Facebook among Youth in Malaysia. *The Public Sector Innovation Journal*, *16*(3), 1-15.
30. Population & Demography. (2016, October 14). Retrieved October 14, 2016, from https://www.statistics.gov.my/index.php?r=column/ctwoByCat&parent_id=115&menu_id=L0pheU43NWJwRWVSZklWdzQ4TlhUUT09.
31. Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior research methods, instruments, & computers*, *36*(4), 717-731.
32. Ritzer, G., & Jurgenson, N. (2010). Production, Consumption, Prosumption The nature of capitalism in the age of the digital 'prosumer'. *Journal of consumer culture*, *10*(1), 13-36. Chicago.
33. Salman, A., & Hasim, M. S. (2011). Internet usage in a Malaysian sub-urban community: A study of diffusion of ICT innovation. *The Innovation Journal: The Public Sector Innovation Journal*, *16*(2), 1-15.
34. Sia, W. (2015, November 27). Debunking The Myth: Is The Malaysian Film Market Too Small For Local Films To Survive? Retrieved December 4, 2015, from http://www.dailyseni.com.my/v3/editorial/debunking-the-myth-is-the-malaysian-film-market-to-small-for-local-films-to-survive/
35. Simon Kemp. (2012). we are social: Social, Digital and Mobile in Malaysia. Retrieved March 25, 2013, from http://wearesocial.net/blog/2012/01/social-digital-mobile-malaysia/.
36. Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. *Sociological methodology*, *13*(1982), 290-312.
37. Spencer, S. J., Zanna, M. P., & Fong, G. T. (2005). Establishing a causal chain: why experiments are often more effective than mediational analyses in examining psychological processes. *Journal of personality and social psychology*, *89*(6), 845.
38. Vickery, G., & Wunsch-Vincent, S. (2007). *Participative web and user-created content: Web 2.0 wikis and social networking*. Organization for Economic Cooperation and Development (OECD).

SECURITIES AND ITS CHARACTERS AS THE PART OF THE CAPITAL MARKET OF THE SLOVAK REPUBLIC

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ABSTRACT

Capital market as the complex of institutions, transactions and mechanism of offer and demand for medium-term and long-term financial capital presents that part of financial market where the movement of securities is realized and at the same time, it is the part of every efficient market economy. After 1989, securities have become the significant tool in the companies' economies whose main aim was to deposit and assess free financial resources and invest them to securities. It is not possible to reach success without the knowledge of the issue of legal enactment of securities on the securities market. The aim of the authors of this paper is the scientific research of the particular characters of securities. The main legal enactments are the Constitution of the Slovak Republic, Act on Securities and Investment Services, Commercial Code and Civil Code. The paper with its content presents multidisciplinary, i.e. economic – legal research of this issue.

Keywords: *aspect, form, security, security floatation*

1. INTRODUCTION

Act no. 566/2001 of Journal of Laws on securities and investment services (Act on securities) subsequently amended (hereinafter Act on securities) effective from 1st of January 2002, represents *"lex generalis"* of the legislation of securities in the Slovak Republic and it is the main source of the legislation of securities. Its proposal was made by the Ministry of Finance of the Slovak Republic on the basis of the Plan of legislative tasks of the Government for the year 2001 (approved by the Government Decree no.45/2001) and on the basis of National Program for the approval of a *acquis communautaire*. The aim of the Act proposal was mainly:

- To create standard, internationally accepted legislative environment of capital market that represents the requirements for the full membership in OECD and EU,
- To provide the rules for provision of investment services and rules for the capital proportionality of securities dealers,
- To adjust conditions for securities issue, mainly securities issued on the basis of public offer and to define newly the expression of public negotiability
- To increase the level of information provision from the issuers side of the publicly offered securities, to enable applying of tools and procedures in securities dealing what is ordinary on the developed capital markets, mainly securities lending
- To create the space for making effective the institutional side of capital market, mainly the system of evidence of securities and clearing and settlement of securities trade,

- To improve the level of protection of clients, securities dealers and investors on capital market,

Act on securities and investment services comes out of Directives of EU that adjust generally the performance of the subjects of capital market as well as requirements for the obligation of information and investors protection, mainly from Directive no.93/22 on investment services provision in the area of securities, Directive no. 93/6 on capital proportionality of securities dealers and credit institutions , Directive no. 97/9 on compensation schemes for investors and Directive no. 89/298/EHS on coordination of formation, researching and distribution of information about securities in the form of advertising folder when exercising public offer. However, Directives do not adjust in any way the issue of contracts about securities, whose question was left to legislation of every state. (Nováčková, Milošovičová, 2011, pp. 88-99)

The subject of amendments of slovak Act on securities are securities, investment services, some contractual relationships connected to securities, some relationships connected to performance of persons providing investment services stated in § 5 of this Act, as for example securities dealers, foreign securities dealers, performance and activity of central securities depository, some relationships connected to performance of other subjects, as for example issuers of securities and other persons accumulating funds from public for entrepreneurship, guarantee fund or investors to securities and State control on the individual and also consolidated basis. (Milošovičová, Nováčková, 2014, p. 90)

However, the issue of securities is solved also in the basic codex's of civil and commercial law. For example the legislation of savings books and deposit sheets is included in provisions of § 781 to 786 of Act no. 40/1964 of Journal of Laws the Civil Code subsequently amended (hereinafter „the Civil Code") as well as in Act on securities. Stocks, provisional ownership confirmation cerificates, travellers' cheques, literae recognitionis, dock warrants are included in its provisions of Act no. 513/1991 of Journal of Laws, in the Commercial Code subsequently amended (hereinafter „the Commercial Code"). We can not forget Act no. 594/2003 of Journal of Laws on collective investing adjusting units, Act no. 530/1990 of Journal of Laws on bonds subsequently amended, Act no. 141/1950 of Journal of Laws, Act on bills and cheques subsequently amended. Within this context, Act no. 42/1992 of Journal of Laws on adjustment of property rights and settlement of property requirements in co-operative subsequently amended belongs also into the resources of law regulating possibilities of issuing co-operative allotment certificates.

For the purpose of the legal regulation and securities trading, more acts were passed as for example:

- Act no. 429/2002 of Jornal of Laws on stock exchange market subsequently amended
- Act no. 483/2001 of Journal of Laws on banks subsequently amended
- Act no. 747/2004 of Journal of Laws on financial market supervision subsequently amended
- Act no. 367/2000 of Journal of Laws on protection against legalisation of profits from crime subsequently amended

2. THE FORMULATION OF CHOSEN BASIC EXPRESSIONS

Slovak professional literature states, that **security** can be defined from the two points of view, economic and legal. From the economic point of view, it represents *„particular property value that by its functioning on financial market enables the change of money into capital. Security belongs to financial assets and it is an important tool for the realization of financial investments in economy."* (Bohdalová, Greguš, 2012, p. 11) The legal definition of security is included in Act on securities, that as it was already stated is the basic formal resource of provision of securities in the Slovak Republic. According to it, *security is the listing valued by money in legal form and aspect, with which the certain rights are connected, according to this law and*

particular laws, mainly the authorisation to require certain property transaction or to execute certain rights against the persons legally determined by law. From this legal definition consequently 3 basic features of security result, that are:

1. Security is the listing valued by money
2. Owner of security has the right to require certain, either financial or property transaction
3. The right connected to listing has to have the legal form

Act on securities contains not only legal definition of security but in clause of § 2 part 2 names enumeratively the particular types of securities that create the system of securities in the Slovak Republic. It consists of: stocks, provisional ownership confirmation cerificates, allotment certificates, bonds, deposit sheets, treasury bills, savings books, coupons, bills, cheques, travellers' cheques, literae recognitionis, dock warrants, dock mortgage bonds, products mortgage bonds, ,cooperative allotmet certificates and other types of securities that are declared as securities by particular act.

There are many other writings except of securities that are not regarded as securities in spite of the fact that they show certain legal meaning and can be submitted to enforce certain subjective law.

It is possible to distinguish securities according to different criteria, either from the point of view of its functioning on financial market, transferability and merchantability, the way of issuing security or date of its maturity. The special attention has to be dedicated to the division of securities from the point of view of its form and aspect.

3. THE ASPECT OF SECURITY

From the point of view of aspect of security, clause § 10 part 1 of Act on securities security can be *registrated form* or *book-entry form*. Historically, there was always required the written form for the existence of security i.e. the right for the payment of certain amount was captured in letter. As time went on, mainly in the connection to the mass investments into securities, registrated form of security became the barrier to faster development whose consequence was issuing securities in dematerialized form.

Certificated security is according to clause § 2 part 1 of act on securities *is the listing valued by money in legal form and aspect, which the certain rights are connected with* according *to act on securities and particular laws, mainly the authorisation to require certain property transaction or to execute certain rights against the persons legally determined by law*. Certificated securities that include right to settlement are distinguished from other letters with legal meaning, because in this case the letter is irreplaceable. With its lost or destruction, there is a lapse, the example is bill of exchange.

Book-entry security in contrast with certificated security, is the listing in record valued by money and is in the legal form. The advantage of the electronic form is security, transparency, economy, fastness of balance of trade with securities and finally also todays preferred protection of enviroment. *The main distinguishing feature of certificated and book-entry securities is then the way of its listing.*

However, the both forms of securities are equivalent, law acknowledges them the same rights and issuer decides about its form, except of the case when law determines the form by the mandatory way. Bearer shares, units of closed mutual funds, bearer shares of open mutual funds, bearer bonds, invesment certificates and treasury bills can have the form only of book-entry securities. On the contrary, other securities than bills of exchange, cheques, dock mortgage bonds, product mortgage bonds have to have the written form from the law. Not keeping the from, would have the consequence of lapse of that legal transaction. (Cirák et al. 2008, pp 185 -215)

4. THE CHANGE OF FORM OF SECURITIES

Law enables the change of form of securities provided that the legal form of all issue of securities changes, the legal form is a series of substitutable securities with the same date of its issue. Substitutable security is security of the same type (share) and form (registered share) issued by one issuer, if the same rights are connected with it. The change of form of security means:

1. The change of certificated security to book-entry security of the same form or,
2. The change of book-entry security to registered security of the same form

If the issuer decides to do this step, he is obliged to publish immediately his decision about the change of form of security in Commercial bulletin and in daily press that publishes stock exchange news at least once a week. If issuer breaches provisions of Act on securities in changing the form of security, he is responsible for damage that he will cause by this. (Saxunová, 2014, pp 96-103)

5. THE FORM OF SECURITIES

Securities are divided also according to their form which determines way of possibilities to transfer security among the different subjects. The legal order of the Slovak Republic distinguishes 3 forms:

Registered security (*au nom papier, rektapapier*) contains the name of the first owner. For certain types of securities, the legislator determined imperatively its form (certificates of deposit and savings books that have to have the form of registered security). We talk about securities, that are not transferable by endorsement but their transfer is not excluded as it is executed according to general and civil regulations. The transfer of ownership by itself rests in physical handing-over of security and regulation of rights and duties of contractual sides following enactments of § 524 to § 530 of the Civil Code, that regulate institute of *assignment of claims.*

Order paper (ordrepapier) is characteristic by the authorized person who is directly marked in the text. However, the person can transfer his authorization by his own written statement on the reverse side of the paper to other person, what means that the person authorized for receiving of settlement will be the one, whose name was the paper issued on, or other authorized person, if the act does not enact differently, for example, change of the owner of security by its transfer, i.e. on the basis of legal action as the death of owner is. For the valid transfer of ownership of order paper the endorsement is not enough, the other requirement is handing-over of security to the acquirer's disposal. By this, all rights and duties of security are transferred on him.

Debt security in global bearer form does not contain the name of its owner. The authorized person for the settlement is the letter holder, menwhile the letter is transferred only by the hand-over to its acquirer. The execution of rights connected to this security depends on the holding of the letter, resp. its presentation. To whom will security be presented, this person is obliged to settle and by this he gives up his liability. However, while the obliged person knew or had to know that submitter is not the authorized person, his liability to settle from security does not cease to exist.

Nowadays, certain doubts of participants can arise about the form of book-entry securities. It is clear that distinguishing securities according to their form has its sense mainly in ordinary certificated security. Its issuer decides about the form of security according to the conditions approved by law regardless of its form.

The requirements of account established for the owner of security by Central securities depository are not possible to associate with the text of security, as the act clearly distinguishes necessary data for the existence of security and for account.

6. REQUIREMENTS FOR SECURITIES

For security to be issued and to exist, it is necessary for *the security to fulfil the requirements imposed by law*, i.e. to contain data for being regarded as security according to law. Therefore it has to contain the marking of the type of security, naming the issuer, ISIN representing the marking of security according to the international numbering system for securities' identification, par value of security. Book-entry securities are issued in dematerialised form and for this reason also the legal condition of listing in certain register has to be fulfilled e.g. in Central securities depository. Registered securities have to fulfil the requirements stated in clauses § 34 to § 42 of Civil Code on keeping the written form of legal acts with the special respect to single forms of registered securities.

7. DISCHARGE OF SECURITY

Act states, what ways and according to what conditions security can cease to exist, if there are not conditions of its discharge adjusted in special act, according to clause of § 14 of Act on securities, security ceases to exist:

1. By discharge of issuer of securities with the exception of the case when issuer discharges with his legal successor or if the liability connected to security was not transferred to other corporate entity or physical entity by the day of its ,
2. On the basis of issuer's decision, if particular act does not state differenly, by the day determined by issuer,
3. On the basis of the lawful judgement of the court, by the date stated in that judgement,
4. By fulfilling other elements of law, which act on securities or other particular act establishes for the discharge of security, by the day of fulfilling that element of law, whose fulfilling will be earlier.

It is valid then, that security entitling payment discharges by the day when it is fully paid-up or the day of its early repayment, if the possibility of early repayment results from the emitting conditions or from the agreement between issuer and owner of security. If the articular act does not state differently, security authorizing other property settlement than payment settlement, security discharges by the day of fulfilling all liabilities resulting from security. Security acquiring by its issuer before the maturity date of security is regarded as early repayment of security only when the particular act approves it.

8. CONCLUSION

The last two decades, at the turn of 20th and 21st century are perceived as the era full of turbulences and changes, the era when all the world made the significant move to global economy. There are certainly many factors, why this particular direction develops and probably it is not possible to identify them all. In this connection, it is discussed very often about the phenomenon of „the new economy". (Komorník, Majerčáková, Husovská, 2011, p.13) Capital market with securities is its inseparable part whose management represents the particular category of management as the scientific discipline, that became to develop in the condition of the Slovak Republic after the change of social structure, after the year 1989. (Piškanin et. al., 2006, p. 30)

Within the scope of critical view on the legal enactment of the Slovak Republic, professional literature almost always points to more elaborated and more convenient utterance of the Czech legal enactment, that is nowadays Czech Civil Code. It is the codex of private law in the position of „*lex generalis*" effective from the year 2014, which, in its more than 3000 paragraphs tries to unify all the area of the czech private law, including also the area of security law. In this case, it is not valid. After two years of its effectivity, czech theoreticians from the area of private law as well as the profesional from practice point of you, that way that the czech legislator has

chosen is not right at all. Anglo-American liberal approach and the ambition to include the issue of securities that belongs mainly into the area of public law, into the private law, has the consequence of opacity and chaos of this juridical branch. Therefore it is necessary to point out clearly that the strict slovak legal enacment that resists to these negative liberal influences is the guaranty of the secure operation of financial market, which also the economic growth is connected to. (Stoličná, 2012, p. 14)

LITERATURE:

1. Bohdalová, M., Greguš, M. (2012). *Stochastické analýzy finančných trhov. Bratislava*: Univerzita Komenského v Bratislave
2. Cirák, J et al. (2008). *Občianske právo : všeobecná časť.* Šamorín: Heuréka
3. Komorník, J.,Majerčáková, D., Husovská, M. (2011). *Finančý manažment.* Bratislava: KARTPRINT
4. Milošovičová, P., Nováčková D., (2014). *Uplatňovanie práva EÚ na Slovensku.* Plzeň: Aleš Čeněk
5. Nováčková D., Milošovičová P., (2011). *Medzinárodné ekonomické právo.* Bratislava: Eurounion
6. Piškanin, A. et al. (2006). *Základy manažmentu.* Bratislava: Univerzita Komenského v Bratislave
7. Saxunová, D. (2014). *Vplyv účtovania dlhových cenných papierov na finančnú situáciu a výsledok hospodárenia.* Bratislava: Univerzita Komenského v Bratislave
8. Stoličná Z. (2012). *Vývoj hospodárskej politiky SR od transformačného obdobia roku 1989 až po súčasnosť*, Bratislava: KARTPRINT

MODELLING WEALTH EFFECT AND DEMAND FOR TOURISM DEPARTURE IN EUROPE: A PANEL DATA APPROACH

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ABSTRACT

When stock prices go down, households have more reason to save, and will reduce tourism spending because they feel less wealthy. This paper analyses the tourism departure determinants in selected European countries and quantifies their influences concerning wealth effects on tourism consumption. Given the importance of tourism trips for well-being, this paper investigates the wealth factors affecting tourism departure intensity in Europe using panel data by regression from thirty-one countries, from 1995 to 2014. We consider that departure is a function of income, saving, stock trading, real effective exchange rate, fuel price, and recession dummy variable.

Keywords*: wealth effect, tourist departure, panel data model, European countries*

1. INTRODUCTION

Any consumption activity, including the holiday, implies the use of money. For this reason, we cannot achieve a complete understanding of the tourist's choice by neglecting the role money and personal wealth in the decision process to depart on holiday trip linked, very closely, to the concept propensity to consume. While the average propensity to consume current income of private economic agent tends to be constant in the end, it fluctuates in the short run. Short-run changes in the expected growth rate of income, wealth-income ratio, and changes in the real rate of interest are main factors behind consumption variability. According to that, a higher expected income growth or a rise in the market value of financial wealth relative to current income would increase the propensity to consume tourist service. Positive changes in income and wealth will often go hand-in-hand, since a higher expected income growth is likely to drive up the market prices of stocks, owner-occupied housing, thereby increasing stock of real financial wealth, because a higher expected growth rate will tend to raise future corporate dividends and to drive up demand for housing, traveling abroad etc. Outbound tourism is considered a luxury good that carries certain prestige to the some part of people or encompassed nations in our analysis. However, another stream of studies on consumption argues that current earnings alone do not sufficiently explain consumers' spending behaviors. Expecting an increase in future income can also stimulate consumption of goods (Campbell and Cocco, 2007). This conjecture allows us to study how the tourist's choice is affected by changes in the income. In particular, an increase in wage (source of income) generates two effects. First, it lowers the marginal utility of money by making the tourist richer than before; this is the well – know wealth effect. Second, it increases the full price of the holiday, since one day spend away from work become relatively more expensive in terms of foregone income, the so-called substitution effect. Commonly cited as the 'wealth effect', the phenomenon linked to tourism

demand as a topic of this paper has been put to test by a very few number of studies. In the paper Fereidouni at all (2017) using quarterly data from Malaysia (2000-2011), examine the relationship between the wealth effect from real estate and outbound tourism while controlling for other relevant outbound tourism determinants. By applying time-series cointegration regressions, their results show that the wealth effect from real estate has a positive and significant impact on Malaysian outbound travel demand. Kim at all (2012) try to test for the wealth effect on Korean outbound travelers between 1989 and 2009, as Korean households hold housing assets and financial assets actively traded in markets. The results in this study support that housing had a significant effect on Korean outbound travelers, but financial assets seemed to have no effect. Therefore, we give serious attention to the study of the "income and wealth effect" factors that affect demand for tourism departure.
Accordingly, the hypotheses of the study were formulated:
Hypothesis 1: Increase of income in Europe will increase outbound travel demand.
Hypothesis 2: Price gains of capital assets in Europe will increase outbound travel demand

In this general context, this paper constructs a panel model for tourist departure in selected European countries for the period from 1995 to 2015. We analyse the determinants of income and wealth effect that cause outgoing tourism in Europe, taking into consideration a series of variables.
The objectives of this paper are the identification of "income and wealth" trends of outgoing tourism generating countries that can explain and predict the tourism demand in Europe. The paper is organized as follows. After the first section describes the methodological approach, the second section discusses the variables that influence departure demand, construction of the variables and the data sources. The third section presents the results. The last section summarizes the study's results and underlines the policy implications of the main findings.

2. METHODOLOGICAL APPROACH AND MODEL SPECIFICATION

In our empirical analysis, the estimation of wealth effect in demand for outbound tourism from different countries, which represent almost all tourism departures in Europe between the years 1995 and 2015, was performed. The data used to create the total tourist departures series by countries, as a dependent variable as well as other independent variables, are collected annually from World Bank collection of development indicators (WDI). A panel was compiled of 31 countries. Following the literature review, we consider that wealth effect in demand for outbound tourism is a function of population, age, gender, urbanization and economic openness between the origin country and Croatia.

$$DEPARTit = f\,(\underset{+}{INC_{it}},\ \underset{?}{SAV_{it}},\ \underset{+}{STOCK_{it}},\ \underset{?}{REER_{it}},\ \underset{-}{FUEL_{it}},\ \underset{-}{DUMMY_{it}})$$

where i = 1, … 21 (1 = Austria, 2 = Belgium, 3 = Bulgaria, 4 = Switzerland, 5 = Cyprus, 6 = Czech Republic, 7 = Germany, 8 = Denmark, 9 = Estonia, 10 = Spain, 11 = Finland, 12 = France, 13 = UK, 14 = Greece, 15 = Croatia, 16 = Hungary, 17 = Ireland, 18 = Iceland, 19 = Italy, 20 = Lithuania, 21 = Luxemburg, 22 =Malta, 23= Netherlands, 24=Norwy, 25=Poland, 26=Portugal, 27=Romania, 28=Russian Federation, 29=Slovenia, 30=Slovak Republic, 31=Sweden); and t = 1, … 31 (1 = 1995, …., and 15 = 2015).

DEPART is the international tourism measured by millions of departure; INC is real adjusted net national income per capita (in US$) as a proxy variable for the average household income, SAV is real adjusted savings: net national savings (in US$), STOCK is the stocks traded in real terms, REER is is the real effective exchange rate that accounts for changes in purchasing power parity in both prices and currency valuation, FUEL is the pump price for diesel fuel

(US$ per liter) in real terms, DUMMY08-09 is the dummy variable for macro event e.g. the shock of the great recession in Europe. Subscripts *i* and *t* denote country and year, respectively.

Table 1: Summary of Variables (1996-2010 year average) used in the Regression

	MIN	MAX	MEAN	STDEV
DEPART	0.157 (Malta)	87.46 (Germany 2013)	13.756	17.844
INC	70.33 (Estonia 2000)	851.92 (Germany 2014)	497.1	7250.5
SAV	-785.83 (Romania 1995)	5290.32 (Russia 2008)	398.85	728.3
STOCK	0.0005 (Latvia 1995)	8719.56 (GB 2007)	3410.14	6495
REER	44.99 (Bulgaria 1996)	152.77 (Island 2010)	96.06	13.445
FUEL	0.18 (Russia 1998)	2.35 (Norway 2012)	1.17	0.490

Source: Author's calculations

The real income per capita and its relationship between DEPART is expected to be positive (Garín-Muñoz and Amaral, 2000; Luzzi and Fluckiger, 2003; Phakdisoth and Kim, 2007; Muhammad and Andrews, 2008; Habibi et al, 2009; Hanafiah and Harun, 2010; Leitão, 2010). The research of the tourism demand frequently includes the role of real GDP per capita in the analysis, under the assumption that country with higher standard of living level tends to more frequently spend one fraction of income on holiday vacation. Some authors have employed this variable in attemt to explain the variation in international tourists arrival to Thailand and supported that hypothesis due to finding that the long-run results indicated that growth in income of Thai's Asia major tourist source markets (Malaysia, Japan, Korea, China, Singapore and Taiwan) have a positive impact on international tourists arrival to Thailand (Chaiboonsri, C.; Sriboonjit, J.; Sriwichailamphan, T.; Chaitip, P.; Sriboonchitta, S., 2010). In study of international tourism demand of Izmir, Turkey using time series data from 1980 to 2005 the authors find income (and prices) of the tourist generating country as a main determinant of tourism demand (Özlem Önder, Aykan Candemir, Neşe Kumral, 2009). Since the frequency of the inclusion of these variables in the model specifications tourism demand is high, we included them in the specification. Of course, we do not expect a surprise. The long-run elasticity estimates indicate that tourism demand is positive and highly elastic with respect to the income of tourist-generating countries in the case of Croatia (Mervar, A.; Payne, J.E. 2007). On average, the tourists that depart their own country covered in this study are from a medium-income category as the average per capita income. However, there is a significant variation in this variable (a standard deviation of USD7250.5), with the minimum USD 70.33 (Estonia, 2000) and the maximum USD 851.92 (Germany, 2014).

The hypotheses on wealth effect from financial assets, in the proceedings, were tested by coefficients on and SAV and STOCK respectively. Any use of personal income that a person does not spend in a way that directly results in a way that directly results in the employment of workers to produce consumer goods and services is considered to be personal savings. The mutual relationship between the DEPART and the SEV in our model of tourism demand for departure is unknown. Obviously how much tourist traveling abroad do depends on such thing as their saving (e.g. financial wealth), but also on their personal income, and the amounts of money and credit they are willing and able to borrow. There are difficulties and complexities inherent in the saving and tourism interrelating concept because excessive savings can mean a low propensity to consume goods and services in general, and tourism services, too. However,

there are specific cultural factors in some countries that interfere in just opposite behaviour. Germany has chronically weak consumer spending, a reflection of its aging populations and a national obsession with saving. Germany stores don't open on Sunday unless they're in railway or gas's stations and can only have sales on certain days of the year (Ip, 2010). The Germans save for "das Urlaub" (even more amount relative saving in Denmark, Sweden). As can be seen from Table 1 and our figure, there is enormous variation among the thirty-one economies in the sample in their domestic saving rates, with the nominal domestic saving per capita ranging from 5290.32 USA$ in Russia in 2008 to even negative saving: about -785.83USA$ in Romania in 1995 during the 1995-2015 period as a whole.

STOCK is the stock trade value. The stock and their prices are, an indicator as to how well an economy is doing: profits and revenues, and thus the prices of stocks and bonds, tend to be higher when an economy prosper, and lower when recession occur. The dynamics of illusion of wealth due to STOCK fluctuating can influence on how much the residents travel abroad, under that circumstances. The relationship between DEPART and STOCK is expected to be positive because the increase of stock trade volume increases optimism and stimulate job creation and greater opportunities. As one of the European countries, especially countries of the Eastern Circuit, which rarely traded, the Latvia was at a bottom of stocks and bonds trading in the 1995th. A country that captures maximum STOCK is the UK in the 2007th. In the same year in August, the LIBOR began to climb steeply and shortly following the fall of Northern Rock (one of the fife largest mortgage lenders in the UK), the global financial system underwent a meltdown that had not been seen since the 1930s (Farmer, 2010). That event triggered the start of the great recession in the same country, which later spilled all over the world.

Every recession begins after the peak of the financial trade is over. The dummy variable2008-2009 is included to control for the effects of macro socioeconomic event on demand for tourism departures, namely the Great Recession.

The real exchange rate, is the trade-weighted average of the price levels of trading partners relative to the general price level of the domestic economy (Wickens, M., 2012). The sign of the mutual relationship between the REER and the DEPART is unknown because the real exchange rate variable REER captures two effects on the price of international tourism: first, the influence the nominal exchange rate movements; and second, the influence of the relative price between country i and the rest of the world (Song, Witt, 2000).

Following Wang's (2008) approach, where jet fuel price was used as a proxy for airfare but instead we used the pump price for diesel fuel priced within the country. Fuel price is another relative price variable in tourism demand theory. It is an important variable in modern society since fuel price reflects the real costs involved in traveling within the country and can give more or less interchangeable sense of income value remain after spending someone on fuel liquid. More or less cost translates on wealth illusion. Otherwise, this variable is a useful variable to measure travel demand by tourists because it can be easily converted into energy consumption which is translated into the price of transport and carbon dioxide emissions (negative externality for society). Transportation costs, for example because of changes in oil prices and the emergence of low-cost airlines, have changed substantially in the last decade and influenced tourist behaviour (Gillen & Lall, 2004). If all else remains equal, travellers will choose a destination that takes less cost to reach there (Phakdisoth and Kim, 2007). We therefore expect a negative sign for FUEL and TOUR.

3. REGRESSION RESULTS

To explore the factors behind the international dynamics in generating demand for outbound tourism in European selected countries, we developed a simple model, as previously mentioned. The empirical analysis was based on the annual 1995-2015 data with countries as cross-sectional units.

Although, practically all of classical panel data econometrics assumes cross-section independence, the dependent variable was submitted to the battery of panel unit root tests in order to detect whether there would be possible cointegrations with other variables. When the level of significance obtained from the test results is smaller than 0.05, the null-hypothesis is rejected, and the series said to be is stable. However because all the tests rejected the hypothesis of the unit root, cases that can be seen in Table 2, the analysis proceeded with the estimation of the models in log levels.

Table 2: Results of panel unit root testing for the dependent

Panel unit root test				
	Maddala-Wu	Levin-Lin-Chu	Im-Pesaran-Shin	Hadri Test
log(DEPAR)	286.88***	-15.79**	-2.80***	24.73***

Source: Author's calculations
Note: reject the null of unit root at the level of significance *** 1%, ** 5%.

With panel data, the issue is whether to use random effects or fixed effects estimation approaches. The random effects approach for estimating exploits the correlation in the composite error composed by unobserved heterogeneity and the error term. This approach includes the idiosyncratic error term assuming that unobserved heterogeneity (or specific country effect) is orthogonal to a particular country's input variables in time dynamics and uses a Generalized Least Squares (GLS) estimator to take into account serial correlation in the composite error. There can however, be many instances where this assumption is incorrect. Specifically, unobserved heterogeneity (country's individual effects) can be correlated with explanatory variables in the present model if the country's individual effects influence the vector of explanatory variables. In such a case, the fixed-effects estimator may be more appropriate to use. Wooldridge (2001:266) shows that a fixed effect estimator is more robust than a random effects estimator. A shortcoming of the approach is, however, that time constant factors (almost all explanatory variables in our model) possess a time-constancy feature and cannot be included as an explanatory variable. Otherwise there would be no way to distinguish the effects of these variables from the effects of the unobservable variable. Another shortcoming of the fixed effects estimator is that it is less efficient than the random effects estimator. It has fewer degrees of freedom and takes into account only the variation "within" units, not between units. Accordingly, in order to not exclude intuitively hypothesized issues, such as an important explanatory variable in determination of the factors involved in demand for outbound tourism for selected countries, it is natural to exclude the fixed effects estimator. However, prior to opting for the random effects estimator, we need to diagnostically test the question of whether the effects are really random using an F test (Baltagi, 2001:15). By comparing the fixed effects and the benchmark pooled OLS fits by means of an F test for individual effects ($F = 27.48$, $df1 = 31$, $df2 = 634$, p-value $< 2.2e-16$), our results indicate that there is substantial inter-country variation in regard to departure trends in the European tourist market that impacts the demand for exit from native country traveling in abroad. Such a result indicates that the fixed effects model approach is not needed. It is more appropriate to choose the competitive random effects model, according to the exclusion principle. This result is not surprising because the selected

countries that generate the tourist departure in our sample are not in a certain economic group. It was intuitively obvious that individual effects would be unstable for the very different groups of countries in the studied period. Accordingly, to determine which of these estimators are more appropriate to use in the present case, both a fixed effects (FE) and random effects (RE) estimator were initially used to model tourist saturation, and the Hausman specification test was performed to support the assumption in the random effects model that unobserved variables are orthogonal to the explanatory variables. We also used the Breusch-Pagan Lagrange Multiplier (LM) test to see if the variance of the intercept components of the composite error term is zero. Rejection of the null hypothesis in both of these cases would lead to rejection of the random effects estimator.

Table 3: FE vs. RE Estimator: Diagnostic Results

Dependent variable (model)	**Breusch-Pagan LM Test**	**Hausman Specification Test**
log(DEPAR)	$\chi 2(2) = 1567.7$***	$\chi 2(6) = 11.372$

Source: Author's calculations.
Note: *** Null hypothesis rejected.

A log regression of demand for tourism departure on all six explanatory variables gives LM = 1567.7, which is greater than the critical value at the 1% level of significance. In Table 3 above, the Hausman Specification Test fail to rejects the null hypothesis that the difference in coefficients between the FE and RE estimators is not systematic, so this result implies that our tourism departure model has REs (while the calculated Hausman statistic is 11.37, which is less than the critical value of 15.09 at the 1% significance level). Thus, the result of the Breusch-Pagan test, which strongly indicates the existence of REs, is revalidated by the Hausman test, which finds in favour of the RE. These findings would suggest that the RE estimator can be used without the possibility of producing biased estimates. Since the RE assumptions in our panel regression is satisfied it is consistent and efficient. As we know, RE is one particular way of estimating a feasible GLS model. We will also estimate a more flexible FGLS model that allows for heteroscedasticity and autocorrelation, as an alternative but less preferable model in our case. According to theory FGLS model would be just as efficient as RE if *i* is several times larger than *t*, which is not the occurrence in our sample. The results are contained in Table 4 below, which gives the estimation results for both the FE and FGLS models.

Table 4: Fixed and random effects models: estimation results (Continues on the next page)

	Unrestricted models		**Restricted Models**	
	FGLS	**Random effects** b)	**FGLS**	**Random effects** b
Constant	5.821*** (14.446) **[0.000]**	5.821*** (14.446) **[0.000]**	5.948 (15.632) **[0.000]**	5.130*** (23.731) **[0.000]**
Log (INC)	0.297*** (16.974) **[0.000]**	0.428*** (11.280) **[0.000]**	0.312*** (22.213) **[0.000]**	0.419*** (9.676) **[0.000]**
Log (SAV)	0.030 (1.435) [0.839]	0.104 * (2.090)	0.032. (1.891) [0.058]	0.080 (1.734) **[0.083]** .

		[0.034]		
Log (STOCK)	0.036 *** (8.378) **[0.000]**	0.033* (2.415) **[0.012]**	0.039*** (11.606) **[0.000]**	0.032* (2.345) **[0.022]**
Log (REER)	-0.204*** (-3.367) **[0.000]**	-0.403 (-1.734) **[0.082]**	-0.153 *** (-2.992) **[0.000]**	
Log (FUEL)	0.117*** (10.812) **[0.000]**	0.139** (3.123) **[0.001]**	0.131*** (13.764) **[0.000]**	0.096 * (2.312) **[** 0.021**]**
DUMMY08_09	0.117 (10.812) **[**0.839**]**	0.021 (0.531) **[0.596]**		
Number of observations	672 (32countries * 21 years)	672 (32countries * 21 years)	672 (32countries * 21 years)	672 (32countries * 21 years)
F-stat.	42.817 [0.000]	38.850 [0.000]	77.466 [0.000]	57.056 [0.000]
R-squared	0.87		0.87	
Adj. R-square		0.25		0.25
Breusch_Godfrey/ Wooldridge Test of serial correlation		13.556 [0.051]		16.146 [0.052] 7.304 0.000
Pasaran CD tests of independence	2.536 [0.011]	2.146 [0.034]	6.628 [0.000] 2.062 0.039 Donji novi	7.106 [0.000] 2.478 0.0132
Breusch-Pagan LM test of heteroskedasticity a)	22.413 [0.001]	22.413 [0.001]		

Source: Author's calculations.

Notes:

- Numbers within parentheses () denote asymptotic t-values, and those within [], p-values.
- Signif. codes: 0 '***' 0.001 '**', 0.01 '*'
- The data set as a basis of regression is an unbalanced panel; imputation of missing values is done by Amelia 2 (R-GUI).

a) Based on the OLS estimates, tested for heteroskedasticity. The null hypothesis for the Breusch-Pagan test is homoskedasticity.

b) The bolded p-values are shown in brackets and were obtained from the standard errors of the coefficients, which were White-adjusted.

A comparison of the regression coefficients shows that FGLS- and RE methods yield somewhat different results for our data model. We would leaning on the RE, interpreting the results accordingly. Approximately 25-% of the variations in departure model are explained by

variations in the independent variables, according to adjusted R2 in our RE models. The F test statistics clearly show that all the coefficients in the model(s) are different than zero. The estimation of RE models provides the Breusch-Godfrey/Wooldridge test for serial correlation in panel models. This test did not indicate the presence of serial correlation in the residuals. Pasaran CD (cross-sectional dependence) tests are used to test whether the residuals are correlated across entities (Hoechle, 2007). Namely, cross-sectional dependence can lead to bias in tests results (also called contemporaneous correlation). Our testing shows no cross-sectional dependence in final panel regressions.

We first estimated by OLS the tourist departure model in selected European countries on the international panel data set. Based on the OLS estimates, we tested for the presence of heteroskedasticity. Because heteroskedasticity was found to be present in the random unrestricted model, we re-estimated the RE regressions using White's heteroskedasticity-consistent covariance estimator to provide valid inference. In order to determine the importance of our set of independent variables with regards to demand for tourist departure the tests of significance using the t-distribution are used.

Coefficients on income are the greatest in size and highly significant, consistent with preceding studies. In our study we applied the crude income per capita variant Gross National Income. A one percent increase in average income per capita causes an approximately 4.2 percent increase in the number of outbound travelers. **Hypothesis 1** is supported as the coefficient on income is significant and stable across both models. Accordingly the former result, we find that international tourism in selected country has a higher sensitivity to income than a normal good (income elasticity higher than unity) opposing the finding of Ulrich and Smeral (2016), who recently found that income elasticity of international tourism for 1994-2003 and 2004-2013, decreased from period to period. For the last decade, the values of the income elasticities in their study were lower than 1. In our study the larger the income is, the higher the preference for departure, which corresponds to the results of Hanafiah and Harun (2010) and Leitão (2010).

The real domestic saving per capita (SEV) is significant at the 0.05-0.1 significance level, implying its statistical importance in the model. According to the elasticity as interpreted from the log-log model, a one percentage increase in the real saving per capita increases tourism departure to a various overboard destination in selected sample by approximately 8% in terms of number of departures. This robust relationship adheres to the our prior conceptualized ad-hoc theory of saving's impact on the demand for tourism services, which says that higher saving e.g. financial wealth is precondition or great trigger for tourism traveling in abroad. Thus, this study is consistent with that previous story which classifies some of high traveling, domineering nations as a big saver, and where obviously tourism demand rises faster than savings. When the word is about the impact of financial wealth on tourism demand, in very similar position stands the dynamic of the stock trade (STOCK) and its relation to DEPART variable. So, **hypothesis 2** on the wealth effect from the European stock market was accepted in both models with high probability. The coefficient implies a 3.2 percentage increase in the number of departures out of country with a one percentage increase in that country's stock trade. Most likely the statistical significance at the 0.05 level, which does correspond with the variable's presumed economic significance, implies one or more things. First, a relatively high allocation of personal wealth in the stock market by domineering travel nation in our sample may lead to a significant effect on consumption when their financial wealth is increased. Second, the stock prices are highly volatile in nature, and majority of trading drowned after 2009. Departure demand tourism is not immune on global financial turbulences that occurred in last decade, and where financial wealth of very mighty people and institutions are melted

away but because of very weak impact of that on middle class citizens, mutual relationship between the stock trade dynamics and departure demand remain significant.

Finally, the FUEL variable has a surprisingly positive sign. Beside, a high significance coefficient, according to the theoretical expectation of this coefficient was not expected. Yet, the price of fuel increases the transportation costs and thus the travel expenditure within domestic country. Here, we see so called pure substitution effect. As its inherent characteristic of financial burden or financial wealth let downing if prices go up in their own countries, tourists opted to more traveling abroad.

4. CONCLUSION

We found from panel regressions analysis that the domestic saving rate and stock trade vivacity, as proxies for financial wealth and same type of wealth creation, are relevant predictors of demand to tourism departure in Europe. Namely, the international demand for traveling abroad in Europe is very sensitive to dynamics these indicators of financial assets. Any collapse in financial wealth can produce negative "wealth effect" shock and hinder demand for departures in Europe. Our regressions result did not reveal any significant impact of recession dummy on demand for departures. Although additional saving in times of recession and deep economic crisis for some of countries involved in panel dataset was build up as a result of precautionary saving reflex that positively impacted demand for departures. And at the end, we should underline the role of income effect in determination of the international tourism demand for departure, because higher living standard still ever express the potential for higher level of traveling abroad across the Europe. We also found that the international demand for departures in selected countries as a whole sample will increase with fuel price inflation in selected country because the positive impact of raising transport costs in native country caused substitution effect in traveling.

LITERATURE:

1. Baltagi, B.H. (2001). *Econometric Analysis of Panel Data, 2nd ed.*, John Wiley & Sons Inc, Chichester.
2. Chokethaworn, K. et al. (2010). "International tourist arrivals in Thailand: Forecasting with ARFIMA-FIGARCH approach", *Economics: Annals of the University of Petrosani*, 10(2):75-84.
3. Garín-Muñoz, T., Amaral, T. P. (2000). "An econometric model for international tourism flows to Spain", *Applied Economics Letters*, 7: 525-529.
4. Gillen, D., Lall, A. (2004). "Competitive advantage of low-cost carriers: some implications for airports", *Journal of Air Transport Management*, 10: 41–50.
5. Gonzalez, P. & Moral, P. (1995). "An Analysis of The International Tourism demand of Spain", *International Journal of Forecasting*, 22(2):233–251.
6. Gunter, U., Smeral, E. (2016). "The decline of tourism income elasticities in a global context" *Tourism Economics*, 22(3):466-483.
7. Fereidouni, H.G. et.al. (2017). "Wealth effect from real estate and outbound travel demand: the Malaysian case", *Current issues in tourism*,
8. 20(1):68-79, http://www.tandfonline.com/doi/abs/10.1080/13683500.2014.882886
9. Habibi, F. et al. (2009). "Dynamic model for International Tourism Demand for Malaysia: Panel Data Evidence", *International Research Journal of Finance and Economics*, 33: 207-217.
10. Farmer, R. (2010). How the Economy Works Confidence, Crashes and Self-Fulfilling Prophecies. Oxford University Press.

11. Hanafiah, M.H.M., Harun, M. F. M. (2010). "Tourism demand in Malaysia: A cross-sectional pool time-series analysis", *International Journal of Trade, Economics &Finance*, 1(1):80-83.
12. Hoechle, D. (2007). "Robust Standard Errors for Panel Regressions with Cross-Sectional Dependence", *The Stata Journal*, 7(3):281-312.
13. Kim, H., et.al. (2012). "Do expectations of future wealth increase outbound tourism? Evidence from Korea", *Tourism Management*, 33(5): 1141-1147.
14. Kulendran, N., Witt, S. (2001). "Cointegration versus Least Squares Regression", *Annals of Tourism Research*, 28:291–311.
15. Leitão, N. C. (2010). "Does Trade Help to Explain Tourism Demand? The Case of Portugal", *Theoretical and Applied Economics*, 17(3): 63-74.
16. Luzzi, G.F., Fluckiger, Y. (2003). "An econometric estimation of the demand for tourism: The Case of Switzerland", *Pacific Economic Review*, 8(3): 289-303.
17. Mervar, A., Payne, J.E. (2007). "Analysis of Foreign Tourism Demand for Croatian Destinations: Long-Run Elasticity Estimates", *Tourism Economics*, Vol. 13, no. 3, pp. 407-420.
18. Muhammad, A. & Andrews, D. (2008), "Determining Tourist Arrivals in Uganda: The Impact of Distance, Trade and Origin-Specific Factors", *African Journal of Accounting, Economics, Finance and Banking Research*, 2(2):51-62.
19. Önder A. Ö., Candemir A., Kumral N. (2009). "An Empirical Analysis of the Determinants of International Tourism Demand: The Case of Izmir", *European Planning Studies*, 17(10): 1525-1533.
20. Phakdisoth, L., Kim, D. (2007). "The Determinants of Inbound Tourism in Laos", *ASEAN Economic Bulletin*, 24(2): 225-237.
21. Song, H., Witt, F. S. (2000). *Tourism Demand Modelling &Forecasting: Modern Econometric Approaches*, 1st ed., Pergamon, Oxford.
22. Wang, Y.S. (2009). "The impact of crisis events and macroeconomic activity on Taiwan's
23. international inbound tourism demand", *Tourism Management*, 30:75-82.
24. Wickens, M. (2012). *Macroeconomic Theory: A Dynamic General Equilibrium Approach*, 2nd Edition, University Press, Princeton.
25. Wooldridge J. M. (2001). *Econometric Analysis of Cross Section and Panel Data*, MIT Press, Cambridge.
26. http://data.worldbank.org/indicator

CAPITAL FLIGHT AND ECONOMIC GROWTH IN IRAN

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ABSTRACT
Beginning in the mid-1980s, the phenomenon of capital flight from developing countries received considerable attention in the economics literature. Capital flight destroys the domestic macroeconomic environment and decreases transparency and accountability. It restricts financial resources when a country is looking for economic growth and development. The purpose of this article is to measure the amount of capital flight in Iran during 1981-2012, and to investigate the long-run effects of estimated capital flight on the Iranian economic growth in this period. To do so, the amount of capital flight in Iran has been measured using World Bank (1985) and Erbe (1985) approach. Then, the Auto-Regressive Distributed Lag (ARDL) procedure has been applied in order to estimate a growth equation. Results show that capital flight has a negative impact on economic growth in Iran.
Keywords: *Capital flight, Economic growth, ARDL, Iran*

1. INTRODUCTION

Numerous opportunities for investment in developing countries such as Iran indicate the role and importance of capital and financial resources in economic growth and development. The persistently dismal economic performances, limited possibilities, structural and political difficulties in developing countries necessarily drive out capital out of these countries. The stylized fact is that when capital flees resources are lost to the domestic economy and these have serious implications on long-run macroeconomic performance. Many analysts have attributed sluggish economic growth and persistent balance of payment deficits in most developing countries to capital flight (Ajayi, 1997). Loss of capital suggests the lost resources that did not contribute to the expansion of domestic production or the improvements in domestic social welfares. Similarly, the accumulated capital flight is lost resources that did not contribute to the tax revenues of the government (Beja, 2007).

Given the fiscal constraints in Iran, lost tax revenues represent foregone public infrastructures, health services, and basic education that are crucial for engendering long-run economic growth. In the same manner, the lost resources are funds that were no longer be available for external debt servicing, making the social burden of debt heavier, which in turn contributing to aggravate the resource mobilization problems of the Iran. Therefore, in such and other related considerations, capital flight undermines macroeconomic integrity of the country. The worst part is that the impacts persist over time. Hence, from "an economic justice point-of-view, there are distributive dimensions to capital flight that must not be ignored" (Beja 2006: 264).

This paper does not deal with the question where capital flight went, who was engaged in it, or even how it was undertaken. The main aim in this paper is to find out the long-run effect of capital flight on economic growth, which has not been adequately investigated. To do so, a measurement of capital flight will be provided.

Then, the Auto-Regressive Distributed Lag (ARDL) procedure will be used to estimate the long-run effect of capital flight on economic growth.

The paper has been organized as follows. We discuss the theoretical and empirical literature of capital flight and its relation with economic growth in section 2. Then, methodology of the paper is explained in section 3. This section includes measurement of capital flight, econometric model, and data description. Empirical results of the paper are discussed in section 4. Finally, section 5 dedicated to conclusion and recommendations.

2. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1. Theoretical Literature

2.1.1. Conceptual and analytical frameworks for capital flight

Since data for capital flight is not readily available and must be constructed, there is no universal definition of capital flight. However, it is accepted in all definition that capital flight occurs in the condition of distrust and high risk in the economy. The World Bank (1985) defines capital flight as the change in a nation's foreign assets. It is premised on trying to identify both the sources and uses of international funds by a nation; source funds consist of the increase in recorded gross external debt and net foreign direct investment, which can in turn be used to finance the current account and/or to increase official reserves. In essence, it equates capital flight with all non-official capital outflows.

Dooley (1988) presents another variation of the residual approach which attempts to distinguish between so called normal and flight capital flows. According to Dooley, flight stems from the desire to avoid domestic taxation. As such, flight need not be a current transaction, but merely reflect a change in the motive for holding a previously acquired foreign asset as the domestic investment climate changes. He defines flight as that stock of foreign assets whose returns have not been reported as investment income (in BOP statistics).

Beja (2006) expressed that capital flight is a movement of capital from a resource-scare developing country to avoid social control or losses due to higher domestic risks and uncertainties. In his view, capital flight is the net unrecorded capital outflow or the residual of officially recorded sources and uses of funds.

Four main theories have been identified in the area of capital flight. These include: (1) The investment diversion thesis; (2) Debt- driven capital flight thesis also called debt-overhang thesis; (3) Tax - depressing thesis; and (4) austerity generating thesis (Forga, 2008). We discuss these theories in the follow:

The Investment Diversion Theory: According to this theory, capital flight is due to the macroeconomic and political uncertainty in developing country and the simultaneous existence of better investment opportunities in advanced countries (like high foreign interest rates, wide array of financial instruments, political and economic stability, favorable tax climate and secrecy of accounts). Some, unscrupulous, corrupt leaders and bureaucrats usually siphon scarce capital resources from their countries to advanced countries. Therefore, these funds are not available for investment at home, leading to a decline in aggregate investment, low economic growth, and hence, a decrease of employment, increase in dependency ratio, and high death rate. Sometimes, these negative macroeconomic effects necessitate borrowing from aboard to reactivate the domestic economy, which sometimes furthers siphon, causing external dependency and indebtedness (Forga, 2008).

The investment diversion thesis provides one of the well-known negative consequences of capital flight in the countries involved. By itself however, it provides only partial explanation of the consequences of capital flight on the economy (Henry, 2013).

The Debt-Driven Thesis (Debt Overhang Thesis): This is the continuation of the investment diversion thesis. This thesis postulates that given the heavy external debt of a country, residents of the country are motivated to move their resources outside the country, to foreign countries.

Borrowed money is sold to domestic economic agents who transfer these funds partly or completely abroad. According to this thesis, external debt is one of the propellants or fuel to capital flight. This thesis states that capital flight reduces the incentive to save and invest. The assumption here is that with large foreign debt, there are the expectations of exchange rate devaluation, fiscal crisis, and the propensity of the crowding out of domestic capital and expropriation of assets to pay for the debt (Forga, 2008).

The debt driven thesis and the investment driven thesis taken together suggest interdependency between capital flight, growth and external debt with the linkages being mutually reinforcing. Capital flight leads to poor growth, which calls for the necessity to borrow in order to promote growth. Further borrowing or indebtedness promotes capital flight, which in turns leads to poor economic growth, and the cycle continues (Henry, 2013).

The Tax-Depressing Thesis: Based on this thesis, capital flight leads to a potential revenue loss because wealth held abroad is outside the control of the domestic government, and therefore cannot be taxed. The fall in government revenue complicated the task of politico-economic engineering to promote growth and development. The outcome is the reduction in debt–servicing capacity of the government. This in turns increases the debt burden, which constrains economic growth and development. Thus, a direct resultant of capital flight is the reduction in revenue generating potential of government (Forga, 2008).

Austerity Generating Thesis: This thesis views the poor in a severely indebted situation due to capital flight. They suffer more because they are exposed to excruciating austerity measures by government to pay for debt obligations to international banks that in turns pay interests to flight capital from residents in these countries (Pastor, 1989). Poverty in developing countries reduces them to hewers of wood and drawers of water while perpetrating international inequality and dependency and, widening the gap between the rich countries and poor countries. Furthermore, the tax that the poor may pay is small, which again constrains the ability of government to muster enough resources to promote growth and development with poverty alleviation. Thus, a vicious circle of external debt, capital flight, poor growth, poverty and external debt is created (Henry, 2013).

From the above, capital flight destroys the domestic macroeconomic environment and decrease transparency and accountability. These distortions manifest themselves in weak governance, large government deficits, overvalued exchange rate, high and variable inflation coupled with financial repression. Thus, we can conclude that where there is heavy debt, capital flight increases, exacerbating and magnifying the debt problems of the country (Glynn and Koening, 1984).

2.1.2. Link between capital flight and economic growth

There are several channels through which capital flight affects economic growth. According to the previous sub-section and the literature, we can distinguish the following main channels (Ndiaye, 2014):

The investment channel: The phenomenon of capital flight takes place through transferring abroad a portion of domestic private savings. The persistence of this phenomenon can lead to a decline in domestic savings, resulting in fewer resources available for the financing of domestic investment and for the promotion of economic growth. Ndikumana (2009) asserts that capital flight reduces domestic investment by decreasing the volume of savings channeled through the domestic financial system, hence retarding economic growth.

Tax base channel: Researchers also note that capital flight leads to the erosion of the tax base through reduced domestic economic activity, inducing a fall in government revenue and, consequently, a decline in public investment that, in turn, can lower private investment and growth (Ajayi 1997, Cervena, 2006, Ndikumana2009). Ndikumana and Boyce (2011) have shown empirically that countries with higher capital flight tend to have lower tax revenues.

Imports channel: With respect to imports, if scarce foreign exchanges in developing countries are used to finance capital flight, they will not be available for financing imports that may be crucial for economic growth (Lessard and Williamson, 1987). If capital flight money had been invested in the production of either domestically-produced intermediates or export goods that could finance imports, the import constraint on growth could have been relaxed (Pastor, 1990).

Capital inflows channels: According to Ndikumana (2009), capital flight forces the government to increase its borrowing from abroad, which further increases the debt burden and worsens the fiscal balance. As external debt and foreign aid are supposed to contribute to the financing of domestic investment, the more the phenomenon of capital flight increases, the less the resources from external debt and foreign aid are used to finance investment. Therefore, through external debt and foreign aid, capital flight can lead to a fall in domestic investment, and then in economic growth (Boyce, 1992; Cerra, et. al, 2008, Ndiaye, 2014).

Balance of payments difficulties channel: According to Ajayi (1995), the persistent deficits of balance of payments in most developing countries have been attributed to capital flight. Capital flight may negatively contribute to economic growth by exacerbating the balance of payments problems (Menbere, 2003).

Financial system channel: Capital flight can also reduce growth by destabilizing the financial system, as sudden outflows of large resources would call for an adjustment in interest and exchange rates policies (Menbere, 2003). The phenomenon of capital flight occurs through transferring abroad a part of domestic private savings. The persistence of this phenomenon can thus lead to a decline in domestic savings. Therefore, banks will receive less resource in the form of savings, which may induce a fall in their provision of credit to the private sector. Consequently, capital flight can lower the volume of financial intermediation, thereby negatively affecting economic growth (Ndikumana, 2003 and Ndiaye, 2014).

Corruption channel: Capital flight can affect economic growth through corruption. Indeed, high capital flight is symptomatic of an environment characterized by corruption (Ndikumana and Boyce, 2011). This can hurt economic performance by reducing private investment through adversely affecting the quantity and quality of public infrastructures, by lowering tax revenues and by declining human capital accumulation (Ndiaye, 2014).

2.2. Empirical Literature

There are lots of studies on the area of capital flight. Most of these studies have dedicated to calculate or estimate capital flight for different purpose. Some of them have been conducted to identify the key determinants of capital flight in different countries of the world. We have summed up these studies in the Table 1.

Table following on the next page

Table 1: Studies for Identifying the Key Determinants of Capital Flight

Researcher (s)	Year	Key Determinants of Capital Flight
Dornbusch	1985	exchange rate misalignment, large fiscal deficit
Walter	1987	domestic policy shortcomings, political and economic instability and unfavorable tax climate
Pastor	1989	exchange rate misalignment
Ajayi	1992 2001	exchange rate misalignment
Schineller	1997	financial and current account deficit, appreciated exchange rate, high inflation rate, unclear and overreaching deregulations
Alam and Quazi	2003	political instability, increase of corporate income taxes, higher real interest rate differentials between countries, and lower GDP growth rates
Beja	2007	unending political crises, lack of confidence on government, corruption, unwillingness of investors to domestic investing
Ndikumana and Boyce	2011	existence of widespread debt
Abuzayed	2012	lagged capital flight, external debt, foreign direct investment, real GDP growth rate, and uncertainty
Maski and Wahyudi	2012	foreign direct investment

The other group of studies on capital flight has considered the impacts of capital flight on the macroeconomic variables such as economic growth. So, the goal of this group of researches is the same as our paper. There is numerous evidence of the adverse effect of capital flight on economic growth in the literature. We have summarized these studies in the Table 2. As it is seen in Table 2, all the considered studies confirm that capital flight has a negative impact on economic growth.

Table following on next page

Table 2: Studies on Investigating the Impacts of Capital Flight on Economic Growth

Researcher	Year	Method	Impacts of Capital Flight on the Macroeconomic
Cervena	2006	Generalized Least Squares	Capital flight has detrimental effects on long-run economic growth.
Beja	2007	Comparitive analysis	Capital flight contributes to the lowering of the quality of long-run economic growth.
Forgha	2008	Two Stage Least Squares technique	Capital flight has a negative impact on economic growth.
Okoli	2008	Least square Regression Model	Capital flight exerts a negative effect on the economic development.
Lan	2009	Auto-Regressive Distributed Lag	Capital flight plays a crucial role in influencing economic growth.
Gusarova	2009	Panel Data Regression	Capital flight has a negative impact on economic growth.
Bakare	2011	Auto Regressive Vector Model	Capital flight limits economic growth.
Henry	2013	Multiple Regression	Capital flight has a negative impact on economic growth.
Ndiaye	2014	Generalized Method of Moments (GMM)	Capital flight significantly reduces economic growth.

3. METHODOLOGY

3.1. Measurement of Capital Flight

There are four popular measures of capital flight (Forgha, 2008).

World Bank (1985) and Erbe (1985) measure of capital flight: -1

$$KF = CA + FDI + ED + FR \quad (1)$$

Where, KF is capital flight, CA is current account balance, FDI is foreign direct investments, ED is changes in external debt, and FR is changes in foreign reserves.

Morgan Guaranty Trust Company (1986) measure of capital flight: -2

$$KF = CA + FDI + ED + FR + BFA \quad (2)$$

Where, BFA represents Bank system foreign assets. This method of capital flight measurement is the reported and unreported acquisition of foreign assets by the public and non-bank private sector.

Duwendag (1987) measure of capital flight: -3

$$KF = CA + FDI + ED + FR + EBOP + IMFC + CI \quad (3)$$

Where, EBOP, IMFC, and CI represent errors and omissions in the balance of payments statistics, IMF Credit, and Counterpart items, respectively. Under this measure, capital flight is considered as short-run speculative capital flows, or external assets by non-bank private sector plus the errors and omissions in the balance of payments account. Duwendag's measure is

referred to "hot money flows" approach according to Ajayi (1992). This dimension of capital flight is expected to respond quickly to changes in expected returns. There is also another narrow version of the hot money flows approach by Cuddington (1986) and Ajayi (1997).

KF= - (EBOP + OI) (4)

Where OI is other assets/investment particularly net short-run private capital flows.

sources and uses approach to measure capital flight: -4

KF = (ED + FDI) – (CA + FR) (5)

This measure was developed by Pastor (1989, 1990) to measure capital flight.

Following Beja (2006)'s definition of capital flight, we have used World Bank (1985) and Erbe (1985) approach to measure capital flight in this paper.

3.2. Econometric model

In this section, we will introduce a model for investigating the effect of capital flight on economic growth. Capital flight arises from portfolio diversification incentives, return differential incentives, and relative risk incentives. The standard portfolio model suggests two key incentives for capital flight: after-tax domestic returns adjusted for expected depreciation that are lower than after-tax foreign returns, and domestic returns that have higher volatility or risk than foreign returns (Collier et al., 2001). So, Agents have incentives to transform the capital abroad, which can be caused by macroeconomic instability and other factors. This will limit capital available for domestic investment and therefore, undermine economic growth (Gusarova, 2009).[1]

Our model for studying the growth impact of capital flight is based on the standard theory of growth, which was significantly extended by empirical testing to explain the economic growth by the increasing number of factors. In particular, we have used a model based on Hadjimichael (1994). In our model, economic growth (EG) is a function of capital flight growth rate (KFG), active population growth rate (PG) as a proxy for labour force, the growth of capital accumulation (KG) as a proxy for physical capital, the change of terms of trade (TOT), and inflation rate (INF). So:

EG = f (PG, KG, KFG, TOT, INF) (6)

By the theoretical notion of the growth model, active population growth is believed to have a significant positive effect on the economic growth (Fisher, 1991; Barro, 1996). Also, it is expected by the theory of growth that physical capital has a positive effect on the growth. As discussed before, it is expected that capital flight has a negative impact on the economic growth. Furthermore, an improvement in the terms of trade may reduce input prices relative to output prices. So, firms would have an incentive to raise quantity supplied (Hadjimichael, 1994; Barro, 1996; Gusarova, 2009). Thus, we would expect that increase of the terms of trade has a positive influence on the growth of GDP. It is believed that inflation has an important negative impact on growth; because businesses and households are thought to perform poorly when inflation is high and unpredictable (Hadjimichael, 1994; Barro, 1996).
We have employed the Auto-Regressive Distributed Lag (ARDL) approach proposed by Pesaran & Shin (1995) to specify above growth equation. The main advantage of the ARDL lies in the fact that it can be applied irrespective of whether the regressors are I(0) or I(1), and this avoids the pre-testing problems associated with standard cointegration analysis which requires the classification of variables into I(0) and I(1).

[1] We have explained several channels which capital flight affects economic growth in sub-section 2.1.2.

The ARDL procedure involves two stages. At the first, the existence of the long-run relation between the variables under investigation is tested. In fact, before the estimation of the long-run relationship, it is necessary to test the existence or lack of a long-term relationship among the dependent and independent variables. If the existence of long-run relation is confirmed, then we can go to stage two. The second stage of the analysis is to estimate the coefficients of the long-run relations and make inferences about their values using the ARDL (Pesaran and Pesaran, 1997).

The general form of the model ARDL(p,q_1,q_2,…,q_k) is as follows:

$$\varphi(L,P)Y_t = \sum_{i=1}^{k} \beta_i(L,q_i)X_{it} + \delta W_t + u_t \quad (7)$$

$$\varphi(L,P) = 1 - \varphi_1 L - \varphi_2 L^2 - \cdots - \varphi_P L^P$$

$$\beta_i(L,q_i) = \beta_{i0} + \beta_{i1}L + \cdots + \beta_{iq}L^P$$

Where, L shows the lag operator; Y_t stand for the dependent variable; X_{it} is the explanatory variable vector; q_i(i=1,2,…,k) is the number of optimal lags relevant to each of explanatory variables; p stands for the number of optimal lags for the dependent variable; and W_t is the vector of definitive variables including intercept, seasonal variables, time trend or endogenous variables with fixed lags. Optimal lags for each variable can be determined by Schwarz Bayesian (SBC), Hannan-Quinn (HQC), or Akaike (AIC) criteria.

In the long-run, $Y_t = Y_{t-1} = \cdots = Y_{t-P}$ and $X_{it} = X_{it-1} = \cdots = X_{it-q}$. Therefore, long-run equation for the ARDL procedure as follows:

$$Y_t = \sum_{i=1}^{k} \theta_i X_i + \gamma W_t + v_t \quad (8)$$

To test the long-term co-integration relationship, following null hypothesis test should be conducted:

$$H_0: \sum_{i=1}^{p} \varphi_i - 1 \geq 0$$

$$H_a: \sum_{i=1}^{p} \varphi_i - 1 < 0$$

The prerequisite for the dynamic model estimated through the ARDL method to be inclined towards the long-term equilibrium is that the sum of dependent variable coefficients in the various short-term estimated lags (φ_i) be less than one. The needed statistic (t) to test the hypothesis is calculated as follows:

$$t = \frac{\sum_{i=1}^{p} \widehat{\varphi}_i - 1}{\sum_{i=1}^{p} SE_{\widehat{\varphi}_i}} \quad (9)$$

Where, $SE_{\widehat{\varphi}_i}$ is the standard deviation of the φ_i. The calculated t should be compared with the critical value by Benreji, Dolado and Mister (1992). If the absolute value of test statistic is greater than the absolute value of critical value, then we reject the null hypothesis, and therefore, confirm the long-run relation.

3.3. Data Description

This paper is based on the time-series data of Iran during 1981-2012. The data needed are taken from the Central Bank of the Islamic Republic of Iran and World Bank. In particular, we derived data for terms of trade, economic growth, inflation rate, active population growth, and capital growth from the Central Bank of the Islamic Republic of Iran. As it said before, we have employed World Bank (1985) and Erbe (1985) approach to measure capital flight in this paper. To do so, we used World Bank data of current account balance, foreign direct investments,

changes in external debt, and changes in foreign reserves.[2] Variables used in the paper, their definition, and their data resources are represented in Table 3.

Table 3: Variables Used in the Paper, Their Definition, and Data Resources

Variable	Symbol	Definition	Resource of Data
Economic growth	EG	Percent change in real GDP	Central Bank of the Islamic Republic of Iran
Capital flight	KFG	KF=Current account balance + foreign direct investments + changes in external debt + changes in foreign reserves KFG= Percent change in the capital flight	World Bank
Active population growth	PG	Percent change in the active population	Central Bank of the Islamic Republic of Iran
Investment	KG	Percent Change in capital level	Central Bank of the Islamic Republic of Iran
Change of terms of trade	TOT	Change in the ratio of *export* prices to import prices	Central Bank of the Islamic Republic of Iran
Inflation	INF	Percent Change in consumer price index	Central Bank of the Islamic Republic of Iran

4. EMPIRICAL RESULTS

4.1. Trend of Capital Flight

In this study, we have adopted World Bank (1985) and Erbe (1985) approach to calculate capital flight. We chose this approach not only because it is widely used, but also because of the availability of data. Fig.1 shows the trend of Iran's capital flight calculated for 1981-2012.

Figure following on the next page

[2] The Central Bank of the Islamic Republic of Iran doesn't have these data for the early years of the considered period.

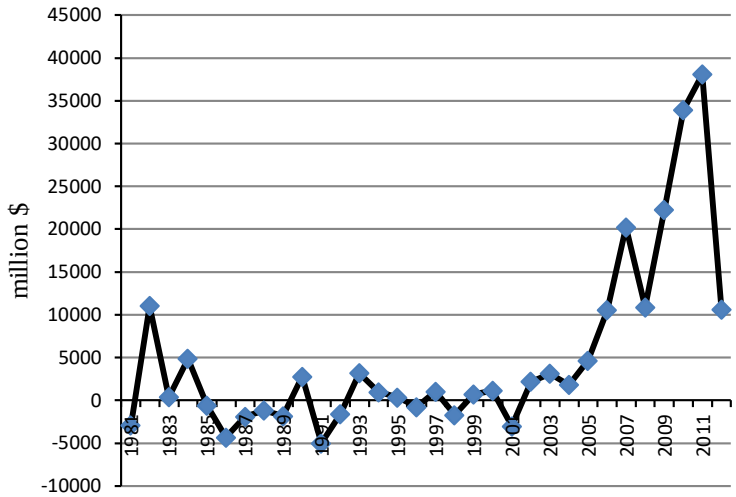

Fig. 1: The Trends of Capital Flight in Iran during 1981-2011

As it shown in the Fig. 1, capital flight has totally had an increasing trend in the considered period. But it has grown substantially from 2005 to 2007.[3] After that, it began to decrease in 2008, and then, it rose significantly and reached to its peak in 2011(38095.94 million dollars). It seems that capital flight has started to decrease in recent years.

4.2. Econometric Results

4.2.1. Results of Unit Root Test

When estimating a model that includes time series variables, the first thing needed is to conduct unit root test to determine whether variables under investigation are stationary or not. This is necessary to avoid estimating spurious regression. Several procedures for the test of order of integration have been developed. We applied Philips and Perron unit root test because of its great advantage that it is non-parametric, i.e. it does not require selecting the level of serial correlation as in ADF. It rather takes the same estimation scheme as in DF test, but corrects the statistic to conduct for autocorrelations and heteroscedasticity. As shown in Table 4, the results suggest that all the variables (except active population growth) are stationary at level. Active population growth is I(1); so, it will be stationary in its first difference.

Table 4: Results of Philips and Perron Test

Variable	Level		1st difference		Result
	Statistic	Prob.	Statistic	Prob.	
EG	-3.074	0.0417	-	-	I(0)
KFG	-5.829	0.0000	-	-	I(0)
PG	-1.148	0.3540	-5.057	0.0003	I(1)
KG	-3.844	0.0067	-	-	I(0)
TOT	-8.258	0.0000	-	-	I(0)
INF	-3.013	0.0446	-	-	I(0)

4.2.2. Estimation of ARDL Model

According to Pesaran and Pesaran (1997), we can use ARDL procedure when the regressors are I(0) or I(1). But before the estimation, it is needed to determine optimal lag in the Vector

[3] According to Fig.1, there is a breakpoint at 2006 in capital flight data. We introduced a dummy variable for the break-point. But the coefficient of dummy variable was statistically nonsignificant, and so, we omitted it from the model.

Auto-Regressive (VAR) model. We employed Schwarz criterion (SC) for this purpose. Table 5 shows the result of lag order selection by SC. Regarding the results, optimal lag is 1.

Table 5: Results of Lag Order Selection

Lag	SC
0	3.8295
1	2.9723*
2	5.2282
3	3.5021

The software used here for estimating is Microfit5. The best model selected by the software is ARDL(1,0,0,0,0). Schwarz Bayesian criterion is applied to select the optimal lags of each variable, and therefore the best model. The estimation results of ARDL dynamic equation are summarized in Table 6.

Table 6: Estimation Results of ARDL Dynamic Equation Model

Variable	Coefficient	t-statistic	p-value
EG(-1)	0.298	1.976	0.041
KFG	-0.007	-2.794	0.010
PG	0.535	1.789	0.086
KG	0.143	2.184	0.039
TOT	0.054	2.205	0.037
INF	-0.002	-2.272	0.032
C	0.011	0.766	0.452
R-Squared	0.6070	**DW-Statistic**	2.0047

To investigate the long-run relation between dependent and independent variables, we test the null hypothesis that there is no co-integration relationship between variables of the model. So, the test statistic is calculated as follows:

$$t = \frac{\hat{\varphi}_1 - 1}{SE_{\hat{\varphi}_1}} = \frac{0.29807 - 1}{0.15078} = -4.65533$$

As the absolute value of the test statistic is greater than the absolute value of the critical value provided by Benreji, Dolado and Mister (1992) at 5 percent level (-4.46), we reject the null hypothesis, and therefore, confirm the long-run relation between variables of the model. Then, we can estimate long-run relation between economic growth and independent variables including capital flight growth, active population growth rate, capital growth, inflation, and the change of terms of trade. The estimation results of long-run relation based on ARDL(1,0,0,0,0) are presented in Table 7.

Table following on the next page

Table 7: Results of Long-Run Relationship Estimation

Variable	Coefficient	t-statistic	p-value
KFG	-0.0114	-1.9932	0.058
PG	0.9175	1.8149	0.082
KG	0.2456	2.6767	0.013
TOT	0.0931	1.8088	0.083
INF	-0.0030	-2.3707	0.026
C	0.0198	0.7844	0.441

Regarding the results, the estimated long-run equation is:

EG = 0.0198 - 0.0114 KFG + 0.9175 PG + 0.2456 KG + 0.0931TOT -0.0030 INF (10)

As can be seen from the Table7, coefficients of all the variables are significant at the 10% level, and the signs of all estimated coefficient are consistent with the theory. Thus, capital flight, active population growth rate, capital growth, inflation, and the change of terms of trade have significant effects on economic growth in the long-run. The results reveal that an increase of capital flight has a significant negative impact on economic growth. Also, inflation affects economic growth negatively. Other explanatory variables including active population growth rate, capital growth, and the change of terms of trade have significant positive effects on real GDP growth; so, increases in these variables will promote economic growth in long-run.

4.2.3. Estimation of Error Correction Model

Existence of co-integration between a set of variables make the ground for use of Error Correction Model (ECM). The purpose of the ECM is to indicate the speed of adjustment from the short-run equilibrium to the long-run equilibrium state. The greater the coefficient of the parameter, the higher the speed of adjustment of the model from the short-run to the long run state will be. Therefore, we can change the considered equation to include ECM to reflect the short run dynamics.

$$\Delta EG_t = \alpha_0 + \sum_{i=1}^{n} \alpha_{1t}\Delta EG_{t-1} + \sum_{i=1}^{n} \alpha_{2t}\Delta KFG_{t-1} + \sum_{i=1}^{n} \alpha_{3t}\Delta KG_{t-1} + \sum_{i=1}^{n} \alpha_{4t}\Delta PG_{t-1} + \sum_{i=1}^{n} \alpha_{5t}\Delta TOT_{t-1} + \sum_{i=1}^{n} \alpha_{6t}\Delta INF_{t-1} + \lambda ECM_{t-1} + \varepsilon_t \quad (10)$$

Where, Δ is the first difference operator, and λ is ECM coefficient and the remaining variables are as already defined above. The estimation results of this model have been shown in Table8.

Table 8: Results of Error Correction Model Estimation

Variable	Coefficient	t-statistic	p-value
ΔKFG	-0.0067	-2.7944	0.010
ΔPG	0.5349	1.7894	0.086
ΔKG	0.1432	2.1842	0.039
ΔTOT	0.0543	2.2050	0.037
ΔINF	-0.0017	-2.2723	0.010
ECM(-1)	-0.5829	-3.8660	0.001
R-Squared	0.6566	**DW-Statistic**	2.0047

According to these results, ECM coefficient in our model is significant and equal to -0.5829. The coefficient of the error correction model (ECM(-1)) indicates the speed at which economic growth adjusts to its steady state in the long run. It further shows that the variables are well defined as it has the usual negative sign that enable the system to adjust to the equilibrium

position whenever it is out of equilibrium. Whit regard to the estimated ECM coefficient, whenever the system is out of equilibrium, it will restore back to the equilibrium with a speed of about 58 percent.

5. CONCLUSION AND RECOMMENDATION

This study is an attempt to provide insight about capital flight in Iran, and to examine its long-run impacts on the country's economic growth**.** Calculating capital flight by World Bank (1985) and Erbe (1985) approach shows that capital flight in Iran has generally grown in the period under investigation. Started from 2005, it has increased substantially, reaching to 38095.94 million dollars in 2011.

Then, we developed a model to study the growth impact of capital flight. For this purpose, we introduced a growth equation in which economic growth is a function of capital flight growth rate, active population growth rate, capital growth rate, change of terms of trade, and inflation. We use ARDL approach to specify the equation. The findings show that there is a significant negative relation between capital flight growth and economic growth in long-run. An increase in inflation rate will reduce economic growth, and other explanatory variables have positive effects on economic growth, as theories predict. There is no doubt that capital flight is a lost opportunity for the economic growth. So, repatriating lost capital back to the country can help to economic growth development. There are some suggestions and recommendations to undermine capital flight. First, it is necessary for government to make policies that discourage capital flight. Improving and easing of the investment and licensing procedures in Iran can be an effective tool to decrease capital flight. Second, capital flight repatriation requires the minimization of uncertainty with respect to the macroeconomic, political, and institutional environment. This reduces risks of losses in the real value of the domestic assets of private investors. So, the monetary and fiscal authorities should strengthen monetary and fiscal policies to increase stability. For example, measures accomplished to reduce inflation rate and make exchange rate stable will reduce investors' preference for foreign assets over domestic assets. Also, tax and tax-like distortions that lower returns and add risk to domestic financial and physical assets, leading to capital flight should be changed. Third, there should be necessary efforts to promote economic growth in Iran. A good economic performance will give citizens the incentives to invest inside the border of country.

LITERATURE:

1. Ajayi S. I. (1992). An Econometric analysis of Capital flight from Nigeria (World Bank Working Paper, No. 993).
2. Ajayi S. I. (1995). An Analysis of External Debt and Capital flight in Severely Indebted Low Income Countries in Africa (IMF Research Paper, No. 35).
3. Ajayi, S. I.(1997). An Analysis of External Debt and Capital Flight in the Severely Indebted Low Income Countries in Sub-Saharan Africa (IMF Working Paper, WP/97/68).
4. Al-Fayoumi, N.A., AlZoubi, M.S., & Abuzayed, B.M. (2012). The Determinants of Capital Flight: Evidence from MENA Countries. International Business & Economics Research Journal, 11(1): 1-10.
5. Alam, M. I. & Quazi, R. (2003). Determinants of Capital Flight: An Econometric Case Study of Bangladesh. International Review of Applied Economics, 17(1): 85–103.
6. Ayadi, F.S. (2008, October). Econometric Analysis of Capital Flight in Developing Countries: A Study of Nigeria. Paper presented at the 8th Global Conference on Business & Economics, Florence, Italy.
7. Bakare, A.S. (2011). The Determinants and Roles of Capital Flight in the Growth Process of Nigerian Economy: Vector Autoregressive Model Approach. British Journal of Management and Economics, 1(2): 100–13.

8. Barro, R. J. (1996). Determinants of Economic Growth: A Cross-Country Empirical Study (NBER Working Paper, No. 5698).
9. Beja, E. Jr. (2006). Was Capital Fleeing Southeast Asia? Estimates from Indonesia, Malaysia, the Philippines, and Thailand. Asia Pacific Business Review, 12(A3): 261–283.
10. Beja, E. Jr. (2007). Capital Flight and Economic Performance (Munich Personal RePEc Archive, No. 4885).
11. Boyce, J.K. (1992). The Revolving Door? External Debt and Capital Flight: A Philippine Case Study. World Development, 20(3): 335–49.
12. Cerra, V., Rishi, M. & Saxena, S.C. (2008). Robbing the Riches: Capital Flight, Institutions, and Debt. Journal of Development Studies, 44(8): 1190–213.
13. Cervena, M. (2006). The Measurement of Capital Flight and Its Impact on Long-term Economic Growth: Empirical Evidence from a Cross-section of Countries. Master's thesis. Comenius University Bratislava.
14. Collier, P., Hoeffler, A. & Pattill, C.(2001). Flight Capital as a Portfolio Choice. The World Bank economic review,(15: 1), 55–80.
15. Cuddington, J. (1986). Capital Flight: Estimates, Issues, and Explanations (Princeton Studies in International Finance, No. 58).
16. Dooley, M. (1988). Capital Flight: A Response to Differences in Financial Risks. Fund Staff Papers of International Monetary Fund, 35(3): 422–436.
17. Dornbusch, R. (1985). External Debt, Budget Deficits and Disequilibrium Exchange Rates. In Smith, G. & Cuddington, J. (Eds) International Debt and the Developing Countries. Washington D.C.: World Bank.
18. Duwendag, D. (1987). Capital Flight from Developing Countries. Journal of Development Economics, 29 (4): 6-15.
19. Erbe, S. (1985). The Flight of Capital from Developing Countries. Intereconomics, 20(4): 268–75.
20. Fisher, S. (1991). Growth, Macroeconomics and Development. (NBER WorkingPaper, No. 3702).
21. Fofack, H. & Ndikumana, L. (2010). Capital Flight Repatriation: Investigation of its Potential Gains for sub-Saharan African Countries. African Development Review, 22(1): 4–22.
22. Forgha, N. G. (2008). Capital Flight, Measurability and Economic Growth in Cameroon: An Econometric Investigation. International Review of Business Research Papers, 4(2): 74-90.
23. Gusarova, V. (2009). The Impact of Capital Flight on Economic Growth. Master's thesis, Kyiv School of Economics.
24. Hadjimichael, M. (1994). Effect of Macroeconomic Stability on Growth, Savings and Investment: An Empirical Investigation (IMF Working Paper, WP/94/98).
25. Henry, A. W. (2013). Analysis of the Effects of Capital Flight on Economic Growth: Evidence from Nigerian Economy (1980 – 2011). European Journal of Business and Management, 5(17): 21-33.
26. Kosarev, A. & Grigoryev, L. (2000). Capital Flight: Scale and Nature (Bureau of Economic Analysis's working paper, February).
27. Lan, S.K. (2009). Effects of Capital Flight on Economic Growth in Selected ASEAN Economies. PhD. thesis, University Putra Malaysia.
28. Lawanson, A.O. (2007). An Econometric Analysis of Capital Flight from Nigeria: A Portfolio Approach (African Economic Research Consortium's Research Paper No. 166).
29. Lessard, D.R. & Williamson, J. (1987). Capital Flight and Third World Debt. Washington D.C.: Institute for International Economics.

30. Maski, G. & Wahyudi, S. T. (2012). Study on the Capital Flight and Its Impact on Economic Growth: a Case Study in Indonesia. Journal of Basic and Applied Scientific Research, 2(7): 7168-7174.
31. Menbere, W.T. (2003). Absolute Convergence across Time and Space: New Empirical Evidence for an Old Debate. Ekonomick´y ˇcasopis, 51(10): 1270–91.
32. Morgan Guaranty Trust Company (1986). LDC Capital Flight. World Financial Markets, 2(1): 13–16.
33. Ndiaye, A. S. (2014, June). Is Capital Flight Decisive in Explaining Economic Growth Performance in the African Franc Zone? Paper presented at 15TH Annual Global Development Conference: Structural Transformation in Africa and Beyond. Accra, Ghana.
34. Ndikumana, L. (2009). Capital flight. In Reinert, K. & Rajan, R. (eds.). The Princeton Encyclopedia of the World Economy. Princeton University Press: Princeton.
35. Ndikumana, L., & Boyce, J. K. (2003). Public Debts and Private Assets: Explaining Capital Flight from Sub- Saharan African Countries. World Development, 31(1): 107-130.
36. Ndikumana, L. & Boyce, J. K. (2011). Capital Flight from Sub-Saharan Africa: Linkages with External Borrowing and Policy Options. International Review of Applied Economics, 25(2): 149–70.
37. Okoli, M. N. (2008). An Empirical Analysis of the Determinants of Capital Flight and Their Impact on the Nigerian Economy (1970–2005). Master's thesis. Federal University Of Technology.
38. Pastor, M. (1989).Capital Flight and the Latin American Debt Crisis. Washington D.C.: Economic Policy Institute.
39. Pastor, M. (1990). Capital Flight from Latin America. World Development, 18(1): 1–18.
40. Pesaran, M.Hashem & Pesaran, Bahram. (1997), Working with Microfit 4.0, Interactive Econometric Analysis. London: Cambridge.
41. Pesaran, M.H. & Shin, Y. (1999). An Autoregressive Distributed Lag Modelling Approach to Cointegration Analysis. In Strom, S. (Ed). Econometrics and Economic Theory in the 20th Century: The Ragnar Frisch Centennial Symposium (Chapter 11). Cambridge: Cambridge University Press.
42. Schineller, L.(1997). An Econometric Model of Capital Flight from Developing Countries (International Finance Discussion Papers, No.579).
43. UNDP (2011). Illicit Financial Flows from the Least Developed Countries: 1990–2008 (UNDP Discussion Paper).
44. Walter, I. (1987). The Mechanisms of Capital Flight. In Lessard, Donald R. and Williamson, J. (eds.) Capital Flight and Third World Debt. Washington D.C.: Institute for International Economics
45. World Bank (1985). World Development Report 1985. Washington D.C.: World Bank.

INDIAN STOCK MARKET REACTION TO INTEREST RATE AND INFLATION ANNOUNCEMENTS

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ABSTRACT

Events related to monetary policy and Inflation are keenly awaited by stock market participants and other economic agents. Past studies have observed that these events announcements first transmit to the stock market and then to the real sector. In the current research work we have used data from Indian economy but unlike the previous studies we have used broader market index CNX500, consisting of 500 stocks covering 97.3% of market capitalization. Further, we have also considered the impact on key sectoral indices such as, IT, Financial Services, Consumer goods and Energy. We employ event study methodology and calculate AAR and CAAR around the announcement date of the events.

In some cases, the results show difference in magnitude and direction depending on whether we use narrower index Nifty, index of 50 stocks, or broader CNX 500. We have also observed differences in impact of the events on sectoral indices.

Keywords: *Stock Market, Market index, Nifty, CNX500, Monetary policy, Inflation*

1. INTRODUCTION

Stock markets play an important role in price discovery and they act as advance indicator of health of an economy. Studies have found that stock markets are susceptible to abrupt swings due to event announcements or key macroeconomic data release. It is noteworthy that though policy announcements influence the overall economy, the impact is indirect via different transmission channels. The most immediate and direct impact is on financial markets - stock and bond markets. Hence, it is extremely important to understand the relation between the announcements of key macroeconomic variables (GDP Growth, Inflation etc.), key policy announcements [monetary policy (CRR, Repo Rate), Budget] and variations in the stock market. At the time of such announcements, stock market falls/ rises abruptly and waits for either some sort of respite news or takes its own course of loss/ profit to recover to some optimum level. These abrupt swings give rise to the possibility of earning abnormal returns. However, Fama (1970) argued that in efficient markets, current price of stock reflects all information about the stock i.e., stock price must contain all available information and no one can use readily available information to predict stock price movement to make profit via trading of stocks. Hence investor will not be able to make 'abnormal' profit through prediction of future stock market movement. There is evidence to show that macroeconomic variables help in predicting the time series of stock returns in the short run and there exists a possibility to gain abnormal returns. Some studies (Fama and Schwert 1977; Nelson 1977) have suggested that macroeconomic variables influence stock returns. Ross (1976) developed the Arbitrage Pricing Theory (APT) that measures the risk premium attached to various factors which influence the returns on the asset, irrespective of whether they are significant or priced into the stock market returns. Recent studies (Bernanke and Kuttner 2005; Gupta and Monique 2013) have analyzed the relationship between 'abnormal return' from the stock market and information that leads to such abnormal returns, and found that it is the 'unexpected' element of the announcement that

creates possibility of abnormal returns. Basic objectives of monetary policy such as interest rate policy is to maintain sound macroeconomic fundamentals viz. good growth, low unemployment and low inflation. Monetary policy works through different channels of transmission such as interest rate channel, exchange rate channel, asset prices channel, credit channel etc. Monetary policy announcements such as interest rate announcements first propagate to stock markets (Bernanke and Kuttner, 2005). They showed that unanticipated 25 bps cut in federal fund rate target is associated with about 1% increase in broad stock indexes. They emphasized that understanding the links between monetary policy and asset prices (through financial markets) is crucial for the understanding of the policy transmission mechanism. Gupta and Monique (2013) also echoed similar views for the South African market, that is, stock markets form part of the transmission mechanism for monetary policy and any surprise changes to such policy actions impact the stock market as well as sectoral indices. Hence, from the perspective of fund managers, policymakers and firms, it is important to understand what causes prices to change in stock markets. In this research, event study methodology is used to analyze how Indian stock market adjusts to the announcement of important monetary policy variable, the repo rate and, release of data on an important macroeconomic variable, Inflation (CPI), using CNX500[1] as market index. Most of the studies in India are limited to Nifty[2] that covers only 70.28% of market capitalization and 50.98% of the traded volume or Sensex[3] as surrogate for the market index, and represents only limited set of information for the broader stock market. Moreover, there are only limited studies that consider the impact of macroeconomic announcements on various sectors that constitute the stock market. In this research, we use CNX500 index, which covers 97.3% of market capitalization and 96.79% of the traded volume on the NSE exchange. For sectoral impact we consider Financial Services (accounting for 27.21% of CNX 500), Energy (13.46%), IT (11.60%) and Consumer Goods (14.34%). We compare abnormal returns using CNX500 and Nifty indices as market proxies. The current research study has added to the existing literature by analyzing the impact of these events on broader stock market (CNX 500) and key sectoral indices. The outline of the paper is as follows. In the next section we review the past studies relating to impact of inflation on stock market, this is followed by review of literature relating to market reaction to monetary policy announcements. In the next section we discuss research methodology, followed by results and discussion and, the final section which gives summary, conclusions, limitations of the present study and, scope for future work.

2. IMPACT OF INFLATION ON STOCK MARKET

In major shift in terms of conducting monetary policy, the central bank of India, the Reserve Bank of India (RBI), moved away from 'multiple indicator approach' to 'flexible inflation targeting' in 2015 with signing of Memorandum of Understanding in Feb 2015 between RBI and Govt. of India[4]. The RBI now considers CPI based inflation for policy making[5]. Consumer Price Index (CPI) measures changes in the price level of a market basket of consumer goods and services purchased by households. The annual percentage change in CPI is used as a measure of inflation. In most countries including India, CPI is one of the most closely watched national macroeconomic variable[6].

Studies have shown mixed response of stock market for variations in inflation. Some studies (Naka et al. 1998; Humpe and Macmillan 2009), have shown a negative relation between stock

[1] CNX500 is India's broad based index consisting of 500 stocks that listed on the National Stock Exchange.

[2] The CNX Nifty is a diversified stock index consisting of 22 sectors of Indian Economy and 50 National Stock Exchange listed stocks. Source: http://www.moneycontrol.com/nifty/nse/nifty-live

[3] S&P BSE SENSEX is calculated using the 'Free-float Market Capitalization' methodology, wherein, the level of index at any point of time reflects the free-float market value of 30 component stocks relative to a base period

[4] http://finmin.nic.in/reports/MPFAgreement28022015.pdf. Accessed on September 23, 2016.

[5] RBI adopts new CPI as key measure of inflation, http://www.thehindu.com/business/Economy/rbi-adopts-new-cpi-as-key-measure-of-inflation/article5859713.ece, accessed on September 21, 2016. Accessed on September 23, 2016.

[6] https://en.wikipedia.org/wiki/Consumer_price_index, accessed on September 20, 2016

market and inflation. Geske and Roll (1983) have suggested that stock returns are negatively related to changes in expected inflation as these changes reflect a chain of events and thus lead to higher rate of monetary expansion. This paper challenged economic theory and common sense according to which stock returns should be positively related to both expected and unexpected inflation. Some of the recent empirical studies have shown positive relationship (Ratanapakorn and Sharma 2007) between inflation and stock markets. The argument in support of positive relationship is that equity acts as a hedge against inflation. Humpe and Macmillan (2009) considered Discounted Cash flow or Present Value Model with co-integration technique to analyze the influence of macroeconomic variable announcement on the long term stock market movement in US and Japan. They found that for US stock prices were positively related to industrial production and negatively to consumer price index and long term interest rate. Schawtz (2010) considered the dynamic relationship between 10 emerging market sector indices and a set of international macroeconomic variables to see the impact of the variables on the sector as well as on the broader stock markets. Contrary to theoretical expectations, it was found that majority of the examined sectors benefitted from increasing commodity prices during the examined sample period.

3. REACTION OF STOCK MARKET TO MONETARY POLICY ANNOUNCEMENTS

RBI uses repo rate as the key policy tool to achieve inflation target. Thus, repo rate announcement has become one of the most closely watched events in Indian markets in recent times because any change in the rates by RBI has impact growth and inflation. Repo rate is the rate at which RBI lends to commercial banks for meeting short term liquidity needs. For example, if inflation is higher than the target set by RBI and government, the RBI increases the repo rate, consequently cost of funds for the banks increases. RBI uses liquidity management to ensure that interbank rates remain close to repo rate. Banks pass on this increase in cost to the corporates/ consumers, which results in increased cost of capital. Increased interest cost in turn may reduce future dividends and investments by corporates. More importantly, repo rate changes have signaling impact on market. It signals to the market the RBI's view on the appropriate level of interest rate in the economy. This in turn impacts the stock market. The RBI increased repo rate multiple times in FY13, FY14 since inflation was above a comfort limit. However, following a sharp decline in inflation, RBI decreased the repo rate multiple times in 2015 to provide the much needed impetus to the economy. Bernanke and Kuttner (2005) used event study framework to assess monetary policy impact on stock market. They found that unexpected 25 basis point cut in the target federal funds rate increased equity prices by 1%. Gurkaynak et al. (2005) used intraday data to see to what extent surprises are due to Federal Bank's actions in relation to Federal Bank's statements. They found that both events significant with the use of methodology with narrower time windows and isolation of the two factors. Interestingly, they found greater relevance for the information disclosed by the Federal Bank than the announcement of the interest target itself. Agrawal (2007) used event study methodology to see the impact of Cash Reserve Ratio (CRR) announcement on the equity markets in India. He found that impact of the event may or may not be found on the event day as sometimes event announcement already gets factored into the market before the event, but the real impact of the announcements is realized by investors through accumulated returns before and after the event. He showed that monetary policy announcement contains important information and that this information gets absorbed into the market slowly over a period of time and hence the Indian stock market is not efficient in the semi strong form. Boudoukh et al. (1994) stated that it is still an open question whether monetary policy affects real economy and stock returns. Thorbecke (1997) used narrative indicators in event study and found that expansionary monetary policy increases the ex-post stock returns. Tripathy (2011) showed the evidence of autocorrelation between stock markets and macro-economic variables. Using

Granger causality test, she found that bidirectional causality exists between inflation rate and stock market, exchange rate and stock market, interest rate and stock market, international stock market and BSE volume. She also found unidirectional causality running from international market to domestic markets, international market and exchange rate, international stock market and inflation rate, international stock market and interest rates. Gupta and Monique (2013) used event study to see the sensitivity of industry specific stock returns to monetary policy and macroeconomic news, considering only the surprise element of the news. They found that monetary surprise is the only variable that consistently negatively affected the stock returns, both at aggregate and sectoral levels.

4. OBJECTIVES AND HYPOTHESES

Specific objectives of the study are: (a) To study the impact of repo rate announcements on the broader stock market, CNX500, (b) To analyse the impact of Inflation (CPI) announcements on the broad stock market, CNX500, (c) To provide a comprehensive view of the stock market (CNX500) and key sector specific (Financial Services, IT, Consumer Goods, Energy) indices' movement with repo rate and inflation announcements and (d) To provide a comparison of abnormal returns received using Nifty[7] and CNX500 as alternative proxies for market index.

In the current research work, we examine the impact of monetary policy (repo rate) and CPI inflation on the broader stock market – CNX500, and on Financial services, IT, Consumer goods, and Energy sectors. A limited analysis of how these results are different compared to the results arrived using Nifty as proxy for market index is presented. Each hypothesis, defined below, corresponds to the impact of event/ announcement on CNX500 & the sectors highlighted above.

Hypothesis 1

CPI Inflation is negatively associated with the stock market index (CNX500) and negatively associated with indices of Financial services, Information technology, Consumer goods and Energy sectors.

Hypothesis 2

Repo rate is negatively associated with the stock market index (CNX500) and negatively associated with indices of Financial services, Information technology, Consumer goods and Energy sectors.

5. DATA AND METHODOLOGY

Event study has been used extensively for understanding the stock market movements in relation to events (Dolley 1933; Myers et al. 1948; Barker (1956); Ashley 1962; Ball and Brown 1968; Fama 1981; Watts 1978; Fama, et al. 1969). In this study too we use event study methodology considering the objective and scope of the study.

Data from June 2014 to May 2015 is considered for the research as this period witnessed high/ moderate inflation, relaxed and unexpected monetary policy actions. One event from each of these categories is used in the overall analysis.

The events which were considered within the scope for the research is given in the table below:

Table following on the next page

[7] The CNX Nifty is a diversified stock index consisting of 22 sectors of Indian Economy accounting for 65.87% of the free float market capitalization of National Stock Exchange listed stocks in 2012. Source: http://www.moneycontrol.com/nifty/nse/nifty-live

Table 1. Events, Event Window and Estimation Window

S. No.	Variable	Event Date	Event	Event Window	Estimation Window
1	Repo rate	January 15, 2015	Repo rate reduced from 8.0 to 7.75[8].	January 8 to 22	June 3, 2014 to January 7, 2015
2	Inflation - Consumer price index (CPI)	May 13, 2015	Inflation for April 2015 had come down to 4.38%.	May 4 to May 22	June 3, 2014 to May 1, 2015

Event study methodology is used to calculate abnormal returns for the above defined events during the event period. Steps followed in event study methodology are as follows: (a) Estimation windows were fixed and this period ranges from 100 to 150 days prior to the event, (a) Calculated α, and β for each stock for the estimated window and used these values to calculate the expected return during the event window, (c) Took actual returns for CNX500 stocks and subtracted the expected return calculated in the previous step to calculate abnormal returns and, (d)Calculated the AAR, CAAR for the event window and obtained the Z-statistic for the results.

6. FINDINGS AND ANALYSIS

6.1 Event: Repo rate decrease by 25 bps

RBI governor announced repo rate cut of 25 bps on January 15, 2015. This move from RBI came as a surprise[9] as RBI had held the rate for a year after raising it Jan. 2014. Reduction in repo rate means lower cost of borrowing from Reserve Bank and eventually lower cost of funds for the banks. RBI reduces repo rate to increase investment and aggregate demand in the economy, eventually helping in increasing the output. Sectors which are directly related to finance should show more variations compared to other sectors which are not so directly related. In the sections below, the impact of this move on stock market CNX500 and other sector indices – IT, Financial services, Energy, and FMCG - is analyzed.

In the first step, estimators for all 428 stocks[10] in the CNX500 were calculated (post adjustments for corporate actions) during the estimation window June 3, 2014 to January 7, 2015. This was followed by calculations of abnormal return for all days in the estimation period. From abnormal returns in the estimation period, standard deviation of each stock during the estimation period was calculated.

Table 2 provides Average Abnormal Return (AARs), Cumulative Average Abnormal Return (CAAR) using CNX500 and Nifty stocks with CNX500 and Nifty respectively as proxy for market index, for the event period (January 8, 2015 to January 22).

Table following on the next page

[8] http://www.moneycontrol.com/news/economy/rbi-cuts-repo-rate-by-25-basis-points-aheadfeb-3-policy_1275009.html accessed on October 1, 2016.

[9] RBI stuns market with 25 bps rate cut ahead of Feb 3, 2015 policy, http://www.moneycontrol.com/news/economy/rbi-stuns-market25-bps-rate-cut-aheadfeb-policy_1275009.html

[10] Number got reduced from 500 stocks to 428 as we removed the stocks which had undergone stock split or which had issue of stock dividends (bonus) or there were other crucial corporate announcements during the estimation window which would impact price movements. The estimates of alphas and betas for 428 stocks are available with authors and can be provided on request.

Table 2: AAR, CAAR for CNX500 & NIFTY Stocks for the Event Period (January 8, 2015 to January 22, 2015)

Day	CNX 500 (n=428)		NIFTY Stocks (n=39)	
	AAR	CAAR	AAR	CAAR
-5	-0.12** (2.48)	-0.12** (2.48)	0.00 (0.03)	0.00 (0.03)
-4	-0.16*** (3.29)	-0.28*** (4.08)	-0.15 (0.91)	-0.15 (0.65)
-3	-0.05 (1.14)	-0.33*** (3.99)	-0.38** (2.38)	-0.53* (1.90)
-2	0.11** (2.20)	-0.23** -2.35	0.32** (1.99)	-0.21 (0.65)
-1	-0.03 (0.64)	-0.26** (2.39)	0.19 (1.16)	-0.02 (0.06)
0	**-0.52*** (10.84)**	**-0.78*** (6.60)**	**-0.32** (1.98)**	**-0.34 (0.86)**
1	-0.06 (1.25)	-0.84*** (6.59)	0.01 (0.07)	-0.33 (0.77)
2	0.07 (1.54)	-0.77*** (5.62)	0.18 (1.14)	-0.14 (0.32)
3	-0.41*** (8.5)	-1.18*** (8.15)	-0.45*** (2.81)	-0.59 (1.24)
4	-0.15*** (3.12)	-1.33*** (8.72)	0.09 (0.54)	-0.51 (1.00)
5	-0.04 (0.87)	-1.37*** (8.57)	0.10 (0.64)	-0.41 (0.76)

Note: Day 0 means event day.
Figures in parenthesis are Z-statistics
***,**,* indicate statistically significant at 1% level, 5% level and 10% level respectively.

Some of the key observations from the results in table 2 are:
On the event day (January 15), AAR is -0.52 which is statistically significant at 1% level. Also the CAAR on event day is -0.78 which is also statistically significant at 1% level. From the results above for the Event Day, we can conclude that repo rate decrease announcement has a potential to provide abnormal returns in the stock market. However, the average abnormal returns are negative which is contrary to some of the existing the research work that concludes that with decrease in repo rate, abnormal returns should be positive especially if the news contains surprise element. One reason for this could be that market was anticipating larger cut in repo rate following sharp decline in inflation and only 25 basis disappointed the market.
Out of the 11-day event window, we got statistically significant AAR results for four days at 1% level, and two statistically significant results at 5% level. For the same event window, we got statistically significant CAAR results for eight days at 1% level. From the results above, we conclude that repo rate event announcement has a potential to provide abnormal returns in the stock market over the event window of 11 days.
Table 2 also gives results for AAR and CAAR for the event window using Nifty as market index. Some of the key observations are:
On the event day (January 15), AAR is -0.32 with which is statistically significant at 5% level. CAAR is - 0.34 which is non-significant.

Out of the 11-day event window, we got statistically significant AAR results for one day at 1% level, and three statistically significant results at 5%. For the same event window, we got statistically insignificant CAAR results for ten days.

From the results above, it is evident that results vary when we use Nifty and CNX500 index as market index. Using CNX500 gives more assurance about the results as it covers more stocks and provides more depth to the analysis.

Some of the key observations from sectoral level analysis are:

All sectors show abnormal returns[11] that are quite visible and some sectors display more abnormal returns. Cement, Consumer Goods showed positive CAAR of 2.80 and 0.04 respectively for the event day and a positive CAAR for a few days after the event day. It means that these sectors are influenced positively with the repo rate reduction news. Financial Services, IT gave negative CAAR when compared to sectors like Energy etc. Energy sector gave a CAAR of -1.55 on event day and has been negative during the entire event window, decreasing continuously post event date. The negative CAAR in some sectors could be because the rate cut was less than anticipated or could also be because of expectation of further slowdown in those sectors. The reduction in in repo rate might have been interpreted by market participants as an acknowledgement by RBI of economic slowdown in some of the sectors. Economic slowdown is also reflected in sharply lower inflation after an extended period of tight money policy.

6.2 Impact of Inflation (CPI) – Event day May 12, 2015 – Inflation Down to 4.38%

According to economic theory stock returns should be positively related to both expected and unexpected inflation. This is because equities act as hedge against (unanticipated) inflation as they represent claims on real assets. According to Fisher (1930) expected nominal rate of return on stock is equal to expected inflation plus the real rate of return, where the expected real rate of return is independent of expected inflation. Fisher hypothesis also predicts a positive homogenous relationship between stock returns and inflation. This implies that stocks will act as inflation hedge since they offer higher return when inflation rises. But empirically it was found that expected inflation, unexpected inflation, and changes in expected inflation are all negatively related to stock returns (Fama and Schwert 1977). Geske and Roll (1983) also stated that the empirical results need attention because they appear to be in conflict with both economic theory and common sense. According to them, if expected inflation increases, ceteris paribus, the real risk premium should decrease, thereby pushing up the stock prices. But some empirical evidence indicates stock prices actually fall when inflation rises. One explanation is that perhaps the impact of fall in risk premium (and consequent rise in stock price) is more than offset by the anticipated future decline in cash flows (and the associated negative impact on stock price).

RBI was using inflation based on WPI (wholesale price index) as the official measure for inflation till 2014. Subsequently, RBI explicitly shifted focus to CPI (consumer price index) inflation and started taking policy actions based on this indicator. CPI is a more accurate measure of inflation as it reflects price of consumption basket including goods and services, sales taxes and retail margin. Given the importance attached to CPI in the last few years, we considered its impact on the stock market and on key sectors discussed in our study. Inflation remained quite high during FY13 and FY14. After remaining high for multiple quarters, inflation came down in May 2015 and came within the limit set by RBI and the Government. This was a positive surprise which led to high expectations from policy makers, analysts, prominent institutes/ agencies, and fund managers, for a rate cut by RBI.

[11] For want of space we are not reporting all the results here. These are available with authors and can be provided on request.

Table 3 provides Average Abnormal Return (AARs), Cumulative Average Abnormal Return (CAARs), for the event period (May 4, 2015 to May 22, 2015).

Table 3. AAR, CAAR for CNX500 & NIFTY Stocks for the event period (May 4, 2015 to May 22, 2015)

	CNX 500 (n=428)		NIFTY Stocks (n=39)	
Day	**AAR**	**CAAR**	**AAR**	**CAAR**
-7	-0.09* (1.83)	-0.09* (1.83)	0.25 (1.55)	0.25 (1.55)
-6	0.08 (1.58)	-0.01 (0.18)	0.15 (0.94)	0.40* (1.76)
-5	0.11** (2.29)	0.10 (1.18)	-0.11 (0.68)	0.29 (1.04)
-4	-0.27*** (5.55)	-0.17* (1.76)	0.35** (2.17)	0.64** (1.99)
-3	-0.16*** (3.40)	-0.34*** (3.09)	-0.17 (1.05)	0.47 (1.31)
-2	-0.25*** (5.08)	-0.58*** (4.90)	-0.11 (0.68)	0.36 (0.92)
-1	0.30*** (6.23)	-0.28** (2.18)	0.00 (0.00)	0.36 (0.85)
0	**-0.28*** (5.71)**	**-0.56*** (4.06)**	**-0.12 (0.74)**	**0.24 (0.53)**
1	0.19*** (3.97)	-0.36** (2.50)	0.07 (0.44)	0.31 (0.65)
2	-0.09* (1.94)	-0.46*** (2.99)	-0.05 (0.30)	0.26 (0.52)
3	-0.16*** (3.34)	-0.62*** (3.86)	0.07 (0.46)	0.34 (0.64)
4	0.11** (2.17)	-0.51*** (3.07)	0.01 (0.08)	0.35 (0.63)
5	-0.22*** (4.44)	-0.73*** (4.18)	-0.13 (0.82)	0.22 (0.38)
6	0.00 (0.03)	-0.73*** (4.03)	0.26 (1.64)	0.48 (0.80)
7	-0.17*** (3.58)	-0.90*** (4.82)	-0.04 (0.28)	0.44 (0.70)

Note: 0 indicated event day.
Figures in parenthesis are Z-statistics
***,**,* indicate statistically significant at 1% level, 5% level (+/- 1.960) and 10% level respectively.

Salient findings are as follows:
On the event day (May 13), AAR was -0.28 which is highly statistically significant at 1% level. On the event day (May 13), CAAR was -0.56 which is statistically significant at 1% level. Based on the results above, we conclude that inflation (CPI) event has a potential to provide abnormal returns in the stock market on the event day. However, the average abnormal returns are negative which is against some of the existing research work that concluded that with

decrease in inflation, abnormal returns should be positive especially if the news contains surprise element.

Out of the 15-day event window, we got statistically significant AAR results for nine days at 1% level, two statistically significant results at 5% level and two statistically significant results at 10% level. Out of the 15-day event window, we got statistically significant CAAR results for six days at 1% level and two days at 5% levels. Based on the results above, we conclude that inflation (CPI) event has a potential to provide abnormal returns in the stock market, not only on the event day but abnormal returns can continue for almost the entire duration of the event window.

Our results are in line with the findings of studies which found positive relationship between inflation and stock prices (Ratanapakorn and Sharma 2007).

Table 3 also gives results for AAR and CAAR using Nifty as market index for the event window. Some of the key observations are:

On the event day (May 13), AAR is -0.12 which is statistically non-significant even at 10% level. Also CAAR is 0.24 which is again statistically non significant. Out of the fifteen day event window, we got statistically significant AAR results only for one day and statistically significant CAAR results for two days.

Thus, we observe differences in results depending the market index used. Using broader market index like CNX500 and stocks in this index gives results which are more representative of the true picture of the economy and market as opposed to narrower Nifty index

Some of the key observations regarding sectoral level impact are: Fifteen sectors showed negative abnormal returns (CAAR)[12] till the Event day +3 days. IT and ITeS companies' CAAR showed negative returns on the event day and for a few days post event day, but started showing positive returns after 3 days of the event day. This shows that any decrease in the inflation number has moderate/ no direct impact on IT in the stock market.

Financial Services showed CAAR which is negative -0.76 on ED and remained negative for almost all days post ED, in fact, increased negative returns for all days post event day in the event window despite the fact that inflation has gone down. This showed the existence of a relationship between financial services sector and news on inflation. Though inflation has gone down, RBI did not announce any rate cut due to low inflation, which possibly meant that RBI had no room for rate cuts to boost the economy by lowering the repo rate. Higher rate leads to more cost of borrowing and thus less investments by companies and less income to financial companies in terms of interest and other incomes. Hence, financial service sector, rather than showing positive returns, showed negative returns and the returns kept decreasing during the event window.

Consumer goods showed CAAR which is negative -0.65 on ED and remained equally negative for almost all the days post ED despite the fact that inflation has gone down. This showed the existence of a relationship between the consumer goods sector and news on inflation. As mentioned earlier, there was no rate cut announcement. Thus, higher rate leads to more interest being levied by banks on loans (home loan, auto loan, consumer goods loan etc.) disbursed to customers. This reduces the loan portfolio of the bank as not many customers opt for loans during high interest regime. Hence, consumer goods sector, rather than showing positive returns, showed negative returns and the returns kept on decreasing during the event window.

Energy sector showed negative CAAR for the event day and for post event days, and the trend remained negative. Before the event day, for four days in the event window, results showed positive CAAR thus showing that market was expecting more positive news on the inflation front.

[12] For want of space we are not producing detailed results here. These are available with authors and can be provided on request.

7. POLICY IMPLICATIONS

This research work augments existing literature. It not only helps in understanding broad stock market behavior due to the changes in selected macroeconomic variables/ policy announcements, but also can help analysts, agencies and fund managers etc. to take informed decisions before investing in equity markets, policy makers to consider the possible impact of announcing repo rates. As per the findings of the study, considering the wider implications of policy rates and inflation rates for the market, policy makers and market participants are better off considering the broader market such as CNX500 stocks covering small and mid caps. We found positive impact of inflation on the market, hence market players may take positions as per their inflation expectations. Our study also finds that repo rate and inflation do not uniformly impact all sectors. Participants may also choose appropriate sectors for investment based on their expectations and interest rate.

8. LIMITATIONS OF THE STUDY AND SCOPE FOR FURTHER RESEARCH

Some of the limitations of the study are: We considered only the selected monetary variables (repo rate and inflation) and focused only four sectors – Consumer goods, IT, Financial services and Energy for detailed sectoral level analysis. We could add more variables and sectors to get wider understanding of impact of macroeconomic events and stock market. We used event study methodology. A few other methodologies like VAR, VECM methodology can be used. However, this requires different data set. We used only one factor that is the market factor, but other factors can be explored and added to the model to minimize the variance in the abnormal returns. It is observed that markets across the globe have become tightly coupled. Event happening in one country impacts the global market. For example, it is observed that any change in Fed rate in US not only impacts the US market but impacts markets across the globe. Hence, it is worth studying the impact of similar events in key markets such as, US, Europe and others, on the Indian stock market. Some suggestions in this respect are (a) US Fed policy impact in US and its impact on Indian stock market, (b) Impact of global economic growth data on the Indian stock market and (c) Exchange rate variations and its impact on the Indian stock market.

9. CONCLUSION

By using CNX500 and considering more than 400 stocks, small caps and mid caps also got coverage in the analysis. While doing sectoral or overall equity market analysis, variations in the results observed which were due to addition of more stocks in each sector. This implies that these stocks which are part of broader index play an important role and thus cannot be ignored research studies. Our study adds to existing literature by highlighting limitations in taking narrower Nifty as market index and corresponding stocks for analysis and, provides an alternative approach of using the broader CNX500 as market index.

LITERATURE:

1. Agrawal, Gaurav (2007), "Monetary Policy Announcements and Stock Price Behavior: Empirical Evidence from CNX Nifty", *Decision*, Vol 34, No.2, pp. 133-153.
2. Humpe, Andreas, & Macmillan Peter (2009), "Can Macroeconomic Variables Explain Long Term Stock Market Movements? A Comparison of US and Japan", *Applied Financial Economics*, Vol.19, No.2, pp.111-119.
3. Ashley, John W. (1962), "Stock Prices and Changes in Earnings and Dividends: Some Empirical Results", *Journal of Political Economy",* February, Vol. 70, No.1, pp. 82-85.
4. Ball R, and P Brown. (1968), "An Empirical Evaluation of Accounting Income Numbers", *Journal of Accounting Research*, Oct.1, pp. 159-178.

5. Barker, C. Austin (1956), "Effective Stock Splits", *Harvard Business Review*, Vol. 34, No.1, pp.101-06.
6. Bernanke, B.S., & Kuttner, K. N. (2005), "What Explains the Stock Market's Reaction to Federal Reserve Policy?" *Journal of Banking and Finance*, Vol.60, No.3, pp. 1221-57.
7. Boudoukh, Jacoh, Matthew Richardson, and Robert F. Whitelaw (1994), "Industry Returns and the Fisher Effect", *Journal of Finance,* Vol. 49, No.5, pp. 1595-1616.
8. Dolley, James Clay (1933), "Characteristics and Procedure of Common Stock Split-ups", *Harvard Business Review*, Vol.11, No.3, pp.316-26.
9. Fama, E, L. Fisher, M. Jensen and R. Roll (1969), "The Adjustment of Stock Prices to New Information", *International Economic Review*, Vol.10, No.1, pp.1-21.
10. Fama, E. (1970), "Efficient capital markets: A Review of Theory and Empirical Work", *Journal of Finance*, Vol. 25, No.2, pp. 383-417.
11. Fama, E. & G, William Schwert (1977), "Asset Returns and Inflation", *Journal of Financial Economics,* Vol. 5, No.2, pp.115-46.
12. Fama, E. (1981), "Stock Returns, Real Activity, Inflation and Money", *American Economic Review*, Vol.71, No.4, pp. 545-565.
13. Fisher, I. (1930), "Theory of Interest", *MacMillan*, New York.
14. Geske, R., & R. Roll (1983), "The Fiscal and Monetary Linkage between Stock Returns and Inflation", *Journal of Finance*, Vol.38, No.1, 7-33.
15. Gupta, Rangan, & Reid Monique (2013), "Macroeconomic Surprises and Stock Returns in South Africa", *Studies in Economics and Finance*, Vol. 30, No.3, pp.266-182.
16. Gurkaynak, Refet S., Brian P. Sack, & Eric T. Swanson (2005), "The Effects of Monetary Policy on Asset Prices: An Intra-Day Event-Study Analysis", *International Journal of Central Banking*, Vol.1, No.1, pp. 55-93.
17. Humpe, Andreas, & Macmillan, Peter (2009), "Can Macroeconomic Variables Explain Long Term Stock Market Movements? A comparison of US and Japan", *Applied Financial Economics*, Vol.19, No.2, pp.111-119.
18. MacKinlay Craig, A. (1997), "Event Studies in Economics and Finance", *Journal of Economic Literature*, Vol. 35, No.1, pp.13-39.
19. Myers, John H. and Bakay, Archie J. (1948), "Influence of Stock Split-ups on Market Price", *Harvard Business Review*, Vol.26, No.2, pp.251-55.
20. Naka, A., Mukherjee, T., & Tufte, D. (1998), *Macroeconomic variables and the performance of the Indian Stock Market,* Department of Economics and Finance, Working Papers, 16.
21. Nelson, C.R. (1976), "Inflation and Rates of Return on Common Stock", *Journal of Finance*, Vol.31, No.2, pp.471-483.
22. Ratanapakorn, O., & Sharma, S. C. (2007), "Dynamic Analysis Between The US Stock Returns and the Macroeconomic Variables", *Applied Financial Economics*, Vol.17, No.5, 369-377.
23. Ross S.A. (1976), **"**The Arbitrage Theory of Capital Asset Pricing", *Journal of Economic Theory*, Vol.13, No.3, pp. 341-360
24. Schawtz, Alexander (2010), "Macroeconomic Effects on Emerging Market Sector Indices", *Journal of Emerging Market Finance*, Vol.9, No.2, pp.131-169.
25. Thorbecke, W. (1997), "On Stock Market Returns and Monetary Policy", *Journal of Finance* Vol.52, No.2, pp.635-54.
26. Tripathy, Naliniprava (2011), "Causal Relationship between Macro-Economic Indicators and Stock Market in India", *Asian Journal of Finance & Accounting*, Vol. 3, No.1, pp.208-236.
27. Watts, R. (1978), "Systematic 'Abnormal' Returns after Quarterly Earnings Announcements", *Journal of Financial Economics*, Vol.6, No.2, pp. 127–50.

GOOD GOVERNANCE AND ECONOMIC REFORMS FOR ENTREPRENEURIAL ACTIVITY

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ABSTRACT

Good governance is central to creating and sustaining an environment which fosters strong and equitable development, and it is an essential complement to sound economic policies. It is also defined as the manner in which power is exercised in the management of a country's economic and social resources for development and growth.

This article would present a critical review of the conventional classification of factors of production and reformulate a new classification for the allocation of resources and the distribution of income (Rent, Wages, Interest, Profits) that would be considered more rational even for the conventional theoretical framework to review and develop the theories of production and distribution. The conventional theory of production discusses the choice between different non-entrepreneurial resources (Land, Labor, and Capital). Why these resources choose to be so and not to become entrepreneurial resource is rather untouched in economic theory. Also, should owners of land, labor and capital decide to work for others on rent, wages and interest respectively or should they take entrepreneurial risk to earn profit? This is a choice often made in reality but has never been explicitly explained in economic theory. The conventional theory does not recognize money capital as an explicit factor of production but recognizes interest as a reward of capital. Interest rate is the price of money capital but it is treated as representing the price of physical capital too.

This article would consider Money as an Entrepreneurial Factor of Production-EFP and this classification would create entrepreneurial factors of production when combined together would enhance growth and allow more equity in the distribution of wealth in the economy. Only entrepreneurial resources can participate with each other and there can be no other form of participation.

Keywords: *Entrepreneurial Activity, Economic Reforms, Governance*

1. FACTORS OF PRODUCTION

The factors of production are resources that are the building blocks of the economy. Inputs that provide a productive service in a production process are called Factors of Production; they are what people use to produce goods and services. Economics is to utilize the limited resources in a way that maximum needs and wants are met to ensure the well-being of all members of the human society.

The four basic economic problems are:

- Determination of priorities;
- Allocation of resources (Land, Labor, Capital, Entrepreneur);
- Distribution of income;
- Development.

1.1. Four Factors of Production in Conventional Economic System

Conventional economic theory divides the factors of production into **four categories**:

1- Land
2- Labor
3- Capital, and
4- Entrepreneurship.

The **first factor of production is land:** "natural resources", that is to say, those things which are being used as means of production without having previously undergone any process of human production, but this includes any natural resource used to produce goods and services. This includes not just land, but anything that comes from the land. Some common land or natural resources are water, oil, copper, natural gas, coal, and forests. Land resources are the raw materials in the production process. These resources can be renewable, such as forests, or nonrenewable such as oil or natural gas.
The income that resource owners earn in return for land resources is called **rent.**
The **second factor of production is labor:** Labor is the effort that people contribute to the production of goods and services, that is to say, any exertion on the part of man. If you have ever been paid for a job, you have contributed labor resources to the production of goods or services.
The income earned by labor resources is called **wages** and is the largest source of income for most people.

The **third factor of production is capital:** This does not mean capital in the sense of money. It refers to man-made units like buildings, factories, machine tools that produced goods and services. The income earned by owners of capital resources is **interest**. Capital without labor cannot possibly provide any output.

The **fourth factor of production is entrepreneurship:** An entrepreneur is a person who combines the other factors of production - land, labor, and capital – exploits them to produce output and bears the risk of profit and loss in production. The most successful entrepreneurs are innovators who find new ways to produce goods and services or who develop new goods and services to bring to the market. Without the entrepreneur combining land, labor, and capital in new ways, many of the innovations we see around us would not exist. They perhaps have the hardest job of all decision making. The payment to entrepreneurship is **profit.**

You will notice that I did **not include money as a factor of production.** You might ask, isn't money a type of capital? Money is not capital as economists define capital because it is not a productive resource. While money can be used to buy capital, it is the capital good (things such as machinery and tools) that is used to produce goods and services. Money merely facilitates trade, but it is not in itself a productive resource.
This division plays a role in explaining the theory of production and theory of distribution of output. All current theories of economic development try to explain the process of development within the framework of these four factors of production.

1.2. Three Factors of Production in Islamic Economic System

In Islamic economy there are **three factors of production:**

1- Land
2- Labor
3- Capital

Entrepreneur and Capital is a single factor of production, anyone investing financial capital must also take the risk of the investment.

- **Land:** that is those means of production which are so used in the process of production that their original and external forms remains unaltered, and which can hence be let or leased, for example, lands, houses, machines etc…
  Compensation: Rentals

- **Labor:** that is human exertion whether of the bodily organs or of the mind, or of the heart, this exertion thus includes organization and planning too.
  Compensation: Wages
- **Capital:** that is, those means of production which cannot be used in the process of production until and unless during this process they are either wholly consumed or completely altered in form, and which therefore, cannot be lent or leased, for example, liquid money or food stuffs etc.
  Compensation: Profit

For this, we would divide productive inputs or factors of production into two categories. The first category comprises those inputs that do not get 'consumed' while used in the production process, but they retain their original nature and shape (except normal wear and tear). Let us call this category "factor inputs". The other category includes those inputs which get "consumed" during the production process and lose their original nature and shape. Money can easily be recognized in the production process as "consumed inputs". Money is useless unless it is "consumed" to convert it either into factor inputs or into consumed inputs. Money has to be "consumed" to be usefully utilized in a production process.

1.3.Problem on Conventional Factors of Production

No economic rationale is given to justify or adopt this classification. The economist themselves consider the division as arbitrary (Samuelson, p. 557). The arbitrariness of the division may not have implications for the theory of production but it must have serious implications for the theory of distribution.

- The conventional theory does not recognize money capital as an explicit factor of production but recognizes interest as a reward of capital. Interest rate is the price of money capital but it is treated as representing the price of physical capital too.
- While determining the distribution of output, economists have explicit theories how the share of land, labor and capital is determined in the market, but there is no theory on how the entrepreneurial profit is determined, The fact that conventional theory is practically devoid of a coherent theory of the supply and demand of entrepreneurship is recognized in the works of Leibenstein (1968), Baumol (1968) and Leff (1978). This may be tolerable in static analysis with the assumption of perfect certainty and knowledge of input and output prices and a determinate and predictable production function, but this does not help much in understanding the development process of an economy.
- The reward of factors of production goes to those who own them. Thus rent goes to the landlord, interest goes to the capitalist, wage goes to labor and the profit goes to the entrepreneur.

Should owners of land, labor and capital decide to work for others on rent, wages and interest respectively or should they take entrepreneurial risk to earn profit? This choice has never been explicitly explained in economic theory. The theory discusses the choice between different non-entrepreneurial resources. Why these resources choose to be so and not to become entrepreneurial resource is rather untouched in economic theory.

- The basis of distribution of the share of output is same for the first three factors of production land, labor and capital. The basis is the marginal productivity. Such a classification that requires the same basis for determining the rewards of all factors of production cannot be considered very meaningful if distributive justice is to be studied.

- Economic literature generates a lot of confusion between rent of physical capital and interest rate. It is often said that interest rate is the rent of capital equipment (Scott and Nigro, p.314; Samuelson, p.557). Why it is to be mentioned as a rate "per dollar value of capital goods"? Why it is not referred to as per machine, per building, per tool etc., as it is done in case of wage of labor and rent of land. A conventional economist would argue that since it is not possible to account for all types of capital goods and their separate rentals, it is analytically convenient to consider all capital goods in money value and consider their rental as a rate per dollar value of capital goods.

Land generates a service. The same is done by capital goods. Capital equipment is like land which is used without its being fully consumed during its use. The same is true for labor. There is no substantial difference between the rent of services of capital equipment and the wages of the services by human being. Both result from a contract for delivering a service in reward for compensation (rent or wage).

An analytical confusion is generated when interest rate is called a rent of capital goods. For the purpose of this article, interest rate should enter into the rewards of factors of production only if money or finance is treated as an explicit separate factor of production capable of providing a service. No economist likes to do so.

2. FACTOR INPUTS IN ISLAMIC ECONOMICS

Factors of production will be identified according to either of the following functions:

- They provide a definite productive service for which they are entitled to receive definite reward (i.e., wage or rent). We will call these factors as **"Hired Factors of Production or simply HFP";** or
- They choose to bear the entrepreneurial risks of a project rather than having a fixed wage or rent. We will refer to these factors of production as **"Entrepreneurial Factors of Production or simply EFP"**. Although the conventional economic theory recognizes both the functions described above, most of its analytical framework centers on the first type of factors of production which are the inputs that generate productive service for a fixed reward and not get consumed.

Factor inputs are allowed to serve as HFP as well as EFP. As EFP they will not claim fixed rent or interest and instead will claim profit by bearing entrepreneurial risk. Our classification clearly distinguishes financial capital from physical capital and makes financial capital entirely different from physical capital, both having different types of factor prices.

Money is not allowed to serve as HFP, but can serve as EFP if it decides to bear the risk. Besides assigning the EFP role to the factor inputs, it is also the peculiarity of the Islamic economic system that it implicitly recognizes money as a separate independent factor of production to the extent that it is capable of bearing risk, and hence comes entitled to the same reward that all EFP get profits,. In an Islamic framework, it is convenient to define and classify factors of production according to the method of determining their reward or price.

Islamic framework recognizes two categories of factor prices:

- One category is called Ujrat. This is a broad name for rents which includes the rent of human services that is normally recognized as wages in conventional economic theory. Thus, all factor inputs are paid Ujrat for their use. Islamic economy allows Ujrat only for those inputs which are not directly "consumed" in the production process. Thus money in Islamic framework cannot be rented and it cannot claim any Ujrat or rent (interest). On the same grounds, raw materials cannot be rented or placed on Ujrat. All Ujrats are fixed and known in advance with certainty. Ujrat is always positive because the services or benefits for which they are hired have to be by Islamic law positive.
- The other category of factor prices is called profit, which can be positive or negative. Profit is a reward for visualizing a profitable productive venture and bearing the risks,

if any, associated with the establishment of these activities. This may be treated as a reward for bearing risk as it is sometimes recognized in conventional economic theory too. Islamic economy categorically entitles factor inputs as well as money to earn this reward. Money which is disallowed Ujrat is allowed profits provided it performs the function that justifies profit. Raw materials are generally priced in the commodity market and therefore are not allowed to share profits or to be placed on rent. The only way for the raw materials to earn profit is to treat their money equivalent as a financial capital invested in a productive project. All profits, by definition, are uncertain and are not known in advance or fixed in advance. Any so-called profits that are claimed to be fixed and known in advance come into the category of Ujrats by definition.

According to these two distinct factor prices, the Islamic framework identifies only two categories of factors of production namely:

- Entrepreneurial Factors of Production (EFP) which claim only profits by bearing risk.
- Hired Factors of Production (HFP) which claim Ujrats (rents or wages) only and do not bear risk.

This classification of factors of production that distinguishes financial capital from physical capital and makes financial capital entirely different from physical capital having different types of factor prices, would create entrepreneurial factors of production encouraging “Institution of Participation” or initiating a “Productive Venture”. The main economic purpose that the institution of participation can serve is to distribute entrepreneurial risk so that more and more potential entrepreneurial resources may come forward to avail the entrepreneurial opportunities in the economy where this participation would increase output.

Since Islamic economy does not allow Ujrat to an economic resource if it gets consumed during the production process, the financial resources, therefore, are not entitled to any rent or interest. The paradox in renting such a commodity becomes very clear from a quotation given by Samuelson himself in his chapter on interest, "How to have your cake and eat it too, lending it out at interest" (Samuelson, p. 557). Islam does not allow this irrationality. Such resource which is consumed during the production process can be sold in an Islamic framework in a commodity market only. But Islam prohibits money to be treated as sellable commodity[1]. The conventional economics theory in fact does not consider it as a factor of production but treats it as a commodity. The theory determines its price not in the factor market but in the money market - a prohibited institution in Islam. This leads to the third major difference - institutional, in nature - arising out of our classification. Financial market which is in our framework, a factor market for monetary resources, is a real sector and merely a money-market.

In conclusion, before discussing the nature and function of these two factors in the following section, it may be instructive to summarize the main points of difference between our classification of factors of production and the classification used in the conventional economic theory. First, our classification clearly distinguishes financial capital from physical capital and makes financial capital entirely different from physical capital, both having different types of factor prices. Secondly, financial capital is disallowed to earn a fixed, known-in-advance, rent

[1] The logic behind not treating money as sellable commodity is very clear. A commodity is sold in the market at a price which is composed of the following:

- Cost of materials gone into its productions,
- Ujrats of HFP used to add value in it,
- Opportunity cost of EFP used to bring this commodity to the market.

Commodities can be exchanged in the market only if they differ in terms of any of the above 3 features.

which is a cornerstone of the conventional economic theory and is known as interest. The logic of depriving financial resources of a fixed rent has already been discussed.

3. INSTITUTION OF PARTICIPATION

The following section now discusses the nature and function of the two types of factors of production recognized in Islamic economics. It should be noted that the two types of factors of production:

- Are mutually exclusive; for example, the same resource cannot be an entrepreneur and Ujrat-receiving at the same time;
- Perform entirely different function.

Islamic economy encourages participation in production process. All economic resources are allowed to join each other to initiate a joint project. So, it is possible that a person with his human resources alone and the other with financial resources alone decide to initiate a productive venture. The participation will be entirely on profit and loss sharing basis. There can be no other form of participation.

In other words **only entrepreneurial resources can participate with each other.** A combination where a person invests his resources to bear the risk of a project and the other simply rents his resources will not be participation.

The participation between non-human resources alone is also possible. For example, it is possible that two or more persons initiate a project by investing financial resources only. They hire managers to organize and run the project.

Islamic finance and economy has laid down rules for sharing profit in any economic participation. The principle is that profits of a joint project can be shared by the participating entrepreneurial resources on any basis agreed in advance. For example, two participating parties may decide to share the profits of the project on 50:50 basis or 40:60 basis or 70:30 basis or on the basis of the ratio in which they have invested their respective financial resources or on the basis of any other pre-agreed ratio. Whether there is a person A participating with no financial resources at all with a person B participating with financial resources or whether two persons are investing only financial resources in any ratio, the participating parties are allowed to decide profit sharing ratios irrespective of their volume of investment. The ratios have been left to be determined by mutual bargaining. It is obvious that since the participating resources are likely to be different in nature as well as in such economic characteristics as productivity, scarcity etc., it is fair to leave the profit sharing ratio to the market forces.

The freedom of bargaining will obviously develop a market for participation where the profit sharing ratio will be determined by the relative supply and demand of the participating resources. It is however, instructive to note that whereas the profit sharing ratio can be agreed upon by mutual negotiation the losses can be shared only in the ratio in which financial resources have been invested.

The main economic purpose that the institution of participation can serve is to distribute entrepreneurial risk so that more and more potential entrepreneurial resources may come forward to avail the entrepreneurial opportunities in the economy. The participation also increases output. Output of A and B together will be larger than the sum of their individual outputs because of division of labor and specialization.

No society prohibits participation. All capitalist economies have the institution of participation. But there is something peculiar about this institution in the Islamic system. The peculiarity is that **Islamic institution of participation is supported by various elements in the economic**

system to promote the institution whereas the capitalist system has elements to discourage participation. In the capitalist system, all productive resources are rentable. In an economy with high business risks, all productive resources will prefer to be on Ujrat rather than to be entrepreneurial resource. Scarce factors obviously will have high Ujrat. They will have no compelling reason to opt for participation in an economy where entrepreneurial risks are very high.

They will be willing to participate only in projects that ensure them very high profitability. They will usually be looking for big ventures. The abundant resources will have very low Ujrat. Bulk of them would be willing to look for entrepreneurial jobs. They will, however, not be able to find participation from the scarce resource. This is because they being abundant (implying marginal utility or productivity close to zero) have very little at risk compared to the scarce factor when participating in an entrepreneurial activity.

Thus we observe that in labor abundant developing countries operating under capitalist system, bulk of the population in working age sits idle[2]. This is because the wage level is too low to induce them to forego the leisure and the family privileges that they enjoy and the social benefits that the family gets even from the non-working members.

(4) This so-called surplus labor obviously would fail to get participation from the physical or financial capital because the risk is great and the labor being surplus does not have much at risk in the event of a loss. There is nothing in a capitalist economy to impose compulsion of entrepreneurial participation particularly between scarce and abundant resources.

Islamic economic system has several elements to promote the institution of participation. Keeping the ethical norms away that require co-operative spirit among economic agents let us see only a few of the institutional provisions. **Islamic economy has made one scarce factor to be totally available for participation. This is the monetary resources. These resources are prohibited to earn rent. But they have been allowed to participate in entrepreneurial activities.** Disallowing the earning of rent is, obviously, not enough to compel a resource to participate in the risk bearing. The resource may sit idle. Besides ethical restrictions,

3.1. Institutional Penalty on the Idle Monetary Resources

Islamic system provides an institutional penalty on the idle resources. One of the Islamic injunctions is that a Zakah at the rate of 2.5 percent has to be paid on the productive assets. The revenue from Zakah is distributed among the poor. Any person who decides to keep his monetary resources idle will have to pay a Zakah of 2.5 percent every year, ultimately losing almost all his financial resources. The only way to save his financial resources is either to purchase capital equipment which he can rent or to become an entrepreneur and initiate a productive venture of his own, or to participate on profit-loss sharing basis in anyone else's project. This is required so that Zakih could be paid out of the income earned from such investment. Thus, there is a compulsion in the system for the finances to opt for initiating own investment or participating with someone else.

The capitalist system does not encourage participation of big entrepreneurs with small entrepreneurs even if small entrepreneurs can prove themselves to be more productive. In the interest-based system there is always demand from the entrepreneurs to acquire financial resources on fixed rent (interest). These entrepreneurs have to be entrepreneurs who have the surety to earn profits much higher than the interest rate. The system makes the existing entrepreneur bigger and bigger because they can offer guarantees to the banking system for the payment of interest. This prohibits small entrepreneurs from entering; particularly those who

[2] This is what Arthur Lewis calls unlimited supply of labor in his well-known work, *Economic Development with Unlimited Supplies of Labor*, The Manchester School of Economics and Social Studies (May 1954). Reprinted in **B. Okun** and **R.W. Richardson**, *Studies in Economic Development* (New York: Holt, Rinehart and Winston, 1961).

cannot expect to earn profits higher than the interest rate. The big corporation thus becomes bigger and bigger mostly relying on interest-based finance. The restriction to make the finances available only on a profit-loss sharing basis reduces the profits of big entrepreneurs because the entire profit is now to be more widely distributed. This induces new entrepreneurs to enter into the market that was previously out because they were not big. All financial entrepreneurs now become equal.

Also, an institution that compels a scarce factor to participate rather than claim Ujrat creates demand for entrepreneurship by reducing the risk. **Participation is more fruitful the more it is between abundant and scarce factors. Such participation promotes the interests of the abundant factor as bulk of the burden of risk bearing comes to the scarce factor due to its opportunity cost.**

Before closing the discussion on the economic implication of this institution it may be instructive to discuss, in the context of participation, the implications of keeping the loss sharing ratio strictly in accordance with the ratio of financial resources whereas profit sharing ratios are allowed to be different.

No project is initiated for earning a loss. This is against rationality and against Islamic injunctions. The participating resources, therefore, participate for profit. The resulting profit is the reward of the invested resources (both human as well as financial).

This reward, in nature, is a price of entrepreneurial resources as Ujrat is a price of the services of hired factors of production. As Ujrat is determined in the market by mutual negotiation so is the profit sharing ratio which too is determined in the market by mutual negotiation. Now suppose two entrepreneurs decide to participate with their respective financial resources only. There is no reason that market forces of supply and demand will lead to a profit sharing ratio different from the ratio of financial resources. A rupee will be valued a rupee in the market whether it is invested by person A or person B.

But suppose person A invests financial resources only and person B invests human resources only. Negotiations in the market will determine a profit ratio, irrespective of the ratio with which financial resources are invested by the two parties. Since expected profits are assessed in advance, the profit sharing ratio would reflect the relative productive worth of the resources invested by the two parties. As soon as one of the parties or both mix human entrepreneurial resources in the joint enterprise, the ratio of financial resources loses its relevance to determine the basis for sharing the profit.

Now consider the sharing of losses. It is totally wrong from the economic point of view to consider losses as negative value of profits on the same scale (though in accounting it is right). Profit is a result of deliberate efforts which were geared towards making this profit. Loss is not the result of deliberate efforts which were geared to achieve this loss.

Loss is a result of unforeseen factors. It is these unforeseen factors that are the basis of entrepreneurial risk.

Participation has two aspects: Profit sharing and risk bearing. Risk bearing is loss bearing, for example, bearing the fruits of the unforeseen or uncontrolled factors or the fruits of chance factors. Profit sharing should be done on the basis of efforts contributed by participants. Market determines the value of respective efforts. Risk bearing cannot be determined by the market because unforeseen are not offered in the market. They are unknown. So there should be some other mechanism for fair sharing of risk. Consider the participation of human resources on the one hand and financial resources on the other hand. When a loss arises, it is a loss in financial terms and not an economic loss. It does not take into account the opportunity cost of the lost human resources that were invested in the project. The human resource has already lost what he invested, his labor. The remaining loss, that is the total financial loss, is to be borne by the

remaining resources, the financial resource. The rule is that financial loss is to be borne by the financial resources as the human resources loss has already been borne by the human resource. In conclusion, a basic requirement for the promotion of participation of entrepreneurial resources is that the risks of the project being participated should be distributed fairly among the participants. It will discourage participation if human resources are asked to share the financial loss too, which would be over and above the entire loss of the own investment, such as the human resources invested in the project.

A further provision in the Islamic framework conducive to promoting the institution of participation, social security is discussed in the next section. Thus there is not only a mechanism to promote the Islamic institution of participation but also this institution creates demand for entrepreneurial resources by:

- Creating new entrepreneurs to come into the market to avail entrepreneurial opportunities;
- Promoting participation of scarce resources with abundant resources hence causing abundant entrepreneurial resources to come into the market as EFP;
- Promoting participation of big entrepreneur with small entrepreneurs and hence creating demand for small entrepreneurs;
- Reducing risk in the economy by distributing risk fairly among the entrepreneurs and hence making the potential entrepreneurs to come forward to take up entrepreneurial activities.

3.2. Institution of Social Insurance

Islam has put the share of the have-nots in the resources of the haves. This means Muslims are required to feed the deprived section of the population who for some reason cannot earn their living. This is basically a voluntary institution. This institution is the institution of Zakah, Sadaqat and charity. The institution will be stronger; the stronger is the practice of ethical norms of Islam by the Muslims. The state is, however, authorized to-take part of what is due from the resources of the haves to distribute it to the have-nots.

The presence of this institution in Islamic economy is conducive to promoting participation and hence the demand for EFP resources. Human resources with nothing else to live upon would hesitate to involve in entrepreneurial activities, because in the event of loss, the risk is too much - starvation for himself and his family. He would, therefore, prefer getting a job at a low wage rather than initiating a higher profit venture if it has a slight chance of ending up with a loss. However, if the system ensures looking after his and his family's minimum living needs[3], he is quite free to take entrepreneurial risks. He will have no compelling reason to opt for a low wage against higher expected profit having the risk of loss.

4. FACTOR MARKETS FOR EFP AND HFP

As described earlier, there are two types of factors of production, EFP and HFP. Output is to be distributed among these two types of resources. Ujrat which is the price of the HFP resources is determined in the market by the supply and demand of these resources. The EFP resources share the residual which is called profit. Profit determines the demand of EFP resources in the economy. Only those goods/resources can be rented or hired which are not "consumed" while they are used. Renting or hire is the sale or purchase of the benefits/services of physical assets or resources including human resources.

[3] For further information of the institutions guaranteeing minimum living needs in an Islamic system, see **M.N. Siddiqi**, "Guarantee of a Minimum Level of Living in an Islamic State" included in **Munawar Iqbal (ed.),** *Distributive Justice and Need Fulfilment in an Islamic Economy* (Islamabad: International Institute of Islamic Economics, 1986), 249-284.

The assets or resources that generate benefits in the form of real goods (like tree giving fruits or animals giving milk) cannot be rented for such benefits. Financial resources cannot be rented because they cannot generate any service without being "consumed".

4.1. Entrepreneurial Factors of Production (EFP)

Entrepreneurship, in our framework, is to perform the following functions:
- Making a decision whether or not to participate in or initiate a particular productive activity.
- Be willing to bear the risks associated with it.

Thus, in our framework, an entrepreneur does not have to be a special man. If he can simply visualize a productive profitable venture, can take a decision to initiate it and is willing to subject the resources at his command to bear the risks, if any, associated with this project, he becomes an entrepreneur. He may not be having the special organizational capabilities as highlighted in economic literature. It is assumed that organizational capabilities can be hired by offering appropriate Ujrat to the managers or executives capable of doing the job. Organizers thus are ujratable resource rather than entrepreneurs.

The two functions, decision making and risk bearing are capable of being isolated. Whereas decision making rests solely upon the human resources, the risk bearing can be done by the human resources, or physical resources or monetary resources. Suppose a person sees a productive opportunity. He can take the decision to initiate the project as well as bear the risk by investing his own human resources in the project. Alternatively, he may take the decision to initiate the project but may make his non-human resources to bear the risk by investing his physical capital or monetary resources alone. **No human resource can become entrepreneurial simply on the basis of decision making function.** Some resources have to be offered to bear the risk[4]. The share in the profits of the project will be dependent upon the resources that are invested to bear the risk. That is why we find it expedient to use the term "entrepreneurial factors of production (EFP)" rather than simply entrepreneurs, to reflect the combination of human and non-human that are willing to bear risks involved in initiating or participating a productive economic venture. This definition of entrepreneurship obviously does not require the EFPs to be "innovative" or "social deviants". We are assuming that EFPs are simply economic resources who, when confronted with a choice to work for a wage or to have their own work (or whether to rent their resources or earn profit on them), decide in favor of the latter. In several situations, the economic resources may find no choice but to become an EFP. This may occur, for example, in the following cases:
- A man wants to pursue an economic activity but finds it religiously prohibited to rent the resources at his command, such as a man having money as the only utilizable resource with him.
- A man wants to pursue an economic activity but finds it uneconomic to rent the resources at his command because of too low a wage level to rent his labor or too low a rent to lease his buildings, assets etc.

The economic resources may not be allowed to sit idle or a man may not decide to keep his resources idle. As discussed before, certain penalties in the system will leave him no choice but to become an entrepreneur. This indicates an obligation feature of the system to generate entrepreneurs in the economy.

[4] In fact, risk bearing is the necessary and sufficient condition to define an entrepreneur. Any resources willing to bear the risks of a project implicitly are making a decision to initiate or participate in a project. The distinction between decision making and risk bearing has been made to highlight the nature of human resources which may make a decision without subjecting themselves to risk bearing.

The supply and demand on EFPs and their determinants means the willingness or availability of the economic resources to initiate a productive venture and to bear the risk associated with it. By demand of EFPs we mean the actual involvement of entrepreneurial resources in the entrepreneurial jobs. In other words, demand of EFPs is reflected by the availability of entrepreneurial opportunities to engage the EFPs.

4.2. Hired Factors of Production (HFP)

All resources that offer definite productive services for a definite reward known in advance are called hired factors of production. All physical capital and human resources can fall into this category as long as they don't get "consumed" in the process of production while offering their production services. "Organization" and "managers" as factors of production too are treated as HFPs as long as they are not willing to bear the entrepreneurial risks.

HFPs get employed only by the EFPs. Their employment and their demand will increase as the EFPs avail more and more entrepreneurial opportunities. The determinants of the supply of the HFPs are more or less same as discussed in conventional economic theory.

HFPs include land, labor, physical capital goods and human capital. It excludes monetary resources. HFPs are derived from the same resources which can offer themselves as entrepreneurial resources. The supply and demand for HFPs thus competes with the supply and demand of EFPs. All these resources have to make a choice whether to opt in favor of becoming an HFP and get an Ujrat or to become an EFP to enjoy the profits.

4.3. Factor Markets Equilibrium

Any excess demand in the HFP market will result into raising the Ujrat level hence clearing the HFP market. Any excess supply in the HFP market is available to become an EFP rather than waiting at the doors of the entrepreneur as HFP. Thus HFP market can be said to be always in equilibrium.

All supply of EFP, however, may not be able to get involved in entrepreneurial activities. In other words, there may not be enough demand for EFP in the economy.

Thus, it is possible to have an excess supply or disequilibrium in the EFP market implying that there are several EFP resources that are willing to take up entrepreneurial jobs but there are not enough jobs available. There cannot be excess demand in the EFP market because that would shift resources from the HFP market to EFP market. The only reason for disequilibrium in the factor market is, therefore, the excess supply in the EFP market. Otherwise the factor markets are in equilibrium in the economy. The growth in the economy will simply raise Ujrats as well as profits. Depression will result in lowering the Ujrats and profits till the Ujrats become downward rigid which will result into creating excess supply in the EFP market.

Physical capital has a choice to become HFP or EFP. The rent at which physical capital will be supplied in the HFP market will depend on the cost of production of these goods (which is to be recovered from the rent by the time it completely depreciates) plus the expected profits on the investment of resources used in the production of these capital goods. The demand for the capital goods as HFP will depend upon the productivity of these goods as HFP. If there occurs an excess supply of capital goods, i.e., their marginal productivity as an HFP falls, they will be offered a rent lower than what the capital goods are willing to accept. This will cause the capital goods to shift from HFP market to EFP market. An increase in supply of capital goods in the EFP market may reduce the expected profits of capital goods. A new equilibrium level of rent and expected profits of capital goods will, therefore, be achieved clearing both the markets for these goods.

It can easily be visualized that there cannot remain substantial excess supply of capital goods even in the EFP market. Suppose the stock of capital goods reached a level that has brought the Ujrat in its HFP market and profits in its EFP market to a level where a further decline would

compell the owners to keep their assets idle till more profitable opportunities arise in the EFP market. This situation will obviously lead further production of capital goods to stop because of lack of demand. The excess supply will either be soon wiped out or will not remain quite substantial.

Similarly, human resources too have a choice to become HFP or EFP. The wage at which human resources will be supplied in the HFP market will depend on the marginal utility of leisure. The demand for the human resources as HFP will depend upon the productivity of these resources as HFP. If there happens to be an excess supply of human resources, they will be offered a wage lower than what they are willing to accept. This will cause the human resources to shift from HEP market to EFP market.

An increase in supply of human resources in the EFP market may reduce the expected profits of human resources in this market. A new equilibrium level of wage and expected profits (of human resources) will, therefore, be achieved, clearing the market for these resources.

It is, however, always a possibility that the excess supply of human resources, not getting employed in the HFP market, also fail to get absorbed in the EFP market. This means that there are not enough entrepreneurial opportunities that these resources can visualize or initiate or participate to yield them a profit equal to or more than the wage. In other words there is not enough demand in the EFP market.

We treat this situation as disequilibrium, an excess supply in the human resource EFP market. The HFP market will remain in equilibrium as the wage will be determined where markets clear supply and demand. The wage level determines the expected profit level in EFP market. The demand for EFP resources at this expected profit is exogenously given and fixed in EFP market. The EFP market will clear as the demand for EFP shifts upwards. Wage and expected profit level remain same. The EFP market may also clear if expected profits in the economy rise. But in this case, wages and profit levels increase too as the EFP market clears.

Money does not have a choice to become HFP. Its can only become EFP. Savings that are not converted into assets or capital goods become the money available for investment. The supply of monetary savings for investment will depend on the income as well as the profits on the investment that these savings can bring[5]. Some part of savings will always be in the form of monetary savings. As physical capital/assets are usually quite expensive, **the smaller savers, therefore, have no choice but to have their savings in monetary terms.** Even all those who can afford to buy a physical asset may not do so as they have to take double risk - first, at the time of buying the asset which requires adequate knowledge of the market of the assets along with the ability to anticipate future prices of the assets and second, at the time of renting the assets which involves the risk of keeping the asset idle during the search of a tenant for the desired rent as well as the risk of loss or of damage to the asset during the period of tenancy.

An excess supply of monetary resources is hardly conceivable in any capital scarce economy in general and in an Islamic economy in particular. An excess demand in EFP of money market may arise which will mean more profits on the monetary resources. The higher profits will lead to more savings in monetary resources till the market is cleared. Supply of monetary resources to meet the demand may get constrained by the capacity to save in the economy. This may let the excess demand in the economy persist if adequate monetary and fiscal measures do not intervene in the EFP market of monetary resources or if the monetary resources from abroad are not allowed to fill the gap.

[5] The institution of moderation not discussed in this paper is the peculiarity of an Islamic system which enables the economy to generate savings more than it would be in a non-Islamic economy in a similar economic conditions. Some discussion of this institution can be seen in **M. Fahim Khan**, "Macro Consumption Function in an Islamic Framework", *Journal of Research in Islamic Economics*, "Vol. **1**, No. **2**, (Winter 1984): 1-24.

Factors determining the demand for entrepreneurial resources may be listed as:

- Capability to visualize a productive activity that would yield him an expected profit greater than the prevailing level of Ujrat for his resources;
- Risks involved in initiating the project;
- Supply of other productive resources;
- Institutional arrangement conducive for free entry in the market.

5. CONCLUSION

The capability to visualize a profitable venture in turn depends on several factors like education, means of communication, level of incomes, consumption and spending patterns etc. The risks in an economy are determined by the sociopolitical climate on the one hand and the moral fiber of the society on the other hand. The resources required to initiate the project can either be entrepreneur's own resources or he can work with the resources owned by the others. Rent reflecting the relative supply of other productive resources will be a key factor in the demand for entrepreneurial resources. Higher the rents in the economy, the lower will be the demand for the EFP. The factors relating to free entry are promoted by the institution of participation and the institution of social security as described earlier.

The total stock of capital goods may exceed demand at any one point of time. If this situation persists the holders of physical capital will have no choice but to look for an entrepreneurial activity utilizing their physical capital which, otherwise, will be depleted by the Zakah deductions. With regard to **the second question:** why a resource not finding adequate Ujrat paid job would be willing to bear entrepreneurial risk, the answer is clear in case of physical capital. Zakah deductions force the owner to deploy the physical capital in any project that would at least yield some positive expected profits i.e., anything greater than 0, so that a part or total of the Zakah could be paid out of the profit, instead of from the asset itself. Thus all such capital goods that fail to get employed on Ujrat are available for entrepreneurial employment. For human resources, though there is no such formal institutional compulsion as Zakah to refrain him from sitting idle if he cannot get employed on Ujrat, yet the human instincts do force individuals to achieve something for themselves and their families. Social norms too encourage human beings to do some productive work. A man involved in productive work always has a social status higher than a person sitting idle. Thus a person having been unable to get employment on the basis of Ujrat is assumed to be available for an entrepreneurial activity. Besides "profit" is a recognized motive even in conventional economic theory. Human beings want to make, rather maximize, profit. Those who are unable to get employment to earn "profit" from their services should look for an opportunity where they can earn "profit" by utilizing their capability to bear entrepreneurial risk.

The supply of different EFPs raises each other's demand. Thus availability of entrepreneurial capital, risk bearing capital will raise the demand for the entrepreneurial human resources and vice versa. Hence there is an indirect application of Say's law to the EFP in the sense that the aggregate supply of EFPs generates their own demand provided supply of all EFPs increases more or less in equal proportion.

LITERATURE:

1. Baumol,W.J. (May 1986), "Entrepreneurship in Economic Theory", *American Economic Review*, Vol. LVIII, 64-71.
2. Brigham Eugene F. and Houston Joel F., (2001), *Fundamentals of Financial Management*, Ninth Edition, Harcourt Inc., Orlando, Florida.
3. Khan, F. Fahim, (1984), "Macro Consumption Function in an Islamic Framework". *Journal of Research in Islamic Economics*, Vol. 1, No. 2, pp. 1-24.

4. _____, (1990), "Factors of Production and Factor Markets in Islamic Framework", *JKAU: Islamic Economy,* Vol. 2, pp. 25-46
5. Leff, N.H., (1979), "Entrepreneurship and Economic Development, the Problem Revisited". *Journal of Economic Literature.*
6. Leibenstein, H., (1968), "Entrepreneurship and Economic Development", *American Economic Review*, Vol. LVIII, pp. 72-83.
7. Munawar Iqhal (ed.) *Distributive Justice and Need Fulfilment in an Islamic Economy*, Islamabad: International Institute of Islamic Economics, pp. 249-284.
8. Raymar Steven, (1991), "A Model of capital Structure When Earnings are Mean- reverting", *Journal of Financial and Quantitative Analysis*, no3, September.
9. Samuelson, P., (1983),*Economics*, 11th Edition, New York, Mc-Graw Hill.
10. Scott, R.H. and Nigro, N., (1982), *Principles of Economics*, New York: Macmillan.
11. Siddiqi, M.N., (1986), "Guarantee of a Minimum Level of Living in an Islamic State" in
12. Stern M. Joel and Shiely S. John with Ross Irwin, (2001), *The EVA Challenge, Implementing Value-Added Change in an Organization,* John Wiley & Sons, Ijc., New York.

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