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The Complexity of the Competitive Repertoire and Firm Performance

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ABSTRACT

Complexity of competitive repertoire is the ability of a firm to undertake a wider range of diverse competitive moves than its competitors. Firm undertaking diverse competitive moves can enhance capabilities and potentially achieve competitive advantage and superior performance, especially in environment with uncertainty and volatility characteristics. Besides, complexity of competitive repertoire gives stakeholders a series of information on the firm characteristics, its resources and/or specific know-how for intense rivalry. The goal of this paper is to provide theoretical and practical overview on the construct of complexity of competitive repertoire and the method of its computing. In addition, relationship between complexity of the competitive repertoire and the firm performance on a sample of seventeen Croatian firm dyads are analyzed. Results show that the higher level of complexity in a competitive repertoire has a positive effect on firm performance.

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1. INTRODUCTION

The interaction of firms with their market rivals the focal point of competitive dynamics research perspectives in the field of strategic management, developed on the tenets of the Austrian School of Economic Thought (Schumpeter, 1942; Kirzner, 1973). The study of competitive dynamics in the context of strategic management began in 1980s (MacMillan, McCaffrey and Van Wijk, 1985 Bettis and Weeks, 1987; Smith et al., 1989) and significantly expanded in the past two decades in the works of Chen, Ferrier, Smith, Young, and others.

Model of competitive dynamics usually involves two competing firms (dyads) and their rivalry with the intention of achieving market advantages. The competitive rivalry is defined as a set of taken strategic actions and response to them (Chen and MacMillan, 1992). Strategic actions are taken with an intention to enhance the relative competitive position. Examples of the strategic actions are: changes in the prices and pricing policies, introduction of new products and services, entering a new market, new production and sales capacities, promotional campaign, signaling, etc.. If a firm implements the stated actions in a correct way, the likelihood that it will threaten the market position and performance of its direct rivals shall increase. This motivates the competitors to react and take competitive countermoves which could annul, offset or at least mitigate the strategic actions of the rivals, retaining or improving its own position.

The basis of the competitive activity in the market competition is comprised of behavioral drivers -Awareness, Motivation and Capability (AMC framework), which have a decisive influence on its decision to take strategic moves and countermoves to the actions of any of its rivals. *Awareness* is defined as identification and recognition of the environment and the challenges, arising from the competitive interdependence (moves between the firm and its

rivals), *motivation* is related with the willingness of firm to undertake moves and respond to the moves taken by the competitors, and the *capability* is defined by cognitive and resource factors that influence the capacity of companies for taking strategic moves (Chen, 1996; Smith, Ferrier and Ndofo, 2001; Ferrier, 2001; Chen et al., 2007). AMC framework is important in the development of micro foundations of competitive dynamics.

The researchers pay attention to the analysis of competitive tension, by examining actions and reactions of the firms and the effects which competitive activity has on their performance (Chen and MacMillan, 1992; Young, Smith and Grimm, 1996; Ferrier, Smith and Grimm, 1999; Miller and Chen 1996; Ferrier, 2001; Chen, Su and Tsai, 2007; Chen and Miller, 2012). They wish to know, for example, how characteristics of certain strategic actions affect the likelihood and speed of competitive response (e.g. Chen, Smith and Grimm, 1992), and how operating results and market position depend on competitive moves and characteristics of strategic interaction between companies (e.g. D' Aveni, 1994; Miller and Chen, 2012).

Next characteristics are of special interest: (1) radicalism in taking moves (level of deviation from the industry norms and the usual way of business operations), (2) complexity of the moves (the necessary resources for the implementation of the move) and the difficulties in responding to rival moves, (3) an area that affects strategic actions (number of competitors in that the move could affect), (4) intensity of threat the move represent to the rivals; as well as (5) frequency and number of the moves (number of the moves in a certain time period), (6) timeliness and speed of response to the taken moves (the time in which firms react to the actions of their rivals) and (7) competitive repertoire and diversity of the moves (range in taking various and different strategic activities) and their correlation with the performance and various performance criteria (Chen, Smith and Grimm, 1992; Smith, Grimm and Gannon, 1992; Chen and Hambrick, 1995; Miller and Chen, 1996; Young, Smith and Grimm, 1996; Gimeno, 1999; Ferrier, Smith and Grimm, 1999; Lee et al., 2000; Ferrier, 2001; Smith, Ferrier and Ndofo, 2001; Chen and Miller, 2012).

In this paper special attention is given on exploring the relationship between the complexity of the competition repertoire and firm's performance on a sample of firms operating on the Croatian market.

2. COMPLEXITY OF COMPETITIVE REPERTOIRE

Firms are taking a diverse range of competitive moves which are defined as the complexity of competitive repertoire. Diversity is defined as the total number of all types of competitive moves observed which a firm undertakes in relation to its competitors in the relevant market within a specific period. Complexity is high in cases where firms undertake competitive activities within many categories and the wide dispersion of moves, which includes research and development, marketing, distribution, new services, manufacturing, etc. (Ferrier, 2001; Gnyawali, Fan and Penner, 2010).

Results of recent studies also suggest that firms that take complex repertoire of competitive moves create difficulties to competitors in understanding of complex set of actions, but also in the potential response to them (Smith et al., 2001; Ferrier et al., 1999). Also, the studies led to the conclusion that if there is a positive correlation between the complexity of competitive repertoire and performance companies, this indicates an experienced team of top managers leading a firm (Basdeo et al., 2006). In general, the complexity of competitive repertoire is in

function of the motivation for finding new ways of competition. Precisely the motivation for alternative competitive activity and approaches leads to learning, gaining experience and competence, whereby making the firms better and more competitive (Miller and Chen, 1996).

Firms taking a broader repertoire of competitive moves are considered to be more aggressive and more competitive. Their competitive repertoire is seen less predictable, and consequently, more complicated to predict and prepare any possible counter-responses. Thus, competitors have less possibility to react while providing defensive ability and competitive advantage for the firm undertaking the complex repertoire (Miller and Chen 1996). As an example of the range of competitive repertoire, D'Aveni (1994), in his "7S categorization" of competition, states characteristics of moves such as, surprise, speed, signaling, shifting the rules, sequential and simultaneous strategic thrusts, as extremely important elements in competitive war.

The complexity of the competitive repertoire represents the range of competitive moves undertaken by a firm. There are many factors shaping the competitive repertoire i.e. the diversity of competitive moves taken by the firms in the mutual competition. The positive business results may lead to inert behavior and decline in diversity of competitive moves (Miller and Chen, 1999). In the opposite circumstances, negative business results motivate firms to find alternative competitive opportunities and new solutions (Lant and Montgomery, 1987). Industrial growth can potentially be demotivating for a firm in terms of undertaking of diverse moves. Market conditions in which demand is increasing also discourages competitors for additional investments and improvement of the competitive repertoire (Miller and Chen, 1996). The level of rivalry also regulates the competitive repertoire of moves, whereat the rivalry and variety of moves are in proportion, or, in other words, the higher the rivalry and the competitive pressure, the greater is the motivation of companies for finding new options, moves and vice versa (Walsh, 1995).

Competitive moves differ depending on the type of actual move undertaken. As the most common categories which stand out are pricing, marketing, new products, new services, increase capacity and signaling moves (Ferrier and Lyon 2004). It is believed that a complex repertoire of competitive moves can have a crucial impact on the ability of firms to adapt to market threats and challenges (Miller and Chen, 1996).

Analysis of the complexity of competitive repertoire is based on annual averages of the diversity in performed moves and is optimized in accordance with the best practices of previous papers in research stream of competitive dynamics that operationalize this variable using the Herfindahl index of concentrations (Ferrier et al., 1999; Miller and Chen, 1996; Basdeo et al., 2006). Firms with high scores Herfindahl index spend narrow and simple competition repertoire and have low complexity of competitive moves. The low score of index however indicates that firms undertake a wide repertoire of various competitive moves, thanks to the relative uniformity in the conduct of all types of moves.

Mathematically expressed it can be illustrated as follows:

$$1 - \text{SUM}_a(N_a/NT)^2$$

In this mathematical equation N_a/NT represents the share of moves within all categories of moves. A higher score indicates a greater diversity of competitive moves. The measure of the

complexity of repertoire very sophisticatedly displays differences and changes in the competitive activities of each firm. Thus, regardless of the total number of categories of performed competitive moves, results also significantly depend on the distribution of the number of competitive moves for each category and the range of the repertoire. Therefore a measure of complexity can differ significantly also for the firms that seemingly have a similar complexity. The complexity of the competitive repertoire is calculated on the basis of the data on diversity of undertaken competitive moves in a given period.

Measuring the complexity of competitive moves carried out, taking into account the pondered diversity between all possible types of moves, is used to determine whose competitive repertoire consists of the widest range of different competitive moves. Later, the methodology of measuring complexity for this study it is explained in detail.

3. METHODOLOGY

3.1 Sample

The study was conducted on a sample of dyads representing firms characterized by a huge rivalry which were leaders of the market and their most aggressive challengers in the Croatian market during the period of 2009-2013. The sample was selected by carefully identifying the biggest competitors in wide range of industries in the Croatian market. Final selection of the specific companies was carried out on the basis of a previous analysis of their competitive behavior and the relevant parameters (size, revenues, market share, investment in research and development, market growth), which classified them as leaders or the most aggressive challengers.

Although originally planned sample had been formed at the level of 20 dyads, i.e. 40 firms operating in the Croatian market, during the research process, it was realized that for certain firms there was a lack of relevant available data and were therefore eliminated from the research sample. All other firms having available and relevant information were left in the research. According to predefined criteria and knowledge of the basic set, we intentionally singled out a representative sample consisting of 17 market leaders and 17 challengers, jointly representing a research sample of 34 firms. In the dyads of firms, the competitors were classified from the equivalent industries while the sample of the firms derives from a total of 17 industries.

The average number of employees in the firms in 2013 sample was 1,983, while the lowest headcount was 122 and the highest was 11,130. Pursuant to the provisions of the Accounting Act, 33 of 34 firms in the sample (97.1%) could be defined as big, while only one (2.9%) firm was medium-sized business.

Size of the firms, or the number of employees is particularly emphasized as important considering the results obtained by a variety of econometric tests, which implied that the size should be determined differently from the standard accounting practices, and thus for the purposes of this research firms were classified into two groups: the limits for smaller firms was set up to 1000 employees and for equal or more than 1,000 employees for larger firms. This led to a distribution in which 15 companies (44.1%) had less than 1,000 employees, while 19 companies (55.9%) had 1,000 or more employees.

3.2 Data collection

The empirical data intended for analysis was collected by a long-term detailed monitoring and recording media releases detected and stored in a research database. The observed period is from 2009 to 2013, and the data were collected from the beginning of 2013 to the end of 2014. The study was conducted on the basis of specific recommendations and practices, taking into account the best practices of world renowned authors in the field.

Also in accordance with past experience of well-known authors in research of competitive dynamics (Ferrier, 1999, 2001, Young et al., 1996; Smith et al., 1992), structured content analysis was used in this study as a research method, by means collected media data extracted and classified relevant competitive moves taken by the firms.

Data of taken competitive moves was collected through the systematic recording of media reports related to each firm published in the 5 most read business portals in Croatia. During the implementation of research, competitive moves were classified in different categories according to the type of move taken by the observed firm (set of 9 categories, later explained in detail).

By daily monitoring and recording competitive moves, the research database was formed, containing all visible competitive activities undertaken by a firm in the context of its business strategies. Further processing and detailed analysis, the database was filtered and "purified" from a certain number of potentially irrelevant records, duplicates etc. Thereby we gained an insight into the competitive behavior of the diversity of moves taken by each particular firm.

When a comprehensive database was created for each firm, as a basis for further analysis, calculating the rate of complexity could begin. Also, in further empirical analysis it was possible to show the impact of the complexity of the achieved performance. Data of the firm's business operation, its performance and other characteristics (number of employees, management, etc.) are based on the annual reports of the selected firms and official databases and one part of the data was collected directly during the interviews with the management representatives of each firm.

3.3 Calculating the complexity of competitive repertoire

This section explains in detail the process of calculating the complexity on the data example derived from the mentioned sample. In the analysis, the maximum number of moves was unlimited, while the number of categories in which competitive moves were taken was limited to nine.

The analysis was based on nine possible categories of moves the observed firm could take. These were respectively: (1) pricing, (2) marketing, (3) new services, (4) new products, (5) new capacity (6), mergers and acquisitions, (7) legal, (8) technological and (9) signaling.

The selected categories of moves and keywords by which competitive moves were encoded are presented in the following table:

| Table 1: Coding and categorizing the competitive moves and the keywords | | |
|--|--|---|
| CATEGORY OF COMPETITIVE MOVE | KEYWORDS | EXAMPLES OF HEADLINES FROM MEDIA RELEASES |
| Pricing | Price, rebate, discount, sale... | Huge sale on fresh fruit in Lidl |
| Marketing | Commercial, promotion, campaign... | Zagrebačka pivovara organize Beckspierence party |
| New services | New service, online channel distribution, loyalty programs, financing... | Konzum now offers online shopping |
| New products | New devices, extension of product range, new packaging... | New type of life insurance in Allianz |
| New capacities | New shop, enlargement of capacity, new production line... | Ina opens new petrol station in Pula |
| Mergers and acquisitions | Merger, acquisition, strategic partnership, consolidation... | T-mobile takes over small cable operator |
| Legal | Lawsuit, contest, regulatory conditions... | Tele2 is suing competitors to the regulatory agency |
| Technology | Development of new technology, building of processes, new IT solutions, implementation of BI system... | Tisak has implemented new CRM system |
| Signaling | Intent, announcement, prior information... | PBZ bank has intention to make special proposals for big clients in next year |

After processing all the media releases and categorization of selected competitive moves, overall results were given for the each firm separately which served as the basis for calculating the complexity of repertoire. The following demonstrates the results obtained in the complexity examples of the sample firms.

| Table 2: The actual example of differences in the complexity of the moves of a firm within two years, regardless of seemingly similar features of competitive behavior | | | | | | | | | | | |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|-----|-------|
| $X_{i,1}$ | $X_{i,2}$ | $X_{i,3}$ | $X_{i,4}$ | $X_{i,5}$ | $X_{i,6}$ | $X_{i,7}$ | $X_{i,8}$ | $X_{i,9}$ | B_i | j | C_i |
| 0 | 0 | 11 | 1 | 3 | 0 | 0 | 0 | 1 | 16 | 4 | 0.48 |
| 0 | 0 | 7 | 0 | 5 | 0 | 0 | 1 | 3 | 16 | 4 | 0.67 |

The same firm was observed in two particular years. In the two observed years this particular firm performed the same number of competitive moves (16) related to the four types of nine ($j = 1, 2, 3, \dots, k$). Although the number of competitive moves was the same and both

companies related to four different types, the complexity was significantly different in the two observed years. The complexity was significantly higher in the second year of observation (0.67). It can be concluded that if the number of moves are more concentrated on one type, the result is the less complex repertoire. Also, if there are less different types of moves, the complexity will be lower, as can be seen from the following example.

Table 3: Hypothetical example of the differences in the complexity of the firm's moves within two years, regardless of seemingly similar features in competitive behavior

| $X_{i,1}$ | $X_{i,2}$ | $X_{i,3}$ | $X_{i,4}$ | $X_{i,5}$ | $X_{i,6}$ | $X_{i,7}$ | $X_{i,8}$ | $X_{i,9}$ | B_i | J_i | C_i |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|-------|-------|
| 0 | 0 | 4 | 4 | 4 | 0 | 0 | 0 | 4 | 16 | 4 | 0.75 |
| 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 16 | 8 | 0.88 |

From the above table (hypothetical example) it is evident that, if the 16 moves were to be equally distributed across four representation types (regardless of what categories it is), the complexity would be even higher (0.75). If their representation by type (e.g. from 4 to 8) would also increase with the same number of moves and with the same distribution, the complexity would additionally increase (0.88). These results justify the use of formula for calculating the complexity of each firm (taken from Ferrier, 2001):

$$C_i = 1 - \frac{\sum_{j=1}^k X_{i,j}^2}{\left(\sum_{j=1}^k X_{i,j}\right)^2} = 1 - \frac{\sum_{j=1}^k X_{i,j}^2}{B_i^2} \quad i = 1, 2, 3, \dots, n \quad j = 1, 2, 3, \dots, k,$$

$$B_i = \left(\sum_{j=1}^k X_{i,j}\right)^2.$$

3.4 Performance

Business performances from the aspect of competitive dynamics appear as the ultimate indicator of the effects of the competitive behavior taking place in unstable, turbulent and uncertain business conditions and forces firms to different approaches to business in order to successfully operate and create value for all stakeholders.

Since the return on sales (ROS) and return on assets (ROA) frequently stand out as benchmarks of performance in the research in the field of corporate entrepreneurship and strategic management (Ferrier, 2001; Murphy, Trailer and Hill, 1996; Boyd and Bresser, 2008) in this paper the impact of the characteristics of competitive moves is shown undertaken on the basis of these two key indicators.

Financial indicators are calculated from the official data provided by the Finance Agency (FINA) and then compared with the complexity of the competitive repertoire. The results are essential for the validation of the assumed thesis on complexity relations of the competitive repertoire and the actual performance.

3.5 Variable operationalization

Data containing cross-section and time-series components can be characterized as the panel data, and models that can adequately assess the impact of one or more independent variables on the observed dependent variable are panel models. There are several panel more models that can be used, such as Pooled panel, static panel model (fixed or random effect) or dynamic panel model (Baltagi, 2009).

Empirical studies have shown that the justification of the use of the appropriate panel model is based on the relative cross and time components while the appropriateness of the model is based on the diagnostic tests such as Hausman test, Sargan test and the like (Wooldridge, 2010). Additionally, it is common to previously transform values of all variables on the base of the natural logarithm (ln) whereby achieving stability of time series and reduces the impact of outliers (Bahovec and Erjavec, 2009).

It is important to stress that the time series component in this research refers to five years of observation, from 2009 to 2013 ($T = 5$), and a total of 34 firms ($N = 34$). Number of the firms in the sample derives from 17 dyads selected in the quota sample (17 challengers and 17 leaders). Using longitudinal study, the huge amount of data was aggregated on the competitive behavior of the firms from different industries on the Croatian market with a total of 170 observations.

The quota sample is intentional sample, whose elements were chosen by the researcher in its sole discretion. It is appropriate approach when the researcher has sufficient information on the characteristics of the entire population, and when the researcher believes that this set of elements should be explored, just as is the case in this study.

In the interpretation is the always necessary to emphasize whether the sign of the estimated coefficient is appropriate and which variables are statistically significant at the empirical significance level below 10%, which are statistically significant in the empirical significance level of less than 5%, or below 1%. While using one-way testing, t-test will be conducted at the lower limit if the sign of the negative variables or the upper limit if the sign of the variable positive.

4. RESEARCH RESULTS

After clustering of numerical variables values in the intervals of equal size, the common statistical and analytical indicators were calculated, such as the minimum and maximum value, the mean and standard deviation. Figure 1 shows that the average number of moves taken in a sample of companies was 16,26 (≈ 16) with an average level of complexity of 0.65.

Average level of complexity at 0.65 is moderately high since it can take values from 0 to 1. From the following histogram, it is also evident that the distribution of the firms is not symmetrical, it is more asymmetric on left side (there are a few companies with very low complexity). Dominating firms are those performing an average of 10-20 competitive moves with the complexity of between 0.6 and 0.8. This is evident from the following tabular and graphical display. For this purpose, the value of the variable is grouped into five categories, i.e. of same 0.2. size interval

| Value | Cumulative | | Cumulative | |
|------------|------------|---------|------------|---------|
| | Count | Percent | Count | Percent |
| [0, 0.2) | 1 | 0.59 | 1 | 0.59 |
| [0.2, 0.4) | 3 | 1.76 | 4 | 2.35 |
| [0.4, 0.6) | 43 | 25.29 | 47 | 27.65 |
| [0.6, 0.8) | 112 | 65.88 | 159 | 93.53 |
| [0.8, 1) | 11 | 6.47 | 170 | 100.00 |
| Total | 170 | 100.00 | | |

Figure 1: Distribution of firms according to the complexity of competitive moves taken in the period of 5 years

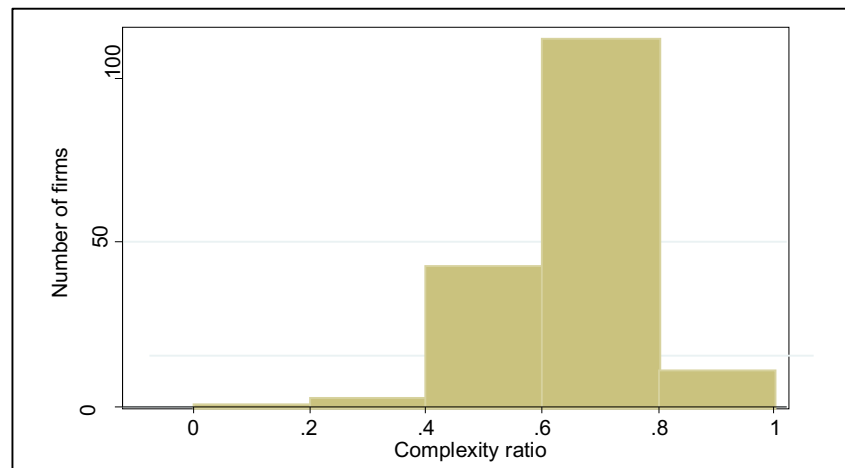


Figure 2: Histogram distribution firms according to the complexity of competitive moves taken in the period of 5 years

Furthermore, empirical analysis based on a series of different panel models and supported by a number of tests, in order to obtain the most appropriate model in a specific analysis and in order to acquire the most relevant results in the research.

The main thesis of the study is that there is a positive impact of the complexity of competing firms' repertoire on the performance level. The assumption of positive relationship was based on the fact that firms taking more complex and diverse repertoire gain a competitive

advantage in terms of innovation, non-imitativeness etc., thanks to which they are achieving better performance. As previously mentioned, the complexity of the competition repertoire was measured on the basis of diversity undertaken competitive moves while the performance was expressed by ROA and ROS indicators.

After preliminary calculations, the obtained results primarily pointed out the necessity of classification of firms with less than 1,000 employees and companies with 1,000 or more employees. This conclusion was imposed after inspecting the B-P diagrams, whereby it was shown that less atypical data values was when the firms were classified into two categories depending on their size. Therefore it was decided that the firms in the sample would be classified exactly as described above.

The collected data were analyzed using the software package Microsoft Excel and using the software program package for statistical data analysis STATA. Statistical analysis was based on descriptive statistics, correlation and analysis of the panel models. A series of diagnostic tests were performed: F-test, Hausmann test, chi-square test, analysis of variance (ANOVA) and nonparametric correlation. Also, methods of tabular and graphical presentation of the results were used. Through statistical analysis and conducted tests, the suitability of a particular model was shown, and it was decided on the usage of suitable fixed and random effects models whose results are presented below.

According to the results of panel models with fixed effects (proven to be the most appropriate in the performed part of the research during the analysis of indicator ROA), it is evident that the complexity of competitive repertoire of the firm has a positive and significant impact on ROA only in firms with 1,000 or more employees, while a significant and positive impact of the "overall competitive activities of the firm," exists only for indicator ROS, regardless of the firm size.

| | | | | | | |
|-----------------------------------|--|--------------------|-----------------------------------|-------------------|-------|----------------------|
| Fixed-effects (within) regression | | Number of obs | = | 93 | | |
| Group variable: id | | Number of groups | = | 20 | | |
| R-sq: within = 0.0310 | | Obs per group: min | = | 1 | | |
| between = 0.1658 | | avg | = | 4.7 | | |
| overall = 0.0199 | | max | = | 5 | | |
| | | F(2,71) | = | 1.14 | | |
| corr(u_i, Xb) = -0.2801 | | Prob > F | = | 0.3268 | | |
| ----- | | | | | | |
| roa | | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] |
| ----- | | | | | | |
| broj | | -.0417265 | .0559504 | -0.75 | 0.229 | -.1532883 .0698354 |
| kompleksnost | | 5.585227 | 4.259532 | 1.31 | 0.097 | -2.908038 14.07849 |
| _cons | | .7523529 | 3.081579 | 0.24 | 0.404 | -5.392141 6.896847 |
| ----- | | | | | | |
| sigma_u | | 5.9559814 | | | | |
| sigma_e | | 2.6790004 | | | | |
| rho | | .8317253 | (fraction of variance due to u_i) | | | |
| ----- | | | | | | |
| F test that all u_i=0: | | F(19, 71) = | 15.53 | Prob > F = 0.0000 | | |

Figure 3: Results of panel model with fixed effect for firms with 1,000 or more employees; the dependent variable ROA

From the results of the assessment of panel model with fixed effect for firms with 1,000 or more employees shown in the table above, with the dependent variable ROA, it is evident that the complexity holds statistical significance at the 10% of significance rate, with a positive effect at ROA.

According to the results from a panel model with the random effect (which proved to be the most appropriate in analyzing indicator ROS), it was concluded that the firm's complexity of competitive repertory has a significant and positive effect on ROS exclusively in firms with more than 1,000 employees.

| | | | | | |
|-------------------------------|-----------|-----------------------------------|----------------------|-------|----------------------|
| Random-effects GLS regression | | | Number of obs | = | 93 |
| Group variable: id | | | Number of groups | = | 20 |
| R-sq: within = 0.0555 | | | Obs per group: min = | | 1 |
| between = 0.0000 | | | avg = | | 4.7 |
| overall = 0.0055 | | | max = | | 5 |
| | | | Wald chi2(2) | = | 3.79 |
| corr(u_i, X) = 0 (assumed) | | | Prob > chi2 | = | 0.1507 |
| ----- | | | | | |
| ros | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] |
| -----+----- | | | | | |
| broj | .1448103 | .0842536 | 1.72 | 0.043 | -.3099444 .5993237 |
| kompleksnost | 6.432379 | 3.818542 | 1.69 | 0.045 | -6.343728 19.20849 |
| _cons | 4.624413 | 4.893356 | 0.95 | 0.172 | -4.966389 14.21521 |
| -----+----- | | | | | |
| sigma_u | 7.6481306 | | | | |
| sigma_e | 4.3563093 | | | | |
| rho | .75503932 | (fraction of variance due to u_i) | | | |

Figure 4: Results of the panel model with random effect for companies with 1,000 or more employees; the dependent variable ROS

From the results of the assessment of panel model with random effect for firms with 1,000 or more employees shown in the table above, with the dependent variable ROS, it is evident that complexity holds statistically significant significance at 5% significance rate, having positive affect to ROS indicator.

The connection was partly dependent on the number of employees in the firm, so it is evident that complexity of the competition repertoire was significant only in the observed firms having 1,000 or more employees. This supports the thesis and further supports the conclusion that the complexity (complexity) in a competitive repertoire has a strong impact and a positive effect on the performance of large firms.

A summary of the results, impact of complexity of competitive repertoire to firm performance is given in the table below.

| Table 4: Comparison of the appropriate panel models and model result | | |
|---|----------------|----------------|
| Indicators | ROA | ROS |
| Panel model | FIXED | RANDOM |
| No. of employees ≤ 1000 | / | / |
| No. of employees > 1000 | Complexity (+) | Complexity (+) |

From the above table it can be concluded that the analysis of the research results show that the complexity of firms' competitive repertoire significantly affected their business performance in the sample of large firms (with more than 1000 employees) observed within the five-year period. Also, there is a positive correlation of moderate intensity being statistically significant at a significance level of 10%.

5. CONCLUSION

Subject study in this paper was the competitive dynamics among 34 observed firms, characterized by business strategy that define the management teams of firms and their competitive moves performed on the market. Depending on preferences, experience, management beliefs, available resources, etc., some of the firms in the sample implemented a complex repertoire of competitive moves, some simple, and some combined, depending on the estimated position, with the aim of improving the competitive position and performance. It should be pointed that it was confirmed that complexity of competitive repertoire is the very important construct in the competitive behavior of companies and its efforts for the achievement of competitive advantages.

The main connection observed in this study was between the complexity of competitive repertoire and performance of observed firms. Based on the results of quantitative and qualitative analysis, it can be concluded that the higher level of complexity in a competitive repertoire has a positive effect on performance and it is certainly preferable for the firms to have diverse and creative business policy in their competitive activities.

Certainly, it should be noted that the connection was partly dependent on the size of the firms (defined by the number of employees). Based on the obtained results it was concluded that the relationship between the complexity of competitive repertoire and performance was significant only for large companies or those companies with 1,000 or more employees, which confirmed the assumptions of the set thesis. Bearing this in mind, in the context of the sample, a positive impact of a complex repertoire on the performance has proven the connection only when it comes to large firms. This insight represents additional contribution deriving from the research. Surely in future efforts an additional contribution can be given by researching a detailed link between the size of the firms, its competitive behavior and the consequential effects on performance.

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The Effects of Network Agreements on Firms' Performance

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ABSTRACT

In the current economic environment characterized by globalization, technological innovation, financial crisis, firms are facing a sharp drop in sales, production and number of employees. These changes require firms to formulate viable business responses to prevent market exit. One of the ways to strengthen the production system is represented by network agreement, according to which firms work together to achieve a common goal to be more competitive and to achieve what they themselves could not do because of the limitations inherent in the lack flexibility, expertise and lack of financial resources. The purpose of this paper is to evaluate the effectiveness of the network agreements implemented by firms operating in the industrial sector. The analysis is conducted on the Italian firms that, from 2009, have started collaborative relationships through the network contract introduced by the Italian law n. 33 of 9th April 2009. The paper is structured as follows. The first part examines the main contributions in the literature concerning the topics related to networks and the firms' competitiveness and also the reasons influencing the formation and development of alliances between firms. The second part, instead, is focused on the evaluation of the effectiveness of the network contracts by observing the performance of firms before and after their join the network. In terms of competitiveness has been observed sales while, with regard to profitability was observed the return on investment (ROI). The findings show significant results in relation to both the turnover and profitability.

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1. INTRODUCTION

The importance of small and medium-sized enterprises (SMEs) for the Italian economy is widely documented by statistical analysis and is proven by numerous economic and business management studies that have focused on the elements of excellence, on vulnerabilities, constraints and conditions for success of the business model of the firms (Cortesi et al., 2004; Visconti, 2000 and 2006). In Italy 99.7% of active industrial firms has a staff of fewer than 250 employees and 81.7% are even micro-enterprises. The current economic climate in which firms are operating appears complex and uncertain and reflects a structural instability. The challenges of the context in which SMEs face due to globalization, technological innovation, the increasing complexity of markets and radical change in the competitive environment, certainly do not help the economic recovery. On the other hand, the economic and financial crisis continues to impact negatively on SMEs Italian causing a sharp drop in sales, production, employment and exports in the same. Within this framework, firms are urged to formulate viable business responses to prevent market exit. Recent statistics show that the number of bankrupt companies continues to rise and remain above the average of previous years. It is clear, therefore, the need for SMEs to carry out a deep transformation of its organizational structure by adopting instruments and cooperation policies in order to create winning synergies that can boost the local economy. One of the ways to strengthen the production system is represented by the network contract, according to which firms work together to achieve a common goal that is to be more competitive and to achieve what they

themselves could not do because of the limitations as regards in the lack flexibility, expertise and lack of financial resources.

The birth and the development of collaborative relationships can be a valuable tool for firms capable to ensure their growth even in times not so favorable. The change occurred in the profile of SMEs competitiveness requires a greater propensity to develop reticular relations to strengthen and consolidate its wealth of knowledge and skills and, more generally, in order to achieve the benefits of economies of scale and scope that characterize big business. The collaboration agreements and relationships between firms received in Italy explicit recognition by the legislature in 2009. It is only with the enactment of Law no. 33 of 2009, that the network contract has been regulated for the first time. This article aims to analyze the state of the network contracts in Italy in order to assessing their impact on the level of growth of manufacturing firms. The paper is structured as follows. The following section makes a brief review of the main contributions in the literature with regard to issues related to networks and the growth of SMEs. The third paragraph sets out the structure of the network contracts started in Italy. The fourth paragraph, however, is devoted to the analysis of the network contracts, which is made by observing the levels of growth and profitability of the firms involved. The final section of the paper presents conclusions.

2. THEORETICAL BACKGROUND AND HYPOTHESES

Networks agreements in a business management perspective and, more generally, in management studies represent a current topic but not new. The theme of the development of policies and aggregation of business cooperation has been the focus in the last 30 years of numerous scientific contributions related to:

1. Organizational Theory (Pfeffer, 1972; Williamson, 1975 and 1985; Mintzberg, 1979; Rugiadini, 1979; Lomi, 1991; Nohria and Eccles, 1992; Perrow, 1992; Grandori and Soda, 1995; Butera, 1999; Soda, 1998);
2. Strategic Management (Penrose, 1959; Wernerfelt, 1984; Barney, 1991; Lorenzoni, 1992; Porter, 1998; Ireland et al., 2002; Ricciardi, 2004),
3. Industrial districts (Asheim, 1986; Rullani, 1995; Albertini and Pilotti, 1996; Becattini, 2000; Guerrieri et al., 2001);
4. Innovation theory (Lipparini and Sobrero, 1994; Powell, 1996 and 1998; Robertson et al., 1996; Erickson and Jacoby, 2003; Pittaway et al., 2004; Riccaboni, 2005).

From a business perspective, the networks are considered to be of "valuable assets" that facilitate the acquisition of resources and knowledge that are essential for the survival and growth of businesses, and particularly for SMEs (Julien, 1995). These often have not sufficient resources and knowledge to address the rapidly changing environment in which they operate and, therefore, through the development of inter-firm relationships they can acquire the tools necessary to defend or increase national and/or international competitiveness (Hakansson, 1987; Ricciardi, 2001; Rubino, 2006).

The effectiveness of the combinations on the network is documented by numerous empirical studies conducted over time (Ostgaard and Birley 1996; Lechner and Dowling 2003; Rogers 2004; Watson 2007; Park et al., 2010; Schoonjans et al., 2013), which they have fostered awareness on the part of institutions and entrepreneurs of the benefits obtained through their implementation. In recent years, in fact, there was in Italy a growing attention to this issue, as a result of the new awareness of the key role of the network contract for the purposes of a possible economic recovery of the country. The network, linking firms from different environments, meets the need for overcoming the localism and the district itself as the natural

evolution of the collaboration model of the modern production system. Aggregations network are a valid response to address the rapid changing of relations between the territory and global economy. Crisis and globalization are two current issues, whose overcoming requires firms to develop growth paths also based on internationalization. Aim exports may represent a necessary choice for SMEs. However, it should be noted that the number of micro firms operating in Italian territory often have not sufficient resources and expertise to enter or remain successful in international markets. Therefore, to collaborate with other firms can be a solution to overcome this problem.

Several studies show that networks agreements contribute to the growth of firms' performance at international level. According to these studies, the networks can help to accelerate the expansion and overcome the liabilities of foreignness (Hymer, 1976) and outsidership (Johanson and Vahlne, 2009; Pinho and Prange, 2015). For SMEs to join the network is a crucial function in which it creates value through the creation and access to a variety of resources, such as new knowledge, which is a fundamental driver of value creation in the firm (Barney, 1991; Porter, 1986, 1990). The literature suggests that knowledge from networks leads to strong competitive advantages and enhance firm performance (Fang et al., 2013; Nguyen, 2011).

The networks effects on firms' performance, in the networks perspective, have been also explored in the past (Axelsson and Johanson, 1992; Depperu, 1993 Coviello and Munro, 1997; Johanson and Mattson, 1988; Ellis, 2000), and some researchers have shown that their startup is promoted by the development of inter-organizational relationships (Ellis and Pecotich, 2001; Fernandez and Nieto 2005). These reports can provide a more in-depth knowledge of the market, thereby reducing the uncertainty and timing of decision-making, supporting, at the same time, the internationalization (Depperu, 1993). A firm that undertakes a journey of internationalization, without developing inter-organizational relations, is forced to face higher levels of risk and uncertainty due to the lower availability of information on foreign markets to be approached (Lorenzoni, 1997; Mazzola and Sciascia, 2008). In general, therefore, it is possible to argue that business networks facilitate the acquisition of knowledge, skills and resources essential to the growth and the survival of SMEs, elements that would be difficult to achieve especially in the current competitive scenario. At the same time, the network allows firms to: (1) acquire new information and technical knowledge; (2) develop innovative products; (3) optimize the production and marketing processes. The acquisition of all these elements, should allow firms to participate in the networks in order to obtain better performance than firms isolated (Goerzen, 2007; Foresti, 2012).

A firm's economic performance is measured on the basis of its rate of Return on Investement (ROI), which managers widely use to evaluate their annual operations. Another indicator used to measure economic performance is also represented by sales, which measures the level of growth of the firm and its competitiveness. In relation to the analysis of the effects of the networks agreements on firms, we hypothesize:

Hypothesis 1a: ROI growth is positively influenced by the presence of the firm in a network contract.

Hypothesis 1b: Sales growth is positively influenced by the presence of the firm in a network contract.

3. METHODOLOGY

3.1 Data sources

In order to assess the impact of the network contract on the firms' performance, we have performed an analysis on the population of manufacturing firms that have joined the network in 2011 and 2012. The analysis focused on manufacturing firms, which perform activities that fall in the codes "ATECO" C25 and C28. Italian firms are categorized by a code called ATECO, which describes the type of business. The information on firms that have joined the network contract have been found by consulting the database available at the Chambers of Commerce. Instead, performance data were acquired by AIDA database Bureau Van Dijk. The choice to analyze the manufacturing sector has depended on two grounds. The first one is related to the high level of representativeness of the manufacturing sector for the Italian economy. In fact, considering the recent crisis, we have analyzed this sector in order to observe the effects produced by the network contract on firms' performance. Secondly, it should be stated that the majority of network contracts are referred to the manufacturing sector. This allowed to conduct research on a larger number of firms. The analysis focused only on 247 firms (n. 122 operating in the sub-sector C25 and n. 125 of the sub-sector C28) because we have excluded firms for which no performance data were available and also we have selected only those that have joined the network in 2011 and 2012. In order to gauge the percentage change in the firms' performance we calculated the growth (or decline) of two indicators: (1) sales, to evaluate competitiveness; (2) Return on Investment (ROI) for the firms' profitability. The change in the above-mentioned indicators was calculated between the years 2013-2011, for firms that have joined the network in 2011, and between 2014-2012 for firms that have joined the network in 2012. To allow a significant analysis, in order to evaluate the change in the performance indicators we have extended the analysis on other 247 firms of the same sectors that have not joined the network. We aimed at obtaining a well matched sample of 494 firms equally divided between network's firms and not. The choice of the latter was carried out to ensure the presence of firms of the same size (in terms of total assets or number of employees) and with the same geographical distribution (north, center, south) as well as belonging to the same sub-sector of activity. In this way, through a multiple linear regression model we have tested our hypotheses in order to evaluate if the network has a positive impact on firms' performance.

3.2 Measurements

Our dependent variable is firm performance. Prior studies have used various measures to gauge the performance outcomes of the network firms. To assess the profitability we decided to rely on a change in the Return on Investment (ROI) to assess the profitability; instead, regarding the competitiveness we considered the change in Sales Revenues.

The independent variables are: (1) Network, which is considered as a key predictor variable. This is represented as a dummy variable with value of 1, if the firm participating in a network contract, and 0 otherwise; (2) Sub-sector activity: is a dummy variable with value 1, if the firm pertains to the sub-sector activity C28 and 0 if the firm belongs to the sub-sector C25; (3) the geographic area in which the firm operates: we have considered 3 dummy variables (north, center, south). Finally as control variables, we have considered the firm size by using the Log of the Total Assets.

4. EMPIRICAL RESULTS

The results of the analysis show that the research hypotheses are in part confirmed. In particular, as shown in Table I and II, the first hypothesis is confirmed, the second one not. The results confirm that network firms performed better than non-network firms, in the period immediately following the start-up of the network agreements. Belonging to a network is an important variable for the purpose of improving the level of profitability expressed by the ROI. According to previous studies the social context in which a firm operates can have a significant impact on its behaviour and performance (Schoonjans et al., 2013).

| Table 1: Dependent variable: Δ ROI - OLS using observations 1-494 | | | | | |
|---|--------------------|-------------------|--------------------|----------------|----|
| | <i>Coefficient</i> | <i>Std. Error</i> | <i>t-ratio</i> | <i>p-value</i> | |
| const | 3.32748 | 2.5958 | 1.2819 | 0.2005 | |
| Network | 1.87666 | 0.90858 | 2.0655 | 0.0394 | ** |
| Sub-sector | 0.708335 | 0.652846 | 1.0850 | 0.2785 | |
| North | 0.0177085 | 0.725852 | 0.0244 | 0.9805 | |
| Center | -1.41699 | 0.901593 | -1.5717 | 0.1167 | |
| Total Assets (Log) | -0.597057 | 0.499228 | -1.1960 | 0.2323 | |
| | | | | | |
| Mean dependent var | 1.634490 | | S.D. dependent var | 6.953721 | |
| Sum squared resid | 22653.94 | | S.E. of regression | 6.813370 | |
| R-squared | 0.049697 | | Adjusted R-squared | 0.039960 | |
| F(5, 488) | 4.607549 | | P-value(F) | 0.000406 | |
| Log-likelihood | -1645.867 | | Akaike criterion | 3303.735 | |
| Schwarz criterion | 3328.950 | | Hannan-Quinn | 3313.634 | |
| <i>Heteroskedasticity-robust standard errors, variant HCl</i> | | | | | |
| *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$ | | | | | |

| Table 2 : Dependent variable: Δ SALES - OLS using observations 1-494 | | | | | |
|---|--------------------|-------------------|--------------------|----------------|--|
| | <i>Coefficient</i> | <i>Std. Error</i> | <i>t-ratio</i> | <i>p-value</i> | |
| const | 0.0913513 | 0.359502 | 0.2541 | 0.7995 | |
| Network | 0.0612699 | 0.145438 | 0.4213 | 0.6737 | |
| Sub-sector | -0.0383045 | 0.078222 | -0.4897 | 0.6246 | |
| North | -0.0428449 | 0.0765879 | -0.5594 | 0.5761 | |
| Center | 0.257199 | 0.164547 | 1.5631 | 0.1187 | |
| Total Assets (Log) | 0.0359914 | 0.0625606 | 0.5753 | 0.5654 | |
| | | | | | |
| Mean dependent var | 0.292274 | | S.D. dependent var | 0.871236 | |
| Sum squared resid | 366.9303 | | S.E. of regression | 0.867125 | |
| R-squared | 0.019460 | | Adjusted R-squared | 0.009413 | |
| F(5, 488) | 0.856909 | | P-value(F) | 0.509994 | |
| Log-likelihood | -627.5068 | | Akaike criterion | 1267.014 | |
| Schwarz criterion | 1292.229 | | Hannan-Quinn | 1276.913 | |
| <i>Heteroskedasticity-robust standard errors, variant HCl</i> | | | | | |

In fact, through network interaction, firms are able to identify and exploit opportunities and to manage their environmental uncertainties (Burt 1997; Elfring and Hulsink 2003). Network agreements enables firms to get access to knowledge and resources in a timely and cost-effective manner (Powell et al. 1996; Gulati and Higgins 2003). In general, considering the above, firms involved in strong network relationships with other firms are often able to achieve better perform than no network firms.

The second research hypothesis, as shown in Table II, is not confirmed. Probably the reason for the lack of significance of the sales variable may depend on the structure of the manufacturing sector. Networks may have improved the firms' performance through internal reorganization processes or by improving production/business processes whose effects have affected the profitability but not the volume of sales. In fact the Italian manufacturers have been affected by the crisis with greater intensity than in other sectors. For this reason the network firms have been trying to minimize the decline in sales and gain competitiveness by acting on cost reduction as a result of the sharing of knowledge, the strengthening of relations with suppliers and optimization of the production structure.

5. CONCLUSION

The aim of this paper was to test the effects of network agreements on firms' performance. The research hypotheses formulated, as noted in the previous paragraph, were partially confirmed. The network contract, although he has gained pace in the last three years, it is still not widespread especially when taking into account the number of firms operating in the Italian territory. The analysis focused on manufacturing firms that are more present in the world of network contracts (38%). Nevertheless, taking into account the availability of accounting data, it was possible to analyze only a small number of firms operating within this sector.

However, the introduction of the network agreements by the legislature should be welcomed especially when considering the contribution to the revival of the theme of formal collaboration between firms. Management studies, as already noted, have long recognized the importance and value of the agreements between firms, which make up for SMEs one of the main strategies to be put in place to raise their innovation capacity and competitiveness. More than ever networks must be seen as an obvious choice rather than a simple option. According a resource-based perspective (Penrose, 1956; Wernerfelt, 1984), firms with distinctive resources and business skills must be able to use them to the fullest. The collaboration policies allow firms access to resources of strategic importance covered by other firms. Networks as a whole can be interpreted as an architecture of resources and expertise variously combined, able to improve the firm's performance.

The evaluation of the performance produced by networks can be assessed in a broader perspective. First of all it should be noted that the assessment of the impact that the network has on the performance of a single firm (firm's performance), can not ignore the evaluation the performance and effectiveness of the whole network (network performance). A network is effective if it achieves its objectives. Therefore, future research may analyze a series of indicators of the effectiveness of a network which allow to translate the effectiveness in economic results directly attributable to the network performance. The concept of effectiveness identifies the ability to achieve a goal and can be expressed as an absolute

quantification of the results obtained by the network or considering the ratio between results achieved and planned. Also it may be useful to undertake further research based on a survey. This would make possible to evaluate other variables such as the composition and the network structure, the CEOs' ties, in order to verify if and how these variables impact on the firms' performance.

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The Influence of Top Managers' Personal Values On Sustainability Of SMEs In Developing Countries

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ABSTRACT

The purpose of this paper is to provide a new theoretical insight regarding top managers' personal values in developing countries based on the Schwartz Values Theory (Schwartz, 1992, 1996, 2006; Schwartz and Bilsky, 1990) and to explore the influence of top managers' personal values on sustainability performances of successful businesses.

The research describes personal values differences between top managers and their commitment to pro-social and pro-environmental responsibility who were approached through the validated and reliable questionnaire on identifying top managers' personal values (PVQ40) and questionnaire on sustainability indicators observed through the „triple bottom line“ concept which includes three measuring elements: financial, social and environmental performances (Fauzi, Svensson and Rahman, 2010).

Given that top managers are very often the owners in SMEs, their values are largely reflected in the organizational values, which means that in small pro-environmentally oriented firms, the personal values of owners-managers seem to play a much stronger part in motivating pro-environmental behaviors than in other SMEs (Lawrence et al., 2006). With regard to business sustainability, it is still insufficiently known, developed and understood in Southeast Europe and in developing countries. Therefore, this research may be used to encourage companies and local governments to include a sustainability issues in their business activities as a pre-condition for business success and competitiveness. The managers in SMEs can use this research as a guideline on introduction of contemporary principles of sustainability into their companies and to improve and direct their personal values towards sustainability.

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1. INTRODUCTION

The first part of this paper refers to the explanation of personal values concept, which represent one of the most important psychological characteristics of man which determine his individual and common sense and have a great motivational potential of affecting all a man wants, thinks and works. Values are imbued into every man's individual decision, action and lifestyle of his communities. In this research personal values are examined and explained through Schwartz' theory of personal values.

In addition to examining of personal values, the focus in this paper is on the impact of these values on a successful business - the sustainability of SMEs in Bosnia and Herzegovina, as a developing country. In Bosnia and Herzegovina, as well as in the most European countries, small and medium enterprises (SMEs) dominate in the total sample of companies making more than 99% of the companies and therefore represent a major source of employment, income generation, innovation and technological improvement.

Universal indicators to measure business performance do not exist, which means that the basis for measuring the success of firms varies according to the purpose and for that reason various indicators of performance are being used. The success of business enterprise is most commonly expressed by financial indicators that are visible in the financial statements (ROA, ROE, ROI, and many others), although today are increasingly being used non financial business indicators (TQM, BSC, KPI and others). Fatoki (2011) emphasizes that financial and non-financial measures should be used to assess business performance.

Fauzi, Svensson and Rahman (2010) suggested that for measuring the business success (measuring the firm's sustainability performance), should be used the concept of "Triple Bottom Line" (TBL) which would consist of three measuring elements: (1) financial, (2) social and (3) environmental elements.

In this paper the sustainability, as a business performance, is viewed through the integration of financial, social and environmental responsibility, that is through the wise use of financial and natural resources, as well as the respect for people and all living creatures. For determining the social and environmental performance the concept of corporate social responsibility is used - CSR as part of the sustainability (the concept of CSR includes the terms "society" and "environment", but for the purpose of this work environment is extracted from the CSR).

The important question in this paper was: "Does top managers' personal values of successful SMEs in developing countries, like Bosnia and Herzegovina, have a positive impact on sustainability?"

Zainol and Ayadurai (2011) emphasize that the managerial personality, particularly with regard to their values and goals are inseparable from business objectives. The authors' further state that managers' personal values and their motivation influence the management and business practices that are adopted in the conduct of business, and ultimately, the success of their business.

Since, in Bosnia and Herzegovina a large number of enterprises are being closed and constantly increases number of companies with blocked accounts with banks, this study examined the elements that contribute to their sustainable success regardless of the crisis and the risks that are an integral part of every business environment. This paper examined the influence of top managers' personal values on sustainable business of SMEs in Bosnia and Herzegovina, examining the companies that generate positive financial results (profit from operations), as well as their social and environmental responsibility.

2. VALUES THEORY AND CONCEPTUAL DEFINITION OF VALUES

Personal values are being investigated in a number of fields including management, economics, psychology, sociology and anthropology. An analysis of the relevant literature shows that there are over four hundred definitions and eighteen criteria of values to determine the content of this term (Pantić, 2005).

The relationship of modern man toward his values is dynamic because with changing the social position of a particular social group changes his relationship to values and it is this

multi-dimensionality and dynamism which makes it difficult to define values. Tanović (1972) in an effort to overcome the different meanings of the values in modern axiological theory, determined the value as "a term whose content is a relationship in which an object meets a human need, while the meaning of the values is seen in the issues: (1) whether is something desirable, although it is really desired, (2) whether it is good for man, although it is believed to be and (3) whether it is useful as it is considered that ".

Although there are many definitions of values, some of the most commonly used definitions of values are:

- "A value is an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence" (Rokeach, 1973).
- "Values are desirable, trans-situational goals, varying in importance that serve as guiding principles in people's lives (Schwartz and Bardi, 2001).

Values are relatively stable categories in contrast to ephemeral emotions and attitudes, which indicates that values are not unchangeable or completely stable, but not completely unstable and easily changeable (Rokeach, 1973).¹

When it comes to value systems, according to Rokeach they can be understood as a general plans for decision-making and conflict resolution, and learned organization of principles and rules for the selection of different modes of behaviour in some situation, as such, constitute a continuum along which the values are arranged according to the relative importance.

When we talk about values as drivers of behaviour, Bardi and Schwartz (2003) in their study which investigate the relationship between values and behaviour found that values motivate behaviour. Value determines human behaviour, but does not necessarily mean an action - if the value is recognized, but it is considered unrealistic, it will not become the target nor will cause any action (Dimitrijević and Stojanović, 1996).

Personal values carry implications for the behaviour of leaders and managers, as well as the implications for management and decision-making styles (Ciulla, 2004; Krishnan, 2001; Connor and Becker, 2003), the link between managerial values and ethical decision-making in the organization (Fritzsche and Oz, 2007) the link between managerial values and organizational values (Hamann, Habisch and Pechlaner, 2009; Heugens, Kaptein and Oosterhout, 2008), the link between managerial values and strategy - a strategic choice (Kaldschmidt, 2011) which affects organizational performance and the implications of value connections in the top management team.

2.1 Schwartz' Values Theory

Schwartz argues that values as a conscious goals reflect three universal human requirements: biological needs, requirements for social coordination between individuals and requirements that result from the needs for survival and welfare in groups (Schwartz, 1992; Schwartz and Bilsky, 1987, 1990). From these requirements he derived ten different motivational types of values, such as: power, achievement, hedonism, stimulation, self-direction, universalism,

¹<http://darhiv.ffzg.unizg.hr/52/1/HrvojeHajnic.pdf> (Retrieved April, 7, 2014)

benevolence, tradition, conformity and security, and developed a content typology of different values (Schwartz, 1996).

Taking on Rokeach's values conception further, Schwartz in collaboration with colleagues (Schwartz and Bilsky, 1987, 1990; Schwartz and Sagiv, 1995; Schwartz and Boehnke, 2004) expanded on Rokeach's value theory and developed a framework for identifying value types, understanding the motivational aspects of values and developed instruments for measuring values that are frequently used in Values research (Schwartz Values Survey - SVS) and the questionnaire about personal values (Portrait Values Questionnaire - PVQ).

Schwartz (1992) defines a specific values as those that represent a certain type of values when the behaviour that is moving towards their fulfilling supports motivating goal of this type. Schwartz presented ten motivational types of values with 56 specific values shown in table no. 1.

| Table 1: Contents of motivational types of values in terms of motivational goals and their specific values | |
|---|--|
| Value type and motivational aim | Specific values |
| POWER: Social status and prestige, control or dominance over people and resources | Social power, wealth, social standing, authority, preserve the self-image and image on society |
| ACHIEVEMENT: Personal success through demonstrating competence according to social standards | Self-respect, ambition, influence, capability, intelligence, success |
| HEDONISM: Pleasure and sensuous gratification for oneself | pleasure, enjoyment in life |
| STIMULATION: Excitement, novelty, and challenge in life | An exciting life, a varied life, daringness |
| SELF-GUIDANCE: Independent thought and action, creativity, exploring | freedom, creativity, private life, independence, choosing own goals, curiosity |
| UNIVERSALISM: Understanding, appreciation, tolerance, and protection for the welfare of all people and nature | equality, inner harmony, a world at peace, unity with nature, wisdom, a world of beauty, social justice, tolerance, protecting the environment |
| BENEVOLENCE: Preserving and enhancing the welfare of those with whom one is in frequent personal contact | Spiritual life, meaning in life, mature love, true friendship, loyalty, honesty, complaisance, responsibility, forgiveness |
| TRADITION: Respect, acceptance and maintaining of the customs and ideas of traditional culture or religion where the individual belongs | Respect for tradition, moderate, humility, acceptance of my portion in life, religiousness |

| Table 1: Contents of motivational types of values in terms of motivational goals and their specific values | |
|--|---|
| CONFORMITY: Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms | politeness, self-discipline, honour parents and elders, obedience |
| SECURITY: safety, harmony, and stability of society, of relationships, and of self. | A sense of belonging, social order, national security, reciprocation of favours, family security, health, cleanliness |

Source: Schwartz (1996)

Schwartz and Rokeach base their assessment on the justification of these basic values across all cultures, in which the validity and comprehensiveness of 10 basic values is confirmed by numerous other researchers (Schwartz, 1992, 1996, 2006; Schwartz & Bardi, 2001; Schwartz & Bilsky, 1987, 1990; Schwartz & Boehnke, 2004; Schwartz & Sagiv, 1995).

Schwartz (1992) further divided ten motivational types of values into four types of higher order values, which are:

1. Self-transcendence (includes value types "universalism" and "benevolence"), which reflects the acceptance of others as equals and care for their well-being,
2. Self-enhancement (value types "achievement" and "power"), which reflects the achievement of personal success and dominance over others,
3. Openness to change (value types "self-direction" and "stimulation") reflects the freedom of thought and action as well as the tendency to change,
4. Conservation (value types "security", "conformity" and "tradition") reflects obedience and restriction of own actions with the aim of preserving the status quo.

These four types of higher order values Schwartz see as opposite poles of two dimensions, where the first dimension refers to "openness to change" as opposed to "conservatism", while the other dimension includes "self-transcendence" as opposed to "self-enhancement". "Hedonism" is the only type of value that contains elements that can be found in both dimensions, i.e. is associated with "openness to change" and "self-enhancement" (Schwartz, 1996).

The focus in this paper is on the personal values of top managers that are necessary to ensure the sustainable success of the business.

2.2 Value priorities of the Balkans with special attention to Bosnia and Herzegovina

In today's Balkans intertwine tradition as rich cultural heritage of each country, on the one hand and modernization, on the other hand, which is emerging as the basis and need for Euro integration. The European integration of the Balkan countries implies, among other things, the release of past burdens of their societies (various traditionalist prejudices, superstitions, behaviour, complexes of lower or higher value) and willingness to change in all aspects of the social structure.

To turn the Balkans into the European integration it is necessary to achieve the unity of tradition and modern - which is primarily related to the complex economic, political and social changes that include: economic growth, reform of the political system and social structure, advances in technology, as well as a change of psychology and value system. In other words, modern societies are introducing a new value system that is based on scientific rationality, based on the production and distribution of symbolic knowledge and cultural capital (Koković, 2005).

When it comes to value systems in the Balkans, most research has focused on examining social values and a smaller part refers to examination of personal values.

Schwartz and Bardi (1997) found that in societies that have gone through a socialist order have put more emphasis on conservative values and hierarchy, versus intellectual autonomy, egalitarianism (equality) and Master status.

Sekulić concluded in his study on exploring of value orientations in Croatia that: (1) in Croatian society on work is value homogenization, not heterogenization value orientations, i.e. Croatian citizens agree more, not less in value orientations that they advocate for, regardless of growth or decline in the acceptance of certain values, (2) there is a trend of re-traditionalization of society that has taken place after the collapse of the socialist system and is reflected in the increasing religiousness and national exclusivity and (3) parallel modernization of society, which is reflected in the continuous fall in the native conservatism (Sekulić, 2011).

One of the recent research of values in Bosnia and Herzegovina was the project "Values system of young people in post-war society in Bosnia and Herzegovina" in 2006, which included the empirical research based on the 1,200 questionnaires of the population between 15-28 age (Institute of Philosophy and Social Research, 2006). The results of this research show that the values on the one hand maintain the continuity of tradition, and on the other side values are guides in the processes of social change (Ristić at the Institute for Philosophy and Social Research, 2006).

Lisica (2011) researched a fundamental social values, including the exploration of personal human values in Bosnia and Herzegovina with the modified Schwartz survey on a sample of 3,327 respondents. The research results show that there is more acceptance of motivational value types of self-transcendence and conservatism than the values types of openness to change and self enhancement, which indicates that most respondents are more concerned about the welfare of others and accept them as equals, than of its own success and ruling over others, and at the same time the majority of respondents tends to maintain the status quo and do not tend to change (Lisica, 2011).

So far have not been done the research with regard to exploring managers' values in Bosnia and Herzegovina, and for this reason it has been interesting to examine what kind of values have successful managers, and whether these values fit with the global and European values and to bring them in the relationship with companies performance in which they manage.

3. DEFINING THE SUSTAINABILITY AND SUSTAINABLE DEVELOPMENT

Sustainability is usually viewed through the definition of the Brundtland Commission (1987): "Sustainable development is development that meets the needs of present generations without compromising the ability of future generations to meet their own needs".² With regard to the sustainability concept it is necessary to mention the term -Triple Bottom Line (TBL) presented by Briton John Elkington (1997) which says that for achieving sustainability, it is necessary to achieve not only economic performance (profit) but also environmental and social performance.

3.1 Triple bottom line as a new measure of business success

In the traditional accounting „bottom line“ refers to the profit or loss of the company, made during a particular financial period. However, in the last 50 years, this form of accounting has changed to show the costs of producing goods and the impact on the environment, in addition to the financial result (profit/loss).

Recent research on the measurement of successful business focused on predictors of successful business, such as study of Langfield-Smith (1997), which shows that the factors that influence the successful business are associated with the business environment, strategy, internal structure and the control system. Unlike previous studies, which generally define a successful business by focusing on financial elements, Fauzi, Svensson and Rahman (2010) have suggested that for measuring the business success (measuring the firm's sustainability performance) should be used the concept of „triple bottom line“ (TBL) which would consist of three measuring elements: (1) financial, (2) social and (3) environmental elements (financial performance and social responsibility performance). Further, the authors state that the contents of these three elements can vary in context over time and their contents are subject to changes that will develop in the market and society.

Through acceptance of TBL formulation, firms get more systematic approach to sustainability management, business risks and potential crises, remain in line with the needs and problems of society and can easier notice new business opportunities. The three elements of TBL actually represent three different types of capital that every company uses in its operations, with the goal of providing products and services to society, therefore a major challenge for organization is to maximize all three forms of capital (economic capital, through the maximization of the financial results and improvement of their products and services; social capital, through its employees, other relevant stakeholders and society; and environmental capital, through maximizing eco-efficiency and other measures that make good for the company and its environment).

This paper is focused on explaining the economic (financial performance) and the performance of corporate social responsibility (social and environmental performance).

²Report of the World Commission on Environment and Development: Our Common Future, <http://www.un-documents.net/our-common-future.pdf> (last visited June. 10, 2013).

3.1.1 Financial performance (as the economic aspect of sustainability)

The financial success of the company refers to wise use of financial resources, that is to achieve the financial success of the company and contribute to economic prosperity of the environment in which it operates (investment into the community through employment that contributes to the growth of the economy; the development of new skills; firm's products and services can contribute to higher quality of life). Therefore the obligation of management is to improve the firm's financial performance, given that the stakeholders (investors, banks and workers) put the greatest importance to that, because with better firm's financial performance increases the wealth of the aforementioned stakeholder groups.

Basic financial statements that serve as a basis for obtaining a traditional performance indicators (gross margin, net profit margin, return on investment - ROI, return on assets - ROA and return on equity - ROE) are balance sheet and income statement (Van Horne and Wachowitz, 1995).

Financial performances, according to the approach based on the objectives stated by Chong (2008), include profits, revenue, return on investment (ROI), return on sales, return on equity, sales growth and increase of profitability. In this paper, the focus is on examining profitability indicators.

3.1.2 The concept of corporate social responsibility and social performance

The key problem in defining corporate social responsibility (CSR) refers to the multidimensionality of the category, and placing it in relation to the financial indicators of the company which is primarily related to profit. With regard to CSR it should be accepted the view that CSR is focused on how companies act in relation to stakeholders³, hence it is necessary to define the basic dimensions of responsible behaviour.

The research of CSR in the context of SMEs requires an explanation of such business concepts, where the CSR in generic terms is seen as "the link between work and larger society" (Snider, Hill & Martin, 2003).

Andriof and Waddock (2002) presented an overview of development of the concept of corporate social responsibility and corporate social performance on the basis of the stakeholder's theory. The concept of corporate social responsibility has evolved from: a part of the business social response, than the concept of increasing shareholder profits to the modern meaning of social responsibility at the conceptual and strategic basis, when it became part of the business practices, while the concept of corporate social performance is characterized by merging accountability and accessibility which includes principles, processes and policies (Wood, 1991).

Currently there are four main models in the understanding of CSR performances: (1) Carroll, (2) Wartick and Cochran, (3) Wood, and (4) Clarkson.

Carroll (1979) defines CSR as the intersection at a given moment in time of three dimensions: (1) CSR - principles to be apprehended at four separate levels (economic, legal, ethical and discretionary); (2) the total sum of the social problems that a firm faces (e.g., racial discrimination); and (3) the philosophy underlying its response(s) which can range

³The Economist print edition, The good company, Jan. 20 2005; <http://www.economist.com/printedition>

anywhere along a continuum going from the company's anticipation of such problems to the outright denial that it bears any corporate responsibility at all. Wartick and Cochran (1985) adopted and well-adjusted the model by Carroll by re-sculpting its final dimension, borrowing from the strategic management of social problems school an analytical framework enabling them to specify a dimension of „management of social issues“. Wood (1991) proposed a renewed CSR model that quickly became an omnipresent yardstick in the development of conceptual theory. According to earlier studies, Wood (1991) defines CSR as "a business organization's configuration of principles of social responsibility, processes of social responsiveness, and policies, programs, and observable outcomes as they relate to the firm's societal relationship“. Clarkson (1995) proposed applying stakeholder theory as a framework to CSP model, which would then be defined as a firm's ability to manage its stakeholders in a way that is satisfactory to them.

When it comes to measuring corporate social performance (CSP) there have been five main approaches: (1) measurements based on a content analysis of annual reports, (2) pollution indices, (3) perceptual measurements extracted from the questionnaire-based surveys, (4) corporate reputation indicators and (5) data produced by organization's measurement (Igalens and Gond, 2005). In the first approach, CSR is measured using content of firm's annual report - focus is on disclosure in the annual report. Another approach to the measurement of CSR is focused on one dimension of CSR - the environment, with external institutions usually conduct this method. Questionnaire-based surveys, as an approach to CSP measuring, are based on perceptual measurements in nature and use questionnaires as an instrument, developed by researcher, which are based on CSR dimensions. Corporate Reputation indicator, as an approach to measuring of CSR, uses reputation indicators as perceived by external parties of company. Data collected through measurement of organizations activities is a result of measurement approach of CSP, which is perceptive in nature and carried out by external agencies using a multidimensional measurements.

As CSR variables, in measuring social and environmental performance, can be used components proposed by Fauzi (2008) which are developed by Gray and others (1987), Perks' (1993) and Abu-Baker (2000), and include: (1) human resources (number of employees, employee training, health and safety, incentives level, employment of disabled and other services to employees), (2) community involvement (donations to community activities, public welfare and other community activity information) and (3) environmental performance (environmental expenditure, pollution abatement, environmental preservation and recycling programs).

4. INTEGRATION OF MANAGERS' VALUES THEORY AND SUSTAINABILITY PERFORMANCE

A very few empirical studies and papers have been conducted on exploring the impact of values on sustainability performance (CSP). Most authors have examined the link between the managers' values and financial performance, while few have examined the influence of values on social and environmental performance.

Tangwo (2012) examined the impact of managers' personal values on the performance of SMEs (satisfaction with sales growth and satisfaction with the profitability growth), and proved that there is a significant relationship between personal values and performance.

Abiodun (2009) examined the influence of managers' personal values on sales growth, market share and profitability.

Agle, Mitchell and Sonnenfeld (1999) found that there is a significant relationship between top managers' values and community performances (the relations to community), as one of social performance dimensions. Kaldschmidt (2011) found that there is a positive relationship between top managers' personal values of self-transcendence (which are pro-socially and pro-environmentally) and the firm's transformation sustainability strategy, as well as connections with innovative and credible strategies. According to Kaldschmidt (2011) some of elements/performances used in her study include: *transformation strategy* (involving employees in decision-making; sponsoring education, sports and social initiatives), *innovative strategies* (research and development of sustainable innovation (products); environmental marketing; sustainability marketing; research and development on prevention of pollution), and *safe/reliable strategies* (ISO 9001; employee training and development; reduction of hazardous materials).

Berson, Oreg and Dvir (2008) have linked the top managers' values (independence, benevolence and security) with three types of organizational culture and the firm's performance (sales growth, efficiency and employee satisfaction) on a sample of 26 Israeli firms. Using a sample of 150 Dutch companies, Gorgievski, Ascalon and Stephan (2011) proved that top managers' personal values influence strategic choice, where they demonstrated systematic associations of CEO entrepreneur values with profitability, innovation and giving back to society, which are used in evaluation of firm's success.

Huysentruyt, Stephan and Vujić (2015) examined the influence of top managers' personal values on their social enterprises' organizational performance through strategic and human resource management practices. Huysentruyt, Stephan and Vujić (2015) used three criteria for assessing organizational performance: (1) social performance (analysis of organization's overall social performance and comparison of firm's social performance versus competition), (2) financial performance (growth in revenues and profits) and (3) innovation. Authors proved that personal values influence management practices (values of self-transcendence and openness to change) and are highly consequential for the organization's success - in terms of all social, financial and innovation performance.

Park (2009) proved that there is statistically significant and positive correlation between top managers' environmental attitudes (values) and implemented environmental management practices in hotels (which are determined by technical practices (energy management, water conservation and waste management practices) and firm's environmental management systems (green purchasing, audit and control, and relations with stakeholders)). Park (2009) found that the most common specific environmental management practices are: use of energy-efficient lighting products and equipment; installation of devices and equipment for water efficiency; purchase from environmentally responsible suppliers; purchases of used or recycled products; implementation of renewable energy programs (use of wind or solar power).

Park (2009) showed that there is statistically significant relationship between top managers' environmental attitudes (values) and their perception of environmental management benefits (the most common perceived benefits are related to contribution of environmental sustainability, contribution to a safe and healthy work environment for employees,

contribution to reducing negative impacts on the environment, contribution to improving service quality and enhancement employee motivation and satisfaction).

Vazquez-Brust and Cordeiro (2010) proved that top managers' environmental values have significant and positive impact on proactive corporate environmental practices/performances (implementation of environmental management systems - EMS, continuous environmental improvement practices, internal environmental assessment, waste recycling and product remanufacturing) with emphasis on SMEs in Argentina.

5. CONCEPTUAL FRAMEWORK AND RESEARCH HYPOTHESES

Figure 1. shows the general conceptual framework of concepts and relationships under investigation, which follows from the initial question identified in the discussion of the relevance of the research problem, i.e. top managers' personal values that influence successful business (financial, social and environmental performance).

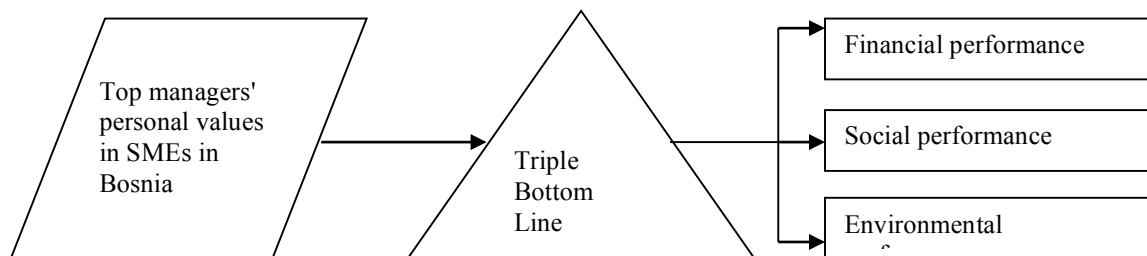


Figure 1: The general conceptual framework

The general research question:

- Do top managers' personal values influence the sustainable business performance in small and medium enterprises in Bosnia and Herzegovina?

Based on the defined problem, subject and research question, the following hypotheses are formulated:

H1: Studied values intensity of achievement and power explain significant part of latent value of self-enhancement variance.

H2: Studied values intensity of hedonism, stimulation and self-direction explain significant part of latent value of openness to change variance.

H3: Studied values intensity of security, conformity and tradition explain significant part of latent value of conservation variance.

H4: Studied values intensity of universalism and benevolence explain significant part of latent value of self-transcendence variance.

H5: Studied values intensity of financial performance, social performance and environmental performance explain significant part of latent value sustainability performances variance.

H6: There is contribution of self-enhancement values in explanation of sustainability performances variance.

H7: There is contribution of openness to change values in explanation of sustainability performances variance.

H8: There is contribution of conservation values in explanation of sustainability performances variance.

H9: There is contribution of self-transcendence values in explanation of sustainability performances variance.

6. METHODOLOGY

In this research is used quantitative methodology, which included the appropriate questionnaire on identifying top managers' personal values (by using Schwartz Personal Values Questionnaire - PVQ) and a questionnaire on successful SMEs in Bosnia and Herzegovina.

The independent variables are top managers' (as decision makers) personal values in the Bosnia and Herzegovina enterprises, while the dependent variable indicators of successful business enterprises are observed through the sustainability concept "triple bottom line" which includes financial, social and environmental performance.

Sample analysis included: top managers (top management teams - TMT) in SMEs in Bosnia and Herzegovina. SMEs were chosen by criteria according to number of employees set by the Agency for Statistics of Bosnia and Herzegovina. According to this criterion, companies with up to 10 employees are micro enterprises, up to 50 employees are small enterprises, while medium-sized companies are those with 50 to 250 employees. This study examined 50 SMEs in Bosnia and Herzegovina. The second criterion in sample selection was to choose only companies that achieved positive financial results (profits) in three consecutive years: 2011-2013.

For data analysis was used:

- Descriptive statistics, which was used to describe distribution of variables, clear the database, analyse missing values and suitable substitute thereof, and if necessary, the results transformation.
- Exploratory analysis.

7. RESULTS OF RESEARCH

When it comes to sustainable business performance, they are for the purpose of this study identified and chosen on the basis of extensive academic research of relevant books and scientific papers, and include the following:

- Financial (sales revenue and net margin),
- Social (employees and managers training and development; gender equality in employment, ethnic diversity in the company; youth employment; employment of people with disabilities; systems/programs for workers protection and safety at work; involvement of stakeholders in CSR (employees, suppliers and customers); sponsorship in education and skills training organization; sport sponsorship and sponsorship of social initiatives/projects) and

- Environmental (minimizing impact of firm's products and services on public health and safety; investments in new technology/equipment to reduce pollution; eco-friendly packaging and raw materials; air pollution and wastewater control systems; energy management/significant financial savings through reduction of energy and water use; recycling and reduction of hazardous materials; standards and measures for environmental protection and social responsibility (ISO 14001, ISO 9001 ...).

Values distribution of dependent variables in the research models have skewness and kurtosis that we expect within the values with normal distribution (From -2 to 2; George & Mallery, 2010⁴).

A slight deviation in kurtosis distribution of dependent variables have: provision of management training, hiring people with disabilities, sponsoring educational and social projects and minimizing health and safety impact on public. A bit larger deviation of the results distribution that we expect in a normal distribution is kurtosis of *youth employment*, where negative skewness is more pronounced and plactokurtic distribution, indicating a high clustering around value that indicates that companies tend to employ young people (Table 2).

Values distribution of the independent variables in the research models also have skewness and kurtosis which we expect within the values in a normal distribution. Significant deviation is only with variable *safety* where negative asymmetrical and leptokurtic distribution indicates a high results grouping around the higher value of safety. On the factor of openness vs. conservatism is raised kurtosis which indicates high results grouping around the middle (Table. 3).

Table 2: Overview of descriptive statistical values of researched dependent variables

| | Mean | Trimmed 5% mean | Variance | Skewness | Kurtosis |
|--|---------|-----------------|----------|----------|----------|
| logSalesRevenue.2013 | 6.6041 | 6.5974 | .356 | .061 | -.072 |
| logNetMargin.2013 | -1.5946 | -1.5427 | .493 | -.960 | .697 |
| Employees training and development | .51 | .51 | .256 | -.051 | -2.103 |
| Providing managers training in company | .78 | .81 | .176 | -1.407 | -.023 |
| Providing training to operational staff | .80 | .84 | .161 | -1.598 | .578 |
| Gender equality in employment | .71 | .73 | .212 | -.946 | -1.164 |
| Ethnic diversity in the company | .68 | .70 | .222 | -.816 | -1.405 |
| Youth employment | .90 | .95 | .090 | -2.817 | 6.236 |
| The employment of people with disabilities | .44 | .43 | .252 | .255 | -2.037 |
| Systems/programs for workers protection and safety at work | .80 | .84 | .161 | -1.598 | .578 |
| Employee involvement in CSR | 3.66 | 3.73 | 1.280 | -.579 | -.262 |
| Suppliers/business partners involvement in CSR | 3.20 | 3.22 | 1.511 | -.392 | -.825 |
| Customers involvement in CSR | 3.44 | 3.49 | 1.902 | -.558 | -.861 |

⁴George, D., & Mallery, M. (2010). SPSS for Windows Step by Step: A Simple Guide and Reference, 17.0 update (10a ed.) Boston: Pearson.

Table 2: Overview of descriptive statistical values of researched dependent variables

| | | | | | |
|---|------|------|-------|-------|--------|
| Sponsorship in education and skills training organization | .44 | .43 | .252 | .255 | -2.037 |
| Sport sponsorship | .59 | .59 | .249 | -.360 | -1.969 |
| Sponsorship of social initiatives/projects | .46 | .46 | .255 | .152 | -2.081 |
| Minimizing impact of firm's product and services on public health and safety | .56 | .57 | .252 | -.255 | -2.037 |
| New technology/equipment to reduce environmental pollution | .34 | .32 | .230 | .694 | -1.598 |
| Eco-friendly package and raw materials | .29 | .27 | .212 | .946 | -1.164 |
| Air pollution and wastewater control systems | .27 | .24 | .201 | 1.086 | -.865 |
| Energy management/significant financial savings through reduction of energy and water use | .37 | .35 | .238 | .578 | -1.754 |
| Recycling and reduction of hazardous materials | 3.46 | 3.51 | 1.905 | -.430 | -.992 |
| Standards and measures for environmental protection and social responsibility (ISO 14001, ISO 9001 ...) | .59 | .59 | .249 | -.360 | -1.969 |

Table 3: Overview of descriptive statistical values of researched independent variables

| | Mean | Trimmed 5% Mean | Variance | Skewness | Kurtosis |
|------------------------------|--------|-----------------|----------|----------|----------|
| Conformity | 3.6240 | 3.6445 | .676 | -.390 | -.858 |
| Tradition | 2.8232 | 2.8384 | 1.191 | -.401 | -.621 |
| Benevolence | 3.9207 | 3.9397 | .373 | -.617 | -.238 |
| Universalism | 4.0833 | 4.1174 | .416 | -.820 | .308 |
| Self-guidance | 3.9512 | 3.9732 | .454 | -.403 | -.804 |
| Stimulation | 3.2846 | 3.3248 | 1.425 | -.379 | -.773 |
| Hedonism | 3.0976 | 3.1265 | 1.429 | -.371 | -.656 |
| Achievement | 3.5732 | 3.5742 | .751 | .070 | -.915 |
| Power | 2.7561 | 2.7751 | 1.228 | -.149 | -.971 |
| Security | 3.8390 | 3.9144 | .744 | -2.326 | 8.851 |
| Self-abandonment | 4.0020 | 4.0287 | .333 | -.746 | .595 |
| Self-improvement | 3.1646 | 3.1586 | .764 | .188 | -1.138 |
| Openness to change | 3.6179 | 3.6321 | .673 | -.174 | -1.085 |
| Conservation | 3.4287 | 3.4462 | .404 | -.448 | .611 |
| Openness conservation | .1892 | .1718 | .736 | .956 | 5.009 |
| Self-denial self-improvement | .8374 | .8170 | .644 | .379 | -.233 |

7.1 Analysis of personal value contributions to explanation of performance variance of companies

Profile of the average response to the basic factors of the scale of personal values is similar for small and medium enterprises. In both groups the least reflected values are power and tradition (average score below 3) whereas the most pronounced values are benevolence, universalism, self-guidance and safety (the average result about 4).

Average values of the supreme factors of personal values are similar among managers of small and medium enterprises. In both groups the average value of the supreme factor is increased to abandonment against the improvement while is slightly greater towards openness to changes in relation to conservatism.

Factor analysis extracted three factors as opposed to the assumed four basic factors. Three factors explain about 72% of the variance of 10 basic factors of personal values (Table no. 4).

| Table 4: The total explained variances of results of the Personal values scale | | | | | | |
|---|-------------------------------------|---------------|--------------|-----------------------------------|---------------|--------------|
| Total Variance Explained | | | | | | |
| Component | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 4.719 | 47.191 | 47.191 | 3.450 | 34.500 | 34.500 |
| 2 | 1.395 | 13.951 | 61.142 | 2.658 | 26.577 | 61.077 |
| 3 | 1.134 | 11.342 | 72.484 | 1.141 | 11.407 | 72.484 |
| Extraction Method: Principal Component Analysis. | | | | | | |

The rotated factor of matrix structure, shown in Table 5, shows that the first factor has the greatest correlation with the basic factors hedonism, achievement, stimulation, power and self-guidance. Another factor has the greatest correlation with the basic factors universalism, benevolence, safety and conformity. The third factor has a great correlation only with tradition. Overall, we can conclude that the scale of personal values has two higher factors that do not correspond to the proposed factors by Swartz theory where one would expect that the first factor is hedonism, stimulation and self-guidance in a positive direction and security, conservatism and traditionalism in the negative direction. The second factor should be composed of the basic factors of universalism and benevolence in a positive direction and achievement and power in a negative direction.

| Table 5: Rotated matrix of factor structure | | | |
|---|-----------|------|-------|
| | Component | | |
| | 1 | 2 | 3 |
| Hedonism | .879 | .040 | .184 |
| Achievement | .810 | .268 | -.100 |
| Stimulation | .804 | .256 | -.099 |
| Power | .785 | .196 | .226 |
| Self-guidance | .631 | .508 | -.126 |
| Universalism | .244 | .793 | -.126 |
| Benevolence | .365 | .756 | -.180 |
| Security | -.077 | .745 | .333 |
| Conformism | .392 | .683 | .135 |
| Tradition | .088 | .017 | .918 |
| Extraction Method: Principal Component Analysis. | | | |
| Rotation Method: Varimax with Kaiser Normalization. | | | |
| a. Rotation converged in 5 iterations. | | | |

Further research provides an overview of the predictor possibilities of group of factors of personal values explaining the variance of individual factors of social, environmental and financial performance of the company.

Analysis of the contribution of personal values explaining the variance of company performance is presented with three different models of combination of independent variables (factors of personal values):

1. The first model includes the basic factors of personal values as a set of predictors: security, hedonism, tradition, universalism, conformity, power, achievement, self-guidance, benevolence, stimulation.
2. The second model involves multiple factors of personal values as a set of predictors: self-transcendence, self-enhancement, openness to change and conservatism.
3. The third model includes factors of supreme personal values as a set of predictors: openness vs. conservatism and transcendence vs. enhancement.

The results of the factor analysis carried out by the method of principal components showed that the factor structure results on the scale of personal values is not in accordance with Schwartz's theory according to which one would expect that the first higher scale factor of personal value is hedonism, stimulation and self-guidance in a positive direction and security, conservatism and traditionalism in the negative direction. By the same theory the second factor should be composed of the basic factors of universalism and benevolence in a positive direction and achievement and power in a negative direction. Factor structure, in Schwartz's view, has not been confirmed with regard to the results of the factor analysis indicate the existence of two higher factors, of which the first was a combination of the basic factors of hedonism, achievement, stimulation, power and self-guidance in a positive direction and the other factor is the combination of the basic factors of universalism, benevolence, security and conformism in a positive direction. Since the first four specific research hypotheses focused on proving the four higher factors of the scale of personal values this dismissed the first, second, third and fourth specific hypothesis.

Hypothesis 5 provided that the intensity of financial performance, social performance and environmental performance explains a significant part of the variance of the latent value of sustainable business performance, however, the results of the factor analysis of the structure of indicators of financial, social and environmental performance of companies indicate that it cannot be regarded as social performance, environmental performance and financial performance makes it part of a latent structure of company performance.

Given the impossibility of confirming the existence of a group of latent factors of personal values that have statistically significant correlation with socially responsible business companies, and non-existence of latent structure of the scale of personal values and company performance model provided, basic research model has not been confirmed.

The sixth, seventh, eighth and ninth hypothesis concerning the possible explanations of performance of sustainable business are based on higher factors by Schwartz's theory. Since the structure is not confirmed according to Schwartz's theory - the sixth, seventh, eighth and ninth hypothesis relating to several factors cannot be fully confirmed. Partly validation was conducted by examining contributions to the explanation of each indicator of social, environmental and financial performance separately.

The sixth hypothesis is partially confirmed and assumes that there is a statistically significant contribution of self-enhancement to the explanation of variance performance of sustainable business. Self-enhancement is higher factor of personal values made up of the basic factors of achievement and power.

The main factor of personal value of achievement is statistically significant predictor:

- Existence of a system of managers' training.

Companies whose managers have a greater value on basic factor achievements have more frequent and lesser values on the factors of systems of managers' trainings.

The main factor of the personal value of power is a statistically significant predictor:

- Existence of a system of managers' training,
- Gender equality in employment.

Companies whose managers have a greater value on basic factor can have more frequent and greater values on factors of gender equality in employment and lesser values on the factors of a system of training for managers.

Higher factor of self-enhancement (second model) is a statistically significant predictor:

- Existence of a system for managers' training,
- Existence of sport sponsorship,
- Investments in new technologies/measures to reduce environmental pollution,
- Investment in environmental control systems for air pollution and wastewater.

Companies whose managers have a higher value at a higher factor of self-enhancements have more frequent and greater values at the factor of a system of training for managers and lesser values on the factors of existence of sports sponsorships, investment in new technologies/measures to reduce environment pollution, investment in environmental control systems for air pollution and wastewater.

The seventh hypothesis is partially confirmed and assumes that there is a statistically significant contribution of openness to change to the explanation of variance performance of sustainable business. Openness to change is a higher factor of personal values made up of the basic factors of hedonism, stimulation and self-guidance.

The main factor of personal value of hedonism is a statistically significant predictor:

- Existence of a system of employees training,
- Gender equality in employment,
- Ethnic diversity,
- Youth employment,
- Involvement of employees in the planning and implementation of corporate social responsibility.

Companies whose managers have a greater value on the basic factor of hedonism have more frequent and lesser values on the factors of a system of employees training, gender equality in employment, ethnic diversity, youth employment, involvement of employees in the planning and implementation of corporate social responsibility.

The main factor of stimulation is a statistically significant predictor:

- Existence of a system of employees training,
- Existence of a system for managers' training,
- Gender equality in employment,
- Ethnic diversity,
- Youth employment,
- Employment of persons with disabilities,
- Existence of sponsorship in education and organizing skills training.

Companies whose managers have a greater value on basic factor of stimulation have more frequent and greater values on factors of a system of employees training, the existence of a system of managers' training, gender equality in employment, ethnic diversity, youth employment and less value on the factors of employment of persons with disabilities, the existence of sponsorship education and organizing skills training.

The main factor of personal values of self- guidance is a statistically significant predictor:

- Compliance with environmental standards.

Companies whose managers have a greater value on the basic factor of self-guidance have frequent and lesser values on the factor of compliance standards for environmental protection.

Higher factor, openness to change (second model) is a statistically significant predictor:

- Existence of a system of managers' training,
- Involvement of customers in the planning and implementation of corporate social responsibility,
- Investment in environmental control systems for air pollution and wastewater.

Companies whose managers have a higher value at a higher factor of openness to change have more frequent and greater values on factors of a system of managers' training,

investment in environmental control systems for air pollution and wastewater and lesser values on the factor of involvement of customers in the planning and implementation of corporate social responsibility.

The eighth hypothesis is partially confirmed and assumes that there is a statistically significant contribution of conservatism to explaining the variance performance of a sustainable business. Conservatism is a higher factor of personal values made up of the basic factors of conformity, security and traditionalism.

The main factor of personal values conformity is a statistically significant predictor:

- Net margins,
- Gender equality in employment,
- Youth employment.

Companies whose managers have greater value on basic factor conformity, have more frequent and greater values on factor of net margins and less value on the factors of gender equality in employment and youth employment.

The main factor of security is a statistically significant predictor:

- Net margins.

Companies whose managers have higher values on the basic factor of security have more frequent and lesser values on the factor of net margin.

The main factor of traditionalism is a statistically significant predictor:

- Existence of a system of training for operational staff,
- Youth employment.

Companies whose managers have a greater value on the basic factor of traditionalism have more frequent and greater values on factors of a system of training for operational staff and youth employment.

Higher factor conservatism (second model) is not statistically significant predictor of either indicator of the performance of companies.

The ninth hypothesis is partially confirmed and assumes that there is a statistically significant contribution of self-transcendence to explaining the variance of performance of a sustainable business. Self-transcendence is higher factor of personal values made up of the basic factors of universalism and benevolence.

The main factor of personal value universalism is a statistically significant predictor:

- Youth Employment.

Companies whose managers have a greater value on the basic factor of universalism have more frequent and lesser values on the factors of youth employment.

The main factor of personal values benevolence is a statistically significant predictor:

- Investment in new technologies / measures to reduce environmental pollution

Companies whose managers have a greater value on the basic factor of benevolence have more frequent and greater values on factors of investment in new technologies/measures to reduce environmental pollution.

Higher factor of self-transcendence (second model) is not a statistically significant predictor of either performance indicator of SMEs.

8. CONCLUSION

The research results of successful top managers in Bosnia and Herzegovina showed that the personal values of universalism, benevolence (self-transcendence) dominate over power and achievement (self-enhancement), i.e. they are turned more towards contributing to the well-being of others than to fulfil their selfish goals. But when it comes to the value of openness to change, it is slightly higher than the conservatism which means that Bosnia and Herzegovina top managers have a desire for new and changes but values of conservatism (security, conformity) are still very present, which at the same time slow down such changes. It means that top managers show that they are moving in the direction of sustainability with their values, but it is still insufficient in view of the excessive attachment to conservatism, which is characteristic for the Balkan countries, including Bosnia and Herzegovina.

Taking into account the three dimensions of sustainability (finance/economics, society and the environment) shown as a triple bottom line, it is clear that the company in order to survive in today's business world should, in addition to purely financial indicators of the success, pay attention and focus on showing social and environmental performance, which is especially important for Bosnia and Herzegovina on its way to joining the EU. These three elements are interrelated so the improvement or deterioration of one of the aspects can jeopardize the overall success of the business.

When it comes to sustainable business performance, research has shown that companies which achieve success in all three fields (financial, social and environmental) are rare, which is an assumption of triple bottom line. Investigated companies are financially successful (profitable) and at the same time show a high level of social responsibility - taking care of employees and involvement in the community, while in terms of achieving environmental performance there is a less number of companies that invest in environmental protection and monitor their impact on the environment. Most of the motives for corporate social responsibility and environmental protection are the reduction of costs and marketing and increasing competitive advantage in the market.

The main research question of this research was: "Do personal values of top managers in small and medium enterprises in Bosnia and Herzegovina affect the sustainable successful business (performance of a sustainable business)?" On the basis of the research it was shown that there is a correlation of certain personal values with individual performance of a sustainable business, but the original model was rejected, where the values of a higher order (self-transcendence, self-improvement, openness to change and conservatism) affect the performances of sustainability.

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Whistleblowing Policy and Corporate Governance Strategy

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ABSTRACT

Can whistleblowing reinforce corporate governance? This will be the subject of this legal study which aims at first identifying legal instruments that exist under French law, and comparing them with those that exist abroad in order to map these mechanisms and identify the structural characteristics. Then, the vocation of whistleblowing as a lever of corporate governance will be discussed, including questioning the effectiveness of this mechanism.

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1. INTRODUCTION

"In a work contract, the employee makes his labour power available to the employer, but not his individual freedom"

Jean Rivero, Civil liberties in the enterprise, Social Rights, 1982, p.423

"No one can impose restrictions on a person's individual and collective rights to freedom that are not proportional to the aim and that cannot be justified by the task at hand "

Art. L 120-2 French Labour Law Code

No organization is immune to the risk of fraud. A PWC study (2014) revealed that 55% of French companies have been victims of fraud in the past 24 months: collaborators diverting funds, cybercrime acts, a Financial Director of a subsidiary falsifying financial results, a Sales Director resorting to corruption in order to gain access to the market, production process pillaging, misappropriation of corporate actions with the participation of employees and unscrupulous accountants. Banks, insurers, the police, magistrates, fraud examiners, forensic accountants, Court Auditors, TRACFIN and AMF, not to mention the employees. Colleen Rowley the FBI agent, Stéphanie Gibaud the Director of Communication at UBS-France and of course Edward Snowden the Computer Scientist for the CIA and NSA fully disclosed world famous scandals. All of them rang the alarm to stop the actions of a company that could harm others: the so-called whistle-blowers. They claim their loyalty to institutions and their intention to act within the law (Lochak, 2014).

1.1 Whistle-blowing and corporate governance

Professional fraud has a negative impact on the company: the average loss is 325 000 USD in 2014 (AFCE, 2014) with an average fraud duration of 32 months (over a million dollars of fraud detected by the legal obligation of denunciation).

The AFCE study indicates that the most effective detection methods are monitoring, information system checks, internal audits, and management that has traditional and proactive methods. In theoretical terms, the financial vision for fraud detection expresses the agency

theory (Jensen and Meckling 1976). According to this theory, corporate governance is intended to reduce asymmetric information between the principals and their agents, thus limiting fraud and thereby loss of wealth for shareholders. If we use the Charreaux governance definition (1997), we refer to all “organisational arrangements which have the effect of limiting power and influencing the decisions of leaders, in other words, regulating their behaviour and defining their discretionary power”. Governance thus plays a traditional role in the detection of fraud.

1.2 Whistle-blowing: a legitimate denunciation of an act involving public interest

Across the Atlantic, remaining silent about an offence makes you an accomplice or an accessory after the fact, while it is a law of silence that takes priority in The Hexagone (Lesniak 2012). The Vichy regime and Catholicism have been marred by the vilification of denunciation. The denunciation of illegal acts by whistle-blowers, class action and lobbying, strongly anchored in Anglo-Saxon countries, has been met with reluctance from the French due to historical, cultural and sociological reasons. The progressive integration of these weapons of attack into the French Law via European Laws provides new opportunities in the service of global economic governance. Employees, consumers and citizens now have the tools to reveal information that could jeopardise essential values threatened by crimes or offences, miscarriages of justice, abuse of power, illegal use of public funds, abusive behaviour, financial and accounting fraud, in-house fraud, malpractice in security and stock market law, money laundering, tax evasion, acts of unlawful competition (price-fixing, misleading sales techniques), corruption, harassment, damage caused to health or to the environment and discrimination at work. They are subsequently granted compensation for damages that resulted in depleted savings, laid-off employees, ruined shareholders, or bankrupt suppliers.

Denunciation is becoming legitimate, it's a mode of social regulation and that has detached itself from its very negative connotation that was previously attached to it in French culture. It has joined the whistle-blowing conduct of the United States: the denunciation of conduct that is contrary to the rules or social values shared within the company. Indeed, beyond the direct financial prejudice generated by fraud, a lack of response raises a sense of exemption from punishment. Various terms are used to translate the word "whistleblowing" (literally "blow a whistle"): denunciation, ethical alert, professional alert, duty reporting, trigger alert, internal warning, or disclosure. In all cases, reporting these illegal behaviours are aimed at strengthening compliance with laws and regulations, integrity, loyalty, honesty and respect for others. The expected benefits of these mechanisms are therefore the detection of fraud, the protection of shareholders and corporate interests and a committing to the responsibility of the leaders.

1.3 The legal basis in Comparative law and French law

Whistle-blowing origins lie especially in the False Claim Act (US, 1863), the Whistle-blower Protection Act (US, 1989), the Public Interest Disclosure Act (UK, 1998), the Sarbanes-Oxley Act (SOX, 2002) and the Dodd Frank Act (US 2010). Other sources, from international conventions or the European Council are also relevant, as well as the European Union laws, including article 29 of the Group Work. In France, in the private sector, whistleblowing rights result from several sections of legal sources creating protection levels according to areas of activity (corruption, health...). They are intended to be rights of expression, not duties (as opposed to the public sector with the obligation to denounce criminal acts except for any crime committed in the context of article 434-1 CPP or enterprises subject to the extraterritorial laws of the USA and the UK). Denunciation is the

result of a legal obligation (especially in the banking sector) or being bound by contract (the existence of an in-house company chart or code of conduct).

The mosaic of texts adopted by French Law after 2002 reflect American whistleblowing to which we can add the legal texts imposed on auditors, banks, lawyers, employees, media, accountants and investors to denounce certain criminal acts that they know about. This new logic of transparency is therefore particularly significant. It can be concluded that these people, just like all employees in the company, are components of corporate governance as they fight against the abuse committed by leaders. Therefore, although denunciation is intended for a wrongful act, it plays an important role for the shareholders managers, employees and company in general. Detrimental effects can arise for the informer (the risk of retaliation, up to and including termination of employment), and for the person denounced (defamation), for the company (regarding their reputation) and for the shareholders (the share price goes down).

1.4 Characteristics of the denunciation of unlawful practices

International labour law speaks of whistle-blowing in these terms: “whistleblowing by employees or former employees of illegal, irregular, dangerous or morally reprehensible practices”. Several definitions are proposed in international and French law, and they have the following features in common: 1 / revealing illegal acts committed in the workplace, 2 / a dimension of public interest and not of individual grievance and 3 /the revealing of these facts by specific channels. The informant may be an internal or external part of the company (employee, firm, competitor, media...) whereby he discloses information to an internal company source (internal auditor, audit committee and compliance officer) or an external source (media, financial authority, and sector or government authority). His motivation is his sense of loyalty and fidelity towards his employer, other stakeholders or the company at large. Conditions for denunciation vary: anonymity, confidentiality, evidence or suspicion. Whistle-blowing is a tool to detect risks.

1.5 The advantage of whistleblowing in moralizing the workplace

Whistle-blowing is therefore a mechanism intended to counteract deviant practices and represents a complement to the conventional instruments of governance (laws and codes of governance). The convergence of the American, German, English and French mechanisms in accordance with the core values of each legal system, contributes to the neutralization of "legislative shopping" corporate strategies that exploit regulatory variations that exist from one State to the other, and that escape rules which aren't in their interest (this is also the case in tax matters and procedural matters). A globalized economic governance was and is the ultimate limit on economic stakeholders' freedom (Albiol, 2010). Is whistle-blowing the prerogative of the traitors or heroes, or is it rather an accessible channel of regulation and control? Does the transparency it provides (I) really strengthen the responsibility of leaders (II)?

2. WHISTLE-BLOWING AND GREATER TRANSPARENCY

Whistle-blowing is an original and powerful anti-fraud mechanism that complements the traditional governance mechanisms of combating fraud (A). As part of reforms that strengthen the quality of financial information, legislators and international regulators have recognized the success of whistleblowing as a means of detecting fraud (B).

2.1 A tool for preventing legal risks

The role of trust in organisations. In companies there are multiple alert routes available to an employee who wishes to report a problem that can seriously affect the company activity or make it liable (hierarchical route, external auditor, audit and internal compliance, staff representatives, labour inspector). The whistle-blowing measure is therefore optional. To maintain trust, the facts to be reported must have clearly stated characteristics: serious facts linked to accounts or finances, the fight against corruption or related to a breach in competition law (<http://www.cnrs.fr/aquitaine/IMG/pdf/CC07D21.pdf>). This is not a question of aiming at all legislative or regulatory provisions. The information about the existence and terms of the alert also plays an important role in this relationship of trust: Who is responsible for the mechanism? What are the consequences for the user of this mechanism? Is there a right of access and rectification to the benefit of the persons identified within this framework? Conversely, the misuse of whistleblowing rights may give rise to disciplinary penalties as well as lawsuits. The fact that the whistle-blower is not anonymous strengthens accountability and limits the risk of accusation. In principle, professional alerts are not anonymous: the perpetrator of the alert must identify himself, this will both facilitate the processing of the alert (possibility of requesting additional information) as well as protection in the event of possible retaliation. Whistle-blowing also allows companies communicate values through a standard of conduct. It is the perfect medium to generate risk awareness that must be identified: it is to preserve the reputation and integrity of the company by adopting the appropriate behaviour.

2.1.1 Anti-fraud mechanisms within the company

Restoring confidence by limiting the risk of fraud is the desired objective of multiple prevention, detection and investigation mechanisms within the company. The tools that can be implemented in the company are as follows (Bensadoun and Celaire-Chaumont, 2013 and Bitra, 2014):

| Table 1 : Prevention, Detection and Investigation tools | |
|--|--|
| Prevention | Internal rules Work contract Computer charts <i>Compliance Officer</i> , <i>Fraud Officer</i> , The adoption of an ethical code or chart/code of good conduct/ guide to good practices (see Wavecom example below) Risk mapping Staff awareness and training by the <i>Compliance Officer</i> . |
| Detection | Audit committee Whistleblowing mechanisms Electronic data analysis/ <i>data mining</i> . |
| Investigation | Accounting and Financial data analysis Interviews <i>Competitive Intelligence</i> activities |

2.1.2 The audit committee

It keeps track of issues relating to the control and development of accounting and financial information and deals with: the financial reporting process and the efficiency of internal control and risk management systems. Its duty is to regularly report to the collegial authorities responsible for administration or monitoring and to immediately report any difficulties encountered (art. L823-19 C.Com). This authority committee, which is an offshoot of the Council, must be composed of at least one independent Director in order to reduce financial fraud. As guarantor of the directors' fiduciary duties of loyalty, diligence and vigilance to the shareholders, the audit committee is first line to detect fraud (Vera-Munoz, 2005). In Canada, the procedure lies with an Audit Committee mechanism "regarding the confidential sending of questionable issues relating to accounting points or auditory matters, under employee anonymity". The process of denunciation is based entirely on the Audit Committee, in other words it is purely internal, which means it has a certain independence, which doesn't seem to be the case with Hunton and Rose (2011). It can be concluded that unless the members of the Audit Committee have enough independence to provide certain powers, this body alone cannot fight effectively against fraud. By comparison, the United States encourages more whistle-blowing to a financial authority (external alert). In Italy, all listed companies are covered and the extension of the mechanism to all companies has been proposed.

2.1.3 The proven efficiency of whistle-blowing to detect fraud

Empirical studies show that the presence of independent administrators limit the occurrence of fraud for executives (Beasley, 1996); the accumulation of CEO responsibilities increases the likelihood of fraud (Farber 2005 and Dechow, 1996). The usual tools of governance have a more clearly defined legal framework than whistleblowing but are often ineffective in detecting fraud (Dyck, Morse, and Zingales 2007), whereas the less common mechanisms such as the media and whistle-blowing are the most effective: according to the Association of Certified Fraud Examiners, external audit, although used in 80% of the companies that fall victim to fraud, only manage to detect 5% of fraud, while 45% of cases of fraud have been discovered thanks to employees. Ethical alert is therefore an effective informal governance mechanism.

2.1.4 French sectoral laws

French law does not include any general obligation to adopt professional warning systems but there are at least 5 sectoral laws on wrongful termination.

These laws represent the interests of public power for whistle-blowers in specific fields: Crimes and offences, corruption, health and environmental safety and conflict of interest involving public officials. But the result is a lack of operability for whistle-blowers. Understanding whistle-blowing mechanisms remains difficult for the lawyer and the company. How can the company effectively collect information? How can it minimise false alerts? Already, the need to establish a whistle-blowing system was highlighted by Paul-Henri Antonmattei, Dean of the Law Faculty of Montpellier and Philippe Vivien, HRD of Areva, in 2007 in their report on ethical charters, whistleblowing and labour law submitted to the Minister of Employment delegate for labour and youth employment .

2.1.5 Whistle-blowing in business speeches about ethics

There are 4 dimensions in a charter: internal managerial type of use, financial goal for external commercial type of use, internal heritage type of use and complete external type of use, where whistleblowing mechanisms (Archer, 2012) are often in response to the U.S. Sarbanes-Oxley Act which requires companies listed on the NYSE to put in place a system that transmits the treatment of concerns that employees may have, strictly concerning accounting, financial and stock exchange issues (Art. 301-4). Thus, for foreign affiliated companies, this legal obligation becomes a simple ethical charter, voluntary in nature, where French companies can shape their own rules on ethical alerts in a charter or code of conduct, which thus falls within CSR. This automatically generates a significant heterogeneity of sources that are not subject to any obligation of convergence, so is the real intention to combat fraud or is it a marketing tool intended for the image of the company? At L'Oréal, the ethical charter is considered to be a genuine constitution: every employee receives a printed copy when hired (it's available in 45 languages and in braille). The scope of these documents appears very limited as a management tool. In making such claims, the company creates responsibilities (or restrictions), and voluntarily duties by involving the concerns of its stakeholders.

These are fashion tools that are an alternative to general rules and correspond to the objectives of corporate social responsibility such as those described in the international standard ISO 26000. From soft law, however, they have as a legal force, something close to a gentlemen's agreement: a non-punishable commitment by the courts that a company respects for fear of a spontaneous, non-State penalties (customer boycotts, employee strikes, loss of contracts, etc.) This is especially the case in Common Law countries, but in France the CSR tools remain legally non-binding (Ganguly, 2009). They also reflect "the ambiguity of the relationship between legislation and the self-regulation of business ethics" (Riffard, 2014).

The spread of whistle-blowing in a business results in regulatory obligations like those sustained by companies listed abroad (USA, Japan...) or a voluntary approach which is CSR. In both cases, the choice of the tool for transmitting the alert and its internal or external treatment remain at the discretion of the company. Therefore a variety of mechanisms have been put into place.

2.2 The ambivalent and incidental result of the mechanism

2.2.1 Implementing whistle-blowing within the company

Whistle-blowing is a means or technique for control over the activity of the employees in the same way as video protection, badges, geolocation or even biometrics. Thus, it must be submitted to the Enterprise Committee (information and prior consultation, art. L2323 - 32 C. Trav.). When the warning contains provisions that fall within the scope of the rules of procedure (see art. L1321 - 1 C. trav.) it is described as adding to the rules of procedure and is therefore subject to the provisions related to the implementation of the rules of procedure. Specifically, the project is forwarded to the labour inspector, there is consultation with the Enterprise Committee if there is an absence of staff delegates, and it is subject to the CHSCT for matters within its jurisdiction (art. L1321 - 4C. Trav., Merle, 2007). Then, if the CNIL gives its agreement, the procedure is implemented by management.

2.2.2 Employee information.

The mechanism is brought to the attention of all employees on an individual basis since "any information concerning an employee personally, cannot be collected by a mechanism that was not previously brought to his knowledge" (art. L1222 - 4 C. Trav.). Collective and

individual employee information includes: who is in charge, whistle-blowing objectives, the areas concerned and its optional nature, the absence of consequences for employees who don't use this mechanism, whistle-blowing recipients, the existence of access rights, audits, opposition and the possible transfer of data outside the European Union (EU).

It should be clearly indicated that "misuse of the mechanism may expose the initiator to disciplinary penalties as well as lawsuits but, in contrast, the use of the mechanism in good faith, even if the facts are subsequently inaccurate, or give rise to no further follow-up, exposes its initiator to no disciplinary sanctions" (Marguerite, 2012 and Flament, 2005 and 2013). It is therefore the unilateral initiative of leaders to inform employees of this, without imposing its use. Provisions may also be included in the employment contract. The employee is therefore an initiator and not a real stakeholder in the mechanism, whether it's at the stage of conception (what is the subject of the whistle-blowing?) or execution (whistle-blowing system followed its aftermath, Vercher, 2011).

The means implemented can be a phone number (ethical line), an online form or an e-mail address. The employer has complete freedom to choose the best collecting tool

2.2.3 The validity conditions of whistle-blowing and role of the CNIL

Once the alert gives rise to the automated processing of personal data, or non-automated processing of personal data contained in or referred to as included in files, its implementation is through a conformity declaration on the CNIL website.

Whistle-blowing shall "respond to legislative or regulatory French laws aimed at the establishment of internal control procedures in respect to finances, accounting, and banking, and the fight against corruption relating to breaches in competition rights, the fight against discrimination and harassment in the workplace, health protection, hygiene and safety at work and the protection of the environment" and refer to the rights of the person denounced to have access to the data and be able to correct it. Thus, if the company wants to implement a whistleblowing procedure outside of legal assumptions, it must obtain prior permission from the CNIL, failing which the company will incur civil, criminal and administrative penalties provided by law. In France, the judicial judge is given the freedom to assess professional alert features and codes of conduct even if these fall within the control of the CNIL (ALBIOL et al...2010).

2.2.4 Anonymity

The person who emits the alert must identify himself and his identity must be treated as confidential: the employee shall suffer no prejudice for his actions. Anonymity isn't unusual. It avoids any accusations and allows the person involved to benefit from basic rights of defence. The person who is the subject of the alert cannot obtain the identity of the person who emits the alert.

2.2.5 Conservation period

If the data doesn't enter the field of the alert, it must be destroyed or archived without delay. Those that have ultimately resulted in no disciplinary or judicial proceedings are destroyed within a period of 2 months from the date of the closing of the audit operations. Otherwise, the elements are kept until the end of the procedure.

2.2.6 The whistle-blowing system selected

The information obtained is verified in a confidential way and then forwarded to the employer who then decides which measures to take. This information must be entrusted to a service or an organization specifically set up to deal with it. The CNIL recommends that the

people responsible for handling alerts be limited in numbers, specially trained and subject to an enhanced confidentiality obligation defined in their contracts. The company chooses if it wants to treat the alert internally or externally via a responsible provider for the collection and processing of the alert. This choice is still at the discretion of the employer: either it is considered as a tool or a means of freedom of expression within the company, or it is considered that resorting to an external provider strengthens confidentiality and the independence of the origin of the alert. In Anglo-Saxon countries, there are many whistle-blowing processing companies.

When put into practice in France, the operation is often placed under the authority of a specialized Committee, (Compliance Committee, and Ethics Committee). If in doubt, the employee must apply to his hierarchy, his compliance manager or the legal service on which action to take.

2.2.7 Processing the internal or external whistle-blowing

The internal processing of an alert can be done by the Audit Committee or any other Committee specialising in administration: the Administrative Council itself or an individual himself, provided he is clearly identified (but this is not a recommended route to take, the defined management of the alert is preferable, Merle, 2007).

The independence of the whistle-blowing management authority is based on the composition of the committee (independent administrator, union representatives, management representatives and an outsider) and only a detailed analysis of these structures can establish their clout.

In the event of an appeal to an external provider (subcontractor), the contract with the company must include respect for data protection (security, privacy, storage, and destruction), respect for the purpose of the process (using data in the strict framework of the whistle-blower's instructions) and the return of the data at the end of procedure. If the procedure is established outside the European Union in a State offering adequate safeguards or enjoying a Safe Harbour Agreement (example: the USA) then permission for the process will be continued (Ledieu, 2006).

There are significant differences in national regulations between the approaches taken regarding denunciation: whistle-blower and recipient of the complaint, type of information, whistle-blower protection, truthfulness, etc... All of these elements affect the effectiveness of the whistle-blowing in terms of corporate governance. Does a managerial ethical whistle-blowing mechanism, which is located at the other end of the compliance chain, and the opposite extreme of the code of governance, strengthen the responsibility of leaders?

3. IMPLEMENTING WHISTLE-BLOWING: AN ADVANTAGE FOR CORPORATE GOVERNANCE?

The leaders are responsible for the protection of assets and the continuity of the operation. Whistle-blowing provides a disciplinary lever against employees, executives, and malicious leaders who are at the origin of fraud for an estimated 630 000 USD (AFCE, 2014) (A). Whistle-blowing is also a potential support for "multi-channel" governance, with the advantage of the agency theory. Opening the alert to stakeholders, strengthening the protection of the whistle-blower and strengthening the system for SMEs would enhance its effectiveness (B).

3.1 A diverse disciplinary lever

Professional alert strategies adopted by companies are a reflection of their desire for transparency and ethics. Studying examples of current whistle-blowing mechanisms demonstrates their composite character which indicates an initial resistance to the impact of the desired advantage. Other elements in the process of whistle-blowing indicate the limits of this strategy.

3.2 Applications in French companies

The Group AXA's (2011) code of professional conduct, specifies that whistle-blowing is optional. It also dismisses the group companies' local laws. Thus, chapter 6 "Denunciation of breaches" does not apply in France because of certain legal obligations: a contributor who wishes to make a report must connect with the ethical or legal department of HR if he works for an AXA company in France. At SANOFI, whistle-blowing mechanisms are available at the French head office and in the USA (green line, fax, email). The procedure is placed under the responsibility of the Global Compliance / Conformity group who make the reporting statement with the assistance of the entire company management, including internal audit management. They are reminded of whistle-blower protection and the human rights of the person being reported. At Société Générale, the internal rules of procedure of the Governing Council imposes the duty of vigilance and alert (art 18: secret) on the directors. The right to alert the staff is meanwhile in the Code of conduct (2013). Several internal routes are available to the employee: hierarchical path, referral to the compliance management or the Secretary General of the group. However, no concrete tool is included in the code (telephone, fax or email) and the procedure is not described, it is merely mentioned that "he who receives the alert will ensure to conduct the necessary investigations". Whistle-blower protection rights and the human rights applicable to the recipient of the alert are not mentioned. In France, the Whistle-blowing Charter applicable for the companies of the German group Bosh is, on the contrary, very comprehensive. This four-page document annexed to the code of ethics includes: a definition of the collaborators in a broad sense (maintained for interns), a reminder of the French legal framework (legislative and regulatory), a description of the operative scope (optional and must be revealed ahead of the procedure), anonymity, the collection of information (people and data), the organization of the operative feature. It has the special feature of letting employees choose between a classic internal reporting track and an external one (green line). The rights of the employee subject to the whistle-blowing are explained, as well as the security and confidentiality of the mechanism. There is also a conservation period, the terms and conditions of data transfer outside the EU, the assessment of the warning, reporting formalities to the CNIL, the date it came into effect and the email address of the Compliance Officer. Finally, in an extreme case, the ethical code of Schindler imposes that employees inform the HRD of any situation in which their spouse or a member of their family is involved!

3.3 The investigation phase

All reporting is subject to preliminary evaluation in order to determine if it falls within the scope of the procedure. The effectiveness of the system lies in the ability of the company to treat all relevant whistle-blowing and to conduct an immediate internal investigation based on the information disclosed. To avoid any malicious accusations, the whistle-blower is identified, which offers him better protection against any risk linked to his actions. His identity is confidential, as well as the subject of the denunciation and the condemned person's

name: it is up to the employer to ensure this privacy, failing which the initiator of the alert and the condemned person have the right to take liability action against the employer.

3.4 The good faith of the whistle-blower

The common requirement definitions of denunciation of illegal practices is the good faith of the whistle-blower. The onus is on the defendant to demonstrate the bad faith of the whistle-blower. This allows the benefit of the protection afforded to the whistle-blower to be modelled on the one offered in the event of denunciation for acts of harassment. "In good faith" means that at the time the contributor had given the information, he thought that he was honest and accurate, even if it is later proved that this was an error. The protection of the whistle-blower is played in good faith even if the reality of the harassment is not established, just as the bad faith of the whistle-blower is not established. The informer in bad faith is liable for the penalties applicable to the accused.

3.5 The secret instruction of whistle-blowing and the presumption of innocence

The authority that receives the alert should find out if the alleged facts can be established. A bit like an investigating judge, searching for the truth objectively, retaining and discarding information and preserving the evidence. One of the jurisprudential conditions of whistle-blowing being compatible with French rights is the respect for the defence rights of the condemned person. We can clearly see, therefore, the ties with human rights laws and criminal procedure. If the facts are established, for example, through an internal audit, the whistle-blowing management authority must be able to take protective measures to prevent any destruction of evidence. Evidence of the disclosed information may come into conflict with a secret business or confidentiality clause or the duty of confidentiality, which binds the individual (respect for fundamental rights and individual freedom, art.L1121 - 1 C.Trav.). In these cases, internal denunciation is difficult. Evidence may be electronically written provided that the person from whom it emanates is clearly identified (the offending fact of accountability must be established by an identification system), knowing that the opening of files outside the presence of the employee is inadmissible. The employer may not personally consult the files being identified (Bensadoun, 2013).

The DSI can be approached to provide fair evidence of the acts in question. If the Court of Cassation recognizes the right of the employer to control and monitor the activity of his employees during their work time, he requires respect for the loyalty of the evidence: the existence of the monitoring and control device must have been brought to the knowledge of the employees (Griger, 2012).

3.6 Exercising rights during the investigation

Any person identified through whistle-blowing has rights of access, rectification, and data deletion (the right to digital oblivion). These rights may be exercised after the outcome of the investigation. Whistle-blowing is awkward since it involves the revelation of the identity of the initiator of the alert.

3.6.1 The prosecution of the employee by the company at the end of the disclosure

The procedure is initially in the hands of the employer. Once the wrongful conduct of the employee is proven, he may initiate civil and/or criminal prosecution in addition to disciplinary penalties (art. L122-40 C.Trav.). Civil liability will be possible in the case of gross employee negligence, that is, if the intention of harming the company has been established.

3.6.2 Applicable penalties

Criminal penalties have been strengthened by the laws on the fight against tax evasion and the large number of economic and financial crimes: punishment for the abuse of social rights is increased when the offence is committed by means of a financial package and the penalties are increased dramatically for offences and breaches in the duty of probity (extortion offences and illegal interest taking, 500,000 euros instead of 75,000 euros; smuggling committed by an individual; a penalty fine for active and passive bribery offences and the offence of favouritism). Penalties are also extended for the act of general confiscation of heritage and for the accepted moral standards of money laundering (art. 131 - 21 C Pén) which carries an additional penalty of an increase of 15 years to the length of the additional punishment, thereby temporarily banning criminally prohibited ethical breaches and preventing their renewal.

The importance of an organisational culture. Whistle-blowing can only come into play if multiple factors converge: individual vigilance, allowing detection of the violation of a norm, the involvement of the owner in the values brought to the company, the credibility of the company to manage the whistle-blowing, the empowerment of the whistle-blower, his courage and the options available to him to exercise this freedom of whistle-blowing (Berry, 2004). Thus, if a company does not have an internal alert system, it runs the risk of an external disclosure. For example, in the USA and the UK, the informant of the fraud who is not heard internally, may take external action on behalf of the government, against the company initiating the wrongful acts (Yeoh 2014 b). However, the risk of external alert is lower when there is an internal whistle-blowing system (Barnett, 1993) Whistle-blowing is therefore a means for shareholders and stakeholders to create value. Indeed, this feature organises societal conformity to its standard environment which avoids the destruction of values. It may even be a real competitive advantage.

3.6.3 Whistle-blowing axes of progress

Whistle-blowing could become a universal instrument, a true “whistle-blowing in the interest of the public”. It will require the creation of a whistle-blower status, an independent National Agency, a receiver of the alert who will verify the information disclosed. Other elements are likely to reinforce the existing mechanisms.

Extend the range of the whistle-blowing initiators. The main source of the alert is mostly the employees (49% of the cases, 21% customers, 4% shareholders, AFCE, 2014). Whistle-blowing allows employees to denounce a wrongful act. Indeed, their position in the company facilitates access to information compared with other traditional stakeholders in governance (external auditor and financial authorities). The informant, "the white knight denouncing the unscrupulous" faces the real risk of retaliation.

It is therefore appropriate for the company to retain a variety of information sources with an internal policy, a hotline and information distributors for customers and shareholders about the hypotheses of fraud and how to detect it.

Can third parties in contact with the company be affected by whistle-blowing? Afep and the Medef are in favour because it isn't appropriate to exclude whistle-blowing from third parties such as customers and suppliers. The employed administrator may apply on the basis of the company charter meanwhile the other directors must do so on the basis of their legal monitoring duty (art. L225 - us C.Com 35.). So, the denunciation can be done through shareholders, customers, suppliers, stakeholders: this exceeds the financial perspective of this

feature, towards an Omni canal governance. Having all citizens on the lookout guarantees the protection of social integrity.

Such a prospect requires one to open an access channel to denunciation through an outside organization to society. Since 2009 the Danone Corporation has opened a whistle-blowing mechanism to suppliers with a specific access code which, at regular intervals, informs the SSD purchases management so that they can privately communicate any business violation according the Principles of Business Conduct which they have been made aware of.

Motivation. An ethical alert places greater responsibility on the shoulders of the employees which leads to an interpretation of this mechanism as not only a way for the whistle-blower to exercise his freedom of expression and his loyalty but also to protect himself, unlike traditional governance mechanisms whose motivation is based on reputation or legal obligation. Hence, to the employees, this “connection” is only one step: can they become the eyes and ears of the shareholders? Such a prospect would limit the function of whistle-blowing to the protection of the share value and would transfer responsibility from the managers to the employees. However, as the CNIL might remind you, paid employees don’t have to comply with whistle-blowing regulations, they must remain optional.

Powerful psychological factors come into account, firstly the whistle-blower’s profile. Seeking to identify a potential whistle-blower at the recruitment stage is impossible but an arguably decisive element from a moral point of view is the whistle-blower’s conception of justice, his ethics and his utilitarian view of whistle-blowing.

The capability of the organisation to respond is especially important to the employee: the organisation by itself can make or break whistle-blowing (Henik, 2015), the higher the risk of reprisals, the less the likelihood of there being whistle-blowing (Liyanarachchi and Newdick, 2009). Thus, disclosure will occur when certain conditions are met, failing which, the stakes will be too high for the employee. It is possible to use whistle-blower’s compensation to offset the risks. This is the case with the Dood Frank Act where the informer receives between 10% and 30% of the amount of the fine paid by the company that is guilty of fraud beyond 1 M USD (art.922) or the benefit of immunity. These practices exist in European competition law leniency programmes, and within French rights (art. L464-2, IV. C.com, American law speaks of a “leniency program”). Xu and Zeigenfuss (2003) demonstrated that internal auditors would be more likely to sound the alarm for a fee. Compensation allowance encourages whistle-blowers in the US (Dych, 2010 and Barrier 2011), while the moral values of business life should be the purpose of the whistle-blowing thereby leading to reservations on whistle-blower remuneration according to Professor Vincent Rebeyrol (2012). In the US the rewards are enormous: 51 million USD for whistle-blowing against Pfizer in 2009 (marketing of Bextra methods); 3.6 million for Jerry Brown in 2012 (overbilling of American forces in Iraq and Afghanistan by the Maersk Group).

Reducing personal costs for the whistle-blower. Disclosure devices have a limited scope due to employee self-censorship or his fear of personal liability at the end of inquiry, for example for subtracting data, violating bank secrets or defamation. The risk of ostracism exists even if the organisation is sincere: the whistle-blower is often misjudged by honest people (Summers and Nowicki, 2003, Reuben, 2013). The knowledge of a dismissal by the CPH is hardly a relief for the whistle-blower. In the UBS case, Stéphanie Gibaud was harassed at her workplace, marginalised and then laid off in 2012. In March 2015 she won against the condemnation of her employer for professional harassment and received compensation in the

amount of 30000 euros which is minimal compared to the amounts of tax fraud organized by UBS (2.6% of the requested € 1.7 million). The transfer of risk management to whistle-blowers therefore requires that strong protection measures are put in place.

Strengthening the protection of the whistle-blower. After the Civil Convention law against the corruption of the European Council "Within domestic law, each party must provide the appropriate protection against any unjustified penalty" against whistle-blowers (art. 9). It is based on confidentiality, and the nullity of individual retaliation measures. To avoid any risk of employee stigmatisation, confidentiality is guaranteed by the organisation, except for extremely serious offences. With regard to the protection of the whistle-blowers against any individual action taken in retaliation or reprisals, protection covers periods of recruitment, internship placements and training, and takes the form of a prohibition of discrimination; and is accompanied by penalties (nullity of the individual decision) but the protection against dismissal is not routine. The recent recommendation of the European Council calls for: Protection against retaliation in a broad sense: dismissal, suspension, demotion, loss of promotion opportunity, transferred as a penalty, reduction in salary, or withheld wages, harassment or any other form of penalty or discriminatory treatment.

Let the whistle-blower opt for either external denunciation or for denunciation through steps taken within the company. If information is collected and reviewed by an authority outside the company, the fear of retaliation is reduced. Both internal and external denunciation are subject to a supervisory authority such as the Central Service for the Prevention of Corruption (art. 40-6 CPP), the High Authority for the transparency of public life (2013 laws) or the National Commission of Ethics and Alerts for public health and the environmental matters (2013 laws). Mr. Lionel Benaïche, Secretary General of the Central Service of Corruption Prevention, envisages the creation of an association or a foundation in charge of informing the whistle-blower of his rights, guaranteeing the confidentiality of his identity, advising, ensuring respect for his rights and accompanying him during the judicial procedure if there is one.

The whistle-blower would also choose whether to move to the next level within the company, as is the case with the Public Interest Disclosure Act (UK).

3.6.4 Training employees and shareholders.

Lack of clarity on the circumstances of whistle-blowing has been identified as a significant barrier to raising the alert (Yeoh, 2014a). Communicating whistle-blowing procedure to employees and stakeholders is essential:

Training, real life situations, practical guides... the diffusion of the standard which prescribes a behaviour must be used to instruct all employees on the values to comply with, irrespective of the countries where they operate. The company must, above all, communicate about ethics and its anti-fraud policy and management must demonstrate by example. All the people in the company must be made aware of fraud. A significant lack of fraud awareness, and a fortiori in its legal framework, has been identified as an obstacle in triggering alerts (Yeoh 2014a). The effectiveness of the whistle-blowing procedure is subject to the manner in which the people of the organization receive the information and its content. Support can take the form of a booklet, a note by the Board of Directors, a memo from management or a briefing from the superior hierarchy and should include a description of the acts to be reported, the people who may receive the alert and the procedure to be followed (Near and Dworkin, 1998). Working groups may be set up within the company to promote the efficiency of the organization, social responsibility and commitment to employees, it's also a way to eliminate

tensions and manage the situation collaboratively so that it doesn't become an individual dilemma (Callaghan, 2002).

Facilitating ethical alerts in SMEs. Both financial and human resources limit SMEs thereby making them particularly susceptible to fraud as they can easily be ruined (the median loss for SMEs is 154000 USD, AFCE, 2014). Audit inspections often involve significant investment, but the drafting of a code of conduct, an anti-fraud policy, management revision procedures and anti-fraud programs can be implemented with relatively few resources.

4. CONCLUSION

Whistle-blowing effectiveness in terms of corporate governance systems is based on three pillars: a legal framework, individual responsibility, and corporate culture. The absence of a clear legal framework and whistleblowing protection currently prevents its use as a tool for corporate governance. The transition to the Whistleblowing Act could be promoted through what I would call a whistle-blowing triangle: motivation, opportunity and means. Individual motivation cannot only be based on loyalty, fidelity, or a legal obligation to disclose the illegal act, but must also be enhanced by the existence of financial incentive and isomorphic factors such as the organisation's ability to accommodate the whistle-blowing (opportunity and means). The opportunity should also be given to the whistle-blower: ethics and the corporate anti-fraud policies must be known: the company must define what is meant by fraud and communicate this definition to the staff. Whistle-blowing is often effective with audit firms, however it must not be confined to a group of individuals but applied individually to be really effective (Alleyne, 2013 and Greenwood, 2015). Finally, the means must surpass the internal procedure of the company and be open to external authorities. Otherwise, there is a risk of confusing the alert. The national framework should promote whistle-blowing in order to develop a positive attitude among the general public and within professional circles.

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Product and Process Innovation - A Cross Country Comparison Between Croatia, Poland and the UK

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ABSTRACT

This paper focuses on the determining the product and process innovation in three different countries: Croatia, Poland and the UK. The purpose of this study is to investigate significant differences among companies that report product and process innovation relative to different market contexts that they operate in and their reported R&D intensity. Using the survey data of 380 entrepreneurs and business executives from three countries: Croatia, Poland and the UK three regression models have been tested as well as significant differences among groups. The empirical results indicate conditional similarities in Croatian, Polish and British firms and respective investment into R&D. Related to product innovation, this study confirmed that UK is significantly better than Croatia, and for process innovation results revealed that UK has significantly better score than both Croatia and Poland. Regarding R&D intensity results indicate that Croatia reports higher levels than Poland.

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1. INTRODUCTION

Innovation is the pathway towards competitiveness, where companies have to be capable of the creation and commercialization of new products and processes (Porter and Stern, 2001).

The product innovation denotes the process of opportunity identification, product design and testing, commercialization and the market control for the purpose of realizing competitive advantage (Urban and Hauser, 1993).

New product development process refers to the activities of opportunity identification, product design and testing, commercialization and the control on the market implemented in order to achieve competitive advantage, therefore superior business performance (Urban and Hauser, 1993). According to Skarzynski and Gibson (2008), besides innovation inputs and outputs, it is important to evaluate the activities related to innovation processes.

The decision about a firm's innovation activity is associated with its purpose of maximizing value in order to sustain competitive advantages (Martínez-Ros and Labeaga, 2009).

The Oslo Manual (OECD, 2005) indicates that the organizational innovations are intended to increase a firm's performance by reducing administrative or transaction costs, improving workplace satisfaction (and thus, labour productivity), gaining access to non-tradable assets (such as non-codified external knowledge) or reducing the cost of supplies.

Firms with a great deal of innovation persistence develop routines (Martínez-Ros and Labeaga, 2009), and capabilities among their departments and employees, which increase the probability of success and foster further innovation. The purpose of this paper is to investigate the differences in the level of product and process innovation, R&D expenditure, internationalization and marketing innovation compared between Croatia, Poland and the UK.

Taking into account that firms in transition economies find the adoption of advanced business practices and adoption of new technologies and their integration into existing activities is very challenging (Radas & Bozic, 2009). Moreover, we investigate the relationship between product and process innovation with selected firm characteristics and other, already

mentioned elements relevant to the innovation process; both on the whole sample and country specific.

2. LITERATURE REVIEW

According to the OECD (2015) there are four distinct types of innovation: product, process, marketing and organization.

This research is build around the notion of product and process innovation that is best described by Porter (1983., p 22.):

“Initially... product design is fluid, and substantial product variety is present. Product innovation is the dominant mode of innovation and aims primarily at improving product performance. Successive product innovations ultimately yield a "dominant design" where the optimal product configuration is reached. Process innovation is initially minor in significance, and small-scale, flexibility, and high labour skill levels characterize early production processes. As product design stabilizes, increasingly automated production methods are employed and process innovation to lower costs takes over as the dominant innovation mode. Ultimately, innovation of both types begins to slow down.”

Product innovation stands for the market introduction of a new or significantly upgraded good or a service in terms of tis characteristics or usage (Mohnen & Hall, 2013); such innovation can be implemented through the improvement of components and materials, software, usage experience, technical specifications etc. Very similarly according to the OECD (2005) the term “product” in the construct refers to both goods and services that are offering significant improvements in the functional or user characteristics of existing goods and services.

A process innovation is the implementation of a new or significantly improved production or delivery method (OECD, 2005). This includes significant changes in techniques, equipment and/or software. Previous research in the area of innovation alludes to the notion that firms choose strategically between the two alternatives of innovation (product and process), usually avoiding a complete specialisation in one. As Milgrom and Roberts (1990) have pointed out, product and process innovations are complements, because they mutually reinforce each other: an increase in the level of any process leads to increases of the marginal profitability of innovations, and vice versa.

Organizational innovation involves the development and implementation of new intra-organizational or inter-organizational structures and proceedings to offer the consumer more efficient, effective and flexible solutions (Armbuster et al., 2006). Organizational innovation refers to changes in the hierarchies, routines and leadership of an organization that result from implementing new structural, managerial and working concepts and practices in order to improve coordination of work streams and employee motivation (Osterloh et. al., 2001). An organisational innovation is the implementation of a new organisational method in the firm’s business practices, workplace organisation or external relations (Mohnen and Hall, 2013). Strategic focus towards innovation in terms of creating comparative advantage is crucial for product innovation success (Hadjimanolis, 2000) and organizational innovation is referred to in terms of new management practices, new organization, new corporate and new marketing strategies (Battisti and Stoneman, 2010).

Lastly, a marketing innovation represents the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing standing for marketing methods (OECD, 2005). They are oriented towards better understanding of customers' needs, new markets or different market positions. Accordingly, a marketing innovation can be implemented for both new and existing products and services. The most prominent marketing innovation is product design that indicates significant changes that are part of a developing marketing concept of product form and appearance but do not alternate product's functional or user characteristics. New promotional activities consider the use of new concepts in promotion such as the first use of a significantly different media or technique. Other marketing methods relevant for marketing innovation include product placement in terms of new sales channels as well as new pricing strategies for company's goods and services.

Marketing innovations differ from the product ones, as they do not change product's function or uses. Recognizing the importance and potential value of marketing innovation Bartow (2000) investigated radical marketing innovation with the intention to proof its great benefits to companies' success.

More radical innovation tends to ensure growth much more prominently than new to business innovation (Freel and Robinson, 2004); which in the end is the ultimate goal of implementing innovation. Apart from incremental and radical there are also exploitative innovations (Lewin, Long and Carroll, 1999) that refer to incremental innovations that arise from capabilities development within the current set of activities, skill, knowledge and processes. This paper models marketing innovation as exploitative innovation.

Porter and Stern (2001) argue that companies must be able to create and commercialize a stream of new products and processes that extend the technology frontier, while at the same time keeping a step or two ahead of their rivals. Innovativeness is a derivative of companies that cooperate with knowledge centres, have easy access to financing and heavily invest into R&D (Keizer et al., 2002). For a long time R&D has been considered as the driving factor of innovation (Mairesse & Mohnen, 2005) that is further enhanced with intangible factors. Innovation leads towards growth, therefore employment (OECD, 2001) but the relationship between the intensity of research and development (R&D) and growth is not very blunt (Račić, Radas, Rajh, 2004). This paper, among other things, investigates the influence of R&D intensity on the probability of product and process innovation. The main reasons for the cross-country comparison is the reality of country specific factors that substantially influence firms' innovative capacity (Stern, Porter and Furman, 2000). R&D is only one dimension of the national innovative culture, infrastructure, national policies and laws, entrepreneurial culture and the market atmosphere significantly influence the national innovation prospects. Therefore, the innovation success and the influence of the R&D intensity on the process and product innovation should be considered market specific. Devoting large amounts of R&D leads to potential jeopardy for the whole company in case of failure. In case of not having available funding and opt for risk averse position, companies may substitute R&D by innovation managing practices which demand less investment and bear less insecurity. (Rammer, Czarnitzki & Spielkamp, 2009).

As for the analysis of innovation patterns of countries in the sample Radosevic (1999) found that companies from Central and Eastern Europe report less R&D expenditures and tend to

purchase more technology than other companies in the EU. The same author concluded that in the region there could be recognized low levels of innovative companies.

Also Račić, Radas nad Rajh (2005) proved that companies in Croatia are more prone to innovating than nationally owned firms.

Europe remains today the main knowledge production centre in the world, accounting for almost a third of the world's science and technology production. The EU has managed to maintain its competitive knowledge position to a greater degree than the United States and Japan and is making progress towards its R&D intensity target of 3% by 2020. The EU also remains a very attractive location for R&D investment. In 2011, the EU was the main destination of FDI in the world, receiving around 30% of FDI inflows worldwide, more than the United States or Japan (Innovation Union Competitive Report, 2013, pg. 8). Three EU countries are selected for this research: Republic of Croatia (as the European Union accession country until July 2013), Poland as the European Union recent member state, and the United Kingdom as the established European Union member state.

3. METHOD

In order to answer the research question variables in the model were derived from the related research including product and process innovation– all of them being dichotomous variables. Product innovation is a dummy variable that has the value of 1 if the company reports an innovation of a product and 0 when it does not. Similarly, process innovation is a dummy variable that has the value of 1 if the company reports an innovation of a process and 0 when it does not. The model also included R&D intensity being the most prominent predictor of innovation that was tested on between 1 being low and 3 being high.

Two control variables were considered firm age and its size in terms of employees that are commonly used in related research (Camison and Villar-Lopez, 2011). Young market participants tend to see innovation as something innate as themselves are new to the market or larger time on the market can induce more experience therefore greater efficiency in innovation launch. The relationship between innovation and size can be interpreted the both ways – some scientists claim that smaller companies are more innovative due to their flexibility while other say that the larger the size companies get more effective and efficient and have more resources to invest into innovation (Lin and Chen, 2007). Cohen (2005) finds that larger firms benefit from the economies of scale therefore having a better chance profit from risky projects.

The survey originates from the 'Stimulating Learning for Ideas to Market' (SLIM) project, which is part of the European Leonardo de Vinci 'Lifelong Learning' education and training program. Its aim is to develop idea-to-market learning for a community of around 400 businesses from the Republic of Croatia (as the European Union accession country until July 2013), Poland as the European Union recent member state, and the United Kingdom as the established European Union member state.

The survey was performed from 12th May 2013 to 28th May 2013 in the Republic of Croatia and it was made online, in the Croatian, Polish and English language. It was translated from English to Croatia and Polish and back to English in order to check for its consistency. It was aimed at entrepreneurs and it was distributed to the internal database of entrepreneurs

obtained by the local sources in each country predominantly National Chambers of Commerce. In Croatia 213 businesses have completed the survey. Polish sample had 100 respondents and UK 67. There was total of 380 questionnaires.

| Table 1: Sample composition | | | | | | | | |
|------------------------------------|-----|--------|---------|--------|--------|--------|----|--------|
| | All | | Croatia | | Poland | | UK | |
| | n | % | n | % | n | % | n | % |
| Industry sector | | | | | | | | |
| Art | 3 | 0,8% | 3 | 1,4% | 0 | 0,0% | 0 | 0,0% |
| Manufacturing | 72 | 20,4% | 47 | 22,2% | 22 | 22,7% | 3 | 6,8% |
| Inovation technology | 37 | 10,5% | 24 | 11,3% | 10 | 10,3% | 3 | 6,8% |
| Sevices | 84 | 23,8% | 46 | 21,7% | 24 | 24,7% | 14 | 31,8% |
| Entertainment/Hospitatlit y | 18 | 5,1% | 12 | 5,7% | 3 | 3,1% | 3 | 6,8% |
| Communication | 1 | 0,3% | 0 | 0,0% | 0 | 0,0% | 1 | 2,3% |
| Electronic | 12 | 3,4% | 5 | 2,4% | 6 | 6,2% | 1 | 2,3% |
| Transportation | 6 | 1,7% | 3 | 1,4% | 3 | 3,1% | 0 | 0,0% |
| Software | 13 | 3,7% | 9 | 4,2% | 3 | 3,1% | 1 | 2,3% |
| Helthcare | 9 | 2,5% | 4 | 1,9% | 3 | 3,1% | 2 | 4,5% |
| Consulting | 22 | 6,2% | 15 | 7,1% | 4 | 4,1% | 3 | 6,8% |
| Finance | 10 | 2,8% | 7 | 3,3% | 0 | 0,0% | 0 | 0,0% |
| Non-profit organization | 5 | 1,4% | 4 | 1,9% | 3 | 3,1% | 1 | 2,3% |
| Energy | 7 | 2,0% | 5 | 2,4% | 1 | 1,0% | 1 | 2,3% |
| Other | 45 | 12,7% | 28 | 13,2% | 15 | 15,5% | 11 | 25,0% |
| Total | 353 | 100,0% | 212 | 100,0% | 97 | 100,0% | 44 | 100,0% |
| Missing | 27 | | 1 | | 3 | | 23 | |
| Total | 380 | | 213 | | 100 | | 67 | |
| | | | | | | | | |
| Age of the business | | | | | | | | |
| Less than year old | 16 | 4,49% | 13 | 6,13% | 3 | 3,03% | 0 | 0,00% |
| 1-2 years old | 14 | 3,93% | 8 | 3,77% | 5 | 5,05% | 1 | 2,22% |
| 3-5 years old | 6 | 19,10% | 33 | 15,57% | 25 | 25,25% | 1 | 22,22% |

| Table 1: Sample composition | | | | | | | | |
|------------------------------------|-------------|-------------|---------|-------------|---------|-------------|--------|-------------|
| | 8 | | | | | | 0 | |
| 6-10 years old | 7 8 | 21,91% | 37 | 17,45% | 27 | 27,27% | 1 4 | 31,11% |
| More than 10 years old | 1 8 0 | 50,56% | 12 1 | 57,08% | 29 | 29,29% | 2 0 | 44,44% |
| Total | 3 5 6 | 100,00 % | 21 2 | 100,00 % | 99 | 100,00 % | 4 5 | 100,00 % |
| Missing | 2 4 | | 1 | | 1 | | 2 2 | |
| Total | 3 8 0 | | 21 3 | | 10 0 | | 6 7 | |
| | | | | | | | | |
| Organization size | | | | | | | | |
| 1 employee | 3 8 | 11,1% | 21 | 10,0% | 6 | 6,8% | 1 1 | 25,6% |
| 1-10 employees | 4 6 | 13,5% | 96 | 45,5% | 27 | 30,7% | 2 3 | 53,5% |
| 11-50 employees | 9 | 2,6% | 67 | 31,8% | 35 | 39,8% | 7 | 16,3% |
| 51-250 employees | 4 0 | 11,7% | 21 | 10,0% | 17 | 19,3% | 2 | 4,7% |
| More than 250 | 9 | 2,6% | 6 | 2,8% | 3 | 3,4% | 0 | 0,0% |
| Total | 3 4 2 | 100,0% | 21 1 | 100,0% | 88 | 100,0% | 4 3 | 100,0% |
| Missing | 3 8 | | | | 12 | | 2 4 | |
| Total | 3 8 | | | | 10 0 | | 6 7 | |

If we analyse the sample relative to the two crucial questions regarding the product and process innovation 276 businesses introduced a new product or service (73%) whereas 194 businesses introduced a new processes (52,7%). 149 Croatian firms reported a product innovation, 73 Polish companies and 58 UK ones. In terms of process innovation there are 101 companies in Croatian share of the sample reporting it, 46 Polish ones and 41 companies in the UK.

4. RESULTS

In order to evaluate the results we conducted ANOVA test for the whole sample for the variables of Product innovation, Process innovation and R&D intensity. The results of ANOVA were significant for Process innovation and R&D Intensity for $p < 0,01$ and for Product innovation for $p < 0,1$.

Table 2: Results of ANOVA

| Product innovation | | | | | | |
|---------------------------|----------------|-----|-------------|-------|------|--|
| | Sum of Squares | df | Mean Square | F | Sig. | |
| Between Groups | 1.078 | 2 | .539 | 2.933 | .054 | |
| Within Groups | 67.602 | 368 | .184 | | | |
| Total | 68.679 | 370 | | | | |

| Process innovation | | | | | | |
|---------------------------|----------------|-----|-------------|-------|------|--|
| | Sum of Squares | df | Mean Square | F | Sig. | |
| Between Groups | 2.594 | 2 | 1.297 | 5.310 | .005 | |
| Within Groups | 86.955 | 356 | .244 | | | |
| Total | 89.549 | 358 | | | | |

| R&D Intensity | | | | | | |
|--------------------------|----------------|-----|-------------|-------|------|--|
| | Sum of Squares | df | Mean Square | F | Sig. | |
| Between Groups | 5.699 | 2 | 2.849 | 4.835 | .008 | |
| Within Groups | 215.081 | 365 | .589 | | | |
| Total | 220.780 | 367 | | | | |

In order to further investigate significant differences in the level of reported process innovation and R&D intensity $p < 0,01$ and for Product Innovation $p < 0,1$; we need to take a better look at the descriptive values and at the post-hoc test.

For product innovation we can confirm that UK scores significantly higher than Croatia. For process innovation results reveal that UK scores significantly higher than both Croatia and Poland. As for R&D intensity ANOVA results indicate interestingly that Croatia reports higher levels than Poland.

Table 3: ANOVA Descriptives**Product innovation**

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval | | Min | Max |
|---------|-----|------|----------------|------------|-------------------------|-------|-----|-----|
| | | | | | Lower | Upper | | |
| Croatia | 207 | .72 | .450 | .031 | .66 | .78 | 0 | 1 |
| Poland | 97 | .75 | .434 | .044 | .67 | .84 | 0 | 1 |
| UK | 67 | .87 | .344 | .042 | .78 | .95 | 0 | 1 |
| Total | 371 | .75 | .431 | .022 | .71 | .80 | 0 | 1 |

Process innovation

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval | | Min | Max |
|--|---|------|----------------|------------|-------------------------|-------|-----|-----|
| | | | | | Lower | Upper | | |

Table 3: ANOVA Descriptives

| | | | | | | | | |
|---------|-----|-----|------|------|-----|-----|---|---|
| Croatia | 207 | .49 | .501 | .035 | .42 | .56 | 0 | 1 |
| Poland | 95 | .48 | .502 | .052 | .38 | .59 | 0 | 1 |
| UK | 57 | .72 | .453 | .060 | .60 | .84 | 0 | 1 |
| Total | 359 | .52 | .500 | .026 | .47 | .58 | 0 | 1 |

R&D Intensity

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Lower Upper | | Min | Max |
|---------|-----|------|-------------------|---------------|----------------------------------|------|-----|-----|
| Croatia | 213 | 2.13 | .732 | .050 | 2.03 | 2.23 | 1 | 3 |
| Poland | 96 | 1.84 | .838 | .085 | 1.67 | 2.01 | 1 | 3 |
| UK | 59 | 1.95 | .775 | .101 | 1.75 | 2.15 | 1 | 3 |
| Total | 368 | 2.02 | .776 | .040 | 1.94 | 2.10 | 1 | 3 |

Table 4: Result of post hoc multiple comparisons (Tukey HSD)**Product innovation**

| (I) Country | (J) Country | Mean Difference (I-J) | Std. Error |
|-------------|-------------|-----------------------|------------|
| Croatia | Poland | -.033 | .053 |
| | UK | -.146* | .060 |
| Poland | Croatia | .033 | .053 |
| | UK | -.113 | .068 |
| UK | Croatia | .146* | .060 |
| | Poland | .113 | .068 |

* The mean difference is significant at the 0.05 level.

Process innovation

| (I) Country | (J) Country | Mean Difference (I-J) | Std. Error |
|-------------|-------------|-----------------------|------------|
| Croatia | Poland | .004 | .061 |
| | UK | -.231* | .074 |
| Poland | Croatia | -.004 | .061 |
| | UK | -.235* | .083 |
| UK | Croatia | .231* | .074 |
| | Poland | .235* | .083 |

* The mean difference is significant at the 0.05 level.

R&D Intensity

| (I) Country | (J) Country | Mean Difference (I-J) | Std. Error |
|-------------|-------------|-----------------------|------------|
| Croatia | Poland | .283* | .094 |
| | UK | .178 | .113 |
| Poland | Croatia | -.283* | .094 |
| | UK | -.105 | .127 |

Table 4: Result of post hoc multiple comparisons (Tukey HSD)

| | | | |
|----|---------|-------|------|
| UK | Croatia | -.178 | .113 |
| | Poland | .105 | .127 |

* The mean difference is significant at the 0.05 level.

To determine the effects of R&D Intensity onto the product and process innovation we estimated a model of binary regression that is suitable for dichotomous dependent variables.

Table 5: Binary logistics regression results – Product innovation

| | Total sample | | Croatia | | Poland | | UK | |
|--------------------------------|--------------|----------------|-------------|----------------|-------------|----------------|-------------|---------------|
| Parametar estimates (B) | Sig. | Exp(B) | Sig. | Exp(B) | B | Sig. | B | Sig. |
| log (Size) | .842 | 1.000 | .667 | .999 | .876 | 1.001 | | |
| log (Age) | .096 | 1.222* | .067 | 1.305** | .745 | 1.092 | | |
| R&D intensity | .000 | 3.774** | .000 | 4.885** | .002 | 4.655** | .031 | 5.348* |
| Intercept | .000 | .114** | .000 | .039** | .137 | .173 | .535 | .495 |
| Model fit: | | | | | | | | |
| -2 Log likelihood | 314.638** | | 197.970** | | 75.467** | | 36.209** | |
| Cox & Snell R Square | .162 | | .204 | | .199 | | .108 | |
| Nagelkerke R Square | .240 | | .293 | | .294 | | .209 | |
| n | 332 | | 202 | | 76 | | 59 | |

The binary logistic regression models available in the Table 7 show the values for the total sample as well as for each country individually. It has to be noted that UK model lacks control variables due to smaller sample size and better model fit. All of the models in the table are statistically significant and following the fit statistics Δ -2 log likelihood indicates statistically significant contribution of the proposed prediction. Nagelkerke's pseudo R-Square shows small but reasonable amount of variation. The parameter b represents the likelihood of company reporting larger levels of product innovation. It is important to note that R&D is proved to have a statistically significant impact on the product innovation in the total sample as well as in each country individually. Moreover, age has a relevant impact in the whole sample and in Croatia.

Table 6: Binary logistics regression results – Process innovation

| | Total sample | | Croatia | | Poland | | UK | |
|--------------------------------|--------------|----------------|-------------|----------------|-------------|----------------|-------------|--------------|
| Parametar estimates (B) | Sig. | Exp(B) | Sig. | Exp(B) | B | Sig. | B | Sig. |
| log (Size) | .881 | 1.000 | .698 | 1.001 | .918 | 1.000 | | |
| log (Age) | .005 | 1.357** | .063 | 1.279* | .010 | 2.090** | | |
| R&D intensity | .000 | 2.414** | .000 | 2.641** | .002 | 2.650** | .074 | 2128' |

| Table 6: Binary logistics regression results – Process innovation | | | | | | | | |
|--|-----------|--------|-----------|--------|----------|--------|---------|------|
| Intercept | .000 | .052** | .000 | .042** | .000 | .008** | .435 | .513 |
| | | | | | | | | |
| Model fit: | | | | | | | | |
| -2 Log likelihood | 408.030** | | 257.997** | | 92.326** | | 60.785* | |
| Cox & Snell R Square | .127 | | .125 | | .229 | | .063 | |
| Nagelkerke R Square | .169 | | .167 | | .305 | | .089 | |
| n | 327 | | 206 | | 82 | | 52 | |

The model available in the Table 8 presents the binary logistics regression values with process innovation as dependent variable. Here again has to be noted that UK model lacks control variables due to smaller sample size and better model fit. All of the models in the table are statistically significant and following the fit statistics Δ -2 log likelihood indicates statistically significant contribution of the proposed prediction. Nagelkerke's pseudo R-Square shows small but reasonable amount of variation. The parameter b represents the likelihood of company reporting larger levels of process innovation. It is important to note that R&D is proved to have a statistically significant impact on the process innovation in the total sample as well as in each country individually; as it was in the previous table, with product innovation. Moreover, age has a relevant impact in the whole sample and in Croatia and in Poland.

5. CONCLUSION AND LIMITATIONS

The purpose of this study was to investigate significant differences among companies that report product and process innovation relative to different market contexts that they operate in and their reported R&D intensity. Using the survey data of 380 entrepreneurs and business executives from three countries: Croatia, Poland and the UK three regression models have been tested.

Related to product innovation, this study confirmed that UK is significantly better than Croatia, and for process innovation results revealed that UK has significantly better score than both Croatia and Poland. Regarding R&D intensity results indicate that Croatia reports higher levels than Poland. This conclusion is in line with Račić, Radas and Rajh (2005) who noted that companies in Croatia are more prone to innovating than nationally owned firms. But, Croatia does not have a mature innovation system with a core of highly innovative business as a driver. R&D expenditures is low at 0.8% of GDP, compared to 2% in EU and 2,4% in the OECD area. Moreover, it has been stagnating during the last decade – in sharp contrast to many emerging economies (OECD Reviews of Innovation Policy: Croatia 2013).

The interesting finding of this study is related to R&D activities. We can conclude that R&D is proved to have a statistically significant impact on the product innovation in the total sample as well as in each country individually. Moreover, age has a relevant impact in the whole sample. This means that management in companies are aware of importance of R&D activities and product innovation. Similarly, R&D is proved to have a statistically significant impact on the process innovation in the total sample as well as in each country individually. In the same way, age has a relevant impact in the whole sample and in Croatia and Poland.

This conclusion is also stated by Milgrom and Roberts (1990) who found that product and process innovations are complements, because they mutually reinforce each other. Furthermore,

extant literature shows that new products and processes are connected, namely the firms that develop new processes also develop new products (Koschatzky et al., 2001; Radas, 2003, Radosevic, 1999). This relationship is confirmed again in this study, where we find a significant relationship between products and processes innovation. This reflects the fact that to realize new products, especially those of higher novelty, firms have to improve outdated technologies and processes (Račić, Radas & Rajh, 2004).

The paper support the finding from Racic, Aralica, & Redzepagic (2008) who found that the 'ideal type' of a Croatian export-oriented SME tends to operate in medium high-technology manufacturing and services, produce specialised capital and consumer goods servicing specific market niches, export independently, sell products directly to specialised customers of special products, cooperate with foreign enterprises, perform intramural Research and Development (R&D) activities, innovate product mix by including products with a higher value added and introduce new technologies, but without limiting their innovation activities on the acquisition of technology.

Main limitation of our study relates to the dichotomous variables and to the fact that UK model sample size was smaller than in Croatia and Poland. Having a bigger sample size in UK would enable us to understand better the relationship between product and process innovation.

Further research should involve longitudinal studies and more complex definitions of product and process innovation. It would also be useful to improve the methodology by strengthening the linkages between the characteristics of entrepreneurs and firms.

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Materialisation of the Concept of Good Governance by Effective Investment Dispute Resolution in the European Union

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ABSTRACT

The concept of good governance constitutes a wide perspective for academic discussion because it provides a substantial theoretical background for settling many practical problems faced contemporarily by the EU. The basic assumptions of good governance have basically remained unchanged since the 90's, when the concept was introduced by the World Bank. Notably, the scholarly discussions these days reveal new facets of the said concept, when related to specific domains. The paper discusses the application of the specific elements of the concept of good governance in the field of the international investment law. Specifically, it seeks to demonstrate that the concept of good governance regulates the issue of international investments in that, among others, it requires the application of the alternative dispute resolution in order to make the investment law enforceable in the best possible way.

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1. INTRODUCTION

Good governance constitutes a key element which influences the rate of investments in the European Union. In order to decide on the localisation of the new projects, foreign investors carefully verify the political situation of the country in which they plan to invest and they keep track of the governmental attitude towards the foreign investors. They investigate the administration procedures which affect the business environment of the country with special consideration of the potential obstacles which may arise in relation to the state procedures. Consequently, they also focus on the potential disputes related to specific phases of the investment process.

It needs to be said that in view of the above facts, the existence of the effective court system is one of the key factors which have impact on the rate of investments in the European Union. Therefore, among others, transparent and predictable judicial proceedings which may be initiated in order to settle the disputes in question constitute a major element of the effective dispute resolution system. However, the courts cannot be considered to be the only institution which is responsible for resolving the investment disputes. The highly complex character of the said type of disputes and the necessity to have the sector-related expertise make the task a challenge for judges. Additionally, high legal fees and long-lasting procedures which withhold the investment process discourage investors from taking legal actions before the state courts.

The possible hypothesis here is that the judicial system is more effective when it is supplemented by some alternative frameworks which are supposed to complement all the deficiencies of the court system. Specifically, the article aims at examining the hypothesis that the existence of the alternative dispute resolution mechanism, in particular the arbitration schemes, plays a significant role in materialising the concept of good governance. Before the relevant arguments are analysed the author will embark on the task of presenting the mainstream assumptions of good governance that are deemed to be crucial for the investment

processes in the European Union. Further, the author will focus on discussing that court and out-of-court procedures which constitute a vital element of the effective dispute resolution system, determining the materialisation of concept of good governance. Finally, the author will elaborate on the statement that providing the out-of-court mechanism is crucial for shaping the investment-friendly environment in the European Union.

2. GENERAL REMARKS ON THE CONCEPT OF GOOD GOVERNANCE

The good governance is not a new concept since it has been in the focus of interest of various institutions for more than 20 years. The concept was formulated by the World Bank in 1991 according to which governance must extend “beyond the capacity of public sector management to the rules and institutions which create predictable and transparent framework for the conduct of public and private business and to accountability for economic and financial performance.” The World Bank placed great emphasis on the three dimensions of the concept: (i) accountability, (ii) predictability and legal framework for development as well as (iii) information and transparency.

The first dimension is considered at the macro- and micro-level. At the macro-level accountability refers to the public authorities which shall bear the financial and economic responsibility for their actions. At the micro-level, accountability relates to the public affected who shall be encouraged to participate in the governmental actions and to articulate their interests. As it will be demonstrated below, accountability at the micro-level plays significant role for the participation of the beneficiaries and this approach is developed further due to its influence on the promotion of the investment process in the EU.

On the other hand, predictability and the legal framework which are considered to constitute the second dimension mean that the specific rules and regulations shall be clear and applied by impartial authorities who have limited capacity as regards the scope their actions. Such approach helps to assess the business risks, to lower the transaction costs and to reduce the governmental arbitrariness. This is particularly important for the private sector players, such as investors who are interested in maximising the profits and reduction of costs.

In order to apply the concept of good governance both of the above mentioned elements must be supplemented by the access to the information from the public and private sources and by the transparency of decision-making process. It shall be stressed here that accurate information about the economy, market conditions and intentions of government “critically affects the efficiency and competitiveness of the private sector.” On the other hand, transparency of the decision-making process is indispensable to reduce the rate of corruption.

Although the concept of good governance coined by the World Bank evolved in 1990's, its general assumptions remained unchanged (Maldonado, 2010). In the latest literature of the subject it is emphasised that the key issues related to the concept of good governance are still on the top of the agenda of the EU institutions. Therefore, it seems to be justified to refer to them nowadays when applying the principles of good governance to the activities of the private sectors, such as investment market of the European Union.

3. APPLICATION OF THE BASIC PRINCIPLES CONNECTED WITH THE CONCEPT OF GOOD GOVERNANCE TO THE INVESTMENT SECTOR

Undoubtedly, public policies and actions undertaken in order to implement the principles of good governance by public authorities affect the investments market in the EU member states. Therefore, their application in this area has a considerable influence on the attractiveness of the investment location. The basic elements of the concept of good governance mentioned above, such as (i) *predictability* and (ii) *transparency* of law, (iii) *accountability* of public institutions which deal with investors and (iv) *participation* of the private sector in the implementation of the policy decisions which reflect investors, remain up-to-date, although there are many new interpretations made by international scholars fitting in the specific conditions characteristic for a given investment environment. In what follows some remarks regarding this interpretation shall be presented.

3.1 Predictability of policy and legal framework

From the perspective of the investors who locate their projects in the EU, *predictability* means that there must be a consistent policy and precise provisions of law governing the investment process in the respective member states. It implies the existence of comprehensive legislative framework encompassing the investment which is deprived of the administrative discretion. Individual decisions, left at the authority's discretion and issued only as a result of the parties negotiations, are clearly contrary to the guideline of *predictability*.

In order to consider the legal framework is predictable, it must follow the market realities. In case when the existing law is not sufficient to regulate appropriately the current investment procedures taking place in a specific member state, the government shall initiate the change of such provisions and ensure that the new regulations would be adapted to the current market situation. It is particularly important for the investment law not to fall behind with the practice. Otherwise the enforcement of such obsolete law would be difficult.

The notion of *predictability* refers not only to the existence of rules and regulations but also to their fair and clear application by relevant national authorities. In this respect law shall regulate the procedure in which administrative bodies issue the decisions. In case of the disputes arising out of or in connection with the investments, predictability requires that national courts should adjudicate coherently, that is in line with the clear legal framework.

Next, in order to state that law affecting the investment process is predicable, it should be made relatively simple and comprehensible for the market players. In particular, the procedure of the application for necessary permissions shall be short and lacking bureaucracy. The reduction of the time necessary for the formalities related to the investment process enables the investors to lower the costs and therefore it influences the investment attractiveness of the specific member states. The existence and the application of the procedures which are clear and easy to follow prevents the investors from ignoring the law and helps them to avoid corruption in this field.

3.2 Accountability of the public authorities

In order to make the public authorities accountable for their actions which affect investors, it is crucial to define the scope of their responsibility. To this end it is indispensable to create a clear legal framework explicating for what and to whom the public authorities are responsible. Those issues shall be regulated both in the procedural and substantive provisions of law.

Consequently, the law must provide a clear structure indicating to the investors the possibilities of appeal from the unlawful administrative decisions. It implies that each

member state should adopt a set of laws which would enable the investors to monitor the administrative procedures at each stage. Further, it needs to be determined which rules and policies those authorities shall apply and enforce within the given investment procedure. Without it the investors' right to appeal would be just a dead letter of the law.

Moreover, *accountability* means that there are preventive measures enacted which shall discourage the public authorities to act behind the law. An example of such means may be the anti-corruption legislation which helps to detect the offences committed by the public authorities within the investment process and provides appropriate sanctions for the corrupted authorities.

3.3 Transparency of the decision-making process

Transparency refers to the governmental policy and actions which shall be open to the public. Interested investors shall be able to get information on the current and planned undertakings in the field of investment policy in order to decide on the location and to estimate the profitability of the project.

Moreover, the principle of *transparency* refers to the national investment laws which shall be translated into the internationally recognised languages. It is still problematic for the foreign investors to understand the law and procedures connected with the investment process if they are available only in the national languages of the respective member states. Lack of legal translation generates additional costs for the investors and creates delays, which finally discourages them from investing in such member states.

It is also worth pointing out the influence of media and public debates on the *transparency* of the investment process. Nowadays they not only serve the purpose of advertising the locations but also and above all they are the source of the knowledge on the government attitude and policy towards investments in the member states.

3.4 Participation of the private interests groups in governance

Good governance requires cooperation between the government, civil society and various business groups. It is displayed in the form of consultancy which takes place at each stage of the policy development and enactment of the legislation. The dialogue between the entities involved is necessary to consider the different interests in the policy - and law-making process.

Such consultations and debates are beneficial for all the groups involved. Thanks to them governments are informed on the current needs of the investors. The consideration of these needs influences the quality of the decisions issued and enables the government to create the investor-friendly image which supposedly makes the member state attractive for foreign investor. In turn, investors share the responsibility for the governmental policy and actions undertaken after the consideration of their interests.

Debates initiated by the government with different groups of interests shall be formally organised and particular members of such consultations (or their representatives) shall be formally informed about the event. Otherwise the policy makers and legislators may face the charges that consultations took place only pro-forma and the real needs of the private sector were not considered. Therefore, it is recommended to involve the investors organisations and associations (if such exist in the given member state) to represent the relevant communities during consultations.

4. GOOD GOVERNANCE AND THE SYSTEM OF JUSTICE

In order to ensure the predictability and stability that is necessary in the investment process there must exist a system of justice which will provide proper application of the rules of law, both by the governments and the investors. Without such control the application of the particular elements of good governance would not be possible. Traditionally, the justice system was, above all, associated with the activities of the courts. However, it will be discussed in the next point that there is also a place for out-of-court bodies whose activities may have tremendous influence on the implementation of the concept of good governance to legal orders of the member states.

Effective system of justice was considered as a vital element of good governance already in 1990's. The emphasis was put on the activity of "independent and credible judicial system which assures that the private contractual agreements are respected and that the law is applied uniformly by the executive." According to the first aspect, the role of the judiciary consists in the enforceability of the contracts which would not be voluntarily executed without the court intervention. This task would not be fulfilled if the adjudication on the contracts enforcement would be delayed or connected with high court fees. The second point concentrates on the judicial control over the public administration which can be exercised effectively only if the judicial system has strong position.

The World Bank stressed out the need of legal reforms aiming at the improvement of the efficiency of institutions which administer laws of significance to the economy. As an example of such reform this institution proposed providing trainings on the business and economic law designated for the judges, which shall help them to take into account the market-related factors in the process of adjudication. Competence and effectiveness of the judges have a strong impact on the costs of transactions which can be considerably reduced if the judicial system is efficient. In turn, it assures the investors that the situation of the member state in which the project shall be located is reliable, which attracts the new transactions.

5. GOOD GOVERNANCE AND ALTERNATIVE DISPUTE RESOLUTION

In line with the concept of good governance conflicts may be resolved not only by judges but also by extra-judicial bodies. Already in 1990's the World Bank noted the need to encourage some extra-judicial means of settling the disputes (in particular commercial arbitration) in order to help the overworked judges and shorten the time needed for the resolution of conflict. The role of the alternative dispute resolution methods in the application of the concept of good governance was appreciated by the literature of the subject after 1990's (Erbe, 2004).

In the field of investment, arbitration turned out to be specially interesting for the investors. It is commonly preferable because, compared to the litigation before national courts, it brings a lot of advantages which are discussed below.

In the first place arbitration enables the parties of the dispute to have the flexibility as regards the choice of arbitrators, legal rules, general principles for the procedure and the applicable law. This means that the parties involved enjoy significant control over the arbitration proceedings. Secondly, it is possible to detach the arbitration process from the usual legal order, as arbitration is not bound by any specific legislation. This is particularly beneficial to the parties when the administrative authorities are involved. The third advantage of arbitration over the national court adjudication is the speed of the process. Because of the fact

that the national courts are constantly overloaded and the trials are delayed arbitration is often a very attractive alternative. It provides faster way of the dispute resolution, as the proceedings are less formal. Bearing in mind the complexity of the subject matter the following factors may be considered to be relevant: the investment disputes and high transactional costs connected with the delays in the investment process and the speed of the proceeding. What is more, in the commercial arbitration proceedings are confidential, which is also vital for the party when the claim is based on the infringements of investment law. All in all, considering the nature of the trans-border investment transactions, arbitration enjoys popularity among investors because of its confidentiality, the speed of the process, flexibility over the choice of arbitrators and process and wide enforcement of decision.

Not surprisingly, one of the world's leading out-of-court institutions which deals with the international investment disputes is the International Centre for Settlement of Investment Disputes ("ICSID") affiliated to the World Bank. ICSID provides the settlement of the disputes mostly by arbitration, but also by other alternative dispute resolution methods, such as conciliation and fact-finding. The main characteristic of ICSID is that it resolves only the disputes which arose between the investors and the host states and it is not competent for the resolution of the conflicts between the investors and other private entities. Unlike in commercial arbitration, information on the disputes settled by ICSID is not confidential and the arbitral awards are officially published. The ICSID emphasises that while the arbitration proceedings are pending under its auspices, the following basic principles of good governance and rule of law are ensured: transparency, impartiality, accountability and consistency (Marshall, 2006)

6. CONCLUSIONS

The discussion presented above allows us to formulate some conclusions in relation to the thesis posed. Namely, the concept of good governance may be held to play a particularly significant role in the sector of investments, where the foreign investors are very careful about the national policy having influence on the choice of the location of the capital.

From among the numerous elements of good governance that were discussed in the paper, according to the author ensuring the possibility of effective pursuance of claims arising out of such transactions may be said to belong to the most important ones. Properly functioning system of justice has key significance for the investors who, in case a dispute arises, want to be sure that it will be resolved with respect of the basic legal principles.

In view of the fact that in majority of the member states the state courts are overloaded and the judges do not have the specialist knowledge in the field of investments, the alternative dispute resolution methods may be said to significant role to play. In line with the principle of good governance state courts shall provide the investors with the possibility to enforce the contracts concluded in these member states effectively and settle potential disputes arising out of them in the proper time. Since the national courts are often unable to achieve this aim, the application of the alternative dispute resolution methods would clearly mean the materialisation of the concept of good governance.

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The Impact of a Going-Concern Audit Opinion on Board of Directors

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ABSTRACT

Paper examines the impact of a going-concern audit opinion on the corporate governance, measured by the changes in board of directors' composition. External auditor's opinion is used as a measure to address agency problems in companies. We examine this impact on sample of 55 companies listed on the Banja Luka Stock Exchange which have received going-concern audit opinion for 2013 financial reports. In this paper, the relationship between going-concern audit opinion and the corporate governance is investigated observing changes in board of director composition and additional requests for rigorous board performance evaluation after the shareholder's assembly have received external auditor's report. Results show that board of directors of companies that received going-concern audit opinions have not suffered serious consequences such as rigorous board performance evaluation, reduction of board size or changes of board members. This highlights the importance of measures that need to be put in place in order to increase of external auditor's role in corporate governance.

ARTICLE INFO

Keywords:

Audit, Board of Directors, Corporate Governance, Going-Concern Opinion

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1. INTRODUCTION AND LITERATURE REVIEW

According to agency theory, agency problems arise as a result of the divergence of interests among agents and principals (Jensen and Meckling, 1976; Shleifer and Vishny, 1997; Miller, 2002), that is managers and shareholders. The agency problem of information asymmetry arises because managers have superior information about the company's business and financial situation than the stakeholders.

Klein et. al. (2002) observe that "*in corporate finance, asymmetric information refers to the notion that firm insiders, typically the managers, have better information than do market participants on the value of their firm's assets and investment opportunities*".

Voluntary disclosures by managers and Board of Directors prevent information asymmetry between shareholders and management to a certain extent (Karamanou and Vafeas, 2005). One of the most important corporate governance principle of transparency and public disclosure is aimed at reducing information asymmetry in companies (Todorovic et. al., 2013).

Regulatory changes and improvements in corporate governance principles, financial reporting and auditing standards and enforcements of these regulations by shareholders, investors and other players in capital markets support the agency theory problem and confirm the importance of external auditing and corporate governance in financial reporting (Cadbury, 1992; Hampel, 1998; Blue Ribbon, 1998; SOX, 2002).

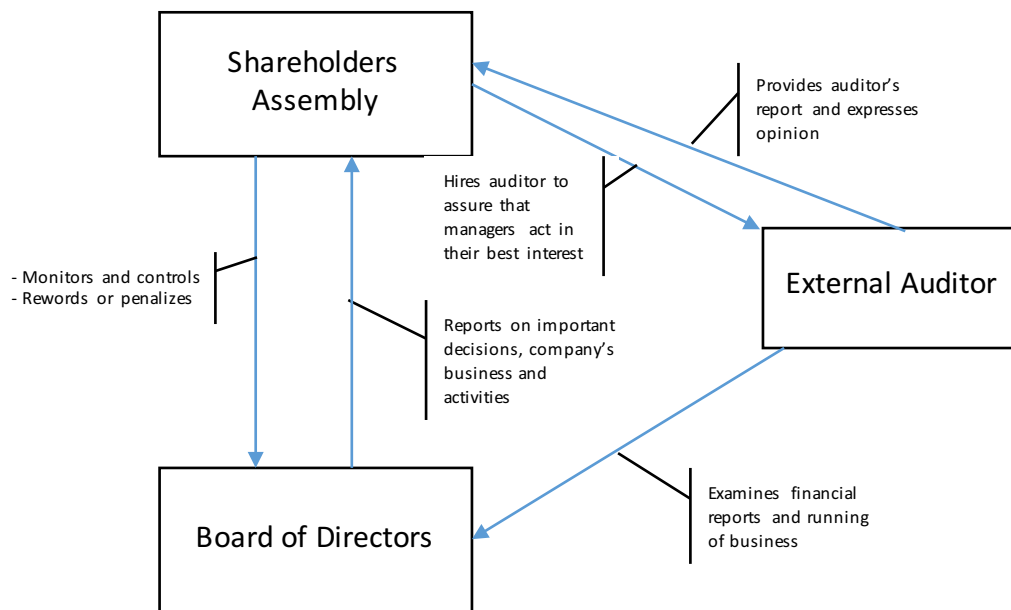


Figure 1: Role of external auditor between owners and managers

As shown in Figure 1, the existence of an external audit review is one of the important factors decreasing information asymmetry. Auditor's opinion plays an important role in mitigating agency problems in company between shareholders and managers (Jensen and Meckling, 1976). Audit review and report is an important mechanism for reducing information asymmetry (Beatty, 1989; Willenborg, 1999). Therefore, shareholders hire external auditors to assure that managers act in their best interest (Antle, 1982; Watts and Zimmerman, 1986).

Studies show that audit reports signal increased reliability of financial statements (Coram, Mock, Turner and Gray, 2011) and that the auditor's going-concern modified report communicates valuable information about risk to investors (Blay, Geiger and North, 2011) and shareholders. As a result, market responds adversely to a going-concern report (Blay and Geiger, 2001; Menon and Williams, 2010).

In paper we examine the relationship between and impact of an external auditor's going-concern opinion on the corporate governance. We use external auditor's opinion as a measure to address agency problems in sample companies. When external auditor expresses report with going-concern suspect or opinion, it means that the auditors raise doubts of the company's ongoing ability (Casterlla, Lewis and Walker, 2001), practices of corporate governance and Board of Directors' ability to govern company well. As external auditor has indicated and raise doubt about running the company Board of Directors of these companies should suffer serious consequences such as rigorous board performance evaluation, reduction of board size or changes of board members.

2. METHODOLOGY AND RESEARCH HYPOTHESIS

Paper examines the impact of a going-concern audit opinion on the corporate governance, measured by the changes in board of directors' composition. External auditor's opinion is used as a measure to address principal agent problems in companies.

Out of 269 companies which have received and disclosed auditor's report for FY 2013 we have selected sample of 55 companies listed on the Banja Luka Stock Exchange which have received going-concern audit opinion for FY 2013 financial reports. Therefore, we examine this impact on a full population of companies which have received going-concern audit opinion.

In this paper, the relationship between going-concern audit opinion and the corporate governance is investigated observing changes in board of director composition after the shareholder's assembly have received external auditor's report. Moreover, to further understand monitoring and control practices we investigate whether shareholder's assembly requested additional and rigorous board performance evaluation.

To offer useful answers to the research problem and realize the objectives, the following hypotheses were tested:

H1. External auditor's going-concern opinion has impact on Corporate Governance practices of companies.

H2. External auditor's going-concern opinion leads to consequence to the Board of Directors.

H2.1. External auditor's going-concern opinion leads to changes in Board of Directors' composition.

H2.2. External auditor's going-concern opinion leads to additional and rigorous Board performance evaluation.

To test research hypotheses, we have collected data from the Banja Luka Stock Exchange database, annual reports and companies' web pages regarding:

- auditor's reports for FY 2013,
- shareholders assembly meetings,
- shareholders assembly meetings decisions,
- changes in Board of Directors structure, and
- board performance reports.

3. RESEARCH RESULTS AND DISCUSSION

Research data collected on companies which have received going-concern audit opinion for FY 2013 financial reports from different sources was analysed and presented in Table 1. (by number of companies) and Figures 2 to 5. (in percentage of total observed companies).

| Table 1: Impact of auditor's going-concern opinion | | | |
|--|------------|-----------|--------------|
| | Yes | No | Total |
| Discussed Auditors Report on Shareholders Assembly Meeting | 50 | 5 | 55 |
| Changes in Board of Directors Composition | 13 | 42 | 55 |
| Requested Additional Board Performance Evaluation | 1 | 54 | 55 |

Source: Authors' research

Table 2. shows reasons for expressing going-concern opinion at sample companies from the Banja Luka Stock Exchange and that main reason for expressing going-concern opinion is significantly higher short-term debt than current assents. These reasons indicate problems in practices of corporate governance and Board of Directors' ability to govern company well.

| Table 2: Reasons for expressing going-concern opinion | |
|--|-------------------------|
| Reason | No. of companies |
| Significantly higher short-term debt than current assents | 26 |
| Significant losses | 9 |
| Loss over the capital | 11 |
| Potential illiquidity or loss | 9 |
| Total | 55 |

Source: Kondic and Poljasevic, 2015

Figure 2. shows that majority of companies, 91% or 50 companies discuss auditor's report on shareholder's assembly meeting. However, 9% or 5 companies did not discuss auditor's report on shareholder's assembly meeting, indicating that some companies do not realise importance of external auditor report on company's business specially when external auditor raises doubt of the company's ongoing ability, practices of corporate governance and Board of Directors' ability to govern company well.

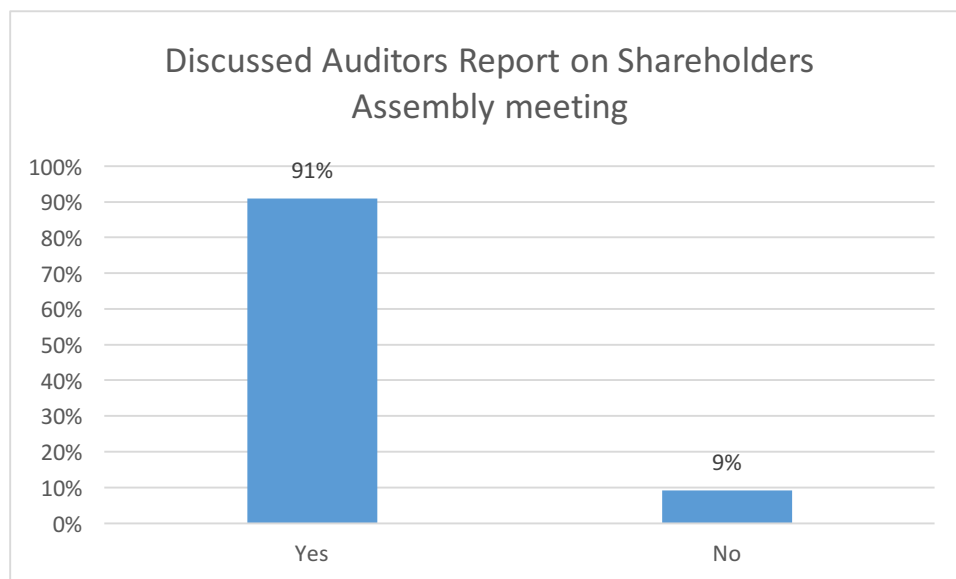


Figure 2: Discussed Auditors Report on Shareholders Assembly Meeting

Figure 3. indicated that majority of sample companies, 76% or 42 companies, have not made any changed to Board of Directors composition and changed its members even though external auditor raised doubts of the company's ongoing ability, practices of corporate governance and Board of Directors' ability to govern company well. Only 24% or 13 companies have made changes to Board of Directors' after the shareholder's assembly have received and discussed external auditor's report.

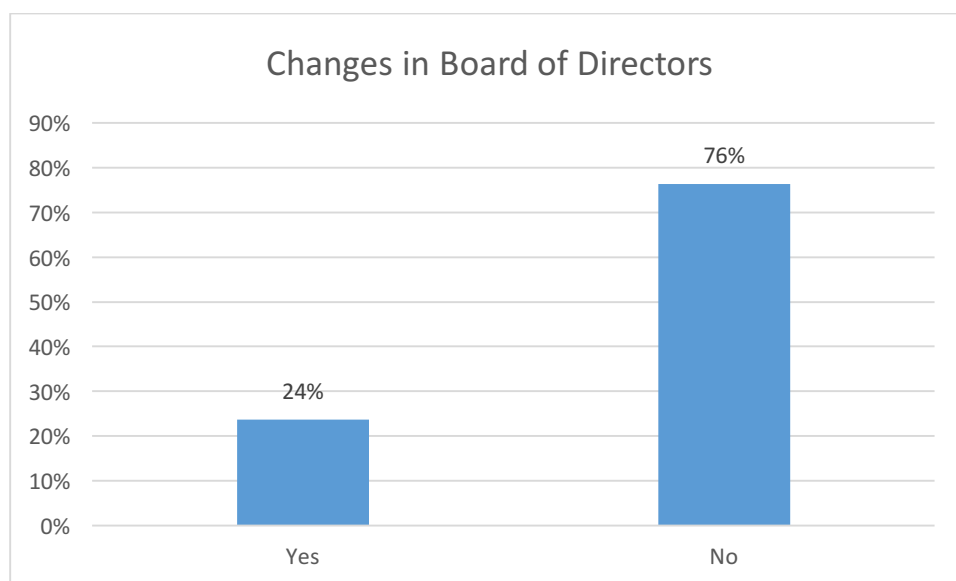


Figure 3: Changes in Board of Directors Composition

Data from Figure 4. shows number of changes by 13 companies that have made changes to Board of Directors' after the shareholder's assembly have received and discussed external auditor's report. Most of companies have requested a change of 1 or 2 board members, while there is one company that has changed entire Board after going-concern audit opinion. Also, we have encountered 3 companies which have changed members of Board of Directors but did not disclose number and names of members that have been changed. On average, these 13 companies have made changes to 2 members of Board.

Analysis of data shown in Table 1., Figure 3. and 4. for sample companies from the Banja Luka Stock Exchange indicate that external auditors' going-concern opinion does not lead to changes in Board of Directors' composition, which rejects hypothesis H2.1.

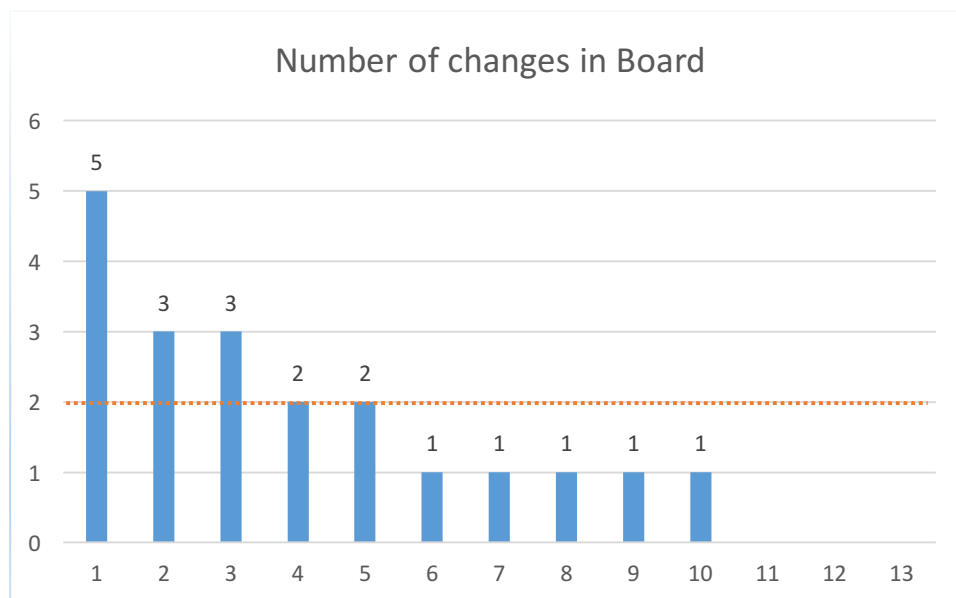


Figure 4: Number of Changes in Board of Directors by Company

To further understand monitoring and control practices we investigate whether shareholder's assembly requested additional and rigorous board performance evaluation after receiving going-concern audit opinion. Figure 5. shows that only one company, out of 55 companies, have requested additional and rigorous board performance evaluation. This indicates that shareholders do not perceive external auditor's opinion to play important role as a mechanism for reducing information asymmetry even though shareholders hire external auditor to assure that managers act in their best interest. Therefore, our analysis of sample companies rejects research hypothesis H2.2.

As results show that shareholders do not perceive external auditor's opinion to play important role in reducing agency problem between shareholders and managers (Board of Directors) we also have to reject hypothesis H2. which indicate that external auditor's going-concern opinion leads to consequence to the Board of Directors.

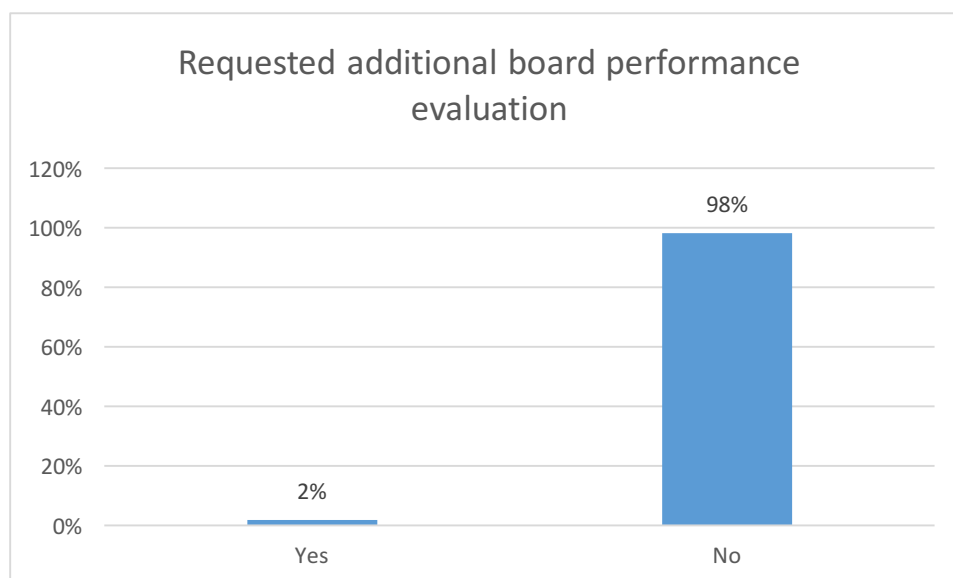


Figure 5: Requested Additional Board Performance Evaluation by Shareholder's Assembly

As external auditors have indicated and raise doubt about running the company by expressing going-concern opinion, Board of Directors of sample companies should suffer serious consequences from its shareholders such as rigorous board performance evaluation, reduction of board size or changes of board members.

However, taking into consideration above results and analysis of the relationship between going-concern audit opinion and the corporate governance which was investigated observing changes in board of director composition and requests for additional and rigorous board performance evaluation after the shareholder's assembly have received external auditors report we also reject hypothesis H1. which state that external auditor's going-concern opinion has impact on Corporate Governance practices of companies.

4. CONCLUSION

Regulatory changes in corporate governance principles, financial reporting and auditing standards have emphasized importance of external auditor's opinion in corporate governance as auditor's opinion plays important role mitigating agency problems and information asymmetry in company between shareholders and managers.

Therefore, as external auditor expresses going-concern opinion and raise doubt about the company's ongoing ability, practices of corporate governance and Board of Directors' ability to govern company well, Board of Directors should suffer serious consequences.

Results show that Board of Directors of sample companies that received going-concern audit opinions have not suffered serious consequences such as rigorous board performance evaluation, reduction of board size or changes of board members. This highlights the importance of measures that need to be put in place in order to increase of external auditor's role in corporate governance.

Based on results we have rejected all research hypothesis which indicates that in sample companies external auditor's going-concern opinion has no impact on Corporate Governance practices of companies and does not lead to consequence to the Board of Directors. Shareholders of these companies do not use external auditor's opinion to mitigate agency problems and reduce information asymmetry between managers and shareholders.

This implies that shareholders are not active in running a company and controlling do managers act in their best interest. If they want to protect their ownership and interest in company shareholders have to be active in monitoring and control over company's activities. This type of activism focuses on the financial performance of companies and puts pressure on management for an improved of performance and acting in the best interest of company and shareholders.

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Interdependence of managerial capabilities and business internationalization

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ABSTRACT

Internationalization has become an inevitable fact in the business world since the 1970s, when a strong liberalization of the market started to take place and the technology came to a level which enabled companies to expand their businesses outside the boundaries of their countries. Businesses use range of different modalities entering foreign markets but this research is focused on exporting companies as one of the most commonly used strategy in foreign market exploitation. Research conducted on the basis of 113 exporting companies examines the role of managerial capabilities regarding their international performance. Managerial capabilities are associated with key organizational requirements necessary for entering these foreign markets, along with the methodical building of a competitive product portfolio and achieving sustainable competitive advantage. Managerial capabilities are measured by the level of their general education, skills and experience, as well as knowledge about international markets.

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1. INTRODUCTION

In order for the companies to survive and sustain in the long run, it is necessary to expand their markets and potentially start the internationalization process. Integrating worldwide financial system, lowering entry barriers, deregulation and cultural convergence have enabled higher volumes of international operations (Chang, 2012). Last decade has witnessed an accelerated growth of international activities but open market does not only imply opportunities rather it also brings new strategic challenges. Concerning international presence many companies do not make the most of their potential. Lack of motivation, capabilities, human or financial resources may result in serious underperformance regarding these opportunities (Freixanet, 2011). Furthermore, accompanying continuously intensifying global competition, recession (Hausman i Johnston, 2014) has additionally emphasized the need for understanding companies' key competitive advantages and ways of employing those into successful international strategies (Damanpour, 2010).

2. LITERATURE REVIEW

Processes of internationalization have been examined in various research papers over the last 30 years (Caughey and Chetty, 1994; Morgan and Katsikeas, 1997; Knudsen and Madsen, 2000; Leonidou, 2004; Leonidou, Katsikeas, Palihawadana and Spyropoulou, 2007; Tan, Brewer and Liesch, 2007; Uner, Kocak, Cavusgil and Cavusgil, 2013; Kahiya and Dean, 2014). Exporting is considered to be one of the most common foreign market entry modalities (Albaum et al., 2008), which consequently may serve as a platform for further international expansion and strategy formation (Wild, Wild and Han, 2014). As quick access

to international markets, exporting requires less capital investment (unlike direct investments) leaving management more resource to focus on consumers, partners and market regulation (Knudsen and Madsen, 2000; Cavusgil et al., 2014).

Nevertheless, exports are dependent on tariff systems and exchange rate fluctuations which may potentially undermine firm's efforts to exploit foreign markets (Piercy, 2014; Kahiya and Dean, 2015). Governments threatening to raise tariff barriers may prompt export inefficiency and make the strategy a high risk venture. Other non-exporting scenarios are associated with high transportation costs which may eliminate firm's profit (Daniels, Radebaugh and Sullivan, 2009) or achieving lower costs of production abroad. This may often be the case in the presence of global standardization or transnational strategy, when it is more efficient to move production facilities into a location with most favourable conditions and consequently export to the rest of the world.

Managerial capabilities, their education, skills, previous experience and knowledge of the foreign market have been considered essential in the process of internationalization (Kyvik et al., 2013). Managers need to make decisions regarding products, services, employees and logistics which have the potential to satisfy customer needs and achieve global competition (Morgan, Katsikeas and Vorhies, 2012). Implementation of the exporting activities, its execution, continual monitoring and strategy adjustments associated with varying market conditions are all parts of implementation and monitoring, and the final stage of the export strategy development (Seringhaus and Rosson, 2012). Depending on specific knowledge, manager's capabilities may increase the speed of internationalization and probability of success. If managers possess more capabilities, exporting activities could be performed more efficiently (Felicio et al., 2015). Therefore the role of managers regarding internationalization has become an important focus of managerial research (Singla & George, 2013).

Managerial capabilities are considered an important source of companies extra profits. They are essential for the organizational resources allocation, communication and implementation of strategies, maintaining internal and external interest group and stakeholder networks as well as managing organizational culture. In order for managers to adequately perform it is essential to possess certain experience and company specific knowledge (Lo, 2012). Managerial capabilities are embodied in a team of people, not just a single person, for an entire scope of complementary skills, technical and social, is needed in order to achieve predominance on a specific competitive market. If they possess these skills, characteristics of a managerial team can meet the conditions for achieving and maintaining competitive advantage (Sahaym et al., 2012). Insufficient managerial skill can lead to missing market opportunities and creating unnecessary cost for the company.

If management incorrectly interprets outer and inner environment, situation will result in adverse decision making, omitting necessary change or not being able to achieve necessary level of proactivity (Ambrosini et al., 2009). Managerial capabilities are key determinants of competitive advantage, an important source of multinational company's success and unique resource of the organization, as managers form strategic visions and communicate them within the entire organization, giving authority necessary for their implementation as well as maintaining the connection between the company and its environment (Ludwig and Pemberton, 2011).

Teece (2009) has defined managerial capability as one of the most important factor of resource management while emphasizing *managing and coordination of resources in existing operations*, maximizing their benefit and *making decisions about their relocation*. These processes will ensure the sustainability of competitive advantage. Sustainability is subordinated to a constant change and resources should be controlled with decision making in a limited time frame. Undoubtedly, the managers have a key role in a company's ability to adjust under changing circumstances. Nowadays, market success requires managers to act in an entrepreneurial way and build upon their organizational capability in order to sense or "seize" the opportunities exploiting them with regards on their competitive advantage and sustainability. Managerial capabilities are directed towards the managers' understanding of external and internal state of the company, i.e. understanding dynamics of the environment will affects manager's *motivation* (Helfat et al., 2014). Depending on the level of motivation, managers may become more or less valuable to the company. Their skills are embedded while hard to copy, especially in the short run. It is highly unlikely for managers to have the same capabilities; their competencies are different, but nevertheless may be equally efficient (Barbero et al., 2011). Managerial capabilities are a requirement for successful internationalization process, but they offer no guarantee of success. It will also depend on many different factors like the environment features, industrial structure, technological position and competition in a specific sector (Cavusgil and Knight, 2015).

3. METHODOLOGY

The research was conducted on the basis of 113 Croatian companies derived from the list of exporters using the database of The Croatian Bureau of Statistics. Sample was acquired from the population of companies which earned more than 50% of their total revenue abroad. According to the CBS in the period 2000-2010, there were more than 400 companies which fitted this description. Highly structured questionnaire was sent via email where participants had to provide company's financial data, information regarding strategy, reasons for entering foreign markets, speed of internationalization and their opinion regarding range of different statements concerning managerial capabilities. Participants perception was measured using Likert scale reaching from 1 - fully disagree to 7 - fully agree.

Out of 113 companies 64 declared using strategy based on exploitation of narrow market segment, 58 used strategy of differentiation and 20 companies claim to have achieved cost advantage. As one of the most important reasons for internationalization, respondents stated growth of the company, following launching of unique products, acquiring new knowledge, unsatisfied international demand and the similarities between markets. Furthermore, respondents also claim domestic market being insufficient in size or their managers having necessary knowledge for supplying demand in the foreign markets. Regarding the speed of their internationalization, 31 companies did it quickly and independently, 25 entered the international market instantly with the help of a partner and 23 followed traditional phases of the internationalization process where they firstly operated on a single international market, i. e., their entry was independent, gradual and careful. Gradual internationalization with the help of a partner was made by 17 companies and 9 of them were born global.

The average level of the foreign ownership in these companies was 18% and the average number of years in business 25, where 19 years on average was spent on the foreign market. Average share of the exporting revenue was 81%, average return on sales 19% and yearly average growth of revenue 7% (Table 1).

Table 1: Characteristics of the sample

| | <i>N</i> | μ | σ |
|--|----------|-------|----------|
| <i>Foreign ownership share in the capital? (%)</i> | 101 | 18.96 | 36.50 |
| <i>Years in business</i> | 104 | 25.13 | 23.19 |
| <i>Level of the firm's internationalization</i> | 107 | 81.01 | 14.58 |
| <i>Years of presence on the foreign market</i> | 103 | 19.41 | 14.82 |
| <i>What is the share of profit in your income in 2014? (%)</i> | 111 | 19.88 | 14.30 |
| <i>What is the average growth/fall in income in 2014/2013? (%)</i> | 113 | 7.89 | 6.22 |

Source: Author's calculation

Managerial capabilities were measured regarding two dimensions, managerial capacity and knowledge about the foreign markets. Subsequent 10 statements addressed managerial capacity: Our company is significantly investing in advancement of managerial knowledge and skills, Our company is significantly investing in managerial knowledge and skills regarding production or service technology, Our management has necessary knowledge and skills regarding efficiency in business planning, Our management has necessary knowledge and skills regarding strategic business analysis, Our management has necessary knowledge and skills regarding research and development, Our management has necessary knowledge and skills regarding company controlling, Our management has necessary knowledge and skills regarding business negotiation, Our management has necessary knowledge and skills regarding public relations and market representation, Our management has ability to learn quickly and adapt to environmental changes, Our management has ability to create innovative environment.

Subsequent 8 statements addressed managerial knowledge of international markets: International experience is very important when contracting our managers, Our management has significant knowledge about strategy of our international competitors, Our managers have extensive knowledge about values and norms inside the foreign market where we do business, Our managers have extensive knowledge about law regulation inside the foreign market where we do business, Our managers have extensive knowledge about customers inside the foreign market where we do business, Our managers have extensive knowledge about distribution channels inside the foreign market where we do business, Our managers have globally applicable knowledge and experience, Our managers are more efficient then regional competition.

4. RESULTS

Managerial capabilities were measured in terms of managerial capacity and knowledge about the foreign markets. First variable representing managerial capacity was derived using arithmetic average of 10 individual statements where most affirmation was given to the statement of Our management has ability to learn quickly and adapt to environmental changes ($\mu=5,77$), following Our management has necessary knowledge and skills regarding public relations and market representation ($\mu=5,75$), ability to create innovative environment ($\mu=5,64$), knowledge and skills regarding business negotiation ($\mu=5,56$), research and development ($\mu=5,55$), company controlling ($\mu=5,47$), strategic business analysis ($\mu=5,41$),

efficiency in business planning ($\mu=5,31$), investment in advancement of managerial knowledge and skills ($\mu=5,20$), and investment in knowledge and skills regarding production or service technology ($\mu=5,10$).

Highest level of correlation between the level of the firm's internationalization and managerial capacity was found regarding necessary knowledge and skills in research and development ($,525$), investing in advancement of managerial knowledge and skills ($,456$) and strategic business analysis ($,443$). Lowest level of correlation between the level of the firm's internationalization and managerial capacity was found for ability to create innovative environment ($,163$), efficiency in business planning ($,315$) and business negotiation ($,317$). It is important to emphasize that the level of managers ability to create innovative environment was not significantly correlated to the level of firm's internationalization ($p=0,093$). Finally, correlation of aggregated final variable measuring managerial capacity encompassing all 10 statements was significantly correlated to the level of firm's internationalization $0,557$ ($p=0,00$). (Table 2)

| Table 2: Correlation matrix: Managerial capacity and the level of the company's internationalization | | | | |
|--|-------|----------------|-------|-----|
| The level of the firm's internationalization | μ | <i>Pearson</i> | Sig. | N |
| Our company is significantly investing in advancement of managerial knowledge and skills | 5,20 | ,456** | 0,000 | 107 |
| Our company is significantly investing in managerial knowledge and skills regarding production or service technology | 5,10 | ,422** | 0,000 | 107 |
| Our management has necessary knowledge and skills regarding efficiency in business planning | 5,31 | ,315** | 0,001 | 107 |
| Our management has necessary knowledge and skills regarding strategic business analysis | 5,41 | ,443** | 0,000 | 107 |
| Our management has necessary knowledge and skills regarding research and development | 5,55 | ,525** | 0,000 | 107 |
| Our management has necessary knowledge and skills regarding company controlling | 5,47 | ,428** | 0,000 | 107 |
| Our management has necessary knowledge and skills regarding business negotiation | 5,56 | ,317** | 0,001 | 107 |
| Our management has necessary knowledge and skills regarding public relations and market representation | 5,75 | ,419** | 0,000 | 107 |
| Our management has ability to learn quickly and adapt to environmental changes | 5,77 | ,425** | 0,000 | 107 |
| Our management has ability to create innovative environment | 5,64 | 0,163 | 0,093 | 107 |
| Managerial capacity | | ,557** | 0,000 | 107 |

** $p < 0,01$

* $p < 0,05$

Source: Author's calculation

Second variable representing knowledge about foreign markets was derived as arithmetic average of the following statements where most affirmation was given to the statement Our managers have extensive knowledge about customers inside the foreign market where we do business ($\mu=5,87$), following Our managers have extensive knowledge about distribution channels inside the foreign market where we do business ($\mu=5,84$), Our managers are more

efficient then regional competition ($\mu=5,73$), Our managers have globally applicable knowledge and experience ($\mu=5,73$), Our managers have extensive knowledge about law regulation inside the foreign market where we do business ($\mu=5,57$), Our managers have extensive knowledge about values and norms inside the foreign market where we do business ($\mu=5,47$), Our management has significant knowledge about strategy of our international competitors ($\mu=5,39$) and International experience is very important when contracting our managers ($\mu=5,37$).

Highest level of correlation between the level of internationalization and managerial knowledge of the foreign market was found regarding importance of international experience when contracting managers (.808), knowledge about strategy of international competitors (.741) and extensive knowledge about values and norms inside the foreign market (.609) (Table 3.). The lowest level of correlation was found between the level of internationalization and managerial knowledge of the foreign market regarding extensive knowledge about distribution channels (.421), being more efficient then regional competition (.469) and globally applicable knowledge and experience (Table 3).

| Table 3: Correlation matrix: Knowledge about foreign markets and the level of the firm's internationalization | | | | |
|--|-------|---------|-------|-----|
| The level of the firm's internationalization | μ | Pearson | Sig. | N |
| International experience is very important when contracting our managers | 5,37 | ,808** | 0,000 | 107 |
| Our management has significant knowledge about strategy of our international competitors | 5,39 | ,741** | 0,000 | 107 |
| Our managers have extensive knowledge about values and norms inside the foreign market where we do business | 5,47 | ,609** | 0,000 | 107 |
| Our managers have extensive knowledge about law regulation inside the foreign market where we do business, | 5,57 | ,598** | 0,000 | 107 |
| Our managers have extensive knowledge about customers inside the foreign market where we do business | 5,87 | ,576** | 0,000 | 107 |
| Our managers have extensive knowledge about distribution channels inside the foreign market where we do business | 5,84 | ,421** | 0,000 | 107 |
| Our managers have globally applicable knowledge and experience | 5,58 | ,557** | 0,000 | 107 |
| Our managers are more efficient then regional competition | 5,73 | ,469** | 0,000 | 107 |
| Knowledge about international markets | | ,795** | 0,000 | 107 |

** $p < 0,01$

* $p < 0,05$

Source: Author's calculation

Before estimating the regression model of managerial capabilities (independent variables) and the level of the firm's internationalization (dependent variable), correlation matrix was calculated in order to demonstrate the relationships among all variables. Results confirmed significant correlations for all variables. Although the correlation between independent variables was significant (.561), problem of multicollinearity wasn't present. Model was able

to explain 64% of all variation. Coefficient assigned with managerial capacity was significant and positive ($\beta_1=0,27$) as well as the coefficient assigned with the knowledge of the foreign market ($\beta_2=1,38$) (Table 4). Residuals were normally distributed.

| Table 4: Regression model | | | |
|---|----------------------|---------------------------|-----------|
| <i>Name of the variable</i> | Variable description | (α)/ (β) | P - value |
| <i>Level of the firm's internationalization</i> | dependent variable | | |
| α | constant | 3,489038 | 0,6939 |
| Managerial capacity | independent variable | 0,279170 | 0,0126 |
| Knowledge of the foreign market | independent variable | 1,380736 | 0,0000 |
| (<i>F-test</i>) | | | 0,00 |
| (<i>R</i> ²) | | 0,64 | |

Source: Author's calculation

On the basis of the regression model it is indicative that managerial capacities have the influence on the level of the company's internationalization. Development of managerial capabilities is an important factor for successful internationalization of the company. Managerial capabilities are a requirement of the organizational routine and may explain the difference between failure and success in the process of the company's internationalization. Since conceptual and organisational learning is the basis of international success, in order to accomplish defined set of goals and organisational integration, companies must strategically manage and monitor the development of managerial capabilities. Nevertheless, managerial capabilities may be an important characteristic of the best companies, but do not guarantee success. Final result will be the output of industry, technology and profit opportunities of the segment in which the company competes.

5. CONCLUSION

In order for the companies to maintain their competitive advantage in the open market it is important to do business outside the boundaries of national countries. International trade is an important condition of national economic development. Companies face internal and external barriers, where technological development, access to information and limitation of industrial infrastructure may diminish their efforts in achieving growth, development and international expansion. Finding solutions with externally given barriers, managerial capabilities should facilitate international expansion of the company. International activities are important for stabilizing company's revenue. If rising unemployment decrease demand inside the national market, exporting to other countries may help companies mitigate this revenue discrepancy. Internationally successful companies have above average investments, avoid limitation of national markets and are more competitive. Prior to global financial crisis in 2008, Croatia had a long history of merchandise trade deficit, importing twice the size of exports, but since then, value of trade was decreasing, with imports tumbling faster. Export has shown to be more robust regarding crisis and demand fluctuation. Global crisis endured longer than expected and fall in aggregate demand encouraged rethinking some economic principles. Robustness of exports, especially high quality manufacturing has demonstrated production to be the bedrock of every well-structured economy this being valid even for the postindustrial countries.

Export plays an important role in the economic development. It has the ability to create new jobs, increase GDP, stabilize balance of payment and create new knowledge which can

further increases the competitiveness of the country. Research has demonstrated most exporting companies from Croatia use strategy based on exploitation of narrow market segment and differentiation, while their reasons were growth, launching of unique products, acquiring new knowledge, unsatisfied international demand and the similarities between markets.

Merchandise exports are responsible for 20% of Croatian GDP, exporters represent most successful segment of the economy and there is evident research interest regarding its determinants. Entering the European Union in 2013 Croatian export was affected by elimination of CEFTA agreement, but Croatia has gained access to aggregated demand of the European market with 500 million consumers as well as preferential agreements of the EU. Aforementioned represents great economic potential, bringing challenges where managerial capabilities may facilitate in achieving higher level of competitiveness for the Croatian companies inside the global market.

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Technological Progress in Croatian Non-Perennial Agriculture

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ABSTRACT

Croatian agriculture stagnates over the last quarter of the century. Although it is heavily subsidized and the investment in mechanization was high, Croatian agriculture did not improve its production level, not even after the accession to the European Union. The project of green and blue Croatia, which aim is to connect agricultural production and tourism, did not show significant results import substitution. In this paper non-perennial crops agriculture is analyzed since it forms more than 40% of total agricultural production in Croatia. In order to distinguish the contribution of capital, labour and total factor productivity, a Cobb-Douglas production function is estimated on a panel data set for Croatian non-perennial agriculture in the period of 2008 – 2014. It was discovered that production elasticities do not correspond to the shares of expenditures on labour and capital which is a common production function assumption. Also, it is shown that total factor productivity declines over time, a disinvestment and labour decline caused stagnation of this sector of Croatian economy. A further analysis is made to determine the impact of subsidies and export orientation on TFP and it is found that Croatian agricultural production is affected by export orientation and subsidies, but their impact is almost irrelevant.

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1. INTRODUCTION

Croatian geographical position is beneficial for its agriculture; warm Mediterranean climate and several rivers pass through fertile fields of Istria, Northern Dalmatia and Neretva valley. These areas are very good for perennials like olives, vines, peaches, apricots, cherries and all citruses. Mountainous region of Lika with fertile valleys offers great conditions for cattle and some fruit, like plums, and potato. Pannonian part of Croatia with its hills and plains and moderate climate enables cultivation of almost all classes of NACE⁵ rev. 2:

| Table 1: NACE classification of agriculture, fishing and forestry | |
|--|--|
| Code | Name |
| 11 | Growing of non-perennial crops |
| 12 | Growing of perennial crops |
| 13 | Plant propagation |
| 14 | Animal production |
| 15 | Mixed farming |
| 16 | Support activities to agriculture and post-harvest crop activities |
| 17 | Hunting, trapping and related service activities |

⁵ NACE = Nomenclature statistique des activités économiques dans la Communauté européenne

| Table 1: NACE classification of agriculture, fishing and forestry | |
|--|---|
| Code | Name |
| 21 | Silviculture and other forestry activities |
| 22 | Logging |
| 23 | Gathering of wild growing non-wood products |
| 24 | Support services to forestry |
| 31 | Fishing |
| 32 | Aquaculture |

Unfortunately, Croatia does not use its agricultural potential. As it can be seen on Figure 1, Croatian agricultural production declines in both volume and share in GDP; from HRK 14,4 Bill. in 2010 production fell down to HRK 12,2 Bill. in 2014, and from 4,4% share in GDP in 2010 it fell down to less than 3,6% in 2014.

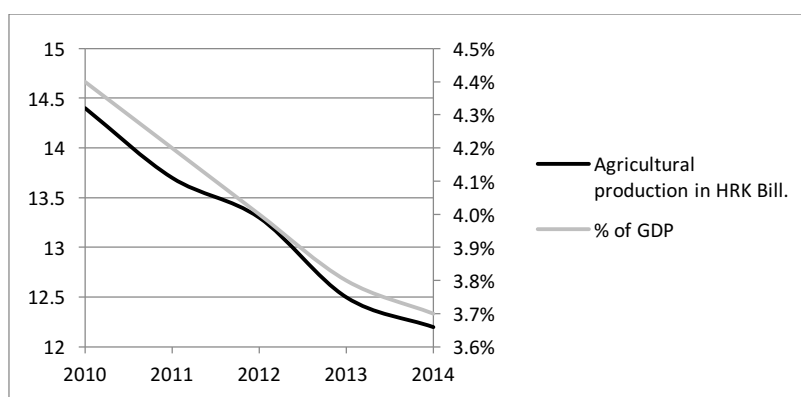


Figure 1: Agricultural production in HRK Bill. and share of agriculture in GDP of Croatia in 2014

Source: Own calculation based on FINA database

In order to find what is pulling Croatian agriculture down, agriculture was decomposed into NACE classes (Table 1). The most detrimental picture is a non-perennial agricultural production. Figure 2 shows that 53,7% of all the arable land in 2014 in Croatia was used for non-perennial cultures. However, in the same year non-perennial agriculture accounted for only 41,2% of the agricultural production, but took 56,9% of total amount of agricultural subsidies⁶.

⁶ Authors' own calculation according to the data by FINA

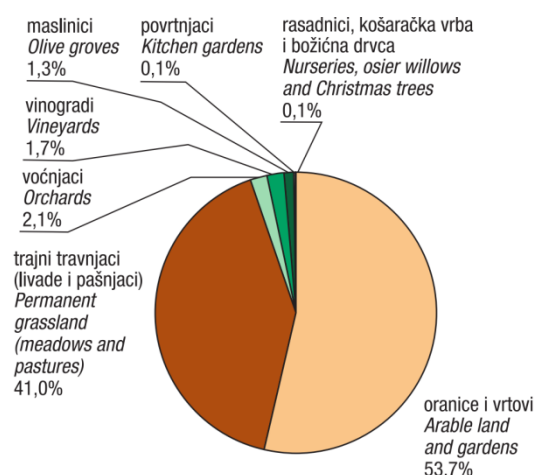


Figure 2: Arable land usage in Croatia in 2014

Source: *Croatian statistical Yearbook 2015, DZS*

Since lots of money and arable land is invested in the non-perennial agriculture in Croatia and revenues are not satisfactory, this paper will try to make its detailed analysis in order to find which classes of non-perennial production section are the least developed and what are the reasons for it.

2. DATA AND METHODOLOGY

Dataset for the analysis is obtained by FINA (Croatian Financial Agency) which collects company JOPPD reports with a number of standardized data. Since Croatian companies are obliged to consign these reports annually under threat of penalty, the dataset used here covers the entire statistical population.

The report outline changed several times. Therefore an adjustment between certain years was needed. After the adjustment, a 301 variable dataset is obtained in the time period from 2008 – 2014 for 1007 legal entities which produced non-perennial agricultural products. The unbalanced panel data set was used to estimate a Cobb-Douglas production function, which is the most commonly used in similar analyses.

Armagan & Ozden (2007) analyzed Turkish agriculture, namely crops, using a Cobb-Douglas function to estimate its production function. They used a number inputs in that study among which are the average age of farmers, their average education and land size and distinguished small, medium and large producers. The analysis was based on cross section data.

Echevarria (1998) constructed a production function for Canadian agriculture. In this paper a very common assumption was taken: scale elasticity $\varepsilon = 1$ (constant returns to scale) and that production elasticities of each input correspond to its share in total costs.

Parlinska & Dareev (2011) estimated agricultural production function for Poland and Republic of Buryatia. A simple two-input Cobb-Douglas function was used to estimate production functions for both countries/regions using a time series from 2000 – 2009.

Enaami, Mohamed and Ghani (2013) have shown even more advantages of using Cobb-Douglas function as a basis for production function estimation. They also show how to deal with multiple issues that might occur under a multiple input approach. Due to these suggestions, a following simple model is used to estimate Croatian non-perennial production function:

$$\hat{Y}_{xt} = A_{xt} K_{xt}^{\kappa} L_{xt}^{\lambda} \quad (1)$$

Where x stand for the legal entity (company), t for year, Y for production volume, A for total factor productivity, K for capital, L for labour, κ for contribution of capital (production elasticity of capital) and λ for contribution of labour (production elasticity of labour). Also, it is assumed that total factor productivity changes in time with an exponential time path:

$$A_{xt} = e^{at+b} \quad (2)$$

Combining (1) and (2) the following function is estimated:

$$\hat{Y}_{xt} = e^{at+b} K_{xt}^{\kappa} L_{xt}^{\lambda} \quad (3)$$

After linearization the estimated model was:

$$\ln Y_{xt} = at + b + \kappa \ln K_{xt} + \lambda \ln L_{xt} + u_{xt} \quad (4)$$

A generalized least squares method was used with random effects, due to abundant dataset and expected differences between the companies. Multicollinearity, heteroscedasticity and autocorrelation test were made as well as the parameter and joint tests for validity of the model.

Using the obtained data total factor productivity is calculated as a residual :

$$A_{xt} = \frac{\hat{Y}_{xt}}{K_{xt}^{\kappa} L_{xt}^{\lambda}} \quad (5)$$

This was the end of the first stage. In the second stage a total factor productivity model was constructed using numerous regressors:

$$A_{xt} = \sum_{i=1}^n Z_{xt,i} + u_{xt} \quad (6)$$

Among many, the following regressors were taken into account: share of company on the market, number of companies on the market, export volume, subsidies taken⁷, growth of the economy, investment volume and many others.

3. PRODUCTION FUNCTION ESTIMATE

Based on the previously described panel dataset and methodology, the estimated production function for Croatian non-perennial agriculture from 2008 – 2014 (7):

$$\hat{Y} = e^{7,462-0,0288t} K^{0,266} L^{0,379} \quad (7)$$

F-test, t-test and necessary autocorrelation and multicollinearity test show that this model is well defined with standard errors being independent one from the other. Also, it is shown that total factor productivity has a declining time path (Figure 3).

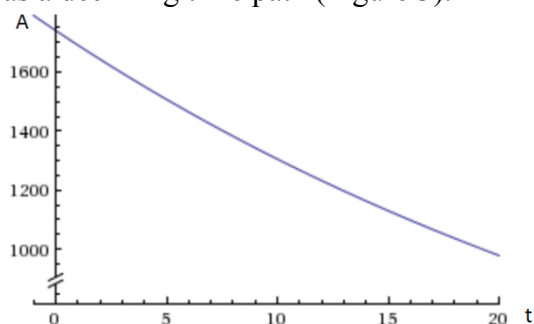


Figure 3: Total factor productivity time path of Croatian non-perennial agriculture

Using the obtained production function coefficients a total factor productivity for classes of non-perennial agriculture can be calculated. In Croatia only sugar cane cannot be produced hence the TFP matrix has 5 columns (Table 3).

⁷ Kroupová & Malý (2010) show the importance of subsidies on Czech agriculture, again using a multiple input Cobb-Douglas production function.

Table 2: Production function residuals for Croatian non-perennial agriculture from 2008 – 2014.

| | Cereals | Rice | Vegetables | Tobacco | Other |
|------|---------|--------|------------|---------|-------|
| 2008 | 27.365 | 22.733 | 5.113 | 2.594 | 1.703 |
| 2009 | 22.064 | 5.586 | 5.614 | 4.217 | 3.786 |
| 2010 | 21.894 | 6.567 | 3.900 | 4.561 | 4.757 |
| 2011 | 27.693 | 4.609 | 4.292 | 3.442 | 2.446 |
| 2012 | 28.744 | 4.423 | 3.913 | 3.306 | 2.478 |
| 2013 | 27.784 | 7.137 | 6.987 | 2.837 | 3.030 |
| 2014 | 29.529 | | 6.250 | 3.295 | 3.064 |

Source: Own calculation based on FINA database

Dynamics of TFP for each class (Cereals, rice, vegetables, tobacco, other) is given in the Figure 4.

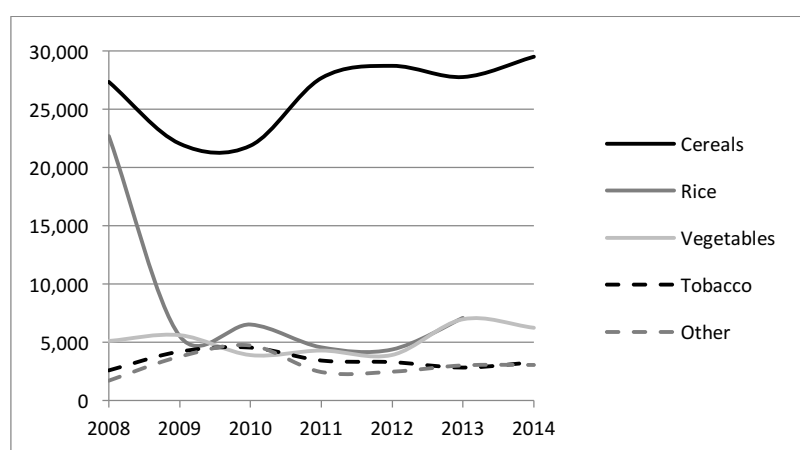


Figure 4: Total factor productivity of Croatian non-perennial agriculture per classes (2008 – 2014)

Source: Own calculation based on FINA database

In order to be able to observe dynamics in detail, a base index TFP matrix is made (Table 3).

Table 3: Base indices (2008 = 100) of production function residuals for Croatian non-perennial agriculture from 2008 – 2014.

| | Cereals | Rice | Vegetables | Tobacco | Other |
|------|---------|-------|------------|---------|-------|
| 2008 | 100,0 | 100,0 | 100,0 | 100,0 | 100,0 |
| 2009 | 80,6 | 24,6 | 109,8 | 162,5 | 222,3 |
| 2010 | 80,0 | 28,9 | 76,3 | 175,8 | 279,3 |
| 2011 | 101,2 | 20,3 | 83,9 | 132,7 | 143,6 |
| 2012 | 105,0 | 19,5 | 76,5 | 127,4 | 145,5 |
| 2013 | 101,5 | 31,4 | 136,7 | 109,4 | 177,9 |
| 2014 | 107,9 | | 122,2 | 127,0 | 179,9 |

Source: Own calculation based on FINA database

Table 3 and 4 shows that cereals production stagnates in terms of technology improvement. Since rice production volume is insignificant, it can be ignored. Vegetables had a TFP decline, but in 2014 are 22,2% above the level in 2010. However, the most significant rise in TFP is seen in tobacco cultivation and other cultures, like soy bean, sugar beet, herbs and many other (Figure 5). These findings suggest that in non perennial agriculture a dynamic rise can be expected in tobacco and other smaller non-perennial production.



Figure 5: Total factor productivity of Croatian non-perennial agriculture per classes (2008 – 2014)

Source: Own calculation based on FINA database

4. ALTERNATIVE PRODUCTION FUNCTION CONSTRUCTION

The alternative approach, used in many production function analyses like Echevarria (1998) did for Canada, suggested a different, non-econometrical approach where a share of inputs costs in total costs is used as a proxy for input contribution. Using this assumption the analyst assumes that companies are on their expansion paths, where cost minimizing rule holds:

$$MRTS_{KL} = \frac{w}{r} \quad (8)$$

Also, it is assumed that returns to scale are constant. The comparison between these two approaches is given in the Table 4.

| Table 4: Comparison between share in costs and econometric production function coefficients for Croatian non-perennial agriculture from 2008 – 2014. | | |
|---|-------------------------|----------------------|
| | Production elasticities | Share in total costs |
| K | 0,266 | 0,858 |
| L | 0,379 | 0,142 |
| Total | 0,645 | 1,000 |

Source: Own calculation based on FINA database

Comparison shows significant differences between the coefficients obtained by econometric and cost-minimizing approach; first, econometric approach shows that returns to scale are not constant, but decreasing. Secondly, labour contribution is much bigger than the share of labour costs in total costs. Finally, contribution of capital is much smaller in the estimated function. These findings suggest that too many workers are used per unit of capital, which is due to poor education of Croatian farmers. Hence less capital is used since there is not enough human capital to run it which causes decreasing returns to scale. Significant difference between econometric and non-econometric function coefficient suggests that the econometric approach should be used for further analyses of TFP in this paper.

5. TOTAL FACTOR PRODUCTIVITY MODEL

The estimation of a model defined in (6) used more than 100 variables, as described in Section 2. It was found that only export orientation and subsidies affect TFP. In order to remove autocorrelation an autoregressive model (9) was estimated:

$$TFP_t = 0,0001571SUB + 0,0001115EXP + 0,37429902 TFP_{t-1} + 2016,898 \quad (9)$$

There is slight positive effect of the export and subsidy rise, but it is almost inexistent. As compared to the findings of Kroupová & Malý (2010), while in Czech Republic subsidies have a beneficial effect on TFP in agriculture, in Croatia it is not a case. The reasons for it should be found in the fact that subsidies are given for the area of land and not for the volume, then because subsidies are directed to the least productive sector of agriculture in terms of revenue, and finally because educational system does not supply necessary human capital to match high technology without which it is impossible to make progress.

6. CONCLUSION

Croatian non-perennial agriculture section occupies most of the arable land and takes almost 60% of all agricultural subsidies, but yields only 41,2% of the agricultural production. A Cobb-Douglas production function for non-perennial agriculture in Croatia was estimated using a panel data. It was found that its TFP has a downward sloping time path. After calculation of TFP as a function residual it was shown that cereals stagnate in terms of technological progress, while vegetables and tobacco production increased 22-27% from 2008 – 2014. Finally, other non-perennial agricultural production has shown the most dynamic TFP growth of almost 80% in the mentioned time period.

Comparison between the theoretical expansion path and the real data has shown that the inadequate education led to excessive usage of labour, inadequate usage of capital and decreasing returns to scale. It also showed that in Croatian case an econometric approach gives significantly different results than the share-of-cost approach.

Finally, subsidies show no effect on the TFP improvement. Since this analysis used a NACE class data, some of the specific data variation might have been lost, hence a differentiated approach has to be taken in order to see which specific classes and subclasses react better to subsidies. Also, further analyses should take into account also live-stock production, hunting, fishing and perennial production which combined account for almost 60% of agricultural production.

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Leadership & Corporate Social Responsibility In El Salvador. The Maquila factory League

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ABSTRACT

League Central America (LCA) is presented as an example of leaders, managers, guides and entrepreneurs who are starting a new era in the management of companies, where values and spirituality mark the path to excellence and define administrative roles, behaviors and attitudes of all members of the organization. Corporate Social Responsibility is the Management Model. Leaders in the business world are judged by hard-number figures, short term actions; added value and wealth creation long term vision & purpose. But, surely, leadership is in itself a risky business role and a visionary leader does not shy away from taking risks because following his/her vision is inherently hazardous. Visionary leaders understand that spirituality, in the work place context, is about finding, meanings and purpose beyond one's self. It means that need the others. The working life of engagement is about understanding and using our family social values and strengths in the day today. When we experience this deep engagement and absorption we are a state of flow (Csikszentmihalyi, 1975 – Gardner 2002). A meaningful life comes from serving others, volunteer activities or visionary work. The visionary leader role may be instrumental by opening opportunities to motivational and positive work.

The D.N.A. of Maquila League culture is oriented to task results and processes, it means short term. The professors we are trying to work with its managers, around 20-25, and supervisors, around 60, to develop crucial leadership skills based at medium- long term objectives like:

- Showing respect for others, Demonstrating fair treatment in conflict situations, Demonstrating fair treatment in conflict situations, Expressing caring and concern, Listening responsively, Recognizing the contributions. Engaging in reflective practice every morning after to know the results of the day before.
 - Mission: Corporate Social Responsibility
-

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1. COUNTRY'S HISTORY

In order to understand the course of a country and the quality of its citizens, it is necessary to be familiar with the country's history, since this determines its identity, its present culture and its level of political, economic, social and technological development.

El Salvador is one of the seven countries that make up Central America, forming part of the continent of America. It has a land area of 20,742 km², a population of 6.7 million and a further 1.2 million people living outside the country 2011¹(Directorate General for Statistics and Censuses). In 2010, the country scored 0.659 on the Human Development Index, with gross national income per capita of \$6,948 (United Nations El Salvador).

In a public opinion survey conducted by the University Institute of Public Opinion (IUDOP) in 2014, 40.7% of the population cited crime as the main problem currently facing El Salvador. Indeed, in 2013 the United Nations Office on Drugs and Crime published a report placing El Salvador among the five most violent countries in the world, with a homicide rate

of 41.2 per 100,000 inhabitants, so clearly this problem is part of everyday reality for many Salvadorans. To gain an insight into the prevalence of violence and crime, one only has to look back on the history of the country, which is marked by constant violent revolutions, massacres, civil conflict and the activities of *Maras* and gangs.

After the independence movement of 1821, the Salvadoran economy embraced a system of communal land tenure, with units of land known as *ejidos* (a plot of communal land in a village, adjoining the village, which is not cultivated, and where livestock is usually gathered [RAE], 2014), but these were abolished in 1881-1882; this allowed just a few families, referred to as the “14 families”, to appropriate large areas of land, forming a powerful elite which reached the height of its influence in the industrialisation and coffee production that took place during the period from 1900 to 1930. El Salvador based its agricultural export model on products such as balsam, indigo, coffee, cotton and sugar cane.

However, in the early 1930s coffee prices suddenly fell and the country became engulfed in an economic crisis. This paved the way for military intervention and a period known as “*military authoritarianism*”, which was accompanied by a succession of popular and military uprisings, including the peasant uprising of 1932, the non-violent strike of 1944 (which brought the country to a standstill), the coup d’état to oust President Castaneda Castro in 1948 and the overthrow of the president, José Lemus, in 1960.

But it was in the 1970s that a belligerent political situation began to develop, which exploded with the Salvadoran Civil War. This lasted from 1980 to 1992, when on 16 January of that year the “Peace Agreements” were signed, putting an end to 12 years of internal conflict (Peñate, 2002). According to some sources, this bloody war caused the death of 75,000 Salvadoran civilians, while more than 9,000 people disappeared and hundreds of families fled the armed conflict by immigrating, mainly to the United States. It is worth highlighting that as a result of the civil war, El Salvador regressed more than 26 years in economic terms.

Regrettably, the peace agreements have been clouded by the appearance of a post-war phenomenon linked with ex-fighters, the transculturation of Salvadorans deported from the US (During 2013, 63 Salvadorans were deported every day), and the emotional, economic, educational and social deficiencies that have struck at the heart of families in El Salvador. This is known as *the Mara and gang phenomenon*. These criminal groups have cast a shadow of death and violence over El Salvador for almost 20 years, and this has been one of the structural problems that no government has been able to confront coherently. In public opinion surveys conducted by the IUDOP in 2014, Salvadorans defined the main tasks they believe the current government must focus on; these were 1) combat crime (51.7%), 2) create sources of employment (17.6%) and 3) improve the economy (10.4%), while the remaining 20.3% is divided between fighting corruption, controlling the cost of basic commodities, and a free education and health plan.

It is, however, important to underline that crime is not the only scourge that the country has to face, for there is also *unemployment*, currently running at 6.6%, with youth unemployment at around 13.3% in 2012, according to data announced by the Ministry of Employment and Social Security. One in 3 young people are under-employed (Multi-purpose Household Survey [EHPM], 2010). Under-employment exists when employed persons have not reached the level of full employment, according to the definition of this concept in the Labour Policy Agreement (ILO, 2014). On top of this, there is the structural problem of poverty, with a national rate of 34.5% in 2012, according to data published by the World Bank; this percentage had increased by the close of 2013, with 45.3% of the population living in poverty, but it remains below the highest figure recorded in El Salvador in the last 10 years: 47.5% in 2004.

According to the Human Development Report El Salvador 2013 of the UNDP (United Nations Development Programme), *the country has had 3 socio-economic models* 1) agricultural exports (from 1821 to 1950), 2) import substitution industrialisation (1950-1970) and 3) export promotion and investment attraction (from 1992 onwards).

The present model has not taken account of the flow of remittances or migrations, according to information in “La Prensa Gráfica”, remittances received from abroad in January 2014 totalled \$290 million, also “It is estimated that 3 of every 10 Salvadorans are outside the country” (UNDP, 2013). Therefore it has been subject to a number of distorting elements, reporting on the one hand an increase in the country’s human development index between 1990 and 2012, but on the other hand a lower rate of economic growth. “More than half the economically active population (EAP) are under-employed or unemployed, and many continue to consider the possibility of emigration, following in the footsteps of more than two million compatriots before them. In this context, there is evidence to support the argument that what has actually prevailed over these years is not an export promotion and investment attraction model, but a model that has functioned *de facto* to promote the import of consumer goods and the export of labour” (UNDP 2013).

2. CORPORATE SOCIAL RESPONSIBILITY IN EL SALVADOR (CSR)

The aforesaid provides a summary of the considerable problems faced by society in El Salvador, and thus it is of key importance to state that companies in El Salvador must make a fundamental commitment to alleviating many of these problems, making proposals that will lead to win-win situations in all areas: “the company wins, the community wins and the fabric of society as a whole wins, creating a solid base from which to significantly improve the level of development” (E&N, October-November 2013). One of the measures adopted by some companies is *Corporate Social Responsibility (CSR)*, which the ISO 26000 Standard defines as: “The responsibility of an organisation for the impacts of its decisions and activities on society and the environment, through transparency and ethical behaviour that:

- Contributes to sustainable development, including the health and welfare of society;
- Takes into account the expectations of stakeholders;
- Is in compliance with applicable law and consistent with international norms of behaviour;
- Is integrated throughout the organisation and practised in its relationships”

It is important to emphasise that CSR programmes ought to play a fundamental role in the strategies of organisations, forming part of their philosophy and organisational culture; they should not be reduced to being alternative, sporadic or routine programmes that lead to a feeling of wasted time or diminishing usefulness. On the contrary, if the application of CSR programmes is oriented in such a way that they generate value for each of the stakeholders in the company, these companies will see an increase in productivity, an improvement in their investments and/or a reduction in operational costs.

Companies are not only called upon to be socially responsible with their environment and with the community around them, or to look for fair and equitable solutions in order to endure and overcome the social problems faced by the country in which they are located, but they are also asked to be responsible with the remaining interest groups, above all with their internal customers and collaborators, who day after day give their best to safeguard the company’s source of income and to contribute to the company’s profit.

In El Salvador, several companies are embracing this new way of doing business, having identified a social deficiency that can be mitigated with a coordinated programme from within and in conjunction with the community.

There are many others that make sustainable and responsible investments to the benefit of the people of El Salvador, such as: Grupo Agrisal, Grupo Poma, Industrias La Constancia, Fusal (Salvadoran foundation for health and development), AES El Salvador, Kimberly Clark and Unilever Centroamérica.

In El Salvador, these efforts are recognised by organisations such as “the Salvadoran Chamber of the Construction Industry (CASALCO), which presents a CSR award every year”. (“La Prensa Gráfica”, 2013)

Although many companies are already putting CSR programmes into practice, 62% of companies in the country do not include CSR as a long-term strategy or policy. It is therefore important that these initiatives can be measured and quantified, in order to demonstrate their validity and the contribution they make to Salvadoran society.

3. LEAGUE CENTRAL AMERICA VARIABLE CAPITAL LIMITED LIABILITY COMPANY

The company under study, League Central America Variable Capital Limited Liability Company (League C.A. limitada de C.V.) belongs to the textile sector and specialises in the manufacture of clothing for US universities. It is a branch of League Collegiate Outfitters, which is based in Philadelphia and holds more than 50% of the US university market.

For 2013, the Textile sector reported 3% growth in exports, 91% of which were shipped to the US. Thanks to the reform of the Free Trade Zone Law in 2013, the sector receives the benefit of state and municipal tax incentives, the aim being to attract new investors. This sector generates 81,600 jobs and injects \$1,200 million a year into the economy of El Salvador

LCA commenced operations in El Salvador in 2009 under the management of the engineer Rodrigo Bolaños. The aim of the company was not only to provide a safe factory, but also to meet its legal and ethical obligations, whereby it could improve the quality of life of the people living in the region, since one of the company’s priorities is to treat its workers with fairness and dignity. League has demonstrated that the manufacture of quality clothing for university students does not have to be carried out in sub-human conditions. There are currently more than 400 employees and 93% of the present managers are in agreement that League’s CSR programmes have a direct impact on employees and their children, raising their standard of living. All the supervisor staff view League as one big family.

In an interview, the engineer Mr. Bolaños outlined the reasons behind both the development of his people-centred style of leadership and the implementation of CSR programmes in League with the total support of the owners of the company: “I believe that the country doesn’t have to be poor. I look at countries like Taiwan, Japan, South Korea, even the United States, and I have a dream that we are going to be like that one day. To be like that you have to start somewhere. I am passionate to see our people, the people from El Salvador succeed. We have to start somewhere.”

The company has the following programmes and policies:

- Establishment of a cafeteria which offers its workers a subsidised breakfast and lunch.
- Children’s Development Centre which operates as a nursery for workers’ children.
- Savings and loan programme through a cooperative.
- Recruitment of spouses and immediate relatives with the aim of increasing family income.
- Tuition at primary and secondary education level.
- Construction of housing for employees with limited funds.
- Scout Movement, to improve the social skills of workers’ children.

- Recycling projects.
- Job Placement Programme (JPP), which employs people who have been members of *Maras* and gangs, but who have broken their ties with these organisations, wishing to be reintegrated into society as productive persons who are not in conflict with the law.

League is a pioneering company in the development of the JPP, on which there are 70 participants. Its name is “Aprendices”. The current management staff have observed that these “Aprendices” have as high a degree or a greater degree of commitment compared with other members of the company, while some consider that they can end up playing a much fuller collaborative role than “normal” staff in the company. It would appear that the majority on the JPP, “Aprendices” have a greater wish to collaborate and show that they are part of society. The members of the programme are contracted to work in the operational area of the company and form part of the production modules.

These can include other workers or they may be composed exclusively of participants on the programme. An interesting characteristic of the “pure” modules is that they return the highest efficiency figures.

In a study conducted from April to September 2012, a daily average of 1,159 pieces was obtained, representing *efficiency* of 107% (compared with the plant average of 843 pieces with efficiency of 91%). It is also observed that the mixed modules, once they are mature, can return an efficiency figure of 110%. (Figure 1 and 2)

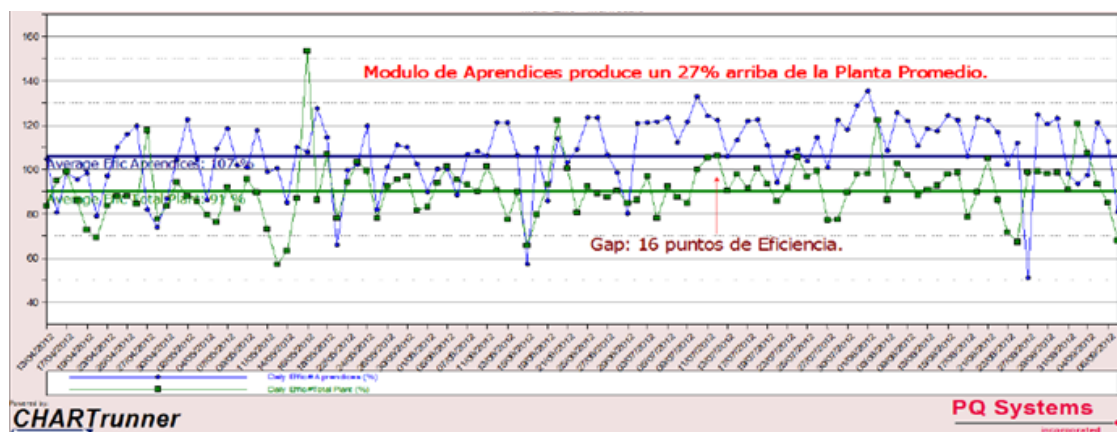


Figure 1: Average daily efficiency. “Aprendices” Unit is producing 27% up of average plant.
Source: League Central America

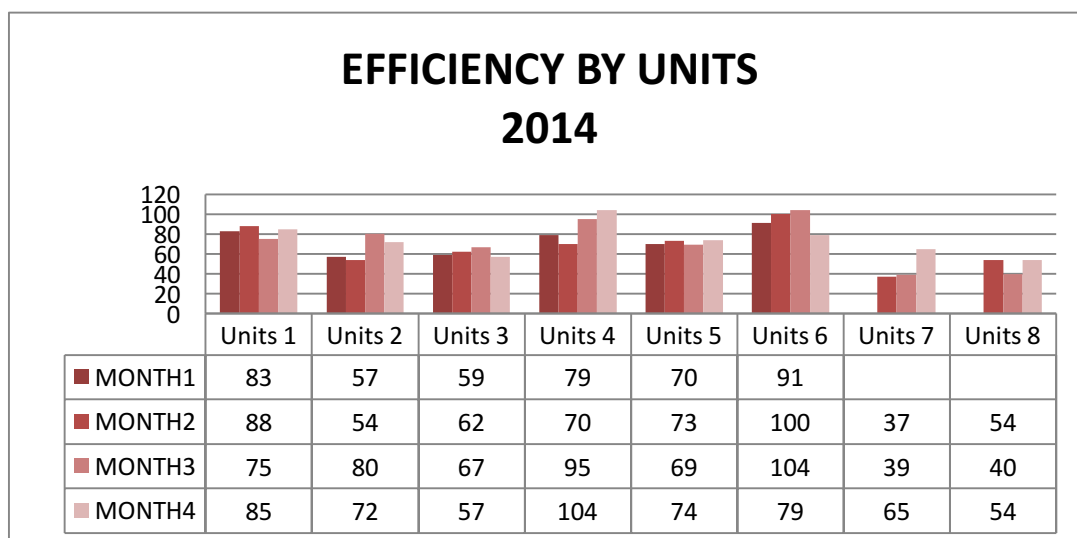


Figure 2: Efficiency by units
Source: League Central America

All the programmes implemented by League are sustainable thanks to the *business culture*, which was measured through the Harrison culture questionnaire in July 2014, demonstrating that its culture is oriented towards Tasks-results, Processes-control, People and Power (see illustrations 2 and 3). This contrasts significantly with other companies in Central American countries, where the majority have a power-oriented culture. In Europe, in multinational companies, an orientation *towards Task-Results emerges in first position, closely followed by Processes-control*.

For the purposes of this study, it is established that the business culture represents the ways in which decisions are taken in the company, the customs therein, the company's way of being and the way it acts. This culture is formed by the values of the founders, the directors, within a broader social framework. Example: civil society, Central American region, USA.

On the other hand, in family businesses, the first cultural orientation is Power, the second Task-results, the third Processes-control, and in last position, People. (Figure 3)

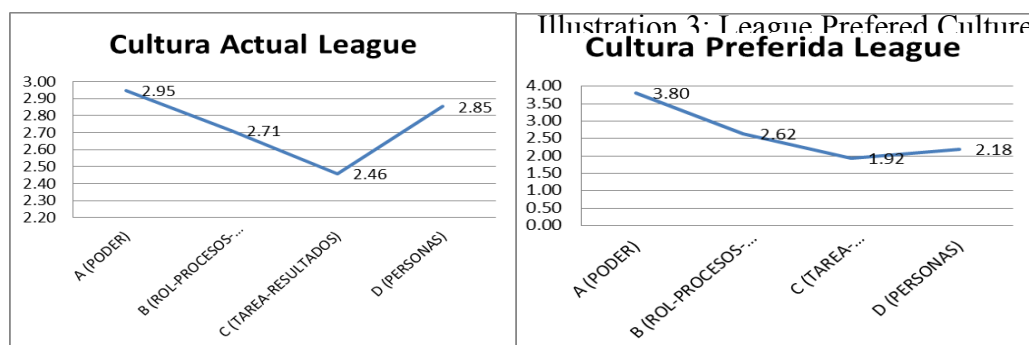


Figure 3: League Current Culture Harrison Model 1992 and League Preferred Culture.
Source: Harrison culture questionnaire applied to the 25 managers of League in July 2014

4. LEADERSHIP EFFECTIVENESS & SPIRITUAL VALUES INSPIRING MANAGERS:

Dolan, Garcia and colleagues proposed a framework to understand organizational culture and its D.N.A. The Quadraxial model has 4 axis. (Figure 4)

A Universal Value-Based Leader Model

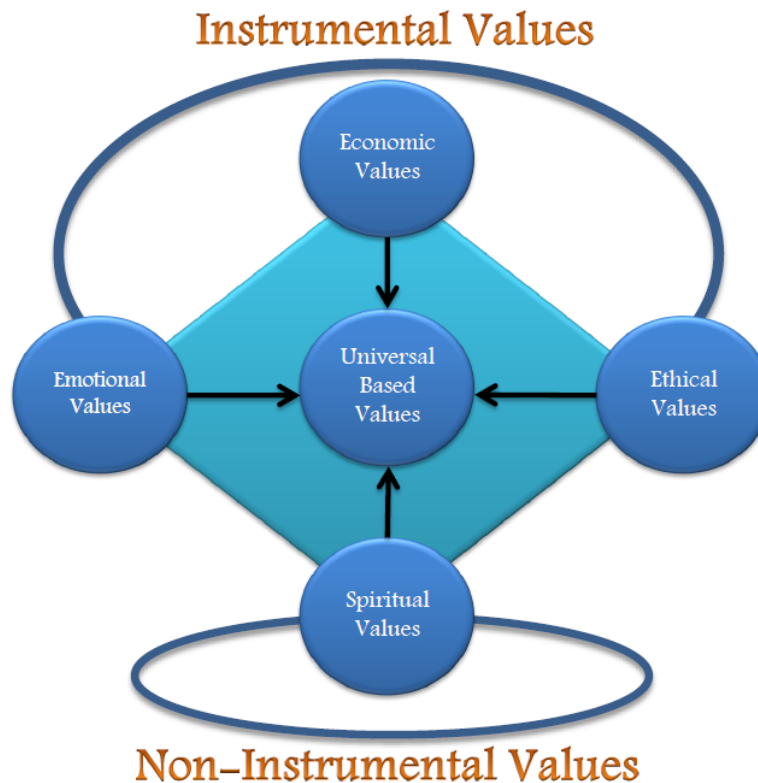


Figure 4: Universal Value-Based Leader.

Source: Dolan, S., & Altman, Y. (s.f.). Managing by values. The leadership Spirituality Connection. People & Strategy. Pag.25

1.- Economic-Pragmatic Values:

In organizations encompassing efficiency, engagement, performance standard, responsibly, reliable and discipline, these family – social values guide activities as planning, quality assurance and accounting. Managers cannot ignore them, as these family-social values assure the survival of the organization in a competitive environment.

2.- Ethical- Social Values:

Emerge from family social values and beliefs as to how people should conduct themselves at work and we can see these with family social values as honesty, integrity, respect, loyalty, transparency, commitment, trust, fair, solidarity to name the more common ones. They are embedded in concept as corporate social responsibility, sustainable environment and the triple bottom line “People, Planet, Profits” (Fry & Nisiewicz.2012)

3.- Emotional-Development Values:

They are essential for creating positive energy for new projects as “the League Program Job Placement Programe PPC” dedicated to members coming from Maras & Gangs (Pandillas).

The values related to intrinsic motivation are; determination, optimism, passion, fellowship, perceived freedom, caring, possibly inspiring love and maturity.

We think that the principal task of an effective leader is to build an organizational culture that aligns these Emotional Development values with the Corporate Core values to what they term “Corporate Well Being” Inspire future means to affect, guide and arouse different influences to stimulate positive actions.

4.- Spiritual Values:

A spiritually friendly workplace respects people with its deepest beliefs, allows and encourages them to wear their faiths and incorporate these family- social values in what they do working and how they go about their work, giving a voice to their innermost values. Remember that spiritual and spirituality when discussing workplaces values are not synonymous. (Mitroff-Denon.1999). Great leaders who inspire act out of inner conviction guided by a moral, religious or spiritual behaviour are looking for the truth. Examples : In politics; the name of President John f. Kennedy, Fidel Castro, Nelson Mandela, President Anwar Sadat of Egypt.

Inspirational spiritual leaders include Pope John Paul II, Pope John XXIII, Archbishop Desmond Tutu, Sor Marie Therese of Calcutta and the guru Sathya Sai Baba, Mahatma Gandhi, Martin Luther King Jr. and Elizabeth Kubler Ross.

In business management, the likes of Peter Drucker, Richard Branson, Steve Jobs and different others not well known because they prefer to work harder instead to show its results. In Maquila League, the existence of a successful business based on values , not just economic but ethical, social and spiritual, which has an attractive growth rate and has one of the lowest in the industry rotations, shows that companies should not only seek growth economic short-term because it is not the only resource that will get the company persists in the market, and that having the true commitment of its contributors may move the boat into deep oceans welfare , stability and growth for all.

Proof of this is that within League fostering values such as solidarity, respect for differences, fellowship, service to the community, providing a benefit to the organizational climate of the plant is given. In the industry there is a common problem , the theft of pieces of machinery and equipment, becoming a significant problem in production costs, but this situation does not occur in League, have not been reported to date cases of theft and / or theft of parts machinery equipment and spare parts , also the percentage of damaged parts is much lower than the industry average , with a minimum staff turnover savings obtained in induction and other costs associated with adapting the staff lines production.

Ms. Graciela Bolaños is proud of this issues respect to the workers in Maquila League because she was / is co-responsible of every one member of the Job Placement Programme and create a social group to help her in supervising the rest of the Corporate Social Responsible programs.

5. CONCLUSION

Thus, it is proposed to use the Quadraxial model (Dolan, Garcia, Altman and his colleagues 2014), to serve as the link between the instrumental values of the business world and the spiritual needs for experiencing life that sustains it.

Leaders in the business world are judged by hard-number figures, short term actions; added value and wealth creation long term vision & purpose. But, surely, leadership is in itself a risky business role and a visionary leader does not shy away from taking risks because following his/her vision is inherently hazardous.

Visionary leaders understand that spirituality, in the work place context, is about finding, meanings and purpose beyond one's self. It means that need the others.

No matter how broad the perceptions of spirituality may be all definitions utilize the ideas expressed through the term "interconnectedness".

The working life of engagement is about understanding and using our family social values and strengths in the day today. When we experience this deep engagement and absorption we are a state of flow (Csikszentmihalyi, – Gardner 2001).

A meaningful life comes from serving others, volunteer activities or visionary work. The visionary leader role may be instrumental by opening opportunities to motivational and positive work.

The D.N.A. of Maquila League culture is oriented to task results and processes, it means short term. The professors we are trying to work with its managers, around 20-25, and supervisors, around 60, to develop crucial leadership skills based at medium- long term objectives like:

- Showing respect for others. Demonstrating fair treatment in conflict situations,
- Expressing caring and concern. Listening responsively,
- Recognizing the contributions, Engaging in reflective practice every morning after to know the results of the day before

In the short term, an organization and its managers may do without these objectives, in the longer term, these family social values are basic to inspire managers.

A fundamental paradox is highlighted by Marjorie Lips Niersma, 2007: “ *Those who practice spirituality in order to achieve better corporate results undermine both its family social values and its ultimate benefits*”

In League, social programmes that form part of the culture and the family-social values of the company have materialised thanks to the efforts of their members and the leadership of their managers, and in particular the openness of attitude shown by the US investors Drew M. Wolf (voted “2013 MHS Alumnus of the Year” by the Milton Hershey School Board of Managers) and Larry Klebanoff, who together with Bolaños family share the ideal dream of helping their collaborators to grow side by side to social Maturity with League.

6. Questions

1. Looking at your organization, would you like to think over: which are its most core social values?
2. Rank the following set of values, from 1 (more important) to 4 (less important) & explain why please?
 - a) Economic-pragmatic
 - b) Ethical-social
 - c) Emotional-development
 - d) Spiritual Values
3. Could you describe how is the personality of your C.E.O.?
4. In the Maquila factory League company, what's the role of:
 - a) Ms. Graciela (spouse of engineer Mr. Bolaños)
 - b) What is the leadership style of engineer Mr. Bolaños?
 - c) Which kind of authenticity represents Mr. Bolaños ?
5. How would you like to describe a state of flow, following Csikszentmihalyi, in your professional life?

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The Interconnection of Company Data – a Way Forward in Development of Freedom of Establishment?

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ABSTRACT

In this paper authors have analysed development of legal and technical framework of interconnection of registries of company data at the level of the European Union. Analysis of sources of the European Union Law and case law of the Court of Justice of the European Union has led to the conclusion on importance of integration of registries of Member States of the European Union for affirmation of principle of transparency and development of freedom of establishment. Efforts made so far in this area of law have resulted in adoption of Directive (EU) 2012/17 on interconnection of central, commercial and companies' registries. The aim of the Directive is to create a framework for easier access to companies' data and to increase transparency. Amended provisions of Act on Court Register have been analysed, by which provisions of Directive (EU) 2012/17 have been implemented. Legal solutions which would contribute to overall integration of central register of financial data of Croatian Financial Agency into the system of interconnection of companies' registries are taken into consideration.

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1. BACKGROUND

By developing possibilities offered by the Internal Market of the European Union (hereinafter as the EU) and by increasing the range of cross-border activities such as cross-border mergers, transfer of registered office, opening of branches, establishment of daughter companies, the need for quicker and simpler access to information on companies, subsidiary companies and branches has increased (see more in Interconnection of Business Registers, MEMO/11/15, Frequently Asked Questions 2011, available at http://europa.eu/rapid/press-release_MEMO-11-115_en.htm?locale=en, accessed 1 December 2015). The transparency of information implies updating of information in the national registers of companies on regular basis. Such approach should increase the confidence of investors, creditors, potential business associates and consumers into companies (Barbić, 2008; Horak, Dumančić, 2011). The European Company Law is the field of law which prescribes many obligations for companies, particularly in relation to disclosure of information for the purpose of protecting the company's shareholders, creditors and other interested parties (Horak *et al.*, 2011). Embracing digitalisation and creating a modern digital framework for companies, which will bring more transparency and security, has been on the agenda of the European Commission. Availability and transparency of registers on companies' data is the precondition for duly functioning of market relations (Gilotta, 2010; Horak *et al.*, 2011). In fact, increase in cross border transparency is precondition for cross-border mobility and the access to cross-border restructuring (see Report of the Reflection Group on the future of European Company Law, Brussels, 5 April 2011, available at http://ec.europa.eu/internal_market/company/docs/modern/reflectiongroup_report_en.pdf, accessed 22 December 2015). In cases of doubt whether to give an advantage to the principle of voluntary or to the principle of mandatory disclosure of information, the principle of mandatory disclosure of information and their submission should be in advantage in front of

potential voluntary disclosure (Gilotta, 2010). This way the aforementioned principle of public disclosure of information, as an assumption that everyone is familiar with the register content, is achieved (Barbić, 2008). In environment where transparency is more and more affirmed as postulate of modern business activities on the European and global market, the national court and other storages of information on companies, which content in some Member States is related to the assumptions of authenticity and the principle of confidence, are “mirrors” of the legal state of a company. The Member State laws prescribe the establishment, organization and content of registers on companies, which leads to the information unevenness. One of the ways to overcome the difficulties regarding the decisions based on the state of companies’ registers is their networking at the EU level. An increased cross-border companies’ activity implies the need to ensure as high availability of information on companies as possible by modern communication means (Horak *et al.*, 2011). Digitalisation is one of the top priorities of the European Commission. The Digital Single Market Strategy was presented by the European Commission in May 2015 (see Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A Digital Single Market Strategy for Europe, SWD 2015 100 final, available at <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52015DC0192&from=EN>, accessed 22 December 2015). Within e-government Action plan for 2016 up to 2020, which will be under public consultations until 22 January 2016, the European Commission will seek to interconnect across the EU (see eGovernment Action Plan 2016-2020, Public Consultations FAQ <https://ec.europa.eu/digital-agenda/en/news/egovernment-action-plan-2016-2020-public-consultation-faq>, accessed 22 December 2015). In her speech held in October 2015 during the Conference on Company Law in the Digital Age EU Commissioner for Justice, Consumers and Gender Equality Věra Jourová stated that “EU law should be pioneer of innovative solutions” (Jourová, 2015). Digital solutions which would allow access to more meaningful and comprehensive information on European companies and their structures are considered to be one of the possible steps for the digitalisation of company law and corporate governance. Nevertheless, the extent of digitalisation of company law in the EU differs quite significantly between Member States (Jourová, 2015).

As the concrete outcome of long legislative considerations, Directive (EU) 2012/17 of the European Parliament and of the Council of 13 June 2012 amending Council Directive (EEC) 89/666 and Directives (EC) 2005/56 and (EC) 2009/101 of the European Parliament and of the Council as regards the interconnection of central, commercial and companies registers (2012 OJ L 156/1) was adopted. The term “business register” is used in terminology of key documents of the European Commission in this field. In all documents, the aforementioned term comprises all central, commercial and companies’ registers within the meaning of Article 3 of the First Company Law Directive (EEC) 68/151 of 9 March 1968 on co-ordination of safeguards which, for the protection of the interests of members and others, are required by Member States of companies within the meaning of the second paragraph of Article 58 of the Treaty, with a view to making such safeguards equivalent throughout the Community (1968 OJ L 65). The term “business register” is *genus proximum* and as abbreviated title hereinafter it will be used the Directive on interconnection of business registers. The term “business register” as *genus proximum* for all registers of companies’ data available in public is also used by the Croatian version of e-Justice portal. In July 2014, the EU Member States initiated the procedure of implementation of Directive on interconnection of business registers into the national laws. The Republic of Croatia (hereinafter as the RC) implemented the provisions of Directive on interconnection of business registers into the Croatian register law.

The contemporary tendencies in this vivid (and rather new) area of EU law have motivated authors to scrutinize possible impact which digitalisation could have on freedom of establishment in the area of business register law. After abovementioned introductory remarks, in the second part of the paper, authors have given the overview of existing forms of cooperation between the EU Member States as regards the exchange of information available in national registers. In the third part of the paper, the interconnection of national registers in Member States is considered in the context of freedom of establishment. Freedom of establishment is one of the four fundamental freedoms of the EU. The term comprises actual performance of economic activity, on continuous and permanent basis, via establishment in another Member State within the unspecified time period (among others refer to Babić, 2006; Barnard, 2013; Bodiřoga - Vukobrat, Horak, Martinović, 2011; Craig, De Burca, 2011; Horak, Dumančić, Šafranko, 2012). Judgements of the Court of Justice of the EU have been analysed in the fourth part. In the fifth part of the paper, the overview of amendments to the Croatian register law has been given. Potential legislative solutions are taken into consideration, which would enable an overall involvement of the Croatian central register of financial information and other national business registers into the European system of interconnecting the business registers. The paper ends with the conclusion.

Aim of the paper is to show that networking of national registers of companies data is not only a matter of technical cooperation among EU Member States. It has legal implications for freedom of establishment as well. Increased possibilities for achieving the cross-border mobility and restructure of companies extend the need for appropriate search methods (Maresceau, Tison, 2008). Correct implementation of Directive on interconnection of business registers and future measures that will be adopted in this field require anticipation of technical solutions and preparation of an overall legal and cost-benefit analysis of networking of national registers. In that way, conditions for correct and timely implementation of new solutions will be created, as well as the fulfilment of objectives prescribed by the Directive on interconnection of business registers. Such holistic approach should contribute to full realization of freedom of establishment.

2. COOPERATION BETWEEN THE MEMBER STATES AS REGARDS THE EXCHANGE OF REGISTER INFORMATION

2. 1 European Business Register and BRITE

The European Business Register is the form of voluntary cooperation between national registers of companies' data and IT service providers which has recognized the importance of cross-border cooperation in company law. The project started in 1992 as the form of technical cooperation and has been supported by the European Commission. It comprises wider number of European countries, the majority of which are EU Member States. Currently there are 27 European states participating in the European Business Register. Three former Yugoslav republics participate in the European Business Register: Former Yugoslav Republic of Macedonia, Republic of Slovenia and Republic of Serbia. The advantage of this system is its simplicity. By submitting the query to the database in its own language, a citizen, business entity or public authority can find a company or, in some countries, a natural person in all national registers of companies' data participating in this project. Although it concerns an informal form of cooperation, it should be mentioned that legal basis of cooperation is contained in the Information Sharing Agreement (see EBR Service website available at <http://www.ebr.org/index.php/about-ebr/>, accessed 22 December 2015). Based on this Agreement, the network members provide to each other a non-exclusive right to access the information registers. Information in the national registers of companies becomes available

via European Business Register network in a form of standardized reports. Furthermore, one should distinguish the European Business Register as a form of cooperation between the European registers from the European Business Register as a legal person – the European Economic Interest Grouping (EEIG). Some states participate in the project, but their registers are not a part of the European Business Register of EEIG, as such company form is not allowed by their national law. The establishment of the European Business Register was considered as a good initiative, but certain disadvantages arose with time. In the first place, there was a lack of funds in order to include all EU Member States. Secondly, the European Business Register is initiative to simplify the cross-border access to information, while the area of cooperation between the registers in companies' cross-border activities (merger, transfer of seat) is not covered. Besides, it concerns the private legal initiative of contractual character, which complicates the implementation of legal mechanisms for achieving the higher level of efficiency of system itself.

Disadvantages of the European Business Register were tried to be overcome by implementing the research project known as the Business Register Interoperability Throughout Europe (BRITE). The project is envisaged as the form of connecting the business registers. The project officially began on 1 March 2006 and was completed in March 2009. It is mostly supported by the European Commission funds (Maresceau, Tison, 2008). 19 members from public and private sector participate in this project. These are European Corporate Governance Institute, European Business Register, Chambers of Commerce, IT companies, universities, small and medium entrepreneurs. The project aims at developing and applying the new model of cooperation, information platform and management system so that business registers could cooperate within the EU territory (see more on European Corporate Governance Institute website available at <http://www.ecgi.org/brite/>, accessed 22 December 2015). The focus of the cooperation is on the cross-border transfer of seat, mergers and supervision of branches registered in other EU Member States. Within the project framework, the Directory of Registers with information on responsibility, location and contacts in registers has been established. The important segment of the entire project is the establishment of so called “branch disclosure service” on status/change of status of the foreign founder company. The purpose of this information service is to disclose the register, in which the branch is registered, on legal status of the foreign founder company according to information available in its register, as well as on potential changes of its status. Such form of cooperation helps in establishing the termination of existence of Founder Company, which refers to termination of existence of branch as well.

2.2 Internal Market Information System and e-Justice Project

This information system was developed in 2006. It aims at improving the cooperation between the public authorities in EU Member States concerning implementation of EU law in various fields. Internal Market Information System serves today as tool for better implementation of rules on recognition of professional qualifications, on services provision, on employment, on euro cash transport, on patients' rights, on electronic trade (see IMI User Handbook available at http://ec.europa.eu/internal_market/imi-net/about/index_en.html, accessed 22 December 2015). Public authorities exchange information based on the requests processed in the system, whereat a structured set of questions and answers is used in all EU official languages. The advantage of this information system is in the fact that all EU Member States are included into its operation.

The main objective of the e-Justice Project is implementation of the e-Justice portal. The portal should serve as practical tool for easier access to judicial information, institutions, registers and other services. The portal provides an access to data on national, European and

international law, case law at national, European and international level, organization of judiciary in EU, legal professions, legal aid, mediation, family, inheritance and criminal law issues, defendant rights in criminal proceedings, as well as on business, land and insolvency registers. The portal should become a unique European electronic access point to access the judicial data. It is expected that it would contribute to faster realization of activities for citizens, legal experts, judicial authorities, workers and other professionals. The portal should enable the “efficient access to justice”, which is indicated in providing the service of finding a legal aid from lawyers, public notaries, court interpreters and other experts involved in legal procedures. The portal has been developing since 2007 along with a wide support of Member States and European Commission. The importance of portal consists in its interconnecting with European Business Register, whereby the objective of the first phase of the European Business Register integration into the portal system has been achieved. The procedure of “phase integration” of the European Business Register into e-Justice portal has been announced in the Action Plan for establishing the e-Justice (see Multi-Annual European e-Justice Action Plan 2009-2013, 2009 OJ C 75, available at [http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52009XG0331\(01\)&from=EN](http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52009XG0331(01)&from=EN), accessed 30 September 2015).

3. INTERCONNECTION OF NATIONAL REGISTERS ON COMPANY DATA AND FREEDOM OF ESTABLISHMENT

3.1 Problem definition and scope of application

The interconnection of business registers in the EU is considered to be a success story (Jourová, 2015). During public discussion on impacts of proposed Directive on interconnection of business registers, three basic groups of problems were recognized. According to the Commission Staff Working Document accompanying Proposal for a Directive of the European Parliament and of the Council amending Directives (EEC) 89/666, (EC) 2005/56 and (EC) 2009/101 as regards the interconnection of central, commercial and companies registries' (SEC 10, 24 February 2011, hereinafter as Impact Assessment, available at <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52011SC0222>, accessed 22 December 2015) these were: lack of updated information in registers in which the foreign branches are registered, weaknesses in cooperation during pursuing the procedures of cross-border merger and seat transfer, as well as problems with cross-border access to register data. The lack of updated information increases a business risk in a way to harm the interested stakeholders of capital market (Maresceau, Tison, 2008). A duty to meet the companies with often different national requirements as regards the information disclosure increases the risk of data fragmentation (Maresceau, Tison 2008; Andenas, Wooldridge, 2009) and reduces the legal certainty which requires a larger engagement of companies on harmonizing contents of registers. The information technology has been considered as a ‘catalyst’ for legislator in its efforts to reduce the administrative barriers for entrepreneurs (Maresceau, Tison, 2007). Lack of information reduces the confidence in authenticity of data in registers of merged company and newly established company, i.e. in register in which the company has registered its seat and register in which new seat has been entered. The data availability is significant for all those who have, by investing the part of their equity, taken over the risk in a form of loss invested in case of poor business results. Business transparency and timely disclosure of information via business register networking system can be considered from the perspective of enhancing the shareholder’s right to information and increase of confidence into capital market. Availability of information on company enables usage of shareholder’s rights and creates conditions for shareholder’s rights

to be not just of nominal but of real character as well. Inability to access the company data stimulates the so called “absentee landlords”. Increase of cross-border activity results in increase of cross-border interconnection of companies, which subsequently has legal implications to shareholder’s rights. In that sense, the importance of transparency of relation between the affiliated companies has been recognized as the basis for protecting the minority shareholders (Jurić, 2006). The interest holders in company must know whether and at what price to invest in a specific company (Horak, Dumančić, 2013).

The availability of data on status changes in registers is important for protection of employees’ rights representing a part of company which is merged or transfers its seat (Bodiroga-Vukobrat, Horak, 2003). It can be said that disclosure of information acts as “powerful tool affecting the companies’ behaviour and protecting the investors” (Horak *et al.*, 2013) and prevents illegal and unethical operations as in company itself so on market (Horak *et al.*, 2013). Interconnection of registers may contribute to achieving the aforementioned objectives at supranational level.

The absence of interconnection, language barriers, heterogeneous forms of register search and organization have been recognized as main obstacles which interested parties are facing with when seeking for cross-border access to information from national registers (Horak, Dumančić, Poljanec, 2014). When searching for companies data, it is required to search the registers of all Member States due to non-existence of unique access point. The Member States apply different methods of companies’ identification in national registers, which makes it complicated to identify a company. Precisely the “national” organization of registers is recognized among scholars as reason for high costs (among others, see Maresceau, Tison, 2008). The absence of harmonized rules, by which the obligation of entering the relevant data in short period, following the event which data are related to, would be prescribed, has been a serious problem leading to unevenness of register data. Besides, the EU constantly performs the analysis of existing companies’ obligations regarding disclosure of information. Whenever possible, the EU tries to reduce the administrative burden for companies (Horak *et al.*, 2011).

Making prerequisites for simplified access to companies’ data and affirmation of cooperation among the national registers is in accordance with provisions of EU law on freedom of establishment. It was clearly stated in Commission Staff Working Document accompanying the Green Paper on Interconnection of Business Registers' (Progress Report, SEC 09, November 2009, available at <http://www.ipex.eu/IPEXL-WEB/dossier/document/SEC20091492FIN.do>, accessed 22 December 2015). Directive on interconnection of business registers was adopted aiming at developing the normative framework for interconnecting the registers of companies’ data. Increase of confidence into the Internal Market and competitiveness of European economy, as well as improvement of cooperation between business registers represent the general objectives of proposal to the Directive on interconnection of business registers. Special objectives include development of safe business environment for consumers, creditors and other business associates, enhancement of legal certainty, reduction of administrative burden for companies, acceleration of cross-border mergers and transfers of seats and update of branches data. Better availability of companies’ data is achieved by prescribing the legal obligation to make available the data stored in registers of other Member States and by prescribing the cross-border cooperation of registers in procedures such as cross-border merger and transfer of company seat. In other words, legal solutions should relate cross-border mobility (mergers, transfer of seats, opening of secondary establishments etc.) of national companies to cross-border access to the information stored in various national registries (see Report of the Reflection Group on the future of European Company Law, Brussels, 5 April 2011, available at

http://ec.europa.eu/internal_market/company/docs/modern/reflectiongroup_report_en.pdf, accessed 22 December 2015). Enhanced transparency stimulates cross-border investments (Christensen, Hail, Leuz, 2014; Gilotta, 2010). In addition to that, enhanced transparency arising out of solutions of the aforementioned directive and national regulations that implement it, contribute to development of business-friendly environment and establishment of confidence in the EU Internal Market.

The Directive is not aiming at establishing certain supranational register of companies' data (Recital 10 of Directive on interconnection of business registers¹ nor at harmonizing the national systems of central, commercial and companies' register (Recital 11 of Directive on interconnection of business registers). By distinguishing the aforementioned three groups of registers, national differences in establishment of registers of companies' data have been taken into consideration. The heterogeneous establishment of national registers of companies' data makes the implementation of this directive quite demanding from the legal and financial point of view. By reading the Directive on interconnection of business registers, it can be concluded that no term of "court register" nor any other term, which would suggest the jurisdiction of specific authority over the register of companies' data, has been mentioned anywhere in the directive. Thus the scope of Directive on interconnection of business registers is not restricted to interconnecting court registers or ministry of justice registers, but *all* registers of companies' data within the storages that could be incorporated under the compromise term of "business register". In some Member States there are national central registers (e.g. in Great Britain, Sweden, Ireland). In some Member States there are commercial registers at local (Handelsregistern in Nord Rhein Westfalen, Germany) or regional level (die Firmenbücher in Austrian federal states). Besides the court registers managed by regional and local courts, in some Member States, the ministries are responsible for companies registration (Cyprus, Denmark, Ireland, Portugal, Slovenia, United Kingdom etc.), while in some Member States the chambers of commerce (Greece, Italy, Netherlands). In Spain, there are Registradores Mercantiles (local administrative offices in Spanish provinces and cities). In the RC, it primarily concerns the "court register", i.e. register managed by commercial courts, in which information on companies and other subjects of company law are stored.

3.2 Interconnection of foreign founder-company register and branch register

Tight cooperation between national authorities and registers of companies' data at all levels is essential when it concerns the branch establishment. The Directive on interconnection of business registers prescribes an obligation for companies' registers to make available, without delay, the information on the opening and termination of any winding-up or insolvency proceedings of the company and on the striking-off of the company from the register, if this entails legal consequences in the Member State of the register of the company data. Upon receipt of information on company being struck off, its branches should likewise be struck off the register without undue delay. The prescribed obligation represents a step forward for the European company law, since before there was no legal obligation for registers to exchange information. Implementation of these provisions ensured the minimum of legal certainty for all those who "enter" the legal relations with branch, since rights and obligations "taken over" by a branch office will be acquired by the founder company.

The existence of the aforementioned legal obligation is relevant for affirmation of freedom of establishment. Prohibition regarding the restriction of freedom of establishment is related to prohibition of restriction during the establishment of branches by nationals of any Member State established in the territory of any Member State. According to the Article 49 of the Treaty on the Functioning of the European Union (Consolidated version 2012 OJ C 326)

freedom of establishment includes the right to set up and manage undertakings under the conditions laid down for its own nationals by the law of the country where such establishment is affected. The pursuit of business activities in another Member State through branch offices is a form of secondary establishment (Horak, Dumančić, Pecotić-Kaufman, 2010; Horak *et al.*, 2012). Since company aims to pursue some sort of economic activity through its branch on specific market on more permanent basis, the confidence of stakeholders and consumers in authenticity and completeness of register in which the branch is entered is of great significance. Creation of possibilities for all those who enter the legal relations with company through its branch in order to get familiar with company legal status, for which the branch takes over the obligations and acquires the rights, is important in case when company- foreign founder is bankrupt (see European Commission Modern Insolvency Rules: European Commission kicks off EU-wide interconnection of insolvency registers, Press Release, 2014, IP/14/774, available at http://europa.eu/rapid/press-release_IP-14-774_en.htm?locale=en, accessed 30 September 2015) or in winding-up proceedings. In case no information on the opening of any winding-up or insolvency proceedings are submitted to the branch register, which could entail relevant legal consequences, e.g. company termination, there is a danger that third party continues to operate with the branch of non-existing company (Maresceau, Tison, 2008). Legal illusion is thus created – secondary establishment (branch office) operates without its primary establishment (foreign mother company, founder). If transparency could have been obtained through data exchange between two registers, it would be useful for secondary establishment – branch, as there would be no suspicion of third party in company existence and duly functioning.

The following situation may be imagined: foreign company terminated its activities due to the bankruptcy in the beginning of 2015. Its branches still pursue the activities and enter into legal relations with third parties. At the moment the bankruptcy happened, the creditors' claims became the bankruptcy estate claims and they became bankruptcy estate creditors with uncertain reimbursement outcome. Damage that suffers who knew nothing on bankruptcy, as the branch register was not immediately informed on such situation is high. In the conditions of such legal uncertainty, a question of general branches credibility arises, which could endanger the possibility of more permanent and stable pursuit of economic activity in a form of secondary establishment. The question is how market would react on reopening of branch of the aforementioned company when and if that company recovered or continued to pursue its activities through bankruptcy plan. If it is taken into consideration that such situation could have been avoided by timely and prompt exchange of information, it is best indicated how apparently pure technical interconnection of registers of company data can have significant legal implications for fulfilling the content of freedom of establishment – possibilities of permanent and stable pursuit of economic activities in a long-term perspective.

The economic activity carried out by a branch will be permanent and stable only if market and stakeholders have confidence in the branch, i.e. its founder. In economic theory it is assumed that increase of transparency reduces the “information” asymmetry between investors and increases the market liquidity (Christensen *et al.*, 2014; Gilotta, 2010). It should be taken into consideration that regular capital inflow is a prerequisite of stable business pursuit. The latter is nowadays represented mostly as loan capital, capital collected by issuing various types of securities (Pervan, 2013). Disclosure of financial data by registers will contribute to reduction of information asymmetry in relations investor – company, thus to reduce the capital price and contribute to its optimum allocation (Pervan, 2013). If there is a need to create conditions for achieving the secondary establishment in a part in which it would refer to establishment of branches, then interconnection of registers is important.

Namely, development of registers network may be expected only if administrative conditions exist, i.e. if there are no administrative barriers that would dissuade foreign founders from establishing new branches. The European Parliament, the Council and the European Commission are competent for carrying out the duties in respect of abolishing those administrative barriers, resulting from national legislation, the maintenance of which would form an obstacle to freedom of establishment (see Article 50 para 2 of the Treaty on the Functioning of the European Union, Consolidated version 2012 OJ C 326). The policy efforts in promoting the interconnection of national economies by simplifying the cross-border companies' establishment should be focused on need to improve access to data in local and cross-border context (Maresceau, Tison, 2008) and such efforts seem particularly important when it comes to interconnection of Founder Company and its secondary establishment.

4. INTERCONNECTION OF BUSINESS REGISTERS AND THE COURT OF JUSTICE OF THE EU

In the context of the aforementioned, the judgement in *Texdata Software GmbH*, C-418/11, EU:C:2013:588 should be mentioned. The judgement should be observed in light of tendencies regarding the interconnection of national registers aiming at removing the administrative barriers to freedom of establishment. Among others, national court referred the question (*Texdata Software GmbH* EU:C:2013:588, para 25) “does EU law and, in particular, the freedom of establishment, as laid down in Articles 49 and 54 of Treaty on the Functioning of the EU, preclude national rules under which, in cases where the statutory nine-month period allowed for compiling and disclosing annual accounts to the relevant court maintaining the commercial register is exceeded, that court is required, first, to impose immediately a minimum periodic penalty of EUR 700 on the company (...) due to a failure of timely disclosure (of annual accounts, added by authors) and, secondly, to impose immediately a new minimum periodic penalty of EUR 700 on the company (...) in respect of further failure for every two-month period thereafter, (...) without first allowing them (company and bodies authorised to represent it, added by authors) an opportunity to state views on the existence of the obligation to disclose (annual accounts, added by authors) or to invoke any obstacles to doing so and, *in particular, without prior examination as to whether those annual accounts have in fact already been submitted to the court which maintains the register in the judicial district of which the principal place of business is situated*; (...) (emphasis added by authors).

The EU Court of Justice interprets (*Texdata Software GmbH* EU:C:2013:588, para 63) that freedom of establishment includes the right to pursue activities in other Member States, among others, through a branch. The term “restriction” (*Texdata Software GmbH* EU:C:2013:588, para 64) from Article 49 TFEU covers the measures that prohibit or prevent the execution of freedom of establishment or make it less attractive. In its answer, the EU Court of Justice states (*Texdata Software GmbH* EU:C:2013:588, para 67) that system of penalties is applied equally towards the Austrian companies and foreign companies with branches in Austria. Accordingly, the system does not place companies which are established in Member States other than the Republic of Austria, but which have a branch there, in a factual or legal situation that is less favourable than that of companies established in Austria. Secondly (*Texdata Software GmbH* EU:C:2013:588, para 68) no penalty is imposed if the company concerned fulfils its legal obligation to disclose (annual accounts, added by authors), as required under EU law – an obligation applicable in all Member States. Consequently, the penalties that may arise are not capable of prohibiting, impeding or discouraging a company governed by the law of a Member State from establishing itself,

through the creation of a branch, in another Member State. The EU Court of Justice concludes (*Texdata Software GmbH* EU:C:2013:588, para 69) that system of penalties in subject cannot be regarded as constituting a restriction of the freedom of establishment and that Articles 49 TFEU and 54 TFEU do not preclude such a system.

Judgement in *Meliha Veli Mustafa v Direktor na fond "Garantirani vzemania na rabotnitsite i sluzhitelite" kam Natsionalnia osiguriteln institut*, C-247/12, EU:C:2013:256 deals with legal consequences regarding the entry of decision to open insolvency proceedings in the register of companies. Pursuant to the Bulgarian insolvency law, the right of employees to guaranteed claims in the event of insolvency of their employer arises on the date of the entry of the judicial decision to open insolvency proceedings in the register of companies (*Meliha Veli Mustafa* EU:C:2013:256, para 9) and it is related only to claims made within the period of six calendar months prior to the entry of decision to open insolvency proceedings in the register (*Meliha Veli Mustafa* EU:C:2013:256, para 10). The declaration must be submitted by the employee within thirty days of the date of the entry in the register of companies (*Meliha Veli Mustafa* EU:C:2013:256, para 11). The insolvency proceedings were opened on the Orfey company and decision to open insolvency proceedings was entered into the register on 2 March 2010 (*Meliha Veli Mustafa* EU:C:2013:256, para 17). The decision on termination of business activity, the realisation of assets forming part of the insolvency estate and the distribution of the assets were entered into the register on 20 May 2011 (*Meliha Veli Mustafa* EU:C:2013:256, para 18). Ms Mustafa was continuously employed from 19 June 2006 until 20 April 2011 under employment contract. Ms Mustafa has legitimate but unpaid claims against Orfey in respect of her gross salary for April 2011 and an allowance in lieu of annual leave to which she was entitled after 2 March 2010. By application of 16 June 2011, she submitted an application to the guarantee fund for the payment of those claims (*Meliha Veli Mustafa* EU:C:2013:256, para 19). The guarantee fund refused that application on the grounds that the application had not been submitted within the statutory period of thirty days from the date of the entry of the decision to open the insolvency proceedings in the register of companies and the claim arose after the decision was entered in the register (*Meliha Veli Mustafa* EU:C:2013:256, para 20). By concluding that it concerns the right to claims arising in the period between registrations of the two insolvency decisions (*Meliha Veli Mustafa* EU:C:2013:256, para 22) the Bulgarian Supreme Administrative Court doubts that national regulations, which right to the guarantees payment relate to the entry of the first decision into the register instead to every stage of insolvency proceeding, even though that decision does not order the termination of the employer's activities and payment, do not comply with Directive (EC) 2008/94 of the European Parliament and of the Council of 22 October 2008 on the protection of employees in the event of the insolvency of their employer (2008 OJ L 283, hereinafter as Directive on employees' rights). For the purpose of this paper it should be mentioned that EU Court of Justice considered the question of whether the Member State may autonomously determine the date of entry of decision to open insolvency proceedings as the reference date before which employees' claims are guaranteed (*Meliha Veli Mustafa* EU:C:2013:256, para 28). Since, under conditions of established insolvency, the decision to open insolvency proceedings is sufficient to apply the provisions on claims payment from guarantee fund (*Meliha Veli Mustafa* EU:C:2013:256, paras 32, 33 and 37) while Directive on employees' rights allows Member States to determine the reference date before which employees' claims are guaranteed (*Meliha Veli Mustafa* EU:C:2013:256, para 41), the aforementioned directive should be interpreted as not requiring the Member States to provide guarantees for employees' claims at every stage of the insolvency proceedings of their employer and, in particular, it does not preclude Member States from providing a guarantee only for employees' claims arising before the entry of the decision to open insolvency

proceedings in the register of companies, even though that decision does not order the termination of the employer's activities (*Meliha Veli Mustafa* EU:C:2013:256, para 43).

Although the judgement does not concern the problem of cooperation between the register of foreign founder and register of its branch, for the purpose of this paper, the case might be hypothetically observed in the context of cooperation between the registers in the event of insolvency of a company – foreign founder. As it has already been emphasized, one of the reasons for interconnection of companies registers is to enable the third parties (e.g. employees), who enter the legal relations with foreign founder branches, to be timely informed on possible insolvency of foreign founder, in case the latter causes relevant legal consequences as per law of the state of company register. Since significant property-right consequences regarding the employees' claims are related to the moment of entry of a decision to open insolvency proceedings, such information should be, pursuant to Directive on interconnection of business registers, submitted to the registers in all Member States in which the Orfe company might established branches having employees. In case the employees found out about the insolvency upon the expiry of thirty days from the date of entry of decision to open insolvency proceedings in the register of companies, they would lose the right to the claims payment from guarantee fund. It can be concluded that, in case the Orfe company had a foreign branch, the exchange of information between two registers before the expiry of thirty days would have been of great significance for acquiring the employees' rights. That aspect of interconnection of national registers offers additional security to employees who are no longer obliged to monitor the state of register of another Member State.

A timely exchange of data on insolvency of a foreign company-employer and their entry into branch register is extremely important in case in which it should establish which state guarantee institution is responsible to pay for claims when employee works in one Member State, while insolvent employer is registered in another Member State. The aforementioned question occurred in *Danmarks Aktive Handelsrejsende, acting on behalf of Carina Mosbæk v Lønmodtagernes Garantifond*, C-117/96, EU:C:1997:415 (hereinafter as *Mosboek*) and *G. Everson and T. J. Barrass v Secretary of State for Trade and Industry and Bell Lines Ltd*, C-198/98, EU:C:1999:617 (hereinafter as *Everson*).

In *Mosboek* the EU Court of Justice stated that the guarantee institution responsible for the payment of employee's claims is the institution of the State in which either it is decided to open the proceedings for the collective satisfaction of creditors' claims or it has been established that the employer's undertaking or business has been closed down (*Danmarks Aktive Handelsrejsende, acting on behalf of Carina Mosbæk v Lønmodtagernes Garantifond*, C-117/96, EU:C:1997:415, para 28). In *Everson* it was decided that the guarantee institution responsible for the payment of employee's claims, in case the employees have been paid through branch, is the institution of state of employment, i.e. of the branch (*G. Everson and T. J. Barrass v Secretary of State for Trade and Industry and Bell Lines Ltd*, C-198/98, EU:C:1999:617, para 25). The security of payment of employees' claims, enabled by new technical solutions, affects the employees' readiness to get employed in foreign branches, i.e. to take advantage of freedom of movement as guaranteed by EU law.

5. INTERCONNECTION OF BUSINESS REGISTERS AND CROATIAN LAW

5. 1 Provisions of the Court Register Act

In July 2014, the Croatian Parliament adopted the Act on Amendments to the Court Register Act (Official Gazette of the Republic of Croatia, No. 93/14, hereinafter as AACRA 14). Thus the RC fulfilled its obligation to contribute to the development of national legal framework for interconnection of business registers. The majority of articles regulate the issue of interconnection of registers through the system for exchange of data on branch offices. The basic legal base has been established. It has been done in order for data and documents of a branch operating in the RC and founded by company with registered seat in another EU Member State to become available in public through the system of interconnection of central, commercial and companies' registries pursuant to Article 4 para 2 of Directive (EC) 2009/101 of the European Parliament and of the Council of 16 September 2009 on coordination of safeguards which, for the protection of the interests of members and third parties, are required by Member States of companies within the meaning of the second paragraph of Article 48 of the Treaty, with a view to making such safeguards equivalent (2009 OJ L 258). It is extremely important to ensure data availability on opening and termination of insolvency and winding-up proceedings, as well as on striking-off of entry subject. Article 83 b para 1 of amended Court Register Act (Official Gazette of the Republic of Croatia, No. 1/95, 57/96, 1/98, 30/99, 45/99, 54/05, 40/07, 91/10, 90/11, 148/13, 93/14, 110/15) is not quite in accordance with text and meaning of Directive on interconnection of business registers.

Namely, the Directive on interconnection of business registers is aiming to ensure not just availability of data on opening and termination of bankruptcy proceedings as one type of insolvency proceedings but of *any* type of insolvency proceedings. The term "insolvency proceeding" is wider and includes, beside the classic insolvency (or bankruptcy) also summary insolvency proceeding, personal management, waiver, small claim insolvency, international insolvency and insolvency plan (Dika, 1998). In case some other insolvency proceeding is opened or terminated on the company, in accordance with Insolvency Act (Official Gazette of the Republic of Croatia, No. 71/15), such information should be available through the system of interconnection of registers, since the Croatian term should be interpreted in accordance with the intention of the Directive on interconnection of business registers. In addition to afore-mentioned, **pursuant to Article 83 b of the Court Register Act, the Croatian registers would submit information on insolvency or winding-up of domestic entry subject if they would entail potential legal consequences in the Member State of branch of domestic company. It seems that such solution does not correspond to the wording and meaning of the Directive on interconnection of business registers as it mentions no submission of information on opening and termination of proceedings with potential but only with actual effects. Principle of legal certainty and predictability should be followed in this regard.**

In accordance with Article 83 b para 2 of the Court Register Act, court register is bound to ensure the receipt of information on the foreign branch founder, i.e. information from the register where the foreign parent company is registered if any insolvency, winding-up or striking-off proceeding has been opened there. It should be mentioned that information on opening and termination of the aforementioned proceedings are submitted free of charge, which should be welcomed as good solution that will enable faster exchange of information and their better availability.

Regarding the aforementioned significance of cross-border cooperation between the national registers in the area of cross-border mergers of companies, the provisions on

cross-border cooperation in amended Articles 83 a and 83 b of the Court Register Act are applied *mutatis mutandis* to companies being merged, pursuant to Article 3 of Directive (EC) 2009/101/ of the European Parliament and of the Council of 16 September 2009 on coordination of safeguards which, for the protection of the interests of members and third parties, are required by Member States of companies within the meaning of the second paragraph of Article 48 of the Treaty, with a view to making such safeguards equivalent (2009 OJ L 258). Domestic companies are often subject to acquiring by foreign companies, while branches of foreign companies operate on the territory of the RC. Significant presence of foreign capital speaks enough on importance of regular and meaningful implementation of provisions on cross-border interconnection of companies registers. Accordingly, implementation of the Directive on interconnection of business registers should be observed as a continuation of harmonization of the RC company law as regarding the register regulations on cross-border mergers from December 2013 (Act on Amendments to the Court Register Act, Official Gazette of the Republic of Croatia, No. 148/13). Its implementation will enable better functioning of regulations on cross-border mergers.

Directive on interconnection of business registers prescribes cooperation between the registers, not between the national governments or ministries as regarding the exchange of information on amendments to national regulations. The legislative solution of Article 83 d para 2 of the Court Register Act, according to which the RC Government ensures the availability of information on amendments to national regulations through the Ministry of Justice, which prescribe the mandatory disclosure of information and documents being subject to exchange through the system of interconnection of registers, does not seem to be in accordance with the European legislator intention on cooperation between the registers, i.e. courts and administrative authorities competent for managing various central, commercial and companies registers. It will require the appointment of judicial officer in commercial court who will monitor the amendments to regulations in this field and submit them to the e-Justice portal on regular basis.

Complete transposition of Directive on interconnection of business registers will be possible only upon the adoption of implementing acts by which the technical frameworks of implementation of register interconnection system will be established. Commission launched Implementing Regulation (EU) 2015/884 of 8 June 2015 establishing technical specifications and procedures required for the system of interconnection of registers established by Directive 2009/101/EC of the European Parliament and of the Council (2015 OJ L 144). This regulation established technical details for electronic communication among national business registers in terms of branch disclosure notification and cross-border merger notification. In order to make it more user-friendly, the service time frame shall be 24 hours each day per week, with availability rate of the system of at least 98 % excluding scheduled maintenance. Thus, the EU has established not only legal but technical requirements for business-friendly environment when it comes to online information retrieval from the national business registers.

In line with current tendencies in the field of digitalisation of business registers, the RC should start with preparations of technical and financial manner. The RC Government and authorities of the Ministry of Justice should intensively monitor adoption of implementing acts and technical solutions proposed in them. Since the involvement of companies' registers and other central registers of companies' data into European network requires technical adjustments, authorities should carry out public procurement procedures for equipment and information services needed for implementation of new solutions. The latter causes additional

financial expenditures which should be foreseen in budgets of individual administrative sectors and commercial courts.

The first step in closer supranational cooperation should be participation of the RC in the network of the European Business Registers as one of the already existing forms of cross-border cooperation between the EU Member States and beyond. One of the main reasons for this is the large presence of foreign capital invested into establishment of branches, subsidiary companies and acquiring of shareholder's rights in domestic companies. In general, every company with registered seat outside the RC will be bound to establish the branch in order to pursue the permanent activity in the RC, whereby the creditors and domestic employees are protected (Horak *et al.*, 2012). The foreign capital comes from the states such as Austria, Germany and Italy, whose registers are part of network of the European Business Registers. Companies with registered seat in the RC invest their capital into companies in Slovenia, Serbia and Macedonia, whose registers also participate in the European Business Register. Interconnection of registers from these states and registers in the RC would simplify the cross-border transactions. The RC should have become a part of this project earlier. If it happened, the RC would become part of the Paneuropean process of interconnection and cooperation of national companies registers. As a stakeholder of such process, the RC would get acquainted with general objective of harmonization of register law in this field – simplification of cross-border operation and increase of transparency as key elements for growth and development of the Internal Market. Anticipated recognition of objectives of the present forms of cooperation in the field of registers interconnection brings to anticipation of legal solutions thus creating the preconditions for timely and good-quality preparation of all legal, technical, financial and personnel solutions. Such *modus operandi* would create a framework for regular and complete implementation of Directive on interconnection of business registers which is the normative expression of present tendencies. For years the RC has been outside such forms of cooperation. The RC capability to harmonize its technical possibilities with requirements of the digitalised EU company law is yet to be indicated.

5.2 Register of Annual Accounts and other business registers

As previously stated, interconnection of companies' registers includes not just the interconnection of court registers but *all* registers containing the data on companies. In Article 5 of the AACRA 14 it is stated that "(...) it is left to the Croatian Government to establish a unique identifier, i.e. a method of its determination for entities in court register with potential entities *in other registers* (emphasis added), which may also be a part of the system of interconnection of registers (emphasis added). In the RC, there are several central data sources on companies. It concerns the registers of Financial Agency (hereinafter as FINA). Registers managed by FINA represent the central location of data on business entities operation. According to data available on FINA webpage, there are the Unique Register of Business Entities Accounts, the Register of Annual Accounts (hereinafter as the RAA), the Register of Digital Certificates, the Register of Concessions and the Register of Court and Notary Public Collaterals (see <http://www.fina.hr/Default.aspx?sec=971>, accessed 22 December 2015). There is enough room for legislator to amend the regulations which regulate the storage of companies' data in some of these registers, not just in court register.

In addition to already enumerated registers of business information, registers such as the Digital Land Register, the Register of Vessels, the Unique Register of Accounts, the Register of Digital Certificates, the registers of Concessions, registers of the State Intellectual Property Office, public procurement registers, the Register of Court and Notary Public Collaterals and registers of the Central Depository and Clearing Company and the Croatian Agency for Supervision of Financial Services could be considered as central registers of business-related

data and thus included in interconnection of business registers. Such wider approach would be also in line with conclusions of the Report of the Reflection Group on the future of European Company. According to its conclusions, it should be possible to retrieve information from all national business registers of the Member States from each entry point throughout the Union (Report of the Reflection Group on the future of European Company Law, Brussels, 5 April 2011, available at http://ec.europa.eu/internal_market/company/docs/modern/reflectiongroup_report_en.pdf, accessed on 22 December 2015).

6. IN CONCLUSION

Tendencies regarding the development of the system of interconnection of companies' registers on the EU internal market are concentrated on implementation of solutions which will contribute to better availability of companies' data, reduction of administrative barriers and improvement of the operation transparency level. Directive on interconnection of business registers and accompanying Regulation establishing technical specifications and procedures required for the system of interconnection of registers aim at putting in place the harmonized legal and technical framework for achieving the aforementioned objectives. Integration of central, commercial and companies' registers will contribute to affirmation of the freedom of establishment of companies and their branches. By interconnecting the branches registers and registers of the foreign entry subject, a timely information of stakeholders, creditors, potential business associates and employees will be provided in situations representing the business risk such as insolvency, winding-up or striking-off of the entry subject in national register. Enhancement of legal certainty and confidence into companies contributes to integration of the Internal Market. The EU Court of Justice case law should be observed in that sense. The latter has opened the questions related to judicial cooperation between the Member States as regarding the registers and issues met by the Internal Market stakeholders are recognized in practice. Some of prominent issues are non-conformity of the national registers content, data fragmentariness and language barrier. Amendments to the Croatian register law should be observed in this legal context in a part related to cross-border cooperation. It can be concluded that amendments to the Court Register Act are not sufficient to fulfil the intention of the Directive on interconnection of business registers. It is required to amend the laws that regulate the establishment of all financial data registers. The RC should monitor intensively the procedure of adopting all implementing acts in this field in order to prepare itself legally, technically and financially for complete implementation of new technical provisions which entered into force in July 2015. The RC should not circumvent the Digitalisation Agenda and should take active role in it. One of the first steps in enhanced cross-border cooperation would be membership in the European Business Register as already existing form of Paneuropean cooperation in which the RC major trade partners already participate.

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Internal Audit Activities as a Support to Governance Processes

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ABSTRACT

Lately, the role of internal audit is viewed with great importance in the context of the supervisory mechanisms of corporate governance, which is a direct result of requests for more effective corporate governance and the need for control. Corporate governance foundation may be considered through the four cornerstones: Audit Committee, Executive Management, Internal Auditors and External Auditors. Internal audit contributes to corporate governance effectiveness through relations and communication with other cornerstones. It is believed that by providing assurance on the effectiveness of risk management, control and governance processes, internal audit is becoming a "key cornerstone" underlying the effective management. This paper analyzes how internal audit contributes to strengthening the governance processes through its relation with the primary beneficiaries, managers and the Audit Committee. The Audit Committee, focused on oversight of financial reporting, controls and risk management, relies on internal audit to assist in carrying out its responsibilities. Also, internal audit provides advice to managers at all levels and information related to the effectiveness of the internal control and risk management processes as well as other important services. It may be concluded that internal audit activities, through its impact on other participants in governance, affect the quality of corporate governance. Internal audit is an important factor in achieving effective governance and is considered as an "integral part of corporate governance mosaic".

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1. INTRODUCTION

The need for more effective corporate governance, driven by corporate-accounting scandals at the beginning of the 21st century, both in the US and Europe, highlighted the importance of corporate governance internal mechanisms. In this regard, special importance is placed on internal audit, which shifted its initial focus from the examination of appropriateness and reliability of accounting and financial controls and developed into a proactive activity that assess effectiveness of internal controls, enterprise risk management and corporate governance. The development of internal audit scope of work, as well as the emergence of new approaches to the conceptualization of the internal audit process had an influence on the perception of its position in the company. Its role has evolved from the company "policeman" to activity that actively contributes to the creation of value added and provides company in achieving company's objectives.

Internal audit contribution can be seen on several levels: helps management in accomplishing their responsibilities related to control and risks; acts as an advisory function, which monitors risks, identifies weaknesses in the internal control system in order to assist with the implementation of the risk management process (Spira & Page, 2003; Allegrini & D'Onza, 2006; Page & Spira, 2004; Sarens & DeBeelde, 2006a, Sarens & DeBeelde, 2006b), helps the audit committee and external auditors in fulfilling their responsibilities (Goodwin, 2003;

Gramling et. al. 2004). Internal audit has a unique role in corporate governance because it is responsible for the oversight of risk management processes and helps to ensure the reliability of financial reporting (Gramling et al., 2004, Carcello et al., 2005, Cohen, et al. 2004).

This paper analyses the internal audit relation with the management and the Audit committee and the means through which internal audit contributes to strengthening the corporate governance.

2. INTERNAL AUDIT ROLE IN CORPORATE GOVERNANCE

Understanding the importance of internal audit is not possible without understanding the broader context within which it operates – the concept of corporate governance. Therefore, the analysis of the need for internal audit should be preceded by analysis of basic guidelines of the corporate governance concept.

According to Cadbury Committee, corporate governance can be defined as “the system by which companies are directed and controlled” (The Committee on the Financial Aspects of Corporate Governance, 1992:2.5). “Boards of directors are responsible for the governance of their companies (...) The responsibilities of the board include setting the company’s strategic aims, providing the leadership to put them into effect, supervising the management of the business and reporting to shareholders on their stewardship” (The Committee on the Financial Aspects of Corporate Governance, 1992:section 2.5). Shleifer & Vishny (1997: 397) see corporate governance as a system by which “suppliers of finance to corporation assure themselves of getting a return on their investment.” Monks & Minow (2001, cited in Hermanson & Rittenberg 2003:26) define corporate governance as “relationship among various participants in determining the direction and performance of corporations.” According to Gillan & Starks (1998, cited in Gillan, 2005) corporate governance is a system of rules, laws and mechanisms that control the processes and operations of the company. According to the Organisation for Economic Cooperation and Development (OECD) *Principles of Corporate Governance* (2004), corporate governance “ involves 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 its shareholders and should facilitate effective monitoring” (Organization for Economic Cooperation and Development, 2004:11).

The complexity of interests, requirements and processes within the company significantly affect its business operations, as well as the efficiency and effectiveness of the management processes. It is this complexity that justifies the importance of corporate governance and the fact that “successful companies need efficient corporate governance” (Tipurić (ed.), 2008:4). Empirical studies provide strong evidence that corporate governance is linked to the company’s performance monitored through financial indicators, rate of innovation, market share, customer satisfaction and employee and other indicators (Tschopp 2005:24-25, quoted in Tipurić (ed.), 2008:8).

It is necessary for the management of a company to understand the risks that the company faces on a daily basis. This implies the need for establishing different control procedures and means that could signal the achieved level of performance, draw attention to the possible corrective measures and provide feedback to management and senior management in an aggregated form. Internal audit activity has great significance in these processes and has become an irreplaceable part of corporate governance practice since it provides information on the effectiveness of management processes (Ruud, 2003:74; Reding et al. 2007:3-5; Hermanson & Rittenberg 2003:31).

Large corporate accounting scandals (Enron, WorldCom and others) which shook the US at the beginning of the new century have sparked serious doubts about the corporate governance effectiveness, in particular its mechanisms established in order to ensure monitoring and control. In response to the scandals, in July 2002 The Public Company Accounting Reform and Investor Protection Act was passed, known as the Sarbanes-Oxley Act (SOX). SOX marked the beginning of a comprehensive accounting reform for companies in the public interest, registered with the US Securities and Exchange Commission (SEC). Internal auditors, traditionally specialists for internal control, but until then not very respected within the company, attracted the attention of governing bodies that had new requirements relating to the provision of assurance for good corporate governance practices (Spira & Page, 2003). In fact, in recent years there is an increasing emphasis on the importance of effective corporate governance for the success of the company. As a result, reliable and timely financial reporting, effective internal controls and risk management are gaining in importance, which affects the development of internal mechanisms of corporate governance that have responsibilities related to those areas.

Corporate governance mechanisms that are present in this regard in the accounting and auditing literature are external audit, internal audit, and independent committees, including the audit committee (Anderson et al.1993; Blue Ribbon Committee, 1999; Institute of Internal Auditors 2003, quoted in Coram, et al., 2007:6, The Committee on the Financial Aspects of Corporate Governance, 1992), and Cohen et al. (2004:88) describes the dynamic interaction between these mechanisms as a "corporate governance mosaic".

According to the new, revised, definition of internal auditing for the 21st Century, by the (Global) Institute of Internal Auditors, "internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes".

In this definition there are contained two main internal audit activities: assurance and consulting services. Assurance services are defined as "an objective examination of evidence for the purpose of providing an independent assessment on governance, risk management, and control processes for the organization" (Anderson & Dahle, 2009:23). They can be divided into four basic stages and include: testing, determining the state and effectiveness, informing and communicating results and providing recommendations for improvement (Sarens & De Beelde, 2006a:45). Consulting services are defined as "advisory and related client service activities, the nature and scope of which are agreed with the client, are intended to add value and improve an organization's governance, risk management, and control

processes without the internal auditor assuming management responsibility" (Anderson & Dahle, 2009:23).

It is important to clearly define the differences between these two services which are manifested in their basic features. Assurance services include three parties: the internal auditor, the process owner and a customer in the assurance process (usually management, senior management or audit committee). The purpose of assurance services is to assess the adequacy of internal controls, risk management processes and corporate governance, as well as testing the compliance with laws and regulations. This process results in recommendations and conclusions. There is also follow up on internal audit recommendations. The purpose of the consulting services is to provide counsel regarding efficiency and effectiveness and help to create a corrective action or implement new controls. These services are agreed between two parties, the internal auditor and the client, usually operational management (Anderson & Dahle, 2009:29).

By providing assurance and consulting services, internal audit provides value added to the company (The Institute of Internal Auditors, 2012). The company's objectives are framework for defining the internal audit objectives and this direct link is basis for understanding the relationship in which the internal audit activity is focused on helping the company to achieve its goals (Reading et al., 2007:1-3).

In order to facilitate the understanding of the internal audit role to its customers, the Institute of Internal Auditors formed a value proposition consisting of the basic elements which internal audit combines to provide value added to the company, and they include "assurance, insight, and objectivity". According to this proposition, the importance of internal audit arises from the need of governing bodies and management who "rely on internal auditing for objective assurance and insight on the effectiveness and efficiency of governance, risk management, and internal control processes" (The Institute of Internal Auditors, 2012).

Some authors (Coram, et al., 2008; Archambeault, et al., 2008; Hermanson, et al., 2008) consider that great importance and responsibility in the post Sarbanes-Oxley era is placed on internal audit as the key mechanism of corporate governance which should be part of the solution for the problems of control, reporting and ethics in the company. Emphasizing the importance of internal audit, as an internal mechanism of corporate governance, was also noted with regulatory bodies, including the New York Stock Exchange (NYSE). It requires that all listed companies (from 2003) establish an internal audit. This represented a major shift in the internal auditing regulation, considering that this was the first time that the internal audit activity was incorporated into the regulations that related to the private companies, not just for financial institutions (Paape, 2007, p.82).

Cadbury Committee (1992:pt. 4.39) considers the establishment of the internal audit as "good practice" for the company because regular oversight of key controls and procedures carried out by the internal audit "is an integral part of a company's system of internal control and helps to ensure its effectiveness". Moeller (2009: 4) considers internal audit as control within the company whose basic function is evaluating and determining the effectiveness of other controls. Namely, management must monitor processes in order to have information on the degree of accomplishment and compliance with the planned actions, which is achieved through control. Internal audit is one mean of the control in the company, and the difference

in regard to other means of control is in its essential role - evaluating other controls in the company (Moeller, 2009:4).

Institute of Internal Auditors in 2006 published a position paper regarding the role of internal audit in corporate governance. According to that document, internal audit has a dual role: to support management and position as a partner to management in the company as a help in organizing and monitoring control system for effective corporate governance. By providing assurance on the effectiveness of risk management, control and governance processes, internal audit is becoming a "key cornerstone" underlying the effective management of the company (The Institute of Internal Auditors, 2006). A similar position was taken by Gramling and Hermanson (2006) who consider that internal audit is a resource of information, opinions, counsels and expertise for the Board and the audit committee. Gramling et al. (2004) expand this perspective, adopting an approach under which the corporate governance consists out of four cornerstones. Along with internal audit they additionally include external audit, audit committee and executive management. Internal audit contributes to corporate governance through interaction with these other participants. The internal and external audit are traditionally associated but along with growing demands related to corporate governance, this relationship is even more profound. External auditors may rely on the internal audit work in carrying out part of their activities, because internal auditors have more thorough understanding of business processes and the risks that the company faces which can help external auditors to be more effective and efficient. The audit committee, focused on oversight of financial reporting, controls and risk management, relies on internal audit to assist in carrying out its responsibilities. Also, internal audit provides advice to managers at all levels and information related to the effectiveness of the internal control and risk management processes as well as other important services.

Ruud (2003:86) consider that internal audit "can contribute to effective governance in several ways:

- it can assist in the identification of risk factors, the analysis of the consequences, as well as in
- assisting management in the prioritization of risk management and control systems,
- add assurance that the risk management processes in fact are functioning as intended
- (...) through consulting services, the internal audit function can furthermore assist management and the board by improving risk management and control processes."

Similarly, Porter (2008) discusses the importance of internal audit along with the external audit and the audit committee, as tripartite audit functions to ensure corporate accountability. Corporate accountability relates to the management responsibility regarding the efficient and effective use of company's resources as well as social efficient and effective corporate governance. Author concludes that internal audit role and responsibilities developed in parallel with those of management. Scope of internal audit activities, primarily concentrated around assessing the effectiveness of internal controls related to financial reporting, expanded to assessing all other categories of internal controls, those related to ensuring the efficiency and effectiveness of business operations and compliance with applicable laws and regulations. Lately, the scope of internal audit work also includes providing assurance regarding the risk management, fraud detection and helping with the ethical aspects of the company.

In the context of providing value added to the company, European Confederation of Institutes of Internal Auditing (ECIIA) (2005:37) consider internal audit contribution is in providing independent and objective assessment to the audit committee and executive management regarding the quality of internal controls and a comprehensive review of the company's risks. It allows them to have a look (opinion) from the another perspective, compared to the one that they already have.

The Institute of Internal Auditors Research Foundation (IIARF) in 2007 published a study the *Common Body of Knowledge (CBOOK)*, which was part of the ongoing research on the practice of internal auditing throughout the world in order to create a comprehensive database, containing information on the global state of internal audit profession. The study included 9,366 members of the Institute of Internal Auditors around the world which at the time represented the most extensive study ever conducted in the field of internal auditing. Respondents were assessing, among other, in what areas was their activity most present, and what areas they believed would be more in focus of their work in the future. The four highest rated areas the respondents believed that were most within the scope of their work were: fraud prevention (69% of respondents), risk management (66.6% of respondents), oversight of compliance regarding the implementation of relevant legislation (64% of respondents) and corporate governance (52.2% of respondents). These were also the areas that they presumed to be in focus of their work in the next three years (The Institute of Internal Auditors Research Foundation, 2007). Maximizing the value of the internal audit is imperative and necessary condition of its adaptation to changing business environment. According to the study on the state of the internal audit profession, internal audit in the near future needs to expand the scope of its activities outside the traditional areas and towards corporate governance, risk management, assessing the achievement of strategic plans and ethics (Alkafaji, et al., 2010:25-26).

It can be concluded that internal audit activities include assessment of the effectiveness of internal controls and risk management which directly affects the quality of corporate governance. Internal audit is an important factor in achieving effective corporate governance and is considered "an integral part of the corporate governance mosaic" (Cohen, et al., 2004:35) and "continuing contributor to the development of corporate governance practices worldwide, (...) a strong international player in corporate governance across all sectors" (D'Silva & Ridley, 2007:114).

3. INTERNAL AUDIT INTERACTION WITH MANAGEMENT

Basic characteristics of the relationship between internal audit and management can be established from the internal audit definition. According to Definition, internal audit is guided by the philosophy of added value, helping to improve the business processes through an independent and objective evaluation of the risk management, control and corporate governance effectiveness. Internal audit is an independent source of unbiased advice to governing bodies in the company, who are key holders of corporate governance with the responsibility to establish and maintain effective risk management and internal control system. In this regard, management, specially its highest levels, seek internal audit to provide assurance on the effectiveness of risk management, primarily in terms of risk identification and monitoring, effectiveness and efficiency of organizational processes, as well as their

control. In this context, since its early days internal audit is often mentioned as “the eyes and ears of management” (Hermanson & Rittenberg, 2003:33).

The importance of internal audit for fulfilling responsibilities of governing structures is manifested mainly in large organizations with complex operations, where managers are not able to monitor all activities themselves. When there is inadequate monitoring, activities are often less effective and efficient, and it is necessary to design surrogate function to provide assessment that management could depend upon (Sawyer, et al., 2003:34). It is important to emphasize that the responsibility for corporate governance, risk management and internal controls remains on management and internal audit takes advisory role by providing valuable information related to these areas. Assisting in the decision-making process by providing or confirming information on which it is based, helping to identify and minimize risk and monitor activities that management cannot monitor themselves Sawyer, et al. (2003: 35-36) consider some of the most significant internal audit contributions to management.

As a necessary condition to achieve its maximum value, in addition to possessing the characteristics of integrity and credibility, constructive relationship between internal audit and management is also usually emphasized. ECIIA (2005: 42) consider it essential for the achievement of effective internal audit activity. Administrative (not functional) responsibility of the chief audit executive to the executive management is a joint stand point of academic debates in the context of strengthening the internal audit independence. The constructive relationship with management should also enable the chief audit executive to reach the information necessary for the proper conduct of internal audit activities, unhindered access to other employees and required documentation. ECIIA (2005: 42) emphasizes the importance of establishing a balanced relationship, not overly friendly, based on mutual trust, which is in the interest of the company. Such a relationship should be constantly built through regular interaction and cooperation, which should result in substantial and useful internal audit results, presented in the final report.

Mutual communication and interaction greatly influences the perception of the management regarding the internal audit value. According to a study conducted by Birkett et al. (1999, cited in Sarens & De Beelde, 2006c) management perception on the internal audit role affects the activities carried out by internal auditors. The conclusion of this study was that the lack of awareness among management about the role of internal audit results in lack of cooperation during the internal audit activities and the lack of implementation of internal audit recommendations. Due to this, it can be assumed that the management perception on internal audit is directly related with the level of support that they will provide to internal audit, in terms of enabling resources as well as in other aspects of support. This is also supported with the research conducted by Rupšys & Boguslauskas (2007:13), according to which management perception about the internal audit status in the company is in correlation with the level of implementation of internal audit recommendations.

Some Performance Standards (2010; 2020; 2060), which are part of the International Standards for the Professional Practice of Internal Auditing, define areas internal auditors should communicate with management such as risk assessment, implementation of internal audit plans and internal audit performance. Anderson & Dahle (2009:106) emphasize the importance of reporting on risk exposures, issues related to internal control and corporate governance. These are key issues for the internal audit role since ensuring transparency and effectiveness of those areas and sharing information is an important part of contribution to

effective corporate governance. During meetings with senior management internal auditors can also obtain feedback on perceptions related to their performance, as well as analyze ways they can provide further assistance.

Relationship between internal audit and management is to some extent theoretically defined, but there is limited number of empirical studies on the characteristics of that relationship in practice.

Several studies, undertaken in late '90s of the 20th century, showed the traditional understanding of internal audit as an appraisal activity, but also recognized some of its modern characteristics that still had not sufficiently overcome. Ridley & D'Silva (1997, cited in D'Silva & Ridley, 2007) have analyzed perception of senior management with respect to the internal audit contribution to control, risk assessment, company performance and the overall governance. According to results, respondents were homogeneous in recognizing the importance of internal audit contribution to the corporate governance. However, analyzing its contribution in other areas did not provide such uniform results. In fact, some felt that internal audit creates value as a management consulting activity in the area of risk and control, with a wide range of responsibilities related to assurance engagements and assessing compliance. Others have recognized internal audit as a partner to management, while others pointed out its connection with the audit committee. Most, therefore, considered that the greatest contribution of internal audit was in the performance of its traditional activities, while some also recognized the importance of its consulting role. According to the findings of Griffith (1999, cited in Sarens & De Beelde, 2005:12) who analyzed the opinions of financial directors, internal audit was generally perceived as insufficiently focused on the business and the risks that arise from it. The need to improve internal auditors' skills was also stressed out, as well as the need for their greater contribution in providing added value.

However, since the late '90s there have been many changes in the context of corporate governance and mechanisms that ensure its effectiveness. The results of some more recent studies have shown that the assurance and consulting services provided by internal audit have been recognized as valuable contributions to good governance practices at the highest level of organizational structures in many companies (D'Silva & Ridley, 2007).

According to a survey conducted by Sarens & De Beelde in 2005, on a sample of managers of Belgian companies, managers expect internal audit to focus on business and compensate the loss of control which occurred as a result of increased business complexity. The way to do so is through monitoring business units and contributing to the development of a unique system of internal controls. Managers also expressed high expectations for internal audit with regard to their experience with business risks, internal control and other related areas, and expressed the need for further development of the internal audit activity as a "tool for improvement". Research also pointed out some areas where internal audit in particular should demonstrate its value: providing assurance of risk management process, internal control and risk assessment, where internal audit was expected to develop data bases of operational risks. Active involvement as a consulting activity in strategically important projects is also highlighted as part of internal audit future scope of work.

One of recent research in this context was conducted in 2011 (PWC, 2012). Analysis of the respondents' attitudes (senior management and members of the audit committee) confirmed the requirements for the internal audit inclusion in the risk management

processes. Respondents stressed out internal auditors special value regarding their ability to identify risks, evaluate their threat and make recommendations about the processes and controls for their management (PWC, 2012:12). Research has shown that the traditional internal audit activities related to the audit of financial controls and compliance continue to have the highest position in the context of expectations from internal audit activity (88% of respondents ranked these activities among the top three). However, these were immediately followed by expectations regarding the assurance activities on risk management and internal controls (82% of respondents ranked these activities among the top three), which stressed out the internal audit importance in monitoring key business risks. Internal audit recommendations related to internal control considered being important, but many respondents pointed out the need for a more detailed assessment within this area that would allow analysis of its impact on business operations. The results suggested the need for continuous adjustment of internal audit to requirements of its customers, as a necessary precondition to meet their expectations.

4. COOPERATION BETWEEN INTERNAL AUDIT AND THE AUDIT COMMITTEE

Audit committees are an integral part of the corporate governance internal mechanisms, whose responsibility is primarily related to ensuring the quality of financial reporting and oversight of audit processes. In the context of the corporate governance mechanisms, audit committee has an oversight function (Soltani, 2009:93). Although there are several theories related to the audit committee and its role in corporate governance (Beasley, et al., 2009), the dominant perspective in the accounting field that considers its role is explained by the agency theory. According to the agency theory, audit committee has an oversight function, acting independently from the executive management in order to prevent their opportunistic action in a way that is not in the best interests of the principal (shareholders).

Audit committees do not carry out function of company's management and are not directly accountable to the owners (shareholders). The final outcome of their work results in reports and recommendations to the Board (governing body) and its activities are mainly described with the terms "oversight", "assess" and "review", while their function is advisory and reactive in nature (Spira, 2003:182).

Audit committees are relevant mechanism of corporate governance, and reasons for their growing global acceptance are, according to Turley & Zaman (2004), potential benefits in various aspects of corporate governance. In fact, some authors consider that the existence of audit committees contributes to the relationship between governing bodies, investors and auditors and helps in discharging Boards responsibilities. Another aspect is their impact on external audit, internal control and internal audit and in recent years some emphasize their importance in the context of the financial reporting quality and improvement of company performance. Spira (1998:30) based analysis of their development on a global level and states that audit committee were established to strengthen the credibility of financial reporting, especially regarding the independence of the external auditors but their purpose and objectives cannot be uniquely determined.

In general, Audit committees have a range of duties from different areas like financial reporting, corporate governance and corporate (internal) control (The Institute of Internal Auditors, 2002). Mohiuddin & Karbhari (2010:105) argue that, although the primary activity

of the audit committee is to support the Board of Directors in carrying out their responsibilities related to the oversight of financial reporting and interaction with internal and external audit, their responsibilities also extend to several areas and include internal control, risk management and the compliance with legislation and regulations (for benefits of establishing an audit committee see Spira, 1998).

Audit committee responsibilities can be classified as followed (Spencer Pickett, 1997, quoted in Tušek, 2007):

- audit committee must take into consideration financial activities of the organization, in particular the costs,
- audit committee should oversee the process of financial statements auditing as well as the internal auditing process,
- audit committee must take into consideration the annual report and the auditor's report on the financial statements which are an integral part of the annual report,
- audit committee must also take into consideration the adequacy of the internal control system,
- audit committee must be involved in the meetings and discussions with external and internal auditors.

When considering audit committee's responsibility regarding internal audit (more on that Tušek, 2006:85-115), Wolnizer states out following (1995, cited in Mohiuddin & Karbhari, 2010:107):

- „evaluate the independence and competence of internal audit function;
- discuss with the chief of internal auditors about internal audit reports, effectiveness of internal controls and problems in performing the internal audit;
- review the scope of internal audits planned for the year;
- review management's response to internal auditors' recommendations;
- review and approve internal audit budget;
- review the relationship between internal and external auditors and coordination of their work and
- appoint and dismiss the head of internal audit (chief audit executive).”

Along with the change of the institutional framework and rules on capital markets, which have been developed in response to numerous scandals and the collapse of some world largest corporations, new audit committee roles were highlighted, especially after enacting the Sarbanes-Oxley Act. Along with Sarbanes-Oxley Act there are some additional requirements relating to the audit committee new roles and responsibilities. Some of these rules extend audit committee responsibilities on risk management and encourage governing bodies to establish oversight over risk management process through delegation of supervisory duties to audit committees (Beasley, 2008). For example, rules for companies listed on New York Stock Exchange (New York Stock Exchange, 2003:11) require audit committees discuss policies related to risk assessment procedures and means of risk responses. Although the risk assessment and risk management is the responsibility of the governing bodies in the company, the role of the audit committee is to discuss guidelines and policies of governing bodies regarding these topics, as well as discuss on significant financial risks and their management.

In order to properly carry out its responsibilities, the audit committee must rely on internal audit work. Although the agency theory implies that the establishment of the audit committee

reduces information asymmetry between owners and management, some authors (Raghunandan et. al., 1998, 2001, quoted in Sarens, et al., 2009:91) consider that the audit committee is faced with the information asymmetry resulting from "principal/ agent" position between the audit committee and operational level (which also includes the lower management) in the company. The audit committee, in the role of principal, mostly composed of non-executive and independent members, often has no sufficient information on specific aspects of risk management and internal control which consequently reduces its ability to discharge duties. In this context, internal audit may be considered as a mechanism that reduces the information asymmetry between the audit committee and the operational level management in the company. This understanding of mutual relationship is supported by the Institute of Internal Auditors (IIA) according to which the level of their good cooperation significantly affects the effective discharge of the audit committee responsibilities regarding governing bodies, shareholders and other stakeholders (The Institute of Internal Auditors, 2002).

Bishop (2000, cited in Sarens & De Beelde, 2006d:9), gave an overview of supporting roles that internal audit can have in relation to the audit committee and they include providing:

- general assistance,
- assistance in financial reporting
- assistance regarding risk and controls.

General assistance includes facilitating the flow of information or conducting special projects or investigations, if requested by the audit committee. Assistance regarding financial reporting is related to supporting the audit committee in its assessment of compliance with internal and external requirements concerning financial reporting, providing support in assessing the quality of financial reporting and information on the state of internal controls through quarterly reports. Also, one of the internal audit tasks in this regard is to ensure that members of the audit committee receive reports that include timely and relevant information on company performance. Assistance about risks and controls relate to the provision of support in the assessment of whether the company meet its goals concerning control, to provide information that will assist the audit committee in monitoring the control environment in the company and provide information of need when monitoring company's key financial and business risks.

One of the prerequisites to make benefit from relation between internal audit and the audit committee is the existence of effective mutual communication and interaction. That type of relationship can strengthen the position of internal audit as internal source of information that provides audit committee an insight into the evolving business challenges and climate in relation to internal control (Deloitte, 2012:6). In order to fully rely on the internal audit results and findings, the audit committee must first of all assess the quality of internal audit activities as well as the criteria on which they are based upon. In this context, it is necessary to periodically assess the internal audit activities in order to gain insight into the adequacy of their performance, as well as the adequacy of used resources.

Sarens, et al. (2009) conducted a case study in order to identify the reasons that affect the audit committee to seek the support from internal audit and also to analyze internal audit characteristics that make it appropriate provider of support in this context. Symbols of support were observed through the internal audit reports, oral presentations, informal contacts and private meetings. The analysis resulted in the following conclusions: audit committees

that were more concerned about issues regarding risk management and internal controls, and their supervisory responsibilities in these areas, encouraged with discomfort resulted from information asymmetry, have seek more support from internal audit. Internal audit was perceived as a communicator between the audit committee and operational levels of management. According to research, internal auditor's unique knowledge (especially specific practical knowledge related to risk management and internal control) allows them to support the audit committee. Similar, results of research conducted by Grant Thornton LLP's Advisory Services (2011:11) on more than three hundred chief audit executives, showed that almost all respondents (95% of them) consider that internal audit is useful to the audit committee, especially in the areas related to risk and general efforts related to strengthening oversight of corporate governance.

A symbiotic relationship between internal audit and the audit committee is also supported by research results of the *Pulse of the Profession report*, conducted by the Audit Executive Center in 2012 (IIARF, 2013:6-7). The survey was conducted among five hundred chief audit executives, and most of them described that relationship in positive terms. A majority of respondents considered (76%) that there is open dialogue and two-way communication, that audit committees clearly communicate their support internal audit and the Board (72%) and seek advice from internal audit (50%). Regarding the activities internal audit is undertaking in order to assists audit committee in discharging their duties, the majority of respondents pointed out the following: conducting continuous risk assessments (75%), assisting in the preparation of meeting topics and related materials (71%), conducting special confidential investigation and providing opinions on management performance related to internal controls and the adequacy of the corrective action (70%).

5. CONCLUSION

Internal Audit, as an internal monitoring mechanism in the system of corporate governance has special significance. For company's management is undoubtedly of great importance information of the extent to which things are "under control". Internal audit, in this regard, has a special importance through its advisory role and providing relevant information to governing bodies, audit committee and other customers. Internal audit is not an end in itself but provides support to the company in achieving its objectives, through support to its customers, primarily management and the audit committee.

To be successful and justify their existence and activities, internal auditors must always adapt to conditions from their work environment through development of new audit services and approaches. There are two main approaches to developing internal audit activity. Internal auditors will in future act subsequently, evaluating the effects of past events and the achieved results but it is becoming more important to take preventive action, where internal audit provides assistance and support to its customers in predicting future risks and proposes adequate system of internal controls.

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Relationship between CSR and Financial Performance - Companies within ZSE CROBEX10® Index

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ABSTRACT

The main objective of this research paper is to examine the relationship between corporate social responsibility (CSR) and financial performance (FP) of the companies included in the official share index of the Zagreb Stock Exchange. CROBEX10® includes shares of 10 companies traded at the regulated market in Croatia. Corporate social responsibility is a factor having an important role in the consumer selection of products and services. Thus, CSR is increasingly gaining in importance because it creates organizational value for a company by giving the ability to differentiate the company from its competitors. All successful companies in the world have recognized the importance of CSR, but not all are equally successful in its implementation. Although many empirical studies found a link between the quality of CSR and the company performance measured by financial indicators, there is still a lot of inconsistency in the results of previous research, mainly due to the factors influencing this relation. The paper starts from the general premise that there is no relationship between CSR and FP, for companies included in CROBEX10®. In this paper common indicators such as the measure of the financial performance (such as ROA and ROE) are determined by using document analysis method. Levels of CSR indicators are evaluated by using content analysis. The relationship between CSR and financial performance is interpreted using descriptive statistics, method of simple regression analysis and factor analysis.

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1. INTRODUCTION

This paper analyzes the relationship of corporate social responsibility (CSR) performance for the sample of 10 companies whose shares are included in the official share index of the Zagreb Stock Exchange (ZSE) and financial performance (FP) in the observed period from 2012 to 2014. The companies have to accept and develop socially responsible business in order to survive in the extremely competitive market. The overall objective of this paper is to assess the connection between the financial performance and the performance of corporate social responsibilities of selected companies. There are many examples where, due to the lack of transparency and unethical decision making, large business systems collapsed in a very short time. To prevent this and to achieve sustainable economic system, CSR is the only way to go (Horvat et al., 2014). Data used in the article are from secondary sources, books and scientific articles in the field of CSR and financial performance and publicly available annual financial reports and other relevant documents of companies included in the share index CROBEX10®.

CSR referred as a strategic plan (Roberts, 1992) is increasingly gaining in importance because it creates organizational value for a company by giving the ability to differentiate the company from its competitors. The general assumption is that a successful implementation of the CSR standard leads to higher financial performance of the companies. Successful

companies support the development of the capital market. Studies show that stock prices and other financial indicators generally respond positively to any improvement in CSR. Although many empirical studies find a link between the quality of CSR and the company performance measured by financial indicators, there is still a lot of inconsistency in the results of previous research, mainly due to the factors influencing this relation. The reason for this can be sought in the absence of adequate measures for quality of CSR, but also because of application of different measures. The unique standard of measure has not been established.

The study sample consisted of companies whose shares are included in the stock exchange index CROBEX10® (ZSE) after a regular revision in September 2015. This sample was selected primarily because of clear conditions for the inclusion of companies' shares in the index and elements for company comparison in the sample. Also, the assumption is that the companies included in the index CROBEX10® have the best performance and CSR quality. The paper starts from the general premise that there is no relationship between CSR and financial performance, for companies included in CROBEX10®. There are different methods of tracking company performance success. For the purpose of this research, financial performance is measured by two ratios most preferred for profitability assessment, ROA and ROE. CSR indicators are evaluated by using content analysis.

The structure of this paper is as follows. The next section provides theoretical evidence about linkage between corporate social responsibility and financial performance. The third section illustrates the research methodology and measurement process, the fourth section provides results report and discusses the main findings. In the last section, the authors make conclusion and give the assumption for future research.

2. EMPIRICAL LINKS BETWEEN CORPORATE SOCIAL RESPONSIBILITY AND FINANCIAL PERFORMANCE

Corporate social responsibility should be an integral part of each company and be present in every process and each activity (Horvat et al., 2014). A definition brought by Selvi, Wagner and Türel (2010) states that CSR is when companies take into account the impact of their decisions on society and the environment. There is a lot of inconsistency in the results of previous research and many authors approach to the relationship between corporate social responsibility and financial performance with different views. So far, presented research data have shown a positive, negative, and neutral impact of corporate social responsibility on financial performance. As one of the reason for this inconsistency authors usually refer to empirical analysis (McWilliams, Siegel, 2012) but also some authors take the neutral position because of the fact that there are many factors that can prevent researchers from secure results (Kang et al., 2010). Also, it is important to notice that there are some research papers in which CSR is perceived as a marketing strategy (D'Arcimoles, Trebucq, 2002) and CSR has a growing part in the marketing literature.

One of the first data were from 1984 in the research paper from Cochran and Wood who found out that average age of corporate assets are highly correlated with social responsibility ranking. Karagiorgos (2010) made a research on 39 Greek companies listed on the Athens Stock Exchange. The presented results showed that companies which adopt CSR strategy and practices may obtain higher stock values due to the fact that shareholders evaluate positively these activities. Flammer (2013b) found out in her research that CSR is a very valuable resource for the company which leads to higher financial performance. Also in her previously research Flammer (2013a) found out that companies experience an extreme stock price increase upon the announcement eco-friendly initiative. Fasanya and Onakoy (2013)

observed primarily and secondary data about Nigerian companies and they found out that CSR could be a key instrument to the financial development and that profit making is the most important for growth trends in corporate social responsibility performance. Servaes and Tamayo (2013) conducted a research about the connection between the existence of CSR of the company and business value of companies that have highly conscious consumers. They performed a set of different studies and their results show that the existence or, on the other hand, the lack of social responsibility, influences the company business success. But still there is some evidence of negative and neutral relationship. Mahoney and Roberts (1997) in their research on a sample of Canadian firms found no significant relationship between CSR activities and FP. In an empirical analysis on a sample of 179 publicly held Canadian firms Makni, Francoeur and Bellavance (2009) found no significant relationship between a composite measure of a firm's CSR and FP, except for market returns. Rapti and Medda (2012) in their research present a negative or nonexistent relationship between CSR and FP according to the commonly used ratios in the air transport industry - EBITDA and Net Assets. Hirigoyen and Poulain-Rehm (2015) in their research on a sample of 329 listed companies in three geographical areas (the US, Europe and the Asia-Pacific region) found that greater social responsibility does not have an influence on a better financial performance, as well as that financial performance has a negative impact on corporate social responsibility.

3. RESEARCH HYPOTHESIS AND METHODOLOGY

The objective of this research paper is to investigate the correlation of company financial performance and CSR performance, respectively to investigate the measure to which the CSR performance of the observed companies influences their performance. The assumption is that CSR leads to a higher level of company performance. The above literature review shows that the relationship between CSR and company financial performance is not clear. Based on our literature review and other authors' review we started from the general premise that there is no relationship between CSR and FP, for companies included in CROBEX10® through the period (2012-2014). Based on that premise, one hypothesis was created.

***H1:** Statistically significant correlation between the financial performance indicators ROA and ROE and overall CSR performance of the companies included in CROBEX10® does not exist.*

The aim is to examine how the implementation of CSR in Croatian companies listed in the stock exchange index CROBEX10® affects the financial performance measured by ROA and ROE. In order to examine the above stated hypothesis, authors conducted a web page analysis. Company web sites were analyzed in order to check the elements identified through the content analysis. This study utilizes a quantitative and deductive approach. A quantitative approach is considered suitable from a statistical perspective regarding companies listed on the stock exchange index CROBEX10®. A deductive approach is considered because the research results are compared to previous research (Hyde, 2000). Simple linear regression has been utilized as a most common method in previous researches, so the authors also decided to use simple linear regressions in order to examine the relationship between CSR performance, as an independent and either ROA or ROE as dependent variable. Empirical results are gained by the analysis of the data in MS Excel and statistical tool Statistica.

3.1 Sample and data

The initial sample constituted of companies that are included in the stock exchange index CROBEX10® (ZSE) after a regular revision in September 2015. The secondary data was collected from the Croatian stock market website (<http://www.zse.hr/default.aspx?id=61298>). The companies listed in the stock exchange index CROBEX10® are from different industrial sectors and they are ranked on the basis of two criteria: a) their shares in the free float market capitalization, and b) their shares in the order book turnover in the course of six months preceding the revision (Resolution on the CROBEX10® index, 2014). The composition of CROBEX10® is: AD Plastik, Adris grupa, Atlantic Grupa, Ericsson Nikola Tesla, HT, INA, Končar - Elektroindustrija, Kraš, Podravka and VALAMAR RIVIERA. Each company from the sample presented in the table below is indicated as f_i where $i = 1$ to 10^{th} company. The main assumption is that the companies included in the index CROBEX10® have the best financial performance and strong commitment to CSR principles. This also presents the main limitation of the research since there is no clear evidence of correlation between those two variables.

3.2 Measure of CSR

Defining and measuring CSR originally referred to as social responsibility is a complicated process, and one of the main reasons for the problematic measurement is the absence of a common framework (Rapti, Medda, 2012). There are several methods for measuring CSR that are recognized in the literature. But there are only two best-known and used methods, reputation index and content analysis (Fasanya, Onakoy, 2013). For the purpose of this research the authors used content – analytic procedure to collect relevant information. Content analysis uses information from the reporting of CSR activities in company publications, codes of ethics, and in the annual report, but sometimes also in stand-alone reports (Bebbington et al., 2008). Company reports on CSR are the primary communication medium to indicate company's CSR actions and strategy (Grudić Kvasić, 2014). Measuring CSR is a multi-dimensional process, because it could be observed from different aspects and includes internal (governance, employees) and external (environmental and community impact) factors (Palmer, 2012).

Based on a content analysis of 10 listed companies on the stock exchange index CROBEX10® (ZSE) the CSR features in the Croatian companies are evaluated. We collected information and documents on CSR directly from their websites, which is connected with the fact that companies use Internet widely as a place to communicate their principles and disseminate their information to public (Snider et al., 2003).

For the purpose of this research, we use the following types of CSR reports, available only at the official websites as a public communication canal: a) Sustainability Report, b) Code of Ethics, c) CSR report, d) Environmental report, e) Code of Business Conduct as well as the section of corporate websites dedicated to disclosing CSR activities. Five companies issued sustainability report, whereas three companies published a code of ethics in business, one company published CSR report, three companies published environmental reports, two companies published code of business conduct and eight companies provided a dedicated CSR section on their websites. All companies disseminated additional types of CSR reports, such as annual report, global compact report, and quality report. The CSR information is published in Croatian and English editions. The fact that companies have different types of CSR reports means that the companies are aware of the importance of developing CSR and its influence on public opinion, and probably on financial results. One of the assumptions is

also that financially stronger companies have people who deal with public relations and therefore have a better program of corporate social responsibility.

Using previous research data, but mainly elements of content analysis by CSR topic from the research paper of Campopiano and De Massis (2015), we made our own research analysis on 10 Croatian companies. In this type of analysis, there are always three main dimensions: business, environment and social performance (Giannarakis et al., 2011). Earlier research conducted on 20 Croatian companies noted that Croatian companies mainly engage in social (95%) and environmental programs (85%) while only 10% of them invest in economic CSR programs (Grudić Kvasić, 2014). General (sub)topic identified on the official websites content analysis are grouped into six logical entities, that is sub-indexes: a) *Values and general interests* (honesty, integrity, respect, gender equality, support for cultural and sporting activities), b) *Shareholder* (CG principles), c) *Employees* (working conditions, no discrimination in selection, business culture, training, HRM), d) *Environmental issue* (environmental policy, environmental investment, responsible use of energy, clean energy, reduction of pollution emissions, sustainable research, circular economy), e) *Philanthropy* (donations, sponsorship, community program sponsorship (anti-racism, employee volunteerism, children/youth program), health program and research), f) *Stakeholder issue* (stakeholder dialogue, involvement in decision making process). Evidence of the content analysis by CSR topic was characterized by dichotomy. An affirmative answer is coded with a value of "1" and the negation with value "0". In calculation of certain sub-indexes each question holds equal value. This way ensures that every sub-index has a value between 0 and 1. The value is calculated in the following manner: [(the sum of values of the answered questions* overall number of questions composed of sub-indexes)/ number of answered questions]/ the biggest sum achieved for the latter sub-index in the year.

3.3 Measure of financial performance

One of the most important benefits that CSR may provide to a company is financial success (Rapti, Medda, 2012). The financial performance of a company is examined through its annual financial reports, where information about growth, investments, earnings, costs, etc. are listed. The above literature review shows that measures of financial performance could be either accounting-based or market-based. For the purpose of this research paper we use accounting-based data available in the annual financial reports of companies included in the share index CROBEX10® in the observed period from 2012 to 2014.

Profitability is the main indicator of company success. Relative measures of profitability are much more revealing than absolute profit numbers when comparing companies (Van Horne, Wachowicz, 2012). They are divided into two groups: ratios that show profitability in relation to sales, and those which show it in relation to investment. Measures of financial performance presenting profitability in relation to investment link some measure of profit with some measure of assets tied up in business. We use two ratios most preferred for profitability assessment and these are: return on assets (ROA), and return on equity (ROE). ROA determines the operating efficiency of the company relating earnings before interest and taxes (EBIT) and total assets. ROE shows the return of shareholders dividing earnings after taxes (EAT) by equity. ROE is the ratio that some consider the most important in finance since it is a driver of value (Walsh, 2006). However, high levels of ROE cannot be achieved without good ROA. To calculate either of these measures of return on investment there has to be a profit. Therefore, for all the years during which a company incurred loss i.e. negative EBIT or EAT, corresponding ROA or ROE was not calculated for our sample (Table 1).

| Table 1: ROA and ROE for CROBEX10® companies, years 2012-2014 | | | | | | |
|--|---------|--------------|---------------|--------------|---------|--------------|
| Company | ROA2012 | ROE2012 | ROA2013 | ROE2013 | ROA2014 | ROE2014 |
| AD Plastik d.d. (f1) | 6.12% | 6.59% | 5.85% | 6.20% | 3.27% | 2.03% |
| Adris grupa d.d. (f2) | 7.96% | 7.25% | 6.48% | 6.05% | 9.15% | 9.56% |
| Atlantic Grupa d.d. (f3) | 1.28% | EAT negative | 0.91% | EAT negative | 1.46% | EAT negative |
| Ericsson Nikola Tesla d.d. (f4) | 12.29% | 16.72% | 13.83% | 21.47% | 12.20% | 25.10% |
| HT d.d. (f5) | 16.23% | 15.23% | 13.11% | 13.23% | 9.45% | 10.08% |
| INA d.d. (f6) | 6.68% | 8.53% | EBIT negative | EAT negative | 3.19% | 5.50% |
| Končar - Elektroind ustrija d.d. (f7) | 7.72% | 7.93% | 9.45% | 9.56% | 5.94% | 5.80% |
| Kraš d.d. (f8) | 3.25% | 1.34% | 2.49% | 1.07% | 3.09% | 2.47% |
| Podravka d.d. (f9) | 1.89% | EAT negative | 5.51% | 4.53% | 10.35% | 15.07% |
| VALAM AR RIVIERA d.d. (f10) | 2.98% | 2.61% | 1.83% | 3.00% | 1.81% | 1.14% |

4. RESEARCH RESULTS

In this section, we present the findings of our analysis. In order to test the dependence between financial indicators and the CSR performance, we used the method of simple linear regression and factor analysis. Based on the calculation of the average values of variables ROA and ROE in the period 2012-2014 we created Table 2. The values for CSR performance shown in Table 2 were obtained according to the description of evaluation given in 3.2 , based on the evaluation entities (sub-indexes): a) *Values and general interests* (VGI), b) *Shareholder* (Sh), c) *Employees* (Emp), d) *Environmental issue* (E), e) *Philanthropy* (Ph) and f) *Stakeholder issue* (Si).

Table 2: The values for ROA, ROE and CSR

| Company | ROA | ROE | CSR |
|---------|--------|--------|------|
| f1 | 5.08% | 4.94% | 0.85 |
| f2 | 7.86% | 7.62% | 0.55 |
| f3 | 1.22% | 0.00% | 0.72 |
| f4 | 12.77% | 21.10% | 0.80 |
| f5 | 12.93% | 12.85% | 0.76 |
| f6 | 3.29% | 4.68% | 0.98 |
| f7 | 7.70% | 7.76% | 0.82 |
| f8 | 2.94% | 1.63% | 0.74 |
| f9 | 5.92% | 6.53% | 0.71 |
| f10 | 2.21% | 2.25% | 0.54 |

By applying *Statistica* tool we made a regression analysis to determine whether there is a dependence between variable ROA and cumulative CSR performance. The result is shown in Table 3.

| Table 3: Regression summary for dependent variable ROA | | | | |
|---|------------|-------------------------|-------------------------|----------|
| | Multiple R | Multiple R ² | Adjusted R ² | SS Model |
| ROA | 0.094930 | 0.009012 | -0.114862 | 0.000139 |

It is obvious that the amount of the correlation coefficient ($r = 0.095$) points to the fact that there is no statistically significant correlation between ROA and overall CSR performance indicator. Table 4 gives parameter estimation regarding simple linear regression.

| Table 4: Results of a simple linear regression of dependability financial measure ROA of CSR performance | | | | | | | | |
|---|---------------|----------------|----------|----------|--------------------|--------------------|-------------------------|------------------------|
| | ROA Param. | ROA Std.Err | ROA t | ROA p | -95.00% Cnf.Lmt | +95.00% Cnf.Lmt | ROA Beta (β) | ROA St.Err. β |
| Intercept | 0.039519 | 0.084209 | 0.469298 | 0.651381 | -0.154668 | 0.233706 | | |
| CSR | 0.029929 | 0.110963 | 0.269722 | 0.794201 | -0.225952 | 0.285810 | 0.094930 | 0.351957 |

From the above results which show t-value for independent variable lower than 2 and p-value for independent variable high it can be concluded that the obtained simple linear correlation coefficient is not statistically significant. This leads to the acceptance of the *H1* considering the correlation existence between ROA and CSR indicator. Below we examine the possible correlation between variables ROE and CSR performance indicator. The result for the correlation coefficient is shown in Table 5.

Table 5: Regression summary for dependent variable ROE.

| | Multiple R | Multiple R ² | Adjusted R ² | SS Model |
|-----|------------|-------------------------|-------------------------|----------|
| ROE | 0.175790 | 0.030902 | -0.090235 | 0.001063 |

The result for the correlation coefficient between CSR and ROE is approximately $r = 0.176$. This is a somewhat higher value than the one we got for CSR and ROA although is also quite small. Table 6 gives parameter estimation regarding simple linear regression.

Table 6: Results of a simple linear regression of dependability financial measure ROE of CSR performance

| | ROE Param. | ROE Std.Err | ROE t | ROE p | -95.00% Cnf.Lmt | +95.00% Cnf.Lmt | ROE Beta (β) | ROE St.Err.β |
|---------------|---------------|----------------|--------------|--------------|--------------------|--------------------|-----------------|-----------------|
| Inter cept | 0.00748 0 | 0.12419 3 | 0.060 232 | 0.953 449 | -0.278908 | 0.293869 | | |
| CSR | 0.08265 5 | 0.16364 9 | 0.505 074 | 0.627 124 | -0.294720 | 0.460030 | 0.17579 0 | 0.34804 8 |

Therefore, it can be concluded that there is no statistically significant linear correlation between CSR indicator and financial indicators ROA and ROE. Based on hypothesis testing, this leads to the final acceptance of the H1.

In order to achieve a deeper insight into the structure of the possible relationships between the profitability and indicator of CSR, we made an analysis of each elements of the overall indicators of CSR since (according to the description given in 3.2). Evaluation results of the CSR components together with the values of ROA and ROE are presented in Table 7.

Table 7. The values of the variables that make CSR and those values describing the financial results for the company from CROBEX10®

| | ROA | ROE | VGI | Sh | Emp | EP | Ph | SI |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|
| f1 | 0.051 | 0.049 | 0.750 | 1.000 | 1.000 | 0.857 | 0.500 | 1.000 |
| f2 | 0.079 | 0.076 | 0.500 | 1.000 | 0.800 | 0.000 | 1.000 | 0.000 |
| f3 | 0.012 | 0.000 | 0.750 | 1.000 | 1.000 | 0.571 | 0.500 | 0.500 |
| f4 | 0.128 | 0.211 | 0.750 | 1.000 | 1.000 | 0.571 | 0.500 | 1.000 |
| f5 | 0.129 | 0.128 | 1.000 | 1.000 | 0.800 | 0.286 | 1.000 | 0.500 |
| f6 | 0.033 | 0.047 | 1.000 | 1.000 | 1.000 | 0.857 | 1.000 | 1.000 |
| f7 | 0.077 | 0.078 | 1.000 | 1.000 | 1.000 | 0.429 | 0.500 | 1.000 |
| f8 | 0.029 | 0.016 | 0.500 | 1.000 | 1.000 | 0.714 | 0.750 | 0.500 |
| f9 | 0.059 | 0.065 | 0.750 | 1.000 | 1.000 | 0.286 | 0.750 | 0.500 |
| f10 | 0.022 | 0.023 | 0.500 | 1.000 | 0.600 | 0.143 | 0.500 | 0.500 |

For the purpose of further data processing, we calculated Cronbach's alpha as a measure of internal reliability. The value is Cronbach - alpha = 0.598128 which can be considered satisfactory considering the size of the sample. In addition, we excluded the variable Sh from further consideration since it has no variation for all the observed companies. After the implementation of factor analysis we determined the existence of two main factors as it is given in Table 8.

| Table 8: Factors and coordinates of variables (CROBEX10®) | | |
|--|-----------|-----------|
| | Factor 1 | Factor 2 |
| ROA | 0.982506 | 0.186230 |
| ROE | 0.982506 | -0.186230 |
| *VGI | 0.336671 | 0.146586 |
| *Emp | 0.027758 | -0.236450 |
| *EP | -0.199245 | -0.378404 |
| *Ph | 0.140624 | 0.430677 |
| *SI | 0.184792 | -0.461887 |

Considering the position of the cases (companies) in further analysis in the two-dimensional factor space we determined a big deviation for Ericsson Nikola Tesla (f4; Table 1) which differs extremely in high profitability from the other companies in CROBEX10®. Since this case can be seen as the exception, this company is not taken into consideration in further analysis. In this case, it could be determined with a greater reliability that the regularity is valid for a set of some the most prominent Croatian companies from the Zagreb Stock Exchange.

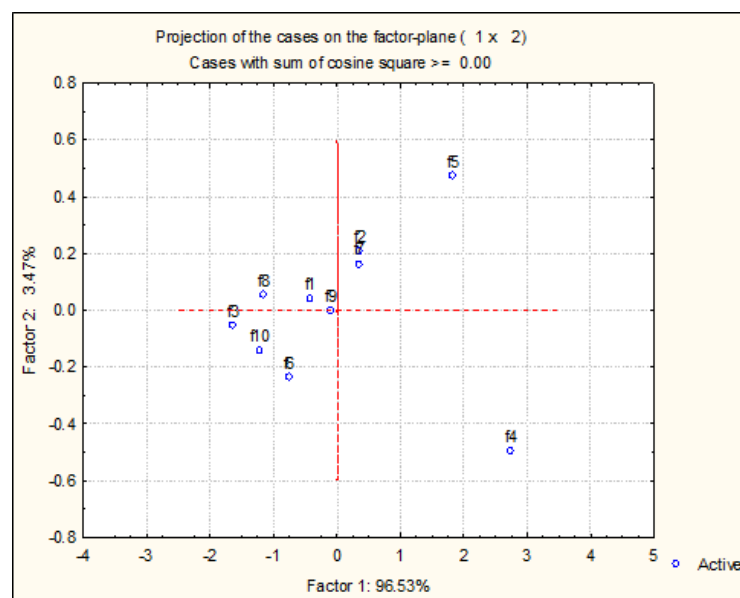


Figure 1: Two-dimensional factor-plane for analysis of CSR components and ROA/ROE (CROBEX10®)

Excluding company (f4), we get a reduced table (no line f4 and no column Sh), where again we have a check of data consistency. The data analysis shows that Cronbach alpha is

0.612640, which gives us an improved result. In addition, in the calculation of factor analysis with the procedure of principal components (excluding ERNT), we get the following correlation matrix (Table 9).

| Table 9: Factor analysis- Correlation matrix (CROBEX10®- ERNT) | | | | | | | |
|---|----------|----------|---------|----------|----------|----------|----------|
| | ROA | ROE | VGI | Emp | EP | Ph | SI |
| ROA | 1.00000 | 0.97782 | 0.43140 | -0.15848 | -0.40396 | 0.49220 | -0.13932 |
| ROE | 0.97782 | 1.00000 | 0.51118 | -0.15551 | -0.37575 | 0.53801 | -0.04641 |
| VGI | 0.43140 | 0.51118 | 1.00000 | 0.39736 | 0.33309 | 0.15554 | 0.64952 |
| Emp | -0.15848 | -0.15551 | 0.39736 | 1.00000 | 0.70589 | -0.08241 | 0.48751 |
| EP | -0.40396 | -0.37575 | 0.33309 | 0.70589 | 1.00000 | -0.17270 | 0.74038 |
| Ph | 0.49220 | 0.53801 | 0.15554 | -0.08241 | -0.17270 | 1.00000 | -0.35921 |
| SI | -0.13932 | -0.04641 | 0.64952 | 0.48751 | 0.74038 | -0.35921 | 1.00000 |
| Means | 0.05461 | 0.05362 | 0.75000 | 0.91111 | 0.46032 | 0.72222 | 0.61111 |
| Std.Dev. | 0.03650 | 0.03894 | 0.21651 | 0.14530 | 0.30952 | 0.23199 | 0.33333 |
| No.Cases | 9.00000 | | | | | | |
| Matrix | 1.00000 | | | | | | |

According to Table 9 it is evident that the profitability indicators ROA and ROE, although they do not have a significant correlation with the overall indicator of CSR, have some fairly significant correlation with the performance of individual components of CSR. Component VGI has a relatively large positive correlation ($R > 0.43$) with ROA and ROE. The similar situation exists with component Ph with ($R > 0.49$). In addition, based on the correlation matrix a new procedure of factor analysis is performed. We apply also the rotation Varimax Normalized. The result is the separation of factors that are given in Table 10.

| Table 10: Factor loadings (CROBEX10® - ERNT) | | |
|---|-----------|-----------|
| | Factor 1 | Factor 2 |
| ROA | 0.953242 | -0.089084 |
| ROE | 0.980689 | -0.027109 |
| VGI | 0.570044 | 0.726516 |
| Emp | -0.116481 | 0.778477 |
| EP | -0.338361 | 0.848531 |
| Ph | 0.647263 | -0.184190 |
| SI | -0.067394 | 0.901941 |
| Expl.Var | 2.746919 | 2.709952 |
| Prp.Totl | 0.392417 | 0.387136 |

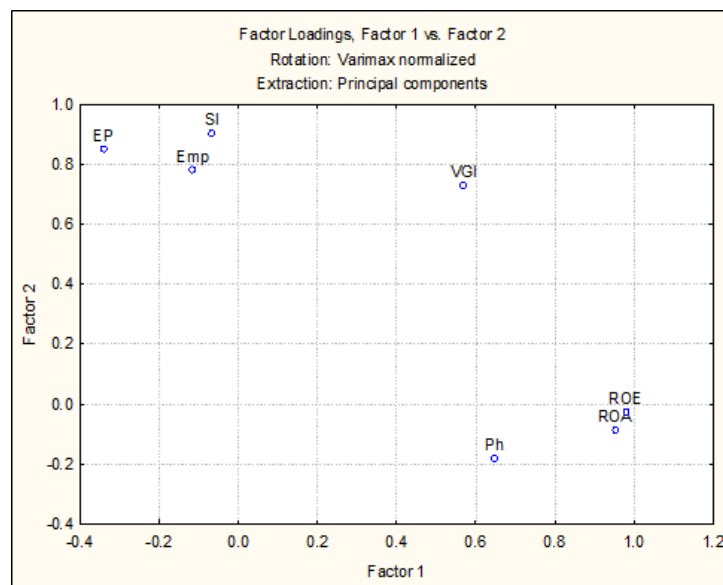
Table 10 shows that the first factor is marked by large weights of financial performance variables. Also, a high value of CSR components is characteristic for the second factor. However, there is one specific exception and that is the variable Ph (Philanthropy). Factors have an eigenvalues as presented in Table 11.

Table 11: Factors and Eigenvalues

| | Eigenvalue | % Total variance | Cumulative Eigenvalue | Cumulative % |
|---|------------|------------------|-----------------------|--------------|
| 1 | 2.984255 | 42.63222 | 2.984255 | 42.63222 |
| 2 | 2.472615 | 35.32307 | 5.456870 | 77.95529 |

It is evident that variable Ph (Philanthropy) has a positive correlation with variables ROA and ROE, while it has a mainly negative correlation with other CSR components (Emp, EP, SI). Table 10 shows that Ph variable participates with greater weight in factor 1 than in factor 2. If we analyze the position of different variables in the two-dimensional factor space, then we see that the variable Ph is near to the ROA and ROE (Figure 2). In this load factor arrangement, variable VGI is also extent (Values and general interest).

Therefore, unlike the first test analysis of a simple correlation between cumulative factors - CSR performance and profitability indicators for companies included in CROBEX10®-distribution of CSR on the components and deeper structural analysis revealed interesting results. Although the hypothesis that there is no significant positive correlation between overall indicator of CSR performance and profitability indicators for companies included in CROBEX10® is correct, the profitability of the analyzed companies (with the exclusion of Ericsson Nikola Tesla) is in the positive correlation with the components of CSR: with VGI and even more with Ph. Variable Ph is not in relevant significant positive correlation with other components of CSR.

**Figure 2:** Two-dimensional factor plane

Therefore, the answer to the question about the correlation between ROA and ROE indicators and CSR indicator is not quite unambiguous. In Figure 2 the proximity of variable Philanthropy can be seen, which includes donations, sponsorship with the profitability variables. This positive relationship is expected in some respects, since the companies that generate excess cash are more prone to such social activities.

5. CONCLUSION

This research paper gives the result which indicates that there is no statistically significant correlation between overall indicator of CSR and financial indicators ROE and ROA of the Croatian companies included in CROBEX10® share index. A more detailed analysis of the components of CSR shows that there is some correlation between CSR components and indicators ROA and ROE. Both profitability variables are positively correlated with the variable VGI (Values and general interests) and even more with Ph (Philanthropy). It should be noted that Ericsson Nikola Tesla was excluded from this part of the analysis because it is highly profitable compared to other companies included in CROBEX10®.

But still, the value of regression coefficient gives some evidence that companies in Croatia have been gradually accepting the concept of sustainable performance. As the literature review shows, it is possible that different set of problem results in a different outcome. In some earlier research conducted on 22 Croatian companies, Vitezić (2011) found out that business profitability measured by ROA and ROE, as well as profit margin, is much better in a socially responsible enterprise which submits transparent reports.

Beside the fact that we defined a set of documents, figures and criteria that can be considered in the content analysis of CSR, the study had several limitations regarding the possible conclusions. CSR indicators are not determined on the basis of strict quantitative procedures, but they include the effect of estimation and judgments in a substantial part. Therefore, the accuracy of the amounts of individual values and the components of CSR are partially unreliable. The sample size does not allow generalizations about Croatian companies on the whole and this research study can be interpreted only as a pilot study. Also, the analyzed companies are among the most successful ones in Croatia and their CSR activities cannot be representative of those with poor financial performance. From that point of view, this research provides a starting point for further more complex research.

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