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THE JOURNAL OF CORPORATE GOVERNANCE, INSURANCE AND RISK MANAGEMENT

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Disclosure in Non-Financial Reports as Strategic Leverage: can it Increase Firms' Value?

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ABSTRACT

Over the last years, stakeholders' pressures over sustainability issues have increased dramatically. Organizations have to demonstrate the inclusion of social and environmental concerns in their operative and strategic decisions processes. For this reason, companies report their sustainability performance in non-financial documents, signaling to markets and stakeholders the outcomes of their CSR policies. As non-financial reporting is a voluntary activity, there is not a common and enforced standard of reporting rules: as a result, the level of disclosure varies from one report to another. Sound and material reporting, with a higher level of disclosure, is a costly activity, requiring large investments in terms of time and resources. Therefore, CSR managers have to determine the grade of disclosure of non-financial reports by evaluating their costs and benefits. The aim of this is paper is to determine whether the market remunerates this investment and if it rewards higher levels of disclosure, providing both managerial and academic implications. This paper analyzes the outcomes on companies' market value determined by non-financial disclosures strategies in GRI referenced reports, juxtaposing a partial disclosure stance against a full disclosure stance, through a 2 years longitudinal study of the 2012 Fortune Global 500 companies. Results show that while the issuance of a GRI referenced report with partial disclosure (C and B GRI Application Levels) causes a positive effect on market capitalization, a full disclosure stance (A and A+ GRI Application Levels) has a negative effect on market value in the period of analysis. This output suggests that there is an optimum level of disclosure perceived by the market, opening a debate over the quality of disclosure and its ability to satisfy stakeholders' informative needs.

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1. INTRODUCTION

The definitions of business accountability and success have spread during the last years: today, firms are called to achieve environmental and social goals, as well as economic ones, in a triple bottom line approach (Elkington, 1997). Stakeholders ask companies to voluntary include social and environmental elements in their strategic processes and to be acknowledged about their non-financial performance. As "the level of CSR activities of the firms is made known to public only through the disclosures" (Kavitha & Anita, 2011, p. 45),

disclosing non-financial information has become a critical activity. Today more than two-thirds of the Fortune Global 500 companies issue a non-financial report (LeBlanc, 2012), showing a growing trend that is not prompted by contingent and temporary forces (Kolk, 2003).

CSR activities and reporting imply going beyond legal requirements and engaging in voluntary actions (McWilliams, Siegel, & Wright, 2006). It is a managerial task to determine the definition and the boundaries of company accountability, defined as the duty to provide an account or reckoning of those actions for which one is held responsible (Gray, Owen, & Adams, 1996), thereby affecting the amount of sustainability disclosures reported to stakeholders (Michelon & Parbonetti, 2010). Thus, to which extent should a company exceed legal requirements in order to meet stakeholders 'demands?

In answering this question, CSR managers should take into account that the issuance of a non-financial report has its costs: "a firm making social disclosures assumes that recipients' evaluation of the information will benefit the firm and that these benefits outweigh the costs of collecting, compiling, and disseminating the information" (Ullman, 1985, p. 542).

Thus, the first aim of this paper is to determine whether investing in the issuance of a non-financial report pays in terms of increased market value. The second purpose lies in investigating the effect of disclosing additional information: do stakeholders positively value greater amounts of disclosure? To test these propositions, I propose a longitudinal analysis of the companies listed in the Fortune Global 500 2012 list. The Global Reporting Initiative (GRI) Sustainability Disclosure Database (Global Reporting Initiative, 2013b) provides non-financial reports and their level of disclosure.

The remainder of the study is structured as follows: in the next section, a literature review concerning disclosure of non-financial information explains how and why such data is able to affect firms' value, offering a theoretical insight as well as quantitative evidences from relevant studies. On these theoretical indications, I formulate the hypotheses to be tested. The following methodological section sheds light on the sampling strategy, the operationalization of level of disclosure, and the econometric model employed. The final part presents the results, analyzing and discussing them, showing implications for management and academia.

2. LITERATURE REVIEW

2.1. Corporate Social Responsibility and Disclosure

Before analyzing in detail the causes and the effects of non-financial information disclosure, it is useful to present its primary antecedent and content, that is Corporate Social Responsibility. CSR is a very complex and fragmented domain that has gathered a plenty of attention in the last years. This is because "an intensive debate has been taking place among academics, consultants and corporate executives resulting in many definitions of a more humane, more ethical and a more transparent way of doing business" (Van Marrewijk, 2003, p. 95). CSR and its sister-concepts, like corporate citizenship (Mirvis & Googins, 2006), sustainable entrepreneurship (Schaltegger & Wagner, 2011), triple bottom line (Elkington, 1997), corporate sustainability (Dyllick & Hockerts, 2002) describe why and how firms are called to respond for the environmental and social consequences of their conduct, providing explanations at institutional, organizational and individual level of analysis (Aguinis & Glavas, 2012).

McWilliams, Siegel, & Wright (2006, p.1) define CSR as "situations where the firm goes beyond compliance and engages in voluntary actions that appear to further some social good, beyond the interests of the firm and that which is required by law". The Commission of European Communities (CEC, 2001) describes CSR as a concept whereby companies integrate social and environmental concerns into their business operations and interact with their stakeholders on a voluntary basis. According to Aguinis (2011, p.855), CSR are "context-specific organizational actions and policies that take into account stakeholders' expectations and the triple bottom line of performance". Van Marrewijk (2003, p.102) indicates that "CSR refers to company activities – voluntary by definition – demonstrating the inclusion of social and environmental concerns in business operations and in interactions with stakeholders".

Most of research efforts look for a business case for sustainability, analyzing the relationship between Corporate Social/Environmental Performance (CSP/CEP) and Corporate Financial Performance (CFP) (Wood, 2010). The majority of research suggest that "it does pay to be green" in terms of increased efficiency, strengthened brand and market value, and improved competitiveness (Hart & Ahuja, 1996; Porter & Van der Linde, 1995; Porter & Kramer, 2011). However, there are still skeptical views, according to which the only responsibility of a company is the use of its resources to engage in activities designed to increase profits, while

CSR strategies are only a source of costs and divert resources from other profitable investments (Friedman, 1970; Vance, 1975; Brammer, Brooks, & Pavelin, 2006). Nevertheless, recent CSP/CEP-CFP studies meta-analyses show that there is a well-established positive relationship between the two dimensions, despite measurement, methodological and theoretical issues surrounding it (Wood, 2010; Dixon-Fowler, Slater, Johnson, Ellstrand, & Romi, 2013). In particular, a new standpoint is emerging, according to which "environmental initiatives may not lead to a cost advantage for all firm under all conditions" (Dixon-Fowler, *et al.* 2013). For this reason, researchers are moving from a "does it pay to be green?" perspective to a "when does it pay to be green?" one, not analyzing anymore *whether* being "green" or not, rather than *how* being "green".

The spirit of this study moves in this direction, not providing another CEP/CSP-CFP analysis, but determining whether and to which extent corporate social disclosure, "the most direct expression of the companies' attitudes and behaviors regarding social responsibility" (Perrini, 2005, p. 611), creates value for firms and stakeholders. Corporate social disclosure is "the process of providing information designed to discharge social accountability" (Sutantoputra, 2009, p. 36). Firms have many communication channels to disclose such data: the annual report, through the so-called "silent social account" (Gray, 1997), special publications, documents or reports, and even socially orientated advertising (Kavitha & Anita, 2011). In their study of the disclosures of 57 companies listed in the Dow Jones Sustainability Index (DJSI), Michelon & Parbonetti (2012, p. 495) underline that "on average companies disclose more sustainability information in social, environmental and sustainability reports than in the annual report", confirming the significance of this medium over the others. Disclosure can be broadly categorized into mandatory or voluntary. As suggested before, voluntariness plays an important role in CSR. This is because "governments generally provide relatively little guidance on the implementation of sustainability at the corporate level" (Searcy, 2012, p. 240) and the motivations for self-regulation are well consistent with those for corporate social responsibility (Matiland, 1985). Likewise, Mirvis & Googins (2006), describing the five stages of Corporate Citizenship, indicate that legal compliance is present in the first, "elementary", stage. For these reasons, it seems that voluntary disclosure, rather than mandatory one, is the best expression for companies' CSR.

2.2. Determinants of non-financial disclosure

Literature identifies several dimensions that prompts the issuance of a voluntary sustainability report. Such dimensions can be generally classified into external and internal: in their study of the evolution of third-party assurance of sustainability reports, Perego & Kolk (2012, p.185) suggest that "a combination of (external) institutional pressures and (internal) set of resources and capabilities provides most fruitful insights in explaining variation of firm' adoption and integration of standardized management tools", such as non-financial reporting frameworks and assurance. Their point of view is convenient with Oliver's (1991) one, according to which organizations strategic response, in this case the issuance of a non-financial report, are crafted when confronted with institutional pressures, and they are a function of internal culture, norms and values. Research provides more insights in terms of external dimension, rather than internal one. In his early contribution, Ullman (1985) already indicated firm size, industry and company visibility, external pressures and executive values as determinants of social disclosure. Clarkson, Li, Richardson, & Vasvari (2007) indicate stakeholders' pressures, mandatory requirements, industrial peers' strategies, media coverage, image and reputation. On the internal side of the determinants, much effort has been spent linking corporate social disclosure and corporate governance (Kolk & Pinske, 2010). Michelon & Parbonetti (2010) studied board composition of 57 Dow Jones Sustainability Index companies, showing the effect of indipendent directors and "community influentials", as well of CEO duality, on disclosure. Research regarding internal resources and capabilities, individual and organizational values and culture is currently an almost unexplored territory.

Visibly, also a firm's sustainable performance determines the issuance of a non-financial report. Researches on this topic can be divided into two main opposite stands: those referring to the voluntary disclosure theory (Dye, 1985; Verrecchia, 1983) and those referring to socio-political theories (Skinner, 1994; Gray, Kouhy, & Lavers, 1995). The first theory, in line with signaling theory (Spence, 1973), posits that better performers have a proactive attitude towards stakeholders, thus they signal their improved results through higher levels of disclosure of verifiable and measurable data. Differently, inferior performers choose to disclose less or to be "silent". The latter theory claims that firms have a defensive approach towards disclosure: companies with poor sustainability results use reports in order to explain or justify their shortcomings, aiming to defend their legitimacy to operate.

Recent studies are trying to overcome this dichotomy, looking for an integrative interpretation of the two stances. In particular, Cho, Patten, & Roberts (2006) suggest that reports quality is a major issue in studying the relationship with environmental performance. "Companies with superior environmental performance […] seek to reveal their performance type, something not directly observable to investors and other stakeholders, through direct voluntary disclosures that cannot be easily mimicked by poor performers" (the so called "hard disclosure") (Clarkson, Li, Richardson, & Vasvari, p.6, 2007). Consequently, these last firms make unverifiable and unmeasurable (the so called "soft disclosure") claims to show their commitment to sustainability, in order to defend their legitimacy.

Concluding, empirical evidence shows that both poor and high performers disclose. The main difference lies in the quality, hard or soft, of their non-financial reports.

2.3. Disclosure and Economic Performance

In most cases, the decision to issue a non-financial report is motivated through economic thinking: social and environmental reporting deliver benefits to a range of stakeholders while serving to enhance shareholder value (Spence & Gray, 2007). However, also in this case evidence provided by literature is mixed. In his early literature review regarding the relationship between social and environmental disclosure and economic performance, Ullman (1985, p.551) concludes that "given the ambiguous results, no clear tendency can be discerned". Burnett, Skousen, & Wright (2011) show that the issuance of a non-financial report has a positive effect on firms' market value, especially in the long term. Xu, Zeng, & Tam (2011, p.227) observe stock market's reaction to disclosure of environmental violations for Chinese listed companies, finding that "the average reduction in market value is estimated to be much lower than the estimated changes in market value for similar events in other countries". Using a dataset provided by the Thailand Institute of Directors' Corporate Governance Benchmarking Survey, Connelly and Limpaphayom (2004) find a significant positive and non-linear relationship between environmental reporting and market valuation, while no link is evidenced with accounting performance. Stanwick and Stanwick (2000, p.155) conduct an examination of 469 US firms' environmental disclosures, their result shows that "firms classified as high financial performers have higher incidences of environmental policies and/or descriptions of environmental commitment than firms classified as low performers".

Theories in strategy provide the correct reading of the relationship between corporate social disclosures and economic performance: "the missing element [in the relationship] is strategy" (Ullman, 1985, p. 552; Perego & Kolk, 2012). As indicated by Bowman & Haire (1975), managers are called to decide on how to allocate company resources optimally between various effectiveness dimensions for successfully coping with the task environment. Addressing to the stakeholder theory (Freeman, 1984), which is one of the most applied theoretical framework in the field of CSR (Searcy, 2012), the task environment is populated by individuals and groups, including employees, shareholders, customers, the wider community, to whom companies have obligations. According to this view, corporate social disclosure is able to generate and enhance organizational legitimacy, demonstrating that a firm shares the same value system of the wider community (Michelon & Parbonetti, 2010), trust and reputation (Lamberti & Lettieri, 2009), moving from a "trust me" approach to a "tell me" one (Perrini, 2005), shareholder value creation alignment with social value creation (Chatterji & Levine, 2006), reliability, transparency and brand positioning (Perrini, Russo, Tencati, & Vurro, 2011). In summary, "the disclosure of financial, social and environmental information is part of the dialogue between a company and its stakeholders and it provides information on a company's activities that legitimize its behavior, educate and inform, and change perceptions and expectations" (Michelon & Parbonetti, 2010, p. 478). If there are still uncertainties regarding corporate social disclosure business case, researchers definitely agree on the existence of a stakeholder case.

Corporate social disclosure can be a source of value for firms also as a form of sustainability performance measurement system (SPMS). A SPMS is a set of performance measures that provides a company with useful information that helps manage, control, plan and perform activities undertaken by the company (Tangen, 2005). In such view, "what gets measured, gets managed": corporate social disclosure can help managers taking long-term decisions, and increase shareholders long-term value, on condition that disclosure is endowed with comparability, reliability and validity of data (Chatterji & Levine, 2006). Moreover, presence of such "hard" disclosure signals to shareholders and stakeholders that managerial decisions are taken also considering non-financial data: "reporting-based analyses represent the right way towards an overall comprehension of what practitioners consider efficient and appropriate socially responsible behavior" (Perrini, 2005).

2.4. Hypotheses development

Considering the stakeholder case of corporate social disclosure, it seems that the issuance of a social and environmental report can create different sources of value for the stakeholders and as a result of these, eventually improve firms 'economic performance, following the value creation mechanism described by Perrini, Russo, Tencati, & Vurro (2011). Thus, I propose the first hypothesis to be tested:

> *Hypothesis 1: The issuance of a sustainability report has a positive impact on firms' market value*

"Formulating social responsibility programs as well as disclosing their existence can be viewed as part of the strategic arsenal of dealing with one particular segment of a firm's stakeholders" (Ullman, 1985, p. 552). Managers can decide the amount of information provided in their non-financial report, accordingly to the definition they give to their company's accountability boundaries (Michelon & Parbonetti, 2010). The stakeholder approach suggests that the more information is disclosed, the more companies would enjoy increase of those intangible resources that eventually affect the overall economic performance. Higher levels of disclosure represent a stronger attitude towards sustainability, as Dawkins and Fraas (2010, p.385-386) advance: "it may be that companies that have a adopted a full disclosure have done so because they fundamentally believe that their strengths outweigh their weaknesses and are committed to environmental disclosure as a matter of value".

On the other hand, corporate social disclosure has its costs. In addition to the very direct costs of reporting activity, linked to report designing and drafting, employees training, data acquiring, assurance granting and publication, there are other sources of costs to be considered. First, the costs related to the object of analysis, which is corporate sustainability performance. It is a complex domain, endowed with pluralistic goals, ambiguity, uncertainty, and context dominance (Searcy, 2009). It requires multidisciplinary competencies, as well as the inclusion of stakeholders' panels in its processes, creating the opposition of different mindsets (O'Dwyer, 2011). As a result, "in many corporations, people are simply not equipped to effectively pursue a commitment toward corporate sustainability" (Searcy, 2012, p. 240), and a lack of these capabilities can represent a serious impediment for the diffusion of sustainability practices, like non-financial reporting (Perego & Kolk, 2012). Secondly, other costs are associated to managing excessive diversification, as managers and directors have to

shift from a single goal perspective to a triple or even multiple bottom line (Jensen, 2001). Finally, because of the proliferation of non-financial reporting standards, managers face too many frameworks to address. They often choose the one that requires less time and resources, although "the metrics that are the easiest to report are not always the most informative" (Chatterji & Levine, 2006, p. 5). Furthermore, proliferation of measures benefits poor performers, who can design their own metrics in order to "greenwash" their performance, deceiving stakeholders, and confusing consumers and socially responsible investors. As a result, they reduce the weight of non-financial measures in their decisions (Chatterji & Levine, 2006).

Given these considerations, I propose the following second hypothesis, testing whether the additional benefits generated by higher amounts of disclosure overcome its additional costs:

> *Hypothesis 2: the issuance of a sustainability report with a higher amount of disclosure determines a higher positive effect on firms' market value*

3. METHODOLOGY

3.1. Data and Sample

As explained by Brown, de Jong, & Levy, (2009), in recent years large multinational enterprises have dominated sustainability reporting. A number of reason support the size-disclosure relationship. Firstly, larger firms are more political visible and often become the "focal point" of broader wars against social and environmental injustices (Chatterji & Levine, 2006). Thus, big companies try to reduce this pressure by various measures, like non-financial reporting (Watts & Zimmerman, 1986). Secondly, bigger firms may enjoy economies of scale and bear lower information production costs (Foster, 1986), or lower costs of competitive disadvantage resulting from disclosing corporate information (Meek, Roberts, & Gray, 1995). Accordingly, I have selected the companies listed in the Fortune Global 500 2012 ranking as the sampling frame. I have collected financial data for a period of analysis of two years (2010, 2011). After having excluded outliers, firms missing financial data and companies belonging to less polluting industries, the final sample results in a balanced panel consisting of 256 observations, 128 per year. The choice of the "worst offenders" industries is because these may experience greater media attention and more pressures from NGOs, consumers, and governmental authorities (Bansel, 2005).

Table 1 provides descriptive statistics of the final sample. It includes companies operating in 5 industries (agriculture, chemicals/heavy industry, light industry, energy,

shipping/transport/distribution), coming from 26 different countries representing 6 world areas (North America, South America, Europe, Asia, Far East, Oceania).

Table 1: Descriptive statistics for the final sample, 2012 data

Industry	No. of Firms	Avg. Profits ($ B.)	St. Dev. Profits ($ B.)	Avg. Assets ($ B.)	St. Dev. Assets ($ B.)	Avg. Net Revenues (B. $)	St. Dev. Net Revenues (B. $)
Agriculture	8	2,30	1,33	37,04	10,19	42,80	20,87
Chemicals/ heavy industry	48	5,41	4,42	81,20	38,17	59,64	37,17
Energy	58	7,00	8,06	113,90	93,65	109,38	110,19
Light industry	110	2,35	3,10	77,69	117,09	56,69	46,75
Shipping/ transport/ distribution	32	1,80	1,72	55,89	59,31	56,08	30,06

3.2. Operationalization of Disclosure

In this paper, I propose the framework developed by the Global Reporting Initiative (GRI) G3 and G3.1 Guidelines (Global Reporting Initiative, 2011a) as the standard for non-financial reporting. There are several reasons that justify this choice. First, though there is not a commonly accepted definition of corporate reporting in the published literature (Schaltegger & Burritt, 2009; Roca & Searcy, 2011; Aktas, Kayalidere, & Kargin, 2013), practitioners and scholars agree on the fact that GRI is the most well-known and widely applied guideline for sustainability reporting (Aktas, Kayalidere, & Kargin, 2013; Chatterji & Levine, 2006; Searcy, 2012). In particular, Brown, de Jong, & Levy, (2009) argue that GRI exhibits several features of an established institution, such as broad uptake and legitimacy. GRI framework boasts a multiple stakeholder approach, as the Guidelines include them in the report design and fulfillment process. GRI reports include environmental, economic and social indicators, accordingly with the Triple Bottom Line methodology. GRI has developed sector

supplements in order to improve its framework ability to disclose information regarding specific industries, including automotive, electric utilities, mining and metals, oil and gas, telecommunications (Global Reporting Initiative, 2011a). Sustainability reports assurors also employ GRI guidelines to standardize assuring process (Perego & Kolk, 2012). In their analysis of indicators disclosed in corporate sustainability reports, Roca and Searcy (2012) investigated 94 non-financial reports, finding that 45 of them (47,9%) use the GRI G3 Guidelines, while 31 include indicators explicitly identified as GRI indicators. Such increasing diffusion represents a great opportunity to reduce costs of reporting through standardization (Chatterji & Levine, 2006), in particular considering the recent effort to produce a digital disclosure of sustainability information with the XBRL machine-readable format (Global Reporting Initiative, 2013b). Nonetheless, there are some critics of the GRI framework. Goel (2005), Smith & Lenssen (2009) claim that GRI indicators are too many and too general to be a management tool. Moneva, Archel, & Correa (2006) strongly criticize methodology behind the G2 version of the Guidelines, specifying that performance indicators are not balanced among the three sustainability dimensions, and evidencing that companies use the Guidelines to legitimize their action rather than embracing the values and principles of sustainability.

According to GRI G3.1 Guidelines (Global Reporting Initiative, 2011a), each report consists of three sections: Profile Disclosures, Disclosures on Management Approach (DMA), Performance Indicators & Sector Supplement Performance Indicators. The first set includes information about strategy and analysis, organization profile, report parameters, governance, commitment and engagement. The DMA regards the management attitude towards each topic covered by the report (economic, environmental, social issues). The last section discloses qualitative and quantitative data regarding economic and environmental performance, results in term of labor practices and decent work, human rights, society and product responsibility. A GRI report is not mandatory in all its sections, due to its voluntary nature. For this reason, each reporting organization should declare the grade to which it has applied the framework specified in the Guidelines. The "Applications Levels" (AL) system assesses the grade of disclosure, giving a score that goes from C (minimum disclosure) to A (full disclosure). Report makers self-declare their Application Level, and, in addition, they can have their self-declaration externally assured by a third party (receiving a "+" to their AL) and/or request the GRI to check the self-declaration (Global Reporting Initiative, 2011b). Table 2 presents details about the AL system. Traditional metrics regarding the amount of disclosure in non-

financial reports are based on content analysis methodologies, e.g. percent of prose in annual reports, number of pages/sentences regarding non-financial issues. Such methodology has the major issue of producing high variability in the results depending from the analysis level of refinement (Ullman, 1985). The AL system is a less arbitrary metric; furthermore, it is coherent within the GRI Guidelines, as the same author of the framework has designed it.

Table 2: Report Application Level system (GRI 2011b)

Profile Disclosure	Report on: 1.1 2.1-2.10 3.1-3.8, 3.10- 3.12 4.1-4.4, 4.14-4.15	Report on all criteria listed for level C, plus: 1.2 3.9-3.13 4.5-4.13,4.16-4.17	Same as requirement for Level B
Disclosure on Management Approach	Not required	Management approach disclosure for each indicator category	Management approach disclosure for each indicator category
Performance Indicators & Sector Supplements Performance Indicators	Report fully on a minimum of any 10 performance indicators, including at least one from each of: social, economic, and environment.	Report fully on a minimum of any 20 performance indicators, including at least one from each of: economic, environment, human rights, labor, society, product responsibility	Respond on each core and Sector Supplement indicator with due regard to the materiality principle by either: A) reporting on the indicator or B) explaining the reason for its omission
Report Application Level	**C**	**B**	**A**

Data regarding reports' Application Level is available in the GRI Sustainability Disclosure Database website (Global Reporting Initiative, 2013b). In order to strengthen the validity of the Application Level, I have excluded self-declared reports, as well as non-GRI reports. Indeed, assured reports respond to the demand for reliable and credible information, guaranteeing that the report truly represents a company's effort and achievements (KPMG/UvA, 2008). However, the so-called "rational myth" often flaws the assurance process: "report readers would often have great uncertainty in understanding how the assurance provider undertook the engagement, what they reviewed and what was the meaning of conclusion" (Deegan, Cooper, & Shelly, 2006, p. 368). Table 3 presents GRI reporting information for the sample.

Table 3: GRI Application Level for the sample. Data 2010-2011

GRI Application Level	No. of Firms
A	4
A+	42
B	5
B+	12
C+	1
Undeclared	1

3.3. Econometric Model

Ohlson, (1995) provides a model for examining the variation of market value, or price, of the firm at date *t* when a vector of other value-relevant information changes. On the hypothesis of efficient markets, share price changes would reflect also social disclosures, given their informational value (Ullman, 1985). Burnett, Skousen, & Wright (2011) use such model in their analysis of eco-effective management, linking firm value and corporate sustainability. In particular, they add cash flow from operations, leverage grade, and ROA to the original model, since relevant literature (Schaltegger, Burritt, & R., 2000; Cormier, Gordon, & Magnan, 2004) indicates that such elements enhance model's robustness and explanatory power.

As seen before, GRI Application Level is an ordinal, non-metric, scale. Its values are rank-ordered, but are not equidistant one from the other. For this reason, statistical techniques such as correlation, regression, and analysis of variance are not suitable. I converted the level of disclosure into two dichotomous variables, GRI1 and GRI2, following the criteria reported in Table 3, to overcome this issue.

Table 4: Conversion of GRI Application Level in two dichotomous variables

GRI1	No issuance of a GRI report	Issuance of a GRI report
GRI2	Publication of a GRI report with an application level score lower than A	Publication of a GRI report with an A application level score
VALUE	0	1

Thus, the equation of the model is:

$$MKV_{it} = a_0 + a_1 TSE_{it} + a_2 ROA_{it} + a_3 CFO_{it} + a_4 LEV_{it} + a_5 GRI1_{it} + a_6 GRI2_{it} + e_{it} \quad (1)$$

Where:

MKV_{it}= market capitalization of firm *i* at date *t*

TSE_{it} = total shareholder equity

ROA_{it} = return on activities

CFO_{it} = cash flow from operations

LEV_{it} = long-term debt/equity

With the aim of mitigating heteroscedasticity and controlling for size, net revenues scale MKV, TSE and CFO. Moreover, industry, year and geographical dummies are included in the analysis to control their effects. To test the validity of the model beyond endogeneity issues, I run the model with MKV values of the subsequent years as dependent variable.

4. RESULTS

I test the hypotheses running a weighted least square (WLS) regression. There are several justifications for using such kind of regression. First, the Breusch-Pagan test shows that a pooled OLS model is inadequate, in favor of the random effect alternative (p-value < 0, 000001). The fixed-effects model is unfit because it excludes the predictors from the analysis. Following a technique proposed by Mundlak (1978), means of independent variables are included in the regression to relax the assumption in the random-effects estimator that the observed variables are uncorrelated with the unobserved variables. The Hausman test verifies that the assumptions underlying the random effects regression are satisfied. Its results show that the generalized least squares (GLS) estimates are consistent (p-value = 0,376503). Although I scale MKV, TSE, and CFO by net revenues, heteroscedasticity is still present, as

confirmed by Wald test (p-value = 0). For this reason, I use a WLS regression with weights based on per-unit error variances. Table 5 provides the results.

Table 5: WLS, using 256 observations, included 128 cross-sectional units. Weights based on per-unit error variances.

	Coefficient	*Std. Error*	*t-ratio*	*p-value*	
Const	-0.766405	0.202204	-3.7903	0.00019	***
Equity	0.219166	0.365871	0.5990	0.54973	
Cash Flow	1.13423	0.587052	1.9321	0.05455	*
ROA	-2.77247	0.702761	-3.9451	0.00011	***
Leverage	0.00329097	0.0447368	0.0736	0.94142	
GRI1	0.216974	0.0426563	5.0866	<0.00001	***
GRI2	-0.371774	0.0507369	-7.3275	<0.00001	***
Mean Equity	-0.382274	0.386899	-0.9880	0.32415	
Mean Cash Flow	6.48796	0.70687	9.1784	<0.00001	***
Mean Leverage	-0.0592301	0.0358038	-1.6543	0.09940	*
Mean ROA	2.77322	0.726789	3.8157	0.00017	***
Industry control	Yes				
Geo control	Yes				
Year control	Yes				

**** indicate significance at p ≤ 0,01*

*** indicate significance at p ≤ 0,05*

** indicate significance at p ≤ 0,1*

The variables of interest, GRI1 and GRI2 are both significant at 0,01 level. GRI1 effect is positive, confirming hypothesis 1. Therefore, the issuance of a GRI report determines a significant positive effect on market capitalization. Unexpectedly, GRI2 has a negative coefficient, rejecting the proposition of hypothesis 2. A full disclosure stance is not valued by

the market, at least in the industries considered in the sample. The analysis includes control effects of industry, world area and year of investigation. For what concerns measures of fit, R-squared (0,923) and adjusted R-squared (0,917) show that the model explains more than two-thirds of the variance of the dependent variable.

5. DISCUSSION AND CONCLUSION

The dialogue between organizations and stakeholders is a key element in the definition of companies' social and environmental responsibility and business success. Firms face a growing pressure to include voluntarily non-financial elements in their strategies, going beyond legal requirements. Companies have a plenty of ways to communicate such information to stakeholders. Relevant research (Michelon & Parbonetti, 2010) points out that sustainability reports are on average the preferred mean to disclose non-financial data. Even though the relationship between sustainability disclosures and sustainable performance is still unclear (Ullman, 1985; Clarkson, Li, Richardson, & Vasvari, 2007), because of methodological and measurement weaknesses, corporate social disclosure represents the most direct expression of firms' CSR and reporting-based analyses are the correct way towards the comprehension of what can be considered a socially responsible behaviour (Perrini, 2005). A strategic issue remains open: given the voluntary nature of CSR reporting, to which extent should managers go beyond law requirements meeting stakeholders' demands?

The aim of this article is to investigate whether and to what extent stakeholders value companies' voluntary efforts meeting their demand for non-financial performance information. Firstly, I test if the issuance of a sustainability report determines an increase of firms' market value. Evidence provided by literature offers mixed results, depicting no clear tendency, because of both conceptual and methodological shortcomings. (Ullman, 1985). In particular, the strategic perspective is the key missing element needed to understand this relationship (Ullman, 1985; Perego & Kolk, 2012). Stakeholder theory (Freeman, 1984) propose an appropriate framework to overcome the inconclusiveness of results. According to it, corporate social disclosure can increase organizational legitimacy, transparency, reliability, trust and reputation, social and shareholder value creation alignment, as well as signaling that managers include non-financial indicators in their decision-making processes. These intangible benefits are the main drivers of firm ability to advantage from CSR and its reporting (Perrini, Russo, Tencati, & Vurro, 2011), establishing the existence of a stakeholder

case that preempts the uncertain business case of corporate social disclosure. Secondly, I verify if a higher amount of disclosure in sustainability reporting leads to a higher reward in terms of firm market value, providing an innovative point of view in the disclosure-economic performance relationship studies. Indeed, the decision to report social and environmental issues is almost always justified through economic reasoning: benefits have to overcome costs (Spence & Gray, 2007). Reporting greater amount of information generates additional costs, basically because "the measurements that are easiest to report are not always the most informative" (Chatterji & Levine, 2006, p. 5).

I operationalize corporate social disclosure with the issuance of a non-financial report shaped following the GRI G3.1 Guidelines in order to test the two hypotheses. The GRI Guidelines are the most well-known and widely applied framework for sustainability reporting (Roca & Searcy, 2011) and the Global Reporting Initiative itself is today an established insitution, endowed with broad uptake and legitimacy (Brown, de Jong, & Levy, 2009).

The 2-years longitudinal analysis of the Fortune Global 500 companies provides interesting results. I test the relationship between market capitalization and level of disclosure in GRI reporting through Ohlson's (1995) model, controlling for industry, geographical and year effects. Results confirm the first hypothesis, showing that the issuance of a GRI G3.1 report determines a positive effect in terms of market value. This outcome confirms the existence of the stakeholder case for corporate social disclosure: companies publishing a GRI report show their commitment towards sustainability, signaling that their management includes it in the strategy-making process, strengthening a set of intangibles resources (trust, transparency, reputation) that eventually drives the economic return. The analysis leaves out of consideration social and environmental performance, thus stakeholders recognize this remuneration only to the disclosure of non-financial information. Dawkins and Fraas (2010) and Fombrun, Gardberg, & Barnet (2000) provide a possible explanation for this, grounded in the strategic approach towards reporting: disclosure can be a "safety net" for poor performers, saving their legitimacy to operate, or an "opportunity platform" for good performers, signaling their superior ability to achieve triple bottom line results. Nevertheless, the remuneration of disclosure has its limits, as the rejection of the second hypothesis demonstrates. In fact, the issuance of a GRI report with a full disclosure stance has a strongly significant negative effect on market value. This outcome carries important implications for both research and management. First, there is a specific amount of disclosure that stakeholders perceive to be optimum. Beyond this quantity, no benefits seems to be delivered

to stakeholders, who in turn consider this additional information unusable and costly. Second, "Friedman-type investors could view a firm's social performance as detrimental or excessive to economic performance – the only legitimate activity in their opinion" (Ullman, 1985, p. 546). A full disclosure stance can be considered as a signal of an excessive sensitivity towards social and environmental issues, leading managers to a disproportionate strategy-making process, where the multiple goals of the triple bottom line are not balanced. Third, the proliferation of information produces a flooding of data that confounds stakeholders and they end up ignoring it and considering it useless. This is because "the introduction of each additional performance metric dilutes the importance of all that preceded it" (Chatterji & Levine, 2006, p. 2). This result opens a debate over the *quality* of disclosure, conceived as its capacity to satisfy stakeholders' informative needs. The quantity of disclosure alone is not sufficient to achieve this result, even because its relationship with actual environmental and social performance is still unclear.

Although this research provides an interesting contribution to corporate social disclosure research, it also has some limitations that open avenues for future studies. In particular, the "worst offenders" industries choice limits the generalization of the results. It is likely that less polluting industries face different stakeholders' pressures and reactions towards disclosure. Moreover, the sample cannot overcome a common limitation of sustainability empirical analysis, which is the size bias: the Fortune Global 500 are the biggest companies in the world, thus generalization of results is limited to this kind of businesses. Further research could test sustainable performance, level of disclosure and economic performance at the same time. Lastly, it would be of interest to understand the components and indicators of disclosure quality, as well as to juxtapose the effects on firm performance of hard disclosure against soft disclosure.

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Influence of Selected Organisational Factors on Innovation

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ABSTRACT

It is almost impossible to imagine a company that does not innovate in today's market. Some companies say they compete on quality and not innovation, but they also innovate, especially in the form of process innovation aiming at enhancing quality. The aim of this paper is to present how the key set of selected organisational factors, company's organisation, strategy, and processes, learning and links, influences innovation. In this respect, the key set of organisational factors has been measured on Croatian companies. In field research we used a questionnaire developed by Tidd et al. (2005) which was further developed to include measurable parts of innovation. The questionnaire is validated by factor analysis, but the influence of latent variables on innovation outcome, such as the number of innovations, revenues from innovation and length of time for new product launch, was researched by structural equation modelling. The research results showed that the set of strategy and learning factors has a significant influence on the number of innovations in companies (radical or modified). At first glance it might seem as though big companies have more resources and are thus in a privileged position to innovate, but researches show that the companies that are able to mobilise their employees, their knowledge and expertise in delivering new products or services, obtain better innovation results. The research results clearly indicate the relationship between company's higher innovativeness and higher innovation results.

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1. INTRODUCTION

Creating a sustainable competitive advantage is the main priority of companies, therefore, the effort is put into their organisational potential or their resources. Innovation processes and product innovations contribute to the prosperity and competitiveness of enterprises, so that many companies are exploring factors that affect innovation (culture, strategy, leadership, etc.), especially in organisational settings. The overall purpose of this research is to further our understanding of how selected organisational factors influence innovation. The aim of this paper is to present how the key set of selected organisational factors, company's organisation, strategy, and processes, learning and connections, influences innovation. Furthermore, the paper presents a model of the selected organizational factors that affect innovation

management from an internal perspective. In this paper, according to Tidd et al. (2005), the focus is on: strategy, processes, company's organisation, links and learning; since they found that these characteristics are present in all successful innovations:

(α) Strategy – innovation supported and propagated by the management of the company;
(β) Links – innovation requires good communication within and outside the company;
(x) Processes – innovation requires the company to quickly adapt to new rules and procedures, to new demands;
(δ) Organisation – innovation has to be supported in all organisational segments (structure; delegation, etc.)
(ε) Learning – the company must support and encourage learning since it is the basis for the creation of new ideas.

In this regard, the key set of organisational factors has been measured on Croatian companies. In field research we used the well-known self-assessment questionnaire for companies created by Tidd et al. (2005, 566-568) which was further developed to include measurable parts of innovation. The research was conducted electronically in the period from 17 January 2012 to 06 February 2012. The questionnaire was sent by e-mail to 2,443 e-mail addresses of companies (with more than 10 employees) engaged in production and programming; the information was obtained from the Croatian Chamber of Economy. The questionnaire was completed by 135 companies, representing a response rate of 5.53%. The research included 62.5% of small companies (10-50), 21.52% of medium-sized (21.32%) and 14.71% of large companies (over 250 employees).

Apart from descriptive statistics, the questionnaire itself had to be validated, since the validation of the questionnaire had not been found in literature. The questionnaire is well structured and the grouped variables shown in Table 2 really have the ability to explain the phenomenon of innovation in companies. This instrument is considered fully verified. Having done that, it was examined, based on structural equations, how each category defined in the questionnaire (strategy, processes, organisation, links and learning) affects the number of new products, the speed of launching new products and revenues from these new products.

The Tidd et al. (2005) questionnaire measures, among other things, the Innovation Index. The higher the index, the higher the innovation output. However, the innovation output has to be measured as well. Hagedoorn and Cloodt (2003) list several possible innovation output measures. The measures they propose include the number of innovative products that the company launched, the time in months necessary to develop a new product and percentage of revenues generated by new products. The companies that have aligned their strategy, processes, organisation and links with external partners and workers' learning will have a higher number of successful new product launches. The companies that have a structured way of innovating, measured by the Innovation Index, will need less time to develop new products, because procedures for innovation are known and institutionalised, therefore, save time. As companies have more new products in their portfolio, it is expected that a larger part of their revenues will be generated from the new products. Therefore, the following hypotheses can be made:

H1: A higher innovation index significantly increases the number of innovations.

H2: A higher innovation index increases revenues from innovation.

H3: A higher innovation index reduces the time of innovation.

The research results show that the set of strategy and learning factors has a significant influence on the number of innovation in companies (radical or modified). At first glance it might seem as though big companies have more resources and are thus in a privileged position to innovate, but researches show that the companies that are able to mobilise their employees, their knowledge and expertise in delivering new products or services, obtain better innovation results. The result of this work is a concrete number on a scale from 1 (low level of innovation) to 7 (high level of innovation) for the entire sample of Croatian manufacturing companies. The results are discussed in the context of the relationships identified between the selected organisational factors and innovation management. The research results clearly indicate the relationship between higher innovativeness of the company and higher innovation results. From this point on, we open up the debate on innovation management from an internal organisational context, because this research provides an insight into the selected organisational factors that can influence innovation in the Croatian context. Also, the paper presents the results of the Croatian innovation audit.

2. THEORETICAL BACKGROUND

2.1. Managing innovation

Over the last decades, there has been an increased interest in the field of managing innovation. Innovation management is concerned with the activities the company undertakes to yield solutions to problems related to products, processes and administration. Using the innovation value chain, management can identify organisation's weaknesses and, as a result, be more selective about which innovation tools and approaches to implement. Failure to identify the weak link (idea selection) and focusing more time and resources on the strong link (idea generation) ultimately undermined the company's innovation efforts (Hansen, Birkinshaw, 2007). In the same context, Hamel (2006) defines management innovation as 'a marked departure from traditional management principles, processes and practices or a departure from customary organisational forms that significantly alters the way the work of management is performed'. So, innovation as a process (Weisenfeld, 2012: 199) is the conception, development and introduction of something new into an environment. 'Something new' can refer to products, (production) processes, business models or new ways to organise and manage. For OECD (2005, 46), innovation must be 'new (or significantly improved) to the firm' and the main point is that neither the idea, nor the invention, is crucial, only the successful implementation on the market or in the company is decisive. So, here we are facing the paradox that innovation, as an internal attempt, depends on internal organisational factors. The question is 'Which organisational factors can enhance innovation? Which factors do we have to put extra effort in?

2.2. Successful innovation

Successful innovation is important because it is the creation and implementation of new processes, products, services and methods of delivery which result in significant improvements in outcomes, efficiency, effectiveness or quality (Albury, 2005). Innovation can be utilised to add value to the company, through increased revenues, reduced cost, and similar improvements in financial results. This has two important consequences for the analysis of any innovation in the context of an organisation. First, innovation must be integrated into the operations and strategy of the organisation, so that it has a distinct impact on how the organisation creates value or on the type of value the organisation provides in the market. Second, innovation is a social process, since it is only through the intervention and management of people that an organisation can realise the benefits of an innovation (Hienerth, 2007). Accordingly, innovations are essentially related to learning, changes (sometimes

drastic) and the risk they require includes initial investments that are returned only in the long term (Prester, 2010: 92). Generally, it's about learning and necessary changes in strategic terms, relationships and communication within and outside the company, the process of learning about the new rules and procedures and adjustments to organisational structure that must also adapt to changes. What has so far been learnt about innovation and that needs to be especially emphasised is the following (Prester, 2010: 201; according to McDonough *et al.*, 2008):

- Successful innovation is a strategic issue;
- Successful innovation depends on internal and external relationships;
- Successful innovation requires innovation climate in the company
- Successful innovation requires mechanisms that encourage and enable change.

According to the Global CEO Pulse Survey on Innovation (Percival *et al.*, 2013), most companies: view innovation as organisation's priority (51%) and value innovation - they are good in recognising new ideas and approaches and adopting them quickly (36%). The same companies are looking to innovate over the next 3 years in areas (top three mentioned) such as *products (48%), technology (45%), customer experience (44%), systems and processes (43%), business models (41%) %), etc.* Furthermore, the most important ingredients for successful innovation for these companies are: *having the right culture to foster and support innovation (57%), strong visionary business leadership (44%), willingness to challenge organisational norms and take risks (37%), as well as the ability to capture ideas through the organisation and have the capacity and capability for creativity (31%).* In other words, overcoming the barriers to innovation is likely to require new ways of building it into strategic and operational management of the business. It is clear that innovation should be built into everyone's job description and the opportunities to innovate need to be created. However, according to the same survey, the following constraints are stopping organisations in being more innovative: financial resources (43%), existing organisational culture (41%), lack of talent (39%), etc. The same authors also offered five key questions that organisations will need to address if they are to become genuinely innovative and generate full value from their investment:

> (1) Does the way you innovate (collaboration, employee empowerment, customer engagement, time horizons etc.) reflect your vision and appetite for innovation?

(2) How effectively are you articulating your vision and appetite for innovation to employees, investors and business partners?

(3) Do your employees see creating, promoting and executing new ideas as a crucial part of their job description?

(4) Are the processes for decision making and organisational mobilisation quick enough to bring new innovations to market ahead of your competitors?

(5) How effectively do you measure and track the return on investment and ability to meet customers' changing expectations?

Answering these questions and understanding the influence of organisational factors on innovation can provide management with a new perspective on how to encourage successful innovation.

2.3. Innovation from organisational perspective

The literature and practice on innovation over the last decade have revealed that it is, in fact, possible for an organisation to be more systematic about innovation. Following intentional, repeatable processes can allow an organisation to more effectively develop, test, implement, and share new ideas. To clarify these methods, innovation specialists have developed a number of valuable models and typologies that help elucidate successful innovation processes. (Kasper, 2008)

There are authors that explicitly treat the contextual factors, such as Rothwell (1994),Van der Ven (1999), Mulgan and Albury (2003), Cormican and O'Sullivan (2004), Tidd and Bessant (2005) and Jacobs and Snijder (2008), because their opinion is that innovation processes do not exist in a vacuum (Eveleens, 2010)! There are variations in how these factors are described, but the main factors described from an internal organisational perspective are: strategy, culture, leadership, organisational structure, resources/skills.

One of the problems is that while the eyes of the CEO are fixed on innovation, the body of the organisation may not be following (Percival *et al.*, 2013: 3). The 'antibodies' that inhibit innovation include a culture that sees it as separate from the mainstream operations of the business and is slow to commercialise new ideas (Percival *et al.*, 2013: 3). Therefore, internal structures are important in the process of innovation. They consist of the interaction between the members of the organisation and the communications media behind them, as well as the factors supporting the productivity of the organisation's members by improving their team

work skills. The organisation's vision, strategies, goals, values, culture and philosophy are also part of the internal structures as well as the links to the external environment of the organisation, e.g. to customers and service providers, constituting the organisation's external structure. (Ability to Innovate, 2013)

Therefore, this paper focuses on the selected organisational factors which are crucial in order for an organisation to enhance innovation.

3. RESEARCH RESULTS

The research shows that Croatian enterprises attach importance to innovation, as can be seen from the percentage of revenues (Figure 1) allocated to research and development. A significant number of companies, 34.6% of them, will increase investment in research and development despite the crisis.

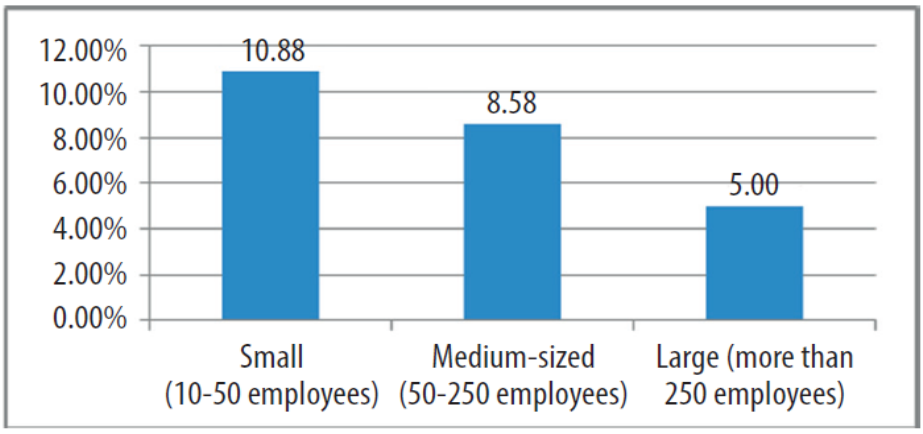

Figure 1: Percentage of revenues reinvested into research and development

Furthermore, it may be noted that small enterprises reinvest the most. However, we should take into account that their revenues are lower when compared to other categories of companies, and if they do not want to lag behind in research they have to reinvest a higher percentage of their revenues.

The research included 62.5% of small enterprises (10-50), 21.52% of medium-sized (21.32%) and 14.71% of large companies (over 250 employees), and the distribution of enterprise by industries is given in Figure 2.

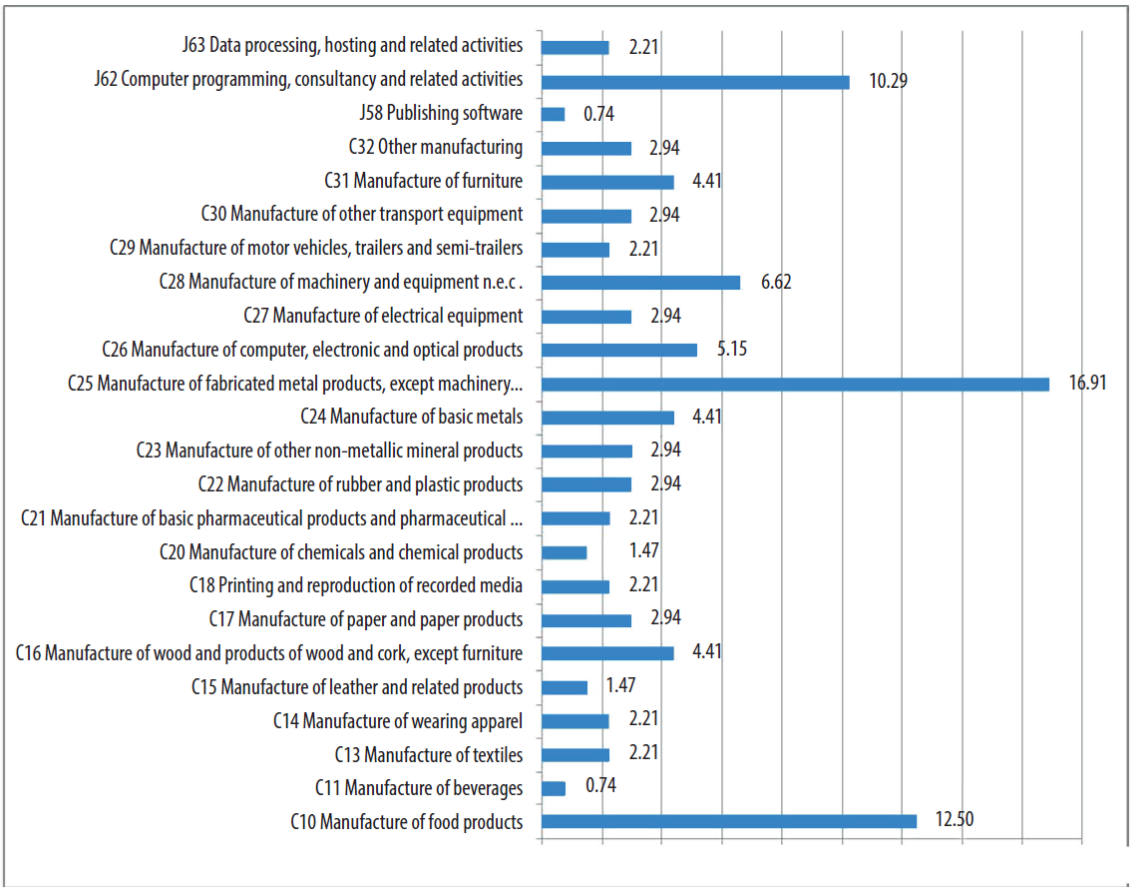

Figure 2: Distribution of enterprises by industries, %

Differences in the perception of the importance of innovation are evident in some industries. Table 1 show that innovations are most important for the companies operating in the apparel and pharmaceutical industry.

Table 1: Importance of innovation by industry (1 - not important, 5 - main priority)

Industry	Importance of innovation
C14 Manufacture of wearing apparel	**4.7**
C21 Manufacture of basic pharmaceutical products and pharmaceutical	**4.7**
C26 Manufacture of computer, electronic and optical products	4.1
J58 Publishing software	4.0
C13 Manufacture of textiles	3.7
J62 Computer programming, consultancy and related activities	3.6
C28 Manufacture of machinery and equipment n.e.c .	3.6
C15 Manufacture of leather and related products	3.5
C17 Manufacture of paper and paper products	3.5
C20 Manufacture of chemicals and chemical products	3.5
C22 Manufacture of rubber and plastic products	3.5
C27 Manufacture of electrical equipment	3.5
C32 Other manufacturing	3.5
C30 Manufacture of other transport equipment	3.3
J63 Data processing , hosting and related activities; web portals	3.3
C25 Manufacture of fabricated metal products, except machinery and	3.0
C10 Manufacture of food products	3.0
C11 Manufacture of beverages	3.0
C16 Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	3.0
C23 Manufacture of other non-metallic mineral products	3.0
C24 Manufacture of basic metals	3.0
C29 Manufacture of motor vehicles, trailers and semi-trailers	3.0
C31 Manufacture of furniture	2.8
C18 Printing and reproduction of recorded media	2.0

According to the research study of innovation by the Boston Consulting Group (BCG, 2010) conducted on a sample of 1,600 U.S. companies, 84% of the respondents said that innovation is important for the survival of their companies. Also, their study showed that there is a correlation between innovation and business performance. In particular, the companies that have innovated achieved 12.4 % better results than those that have not. In Croatia, companies launch an average of four modified products per year and up to 3 completely new products. Figure 3 shows the distribution of new product launches by company size. There are a greater number of modified new products than completely new products, which is logical, since it is easier to modify the product according to customer's wishes than to come up with something completely new. The study did not confirm the rule that small enterprises are the most innovative ones. Many theorists argue that precisely small enterprises generate industry growth through innovation. This study shows that medium-sized and large enterprises innovate more, but this can mainly be attributed to the fact that they have greater resources.

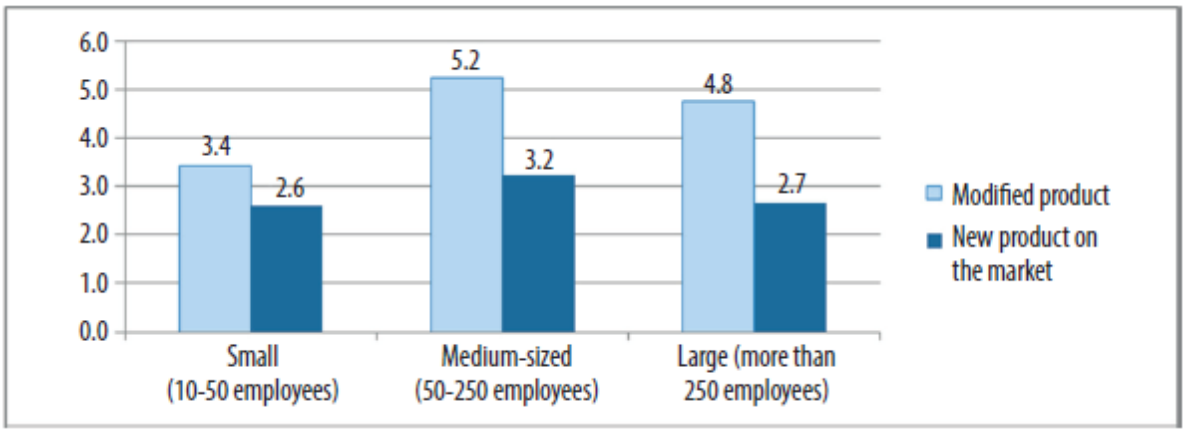

Figure 3: Average number of product launches in a year

An additional argument to why companies focus on modified products is the duration of the new product development process as seen in Figure 4.

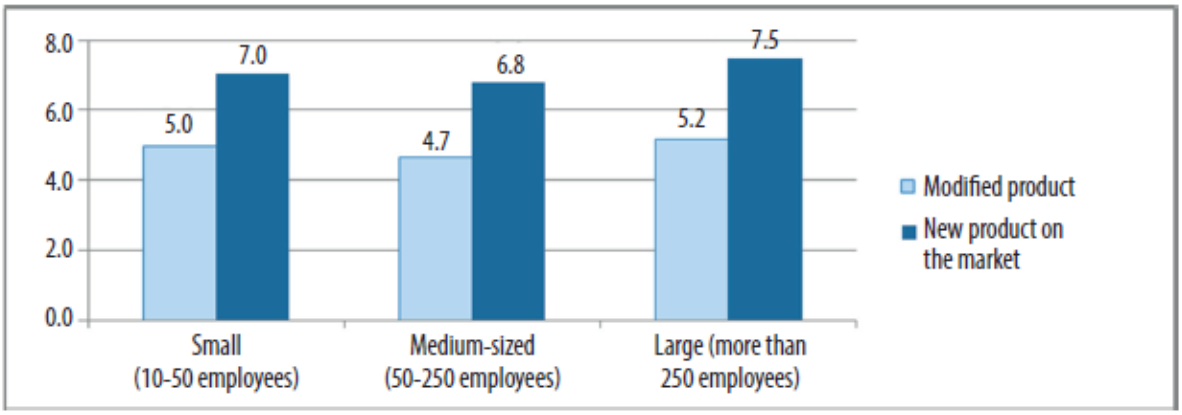

Figure 4: Duration of development (in months) of modified and new products on the market

The new product development process takes, on average, two months longer than the development of a modified product. According to the study by the Boston Consulting Group (BCG), in the U.S. only 55% of the respondents were satisfied with their innovative results and showed that there is a clear causal link between the success of innovation and the decision to increase the innovation budget. However, according to the BCG report, it is also evident that top management is more satisfied with the results achieved in innovation than the lower levels of management and employees. In addition, 64% of respondents believe that not enough is invested in research and development.

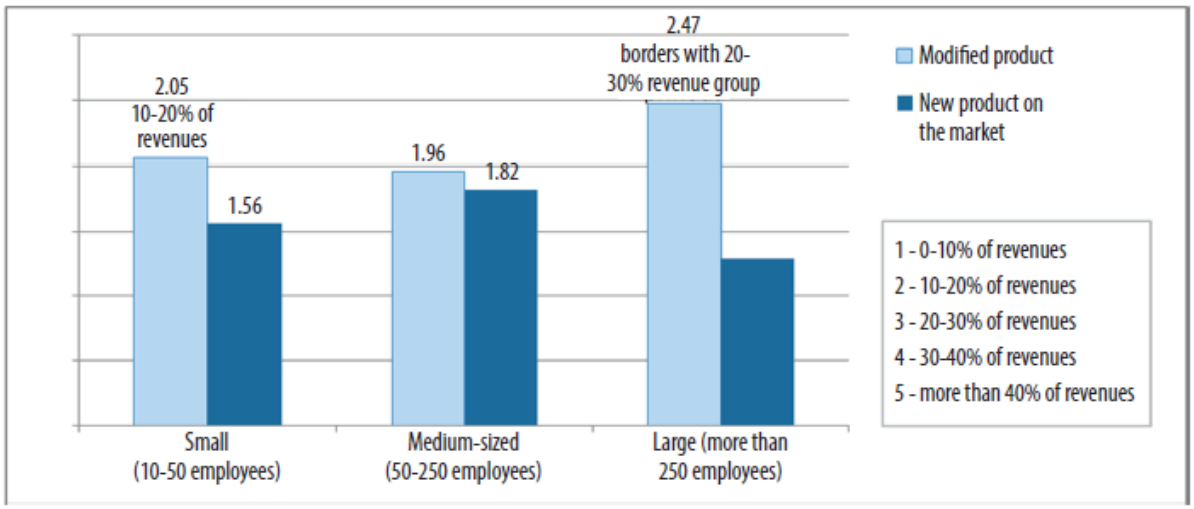

Figure 5: Percentage of revenues generated from new and modified products

Figure 5 shows the percentage of revenues generated from new and modified products. However, the figure is to be interpreted in the following way: 1 means revenues up to 10%, 2 means revenues from 10-20%, 3 means 20-30% of revenues, 4 means 30-40 % of revenues, while 5 means more than 40% of revenues. It is noticeable that, on average, revenues from modified products are higher than that from new products, which is logical because new products need additional marketing. Large enterprises benefit the most from modified products; the majority of medium-sized enterprises benefit the most from new products. This research did not examine the level of satisfaction with innovation at various levels of management, but the person who filled out the survey said whether the planned budget: 1 - is too low, 2 - covers the basics, 3 - is sufficient to cover most of the research, and 4 - satisfied with investment in R&D (Figure 5).

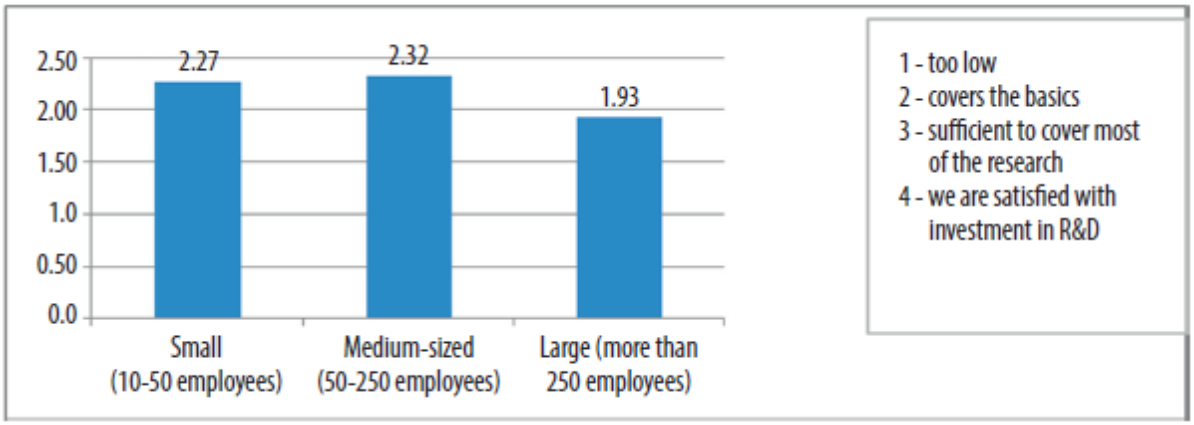

Figure 6: Satisfaction with investment in research and development

On average, all groups of respondents belong to group 2, which means that the budget for R&D for the current year covers the basics, while large enterprises are least satisfied with their investment in research and development. If this is compared with the percentage of revenues reinvested into research and development (figure 1) then this result is somewhat logical, because large companies invest the lowest percentage of revenues. However, one should also take into account that the revenues of large enterprises are much greater than those of small and medium-sized enterprises. According to the study by the Boston Consulting Group (BCG, 2010), the greatest advocates and drivers of innovation in enterprises are CEOs or top management. However, the study also shows that it is not enough just to be an advocate, but to "sell" the "idea" to employees.

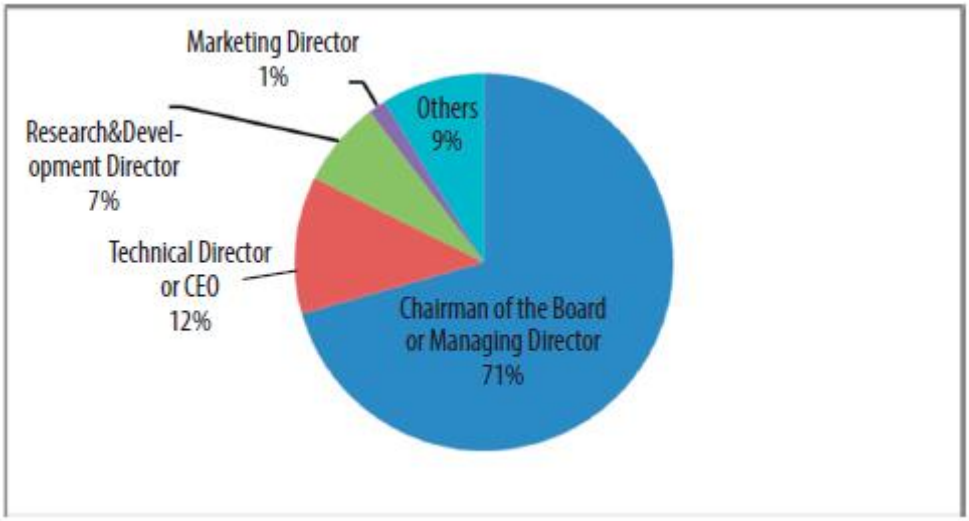

Figure 7: Main advocates of innovation in Croatian companies

According to the BCG study, only 28% of top managers have managed to convey the idea to employees. In Croatian companies, top managers usually trigger ideas about innovation as seen in Figure 6. Whether top management succeeded in conveying the vision of innovating to its employees is the first question of the questionnaire, which reads as follows: "1) The employees in our company have a clear vision of how innovation will help us in a competitive market." Figure 8 shows that the management board only partly managed to convey the vision. The ratings offered were: 1 - false, to 7 - completely true, while 4 meant - partly true.

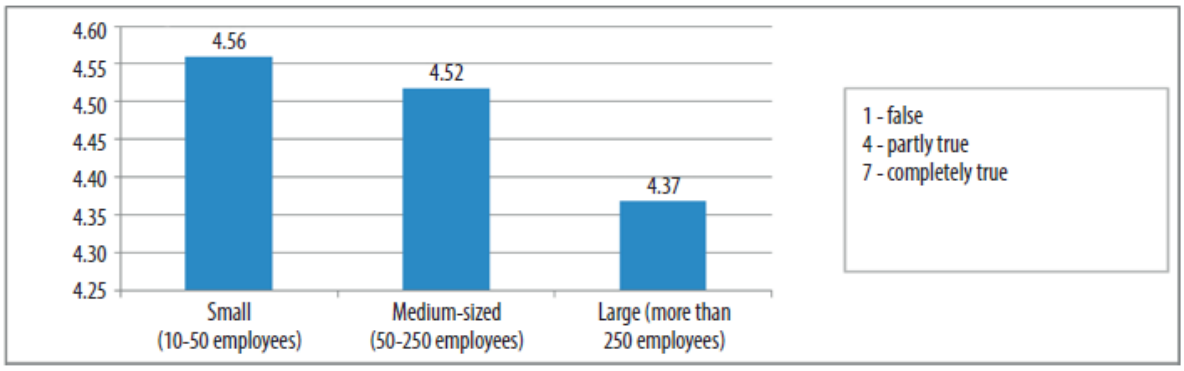

Figure 8: Average rating for the question "The employees in our company have a clear vision of how innovation will help us in a competitive market."

It is noted that the employees in small enterprises are somewhat better acquainted with the vision of innovation when compared to large enterprises, which can be explained by the assumption that small enterprises more easily convey and explain the vision to innovate because they have a relatively small number of employees. It has already been said that the satisfaction with the innovation results increases the likelihood of further greater investments in innovation. According to the BCG study, the main measures to verify the success of innovation are customer satisfaction and overall return on investment. However, BCG recommended that innovation must be verified by multiple criteria, and the reward system should be aligned with those measures. In Croatia, just as in America, the main measures for monitoring the success of innovation are shown in Figure 9.

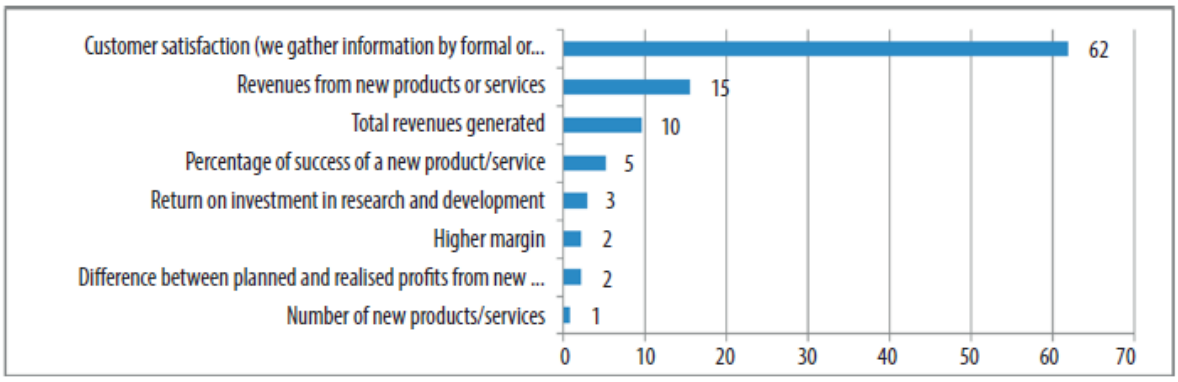

Figure 9: Measures of innovation success in a company (percentage of responses)

It is noted that in Croatia, as well as in America, customer satisfaction is the main indicator of innovation success; followed by revenues from new products and total revenues generated. The BCG report points out that one of the essential measures should be the speed of product launches. No one picked this answer in Croatia. The next research subject refers to barriers to

innovation. According to the BCG report, the main problems in the U.S. companies are employee risk aversion and long new product development time. The situation in Croatia is shown in Figure 10.

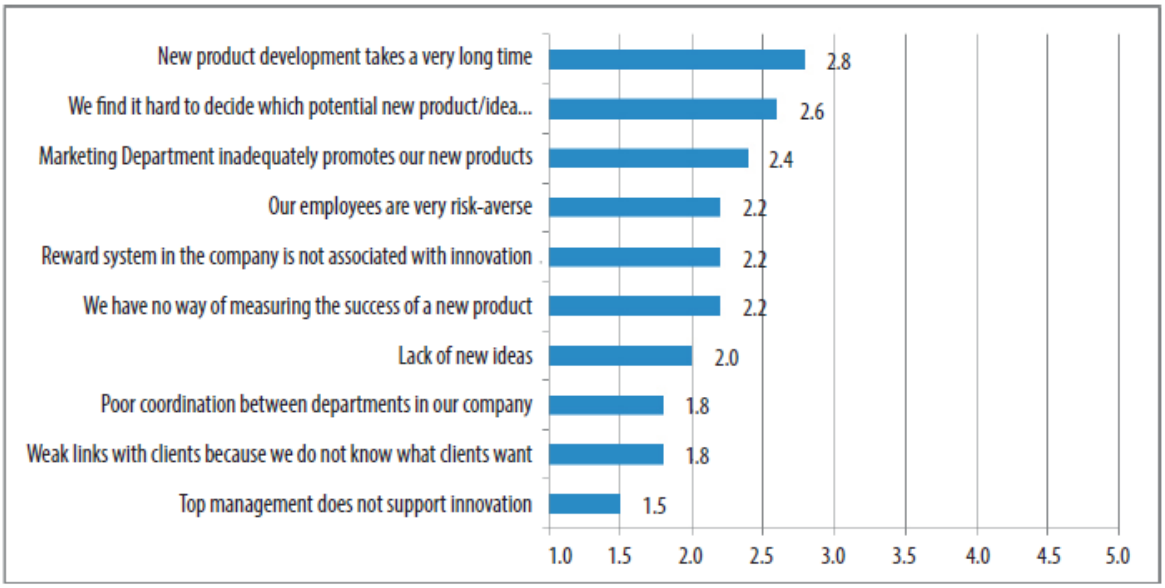

Figure 10: Barriers to innovation (1 - no problem, 3 - somewhat slowing it down, 5 - seriously slowing it down)

The main barrier in Croatian companies is the duration of innovating. Figure 4 shows that the development of modified products takes on average 5 months, and the development of a completely new product 7 months. Research also shows that early involvement of all employees in innovation projects can shorten the development time, because most of the actions required for a successful product launch can be conducted simultaneously. Another problem is the selection of criteria for further investment in an innovation project. There are several methods for selecting projects, and the most used methods are the Net Present Value Method, Internal Rate of Return, Analytical Hierarchy Process or the Model Based on Two Criteria. Another barrier to innovation is inadequate marketing of new products. The marketing of new products is really something that needs investing in, since it is one of the basic ways how customers come to realize that a new product exists in the market. Barriers to innovation vary according to company size. The barriers are greater in larger enterprises as seen in Figure 11. The biggest difference between barriers in large enterprises and other categories of enterprises is poor coordination between departments within the company, lack of ideas and inadequate measurement of innovation success. Case studies of the most successful innovative companies resolve such problems by forming cross-functional innovation teams which include members from Marketing, Engineering, Research and

Development, Production and others. Each innovation team has its own leader who leads the innovation project and, at the same time, as part of ensuring that the project is completed within budget and in time, monitors the performance measures of innovation. These teams are usually appointed by the management board. Ideas are collected from all parts of the company and, based on the criteria (net present value or other), the projects with the greatest market potential are selected.

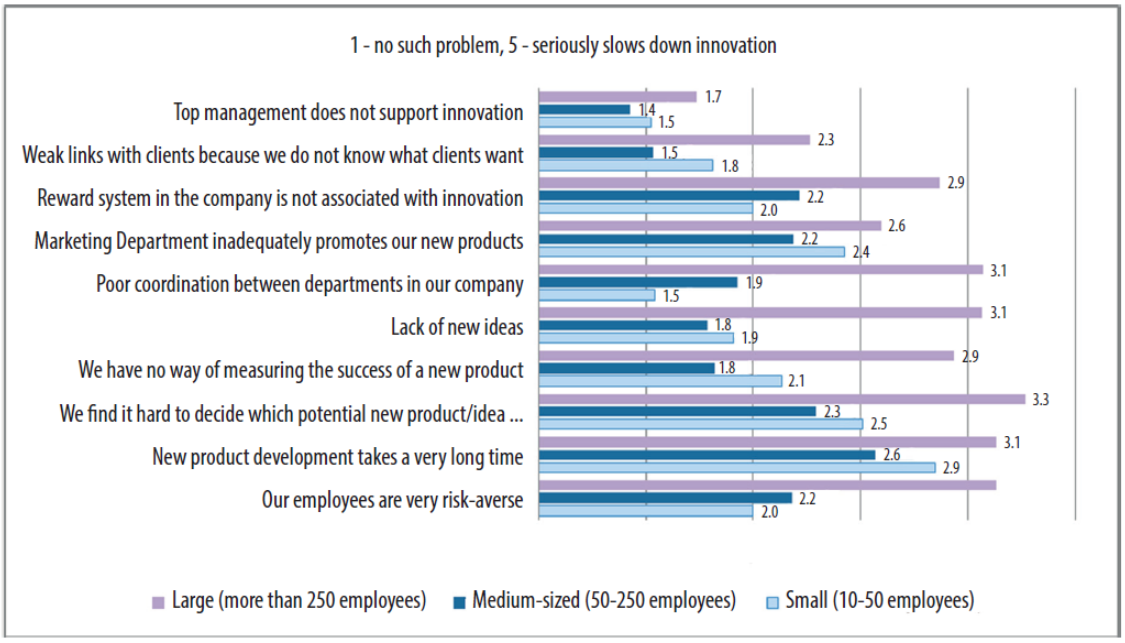

Figure 11: Barriers to innovation according to company size

Innovations are divided into product innovation, innovation of production process and organizational innovation; although at the mere mention of innovation the thought of new products comes to everyone's mind. Even the innovations of products vary, for example, there are radical innovations or just improvements of existing products. This information is essential for a better interpretation of the following result. As shown in Figure 12, product innovation is not a priority for the Croatian manufacturing companies. Product innovation is only at the fifth place. The first place belongs to better product quality, which is achieved through process innovation. This result is somewhat surprising.

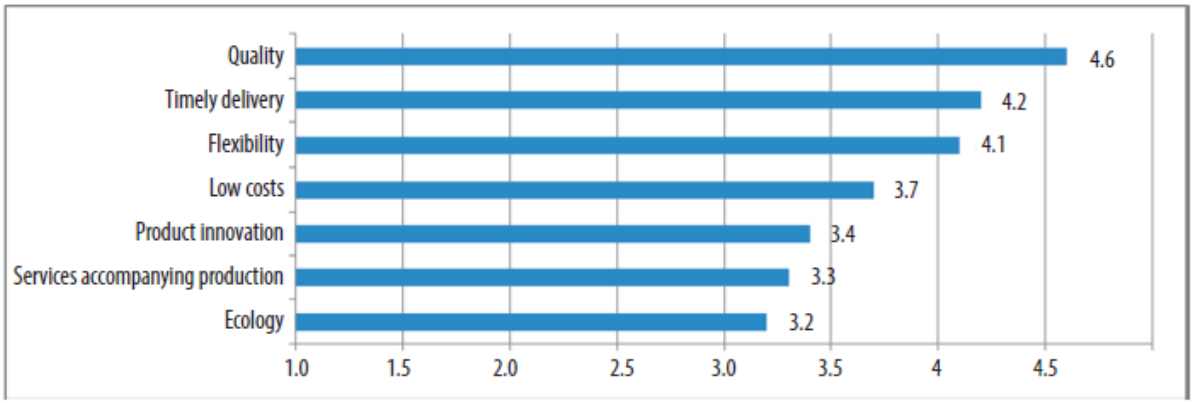

Figure 12: Companies' priorities (1 – not important, 3 – important, 5 – main priority)

Despite the assumption that Croatian companies will compete in the global market through innovation, the key priority seems to be quality. The question is whether this is a good strategy in an era when China is increasingly investing in research and development as well as in its education system. This touches on labour issues. Are there any occupations in demand? The questionnaire asked the question: "If there was no recession, how many employees would be necessary for a particular profession? „ The results are shown in Figure 13.

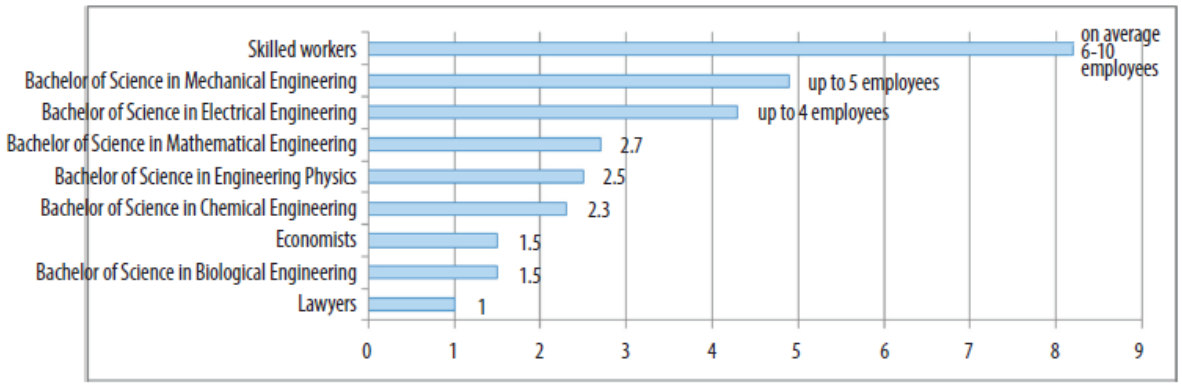

Figure 13: Ratings of occupations in demand by profession

Skilled workers are most in demand, followed by mechanical and electrical engineers. The occupations in demand are also mathematicians, physicists and chemists. The needs are greater in larger enterprises (Figure 14).

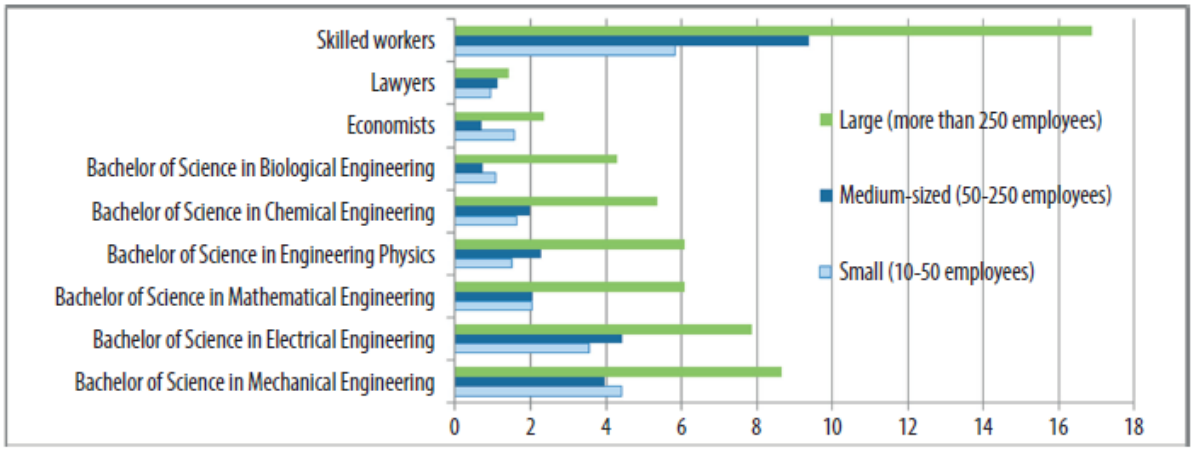

Figure 14: Needs for certain occupations depending on company size (ratings are administered in groups 0 - occupation not needed, 5 - shortage of up to 5 employees, 10 - shortage of 6-10 employees,…)

Finally, a summary report was made on the success of innovation management in the Croatian economy. But very few studies have been found in literature that propose a measuring instrument for measuring innovation. Even the validation for the questionnaire that was used in this research had not been found. Therefore, the first step was to check the validity of the questionnaire. First the reliability of the variables was checked using the Crombach Alpha coefficient which is high for all of the observed variables.

Table 2: Reliability check of constructed variables

Constructed variable	Questions from the questionnaire*	Crombach Alpha	Sig.
Strategy	f1 f6 f11 f16 f21 f26 f31 f36	0.918	0.000
Processes	f2 f7 f12 f17 f22 f27 f32 f37	0.899	0.000
Organisation	f3 f8 f13 f18 f23 f28 f33 f38	0.906	0.000
Links	f4 f9 f114 f19 f24 f29 f34 f39	0.851	0.000
Learning	f5 f10 f15 f20 f25 f30 f35 f40	0.850	0.000

* Questions from the questionnaire in Croatian can be found in Prester (2010, 41-43)

Then a confirmatory factor analysis was performed to check whether the variables grouped in this way indeed describe the phenomenon of innovation. The satisfactory level of indicators was obtained, as shown in the following table:

Table 3: Confirmatory factor model parameters

METHOD OF ESTIMATION: ML	CHI-SQUARE STATISTIC: 2573.33
Discrepancy Function: 19.8	Degrees of Freedom: 740
Maximum Residual Cosine: 7.71E-005	Chi-Square p-level: 0.000000
Max. Abs. Gradient: 0.000149	Steiger-Lind RMSEA
ICSF Criterion: 2.53E-006	--->Point Estimate: 0.13
ICS Criterion: 0.000197	-->Lower 90% Bound: 0.125
Boundary Conditions: 0	-->Upper 90% Bound: 0.136
Joreskog GFI=0.822	RMS Stand. Residual: 0.431

According to these factor model parameters, we can conclude that the questionnaire is well structured and that the grouped variables shown in Table 2 really have the ability to explain the phenomenon of innovation of companies. This instrument is considered fully verified.

Figure 15 shows the Croatian innovation audit, created according to Tidd et al. (2005: 566-568). The respondents answered 40 questions that assessed five segments important for innovation. These are: strategy, organizational structure, processes, learning and links. The respondents assign to each question a value from 1 - false to 7 - completely true. Then the median value is calculated for a particular segment. Figure 14 shows also how the entire sample of companies stands in relation to each segment. Since the values range from 1 - 7, the overall average rating of 4.7 for innovation management in the Croatian manufacturing sector with more than 10 employees is really great.

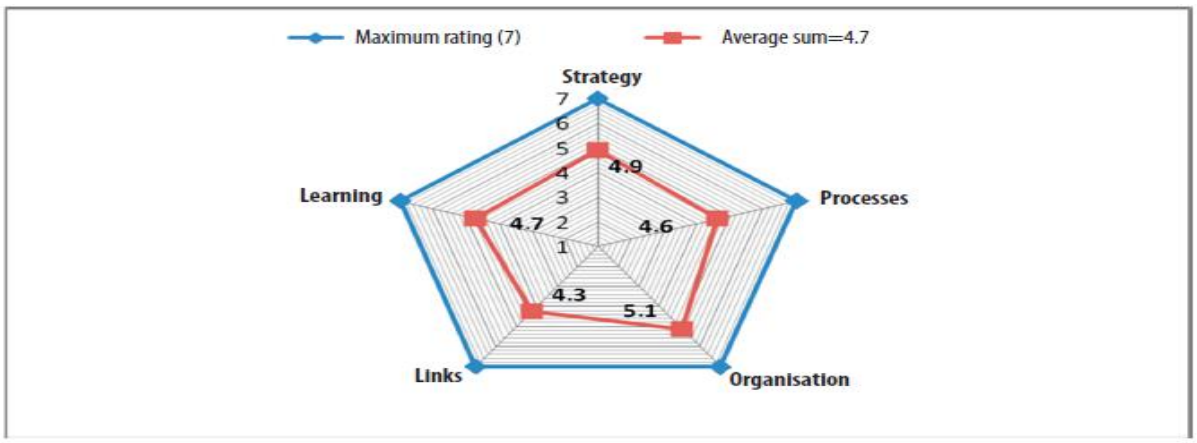

Figure 15: Croatian innovation audit

All the companies that participated in the research received their own innovation audit with the comments on where they can improve their ratings. The ratings are generally high for the overall sample, but work still needs to be done in individual categories. The company fills out the questionnaire, and when it obtains group ratings by categories, it sees where it deviates most from the target value (maximum - 7), follows the questions in this category and tries to fix it.

Finally, the structural model shown in Figure 16 was made, and the parameters which indicate the validity of the model are shown in Table 4.

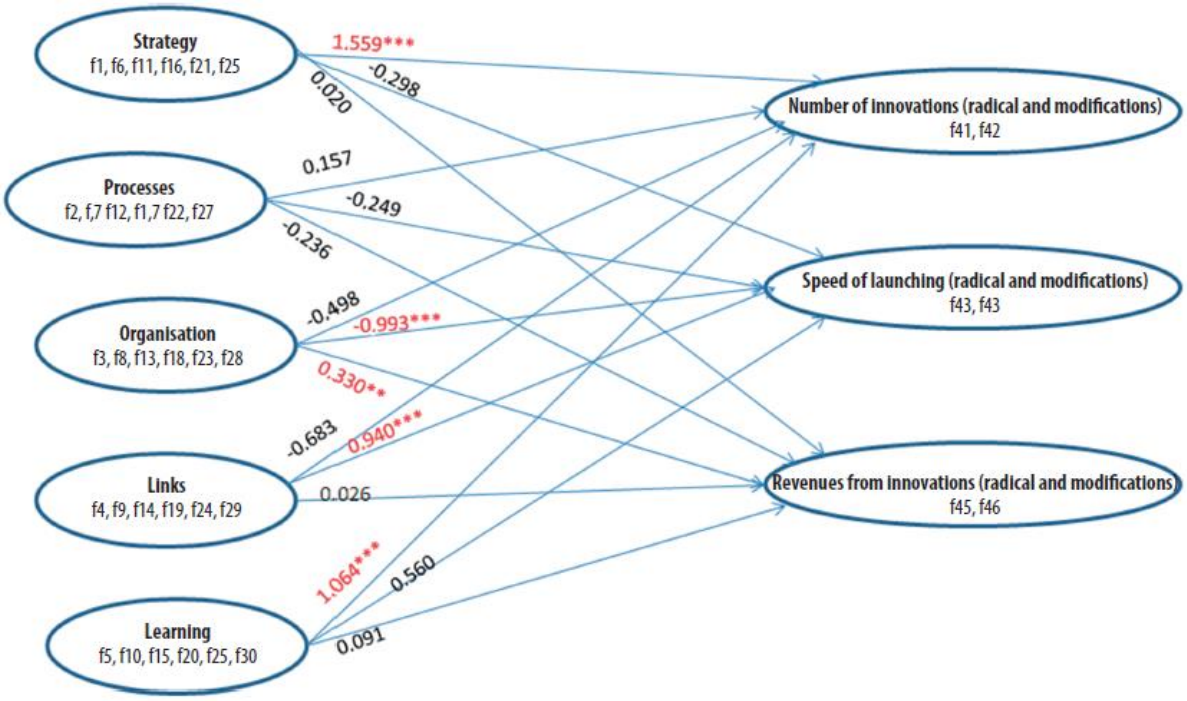

Figure 16: The structural model of links and link strength between the variables that explain innovating and innovation results

Some very interesting results can be seen. If the management board explicitly supports innovation, the number of new products will grow, but the process of innovation itself may take a little longer and has a moderate impact on revenues from innovation. Processes, i.e. quickly adapting to rules and procedures, do not significantly affect the number, speed and revenue of innovation. Organisational structure negatively affects the speed of new product launches, but is necessary to ensure revenues from innovation. This indicates the importance of the interdisciplinarity of innovations, that is to say, it is not enough just to come up with

ideas and declare that you want to innovate more, it is necessary to ensure that the new product is a commercial success at a reasonable level of research costs. Links, i.e. good communication within and outside the company, most significantly affect the speed of launching a new product, which can represent a competitive advantage. Learning, the basis for the creation of new ideas, has a major positive impact on the increase in the number of new products.

Table 4: Indicators of validity of the structural model

METHOD OF ESTIMATION: ML	CHI-SQUARE STATISTIC: 2604.37
Discrepancy Function: 42.7	Degrees of Freedom: 974
Maximum Residual Cosine: 0.00283	Chi-Square p-level: 0.000000
Max. Abs. Gradient: 0.0157	Steiger-Lind RMSEA
ICSF Criterion: 0.00173	--->Point Estimate: 0.124
ICS Criterion: 0.00891	-->Lower 90% Bound: 0.116
Boundary Conditions: 1	-->Upper 90% Bound: 0.132
Joreskog GFI=0.927	RMS Stand. Residual: 0.429

Finally, it was verified whether the overall innovation index obtained by the measurement instrument used can actually be a measure of innovation measured by external innovation results. Structural equation modelling was used. The estimated parameters are calculated on the basis of covariance, not correlations, and the parameters can be greater than 1.

Table 5: Link between innovation index and external innovation indicators

	PARAMETER ESTIMATION	STANDARD ERROR	T - STATISTICS	SIG.
(innovation index)-15->(number of innovations)	3.135	0.327	9.592	0.000
(innovation index)-16->(speed of innovation)	-1.121	0.451	-2.487	0.013
(innovation index)-17->(revenues from new products)	0.305	0.145	2.098	0.036

The estimated parameters show that the following hypotheses can be confirmed:

H1: A higher innovation index significantly increases the number of innovations
The first row in Table 5 clearly shows that the higher the innovation index is, the higher the number of new products will be. Since significance is p=0.000, it can be concluded that the number of launched new products is significantly higher than in the case of lower innovation index.

H2: A higher innovation index increases revenues from innovation
This hypothesis is shown in the third row in Table 5. The parameter estimation is positive, which means that the innovation index will actually increase revenues. The significance is less than the threshold value of p=0, 05, therefore it can be concluded that the higher the innovation index, the higher the revenues from new products.

H3: A higher innovation index reduces the time of innovation
This hypothesis is shown in the second row in Table 5. The parameter estimation is negative, meaning that the higher the innovation index, the shorter the time needed for new product introduction to market. Significance is also satisfactory, meaning that it can be confirmed that the relationship is valid.

Structural equation modelling was proposed that links the innovation index and these three external measures of innovation presented in Table 6.

Table 6: Indicators of validity of the structural model of the link between the innovation index and external indicators of innovation

METHOD OF ESTIMATION: ML	CHI-SQUARE STATISTIC: 23.47
Discrepancy Function: 0.51	Degrees of Freedom: 11
Maximum Residual Cosine: 3.34E-010	Chi-Square p-level: 0.015162
Max. Abs. Gradient: 0.00614	Steiger-Lind RMSEA
ICSF Criterion: 2.1E-010	--->Point Estimate: 0.167
ICS Criterion: 4.61E-010	-->Lower 90% Bound: 0.0803
Boundary Conditions: 4	-->Upper 90% Bound: 0.254
Joreskog GFI=0.865	RMS Stand. Residual: 0.103

The Joreskog GFI index is almost 0.9, which means that this model can actually represent the relationship between the innovation index and external indicators of innovation.

4. IN CONCLUSION

The research shows that Croatian enterprises attach importance to innovation and it is noted that small enterprises reinvest the most. Also, on average, the investment in R&D is not satisfactory, it just covers the basics and if companies' innovations are seen as a contribution to their prosperity and competitiveness, the question is*: Should companies invest more in R&D in the future?* What is good is that in Croatian companies top managers usually trigger ideas about innovation because successful innovation is a strategic issue. Also, we can notice that employees partly (for small companies – 4.56; medium – sized companies – 4.52; and large companies – 4.37) have a clear vision of how innovation can help their companies in a competitive market. Furthermore, companies have measured their innovation success by: (1) *customer satisfaction (62%)* and (2) *revenues from new products or services (15%).* The barriers to innovation in Croatia are a bit different: *new product development takes a very long time (2.8); companies find it hard to decide which potential new product/idea to invest in (2.6); marketing department inadequately promotes new products (2.4),* as well as: *employees are very risk-averse; reward system in the company is not associated with innovation and companies do not have a way of measuring the success of a new product (2.2.), etc.* While the priorities are: *quality (4.6); timely delivery (4.2); flexibility (4.1.), etc*. Moreover, the very important product innovation is not a priority for the Croatian manufacturing companies! Finally, the Croatian innovation audit showed that in the five segments important for innovation: *strategy, organisational structure, processes, learning* and *links,* the overall average rating of 4.7 is really great. Croatian companies achieved the best score in: organisation (5.1) and strategy (4.9). From the structural model of links and link strength between the variables that explain innovating and innovation results we can conclude the following: *strategy mainly influences the number of innovations*; *links have a great influence on the speed of launching* and *learning has the greatest influence on the number of innovations.*

Generally, it turned out that the support to innovation management will increase the number of innovations; however, the support to administration will not significantly contribute to an increase in revenues from innovation. Also, organisation has a greater role in ensuring that

innovation is successfully commercialised, but the downside is that it slows innovation. On the other hand, the better the communication, the faster the innovation process. Finally, learning has a positive effect on the number of new products. The presented results show that a higher innovation index increases the number of innovations.

The phenomenon of innovation is really complex because it includes a number of factors, such as engineering, employee knowledge, psychological and sociological research, and it indeed is an interdisciplinary process. Therefore, this study is only a fraction of the research dealing with how to increase innovation in Croatian companies in this extremely competitive environment now that they compete in the European market.

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Performance of State Owned Electric Utilities – Case of Bosnia and Herzegovina, Slovenia and Croatia

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ABSTRACT

One of the biggest questions battling governments is performance of Electric Utilities, as they are one of the biggest resources and largest State Owned Enterprises. This issue became more important as electricity market has been liberalized and fully opened. Before market liberalization state owned Electric Utilities operated in monopoly market where competition was not possible. Therefore, due to market liberalisation existing companies have to be more competitive than before in order to grow and survive new competition from EU countries. Paper analyses performance of State Owned Electric Utilities from Bosnia and Herzegovina, Slovenia and Croatia. Measuring the success of the State Owned Electric Utilities is based on the analysis of financial statements for period from 2008 to 2012, using indicators of profitability. Electricity market in Slovenia and Croatia have been fully opened in analyzed period while electricity market in Bosnia has been closed. The results reveal that State Owned Electric Utilities operating in opened market have better performance and are more competitive than State Owned Electric Utilities which operate in closed market. The broad conclusion that emerges from the results is that market opening and new competition entering markets has pushed companies to improve their governance practices and performance in order to survive on the market.

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1. INTRODUCTION AND LITERATURE REVIEW

Performance of State owned electric utilities are essential for the reform of the electricity sector in every country. One of the biggest questions battling governments is performance of Electric Utilities, as they are one of the biggest resources and largest State Owned Enterprises. This issue became more important as electricity markets have been liberalized and fully opened and all customers have the ability to freely choose their supplier of electricity. Before this state owned Electric Utilities operated in monopoly market where competition was not possible.

Based on Law on Transmission of Electric Power, Regulator and System Operator in BIH the State Electricity Regulatory Commission of Bosnia and Herzegovina has passed decision on scope, conditions and time schedule of the electricity market opening in Bosnia and Herzegovina. This decision, made in 2006, has proposed steps and flow of electric market opening in Bosnia and Herzegovina. The electricity market opening had proceeded gradually, and the main aim of the opening is the creation, maintenance and development of competitive conditions among participants in the electricity market. Therefore, existing companies will need to be more competitive than before in order to grow and survive new competition from neighbouring countries and EU.

Electricity market opening in Bosnia and Herzegovina was implemented in accordance with the time schedule according to which the eligible customer status may be acquired.
- as of January 1, 2007, all customers with annual consumption of electricity higher than 10 GWh,
- as of January 1, 2008, all customers with annual consumption higher than 1 GWh,
- as of January 1, 2009, all customers except households, and
- as of January 1, 2015, all electricity customers.

The Slovenian energy market structure has been to a large extent State owned and competition and choice for consumers remained moderately limited for number of years. Both electricity and gas industries has been 100% open to competition from 1 July 2007 (ECOTEC Research & Consulting, 2007).
The electricity market in Croatia has been fully open to all customers as of 1st July 2008, though as a practical matter, the former vertically integrated utility, Hravtska Eleckroprivreda (HEP), remains the only supplier of electricity in the country and is the primary importer of electricity (with electricity imports around 36%) (European Bank for Reconstruction and Development, 2012)

There are numerous reasons for establishing or retaining public enterprises, especially if we consider resources that are very important for country, society and from witch most of the government budget is financed. Jones and Mason (1982) categorized as follows: ideological predilection, acquisition or consolidation of political or economic power, historical heritage and inertia, and pragmatic response to economic problems. Friedmann and Garner (1970) also used four categories: promotion and acceleration of economic development, defensive reasons,

controlling monopoly industries, and political ideology. Peterson (1985) argued that SOEs are established to pursue national goals, economic efficiency, weakness of the POEs, and political ideology.

SOEs have been driving force for development and growth of many countries. However, in the realm of public policy, one of the most unprecedented global features in the last quarter of the twentieth century has been privatization. During the period, governments all over the world introduced various forms of privatization irrespective of their economic context, political orientation and ideological position (Haque, 2000). There are different views of privatization and its effects on performance of companies as well as on benefits of privatization for country and its economic growth. One group of authors support privatization and argue that it has positive impacts on company performance and country's economics development (Magginson and Netter, 2001; Vickers and Yarrow, 1995; Dewenter and Malatesta, 2001; D'Souza and Megginson, 1999 and others). On the other hand, other group of authors does not support privatization of strategically important enterprises and argue that privatization has negative impacts country's economics development and growth (Campbell-White and Bhatia, 1998; Bayliss, 2002 and others).

While Bozec, R., Breton, G. and Côté, L. (2002) in its research of state–owned enterprises and private firms for the period 1976–1996 argue that state owned enterprises "when their main goal is to maximize profit, perform as well as the privately owned enterprises. Therefore, the alleged under–performance of the state–owned enterprises may only be the result of pursuing other goals."

Despite all these arguments most of the countries around the world have kept its Electric Utilities under the government ownership in full or partial control. Reason for this is that Electric Utilities are of great importance for economic prosperity of every country and they are often one of the biggest resources and largest State Owned Enterprises. Therefore, its performance and competitiveness is very important especially when electricity market has been liberalized and fully opened for new competition.

2. METHODOLOGY AND RESEARCH HYPOTHESIS

Paper analyses performance of State Owned Electric Utilities from Bosnia and Herzegovina, Slovenia and Croatia. To understands difference in performance of State Owned Electric Utilities in region and impact of electricity market opening we have conducted a comparison analysis of performance of companies from Bosnia and Herzegovina, Slovenia and Croatia. As Slovenian and Croatian electricity market has been fully opened in analysed period their State Owned Electric Utilities have been operating in competitive market where competitors from EU companies are free to enter.

Measuring the success of the State Owned Electric Utilities is based on the analysis of financial statements for period of five years, from 2008 to 2012, using indicators of profitability. In order to measure performance of these companies we have defined Key Performance Indices (KPIs).

Key Performance Indices are as following:

1. Return on Equity (ROE)
2. Return on Assets (ROE)
3. Operating Margin
4. Net profit Margin
5. Equity Ratio
6. Sales/Total Asset Ratio (S/T)
7. Net income per employee

Performance data will be gathered for sample of 12 State Owned Electric Utilities from Bosnia and Herzegovina, 9 State Owned Electric Utilities from Slovenia and 1 State Owned Electric Utilities from Croatia (as HEP Group it is only State Owned Electric Utilities operating in Croatia). HEP Group (Hrvatska elektroprivreda d.d.) is comprised of 13 fully owned companies and 3 companies with 50% ownership.

The research data was gathered from companies' annual reports, the database of the Banja Luka Stock Exchange and the Sarajevo Stock Exchange, the Agency of the Republic of Slovenia for Public Legal Records and Related Services (AJPES), the Zagreb Stock Exchange, Croatian Energy Regulatory Agency (HERA) and companies' web pages.

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

H1: Market opening has positive impact on performance and competitiveness of State Owned Electric Utilities as new competition entering markets has pushed companies to improve their governance practices and performance**.**

H2: State Owned Electric Utilities operating in opened market have better performance and are more competitive than State Owned Electric Utilities which operate in closed market.

3. RESULTS AND DISCUSSION

Research data acquired for 12 Bosnian, 9 Slovenian and 1 Croatian State Owned Electric Utilities were analysed according to Key Performance Indices. Table 1, 2 and 3. presents descriptive statistics of Key Performance Indices for Bosnian, Slovenian and Croatian State Owned Electric Utilities in cumulative amount for period from 2008 to 2012.

-> Country = BiH

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	60	.0035	.0144767	-.04	.04
ROA	60	.0033333	.0120263	-.03	.03
Operating_~n	60	.0448333	.0994475	-.33	.3
Net_Profit~n	60	.0328333	.1083167	-.39	.3
Equity_Ratio	60	.826	.1116168	.62	.99
Net_Income~e	60	112938.5	46675.01	53006.61	220508.3
ST	60	.2461667	.1218236	.03	.45

Table 1: Descriptive statistics of KPIs for State Owned Electric Utilities from Bosnia and Herzegovina

-> Country = SLO

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	45	.0291111	.0317535	-.03	.11
ROA	45	.0197778	.0242608	-.03	.09
Operating_~n	45	.052	.0586825	-.03	.24
Net_Profit~n	45	.04	.0485237	-.04	.2
Equity_Ratio	45	.6806667	.0782304	.52	.84
Net_Income~e	45	285774.6	116851.7	174180.4	783457.8
ST	45	.564	.1801943	.22	1.15

Table 2: Descriptive statistics of KPIs for State Owned Electric Utilities from Slovenia

-> Country = CRO

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	5	.022	.0268328	-.02	.05
ROA	5	.004	.0602495	-.1	.05
Operating_~n	5	.024	.0089443	.02	.04
Net_Profit~n	5	.014	.0114018	0	.03
Equity_Ratio	5	.618	.070852	.56	.7
Net_Income~e	5	124459.3	8631.364	112921.5	136766.6
ST	5	.396	.1069112	.32	.56

Table 3: Descriptive statistics of KPIs for State Owned Electric Utilities from Croatia

Figure 1. indicates that State Owned Electric Utilities from countries with opened electricity market have on average higher Return on Equity than State Owned Electric Utilities from countries with closed electricity market. Moreover, State Owned Electric Utilities from Bosnia and Herzegovina have negative trend and constant decrease in ROE in analysed period. This shows that companies from Bosnia and Herzegovina are less efficient in using shareholders' capital in generating profits.

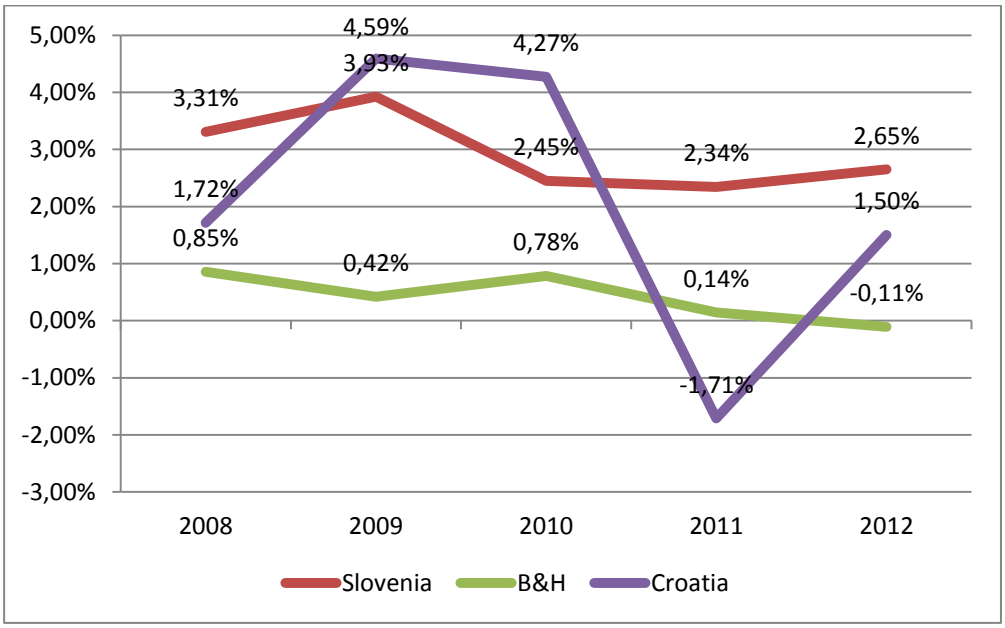

Figure 1: Return on Equity (ROE) for Bosnian, Slovenian and Croatian State Owned Electric Utilities

Figure 2. shows that State Owned Electric Utilities from Bosnia and Herzegovina have significantly lower Return on Asset than State Owned Electric Utilities from Slovenia and

Croatia and negative trend and constant decrease in ROA in analysed period. This shows that companies from Bosnia and Herzegovina are less efficient in utilization of its assets, which is one of the most important factors in Electric Utilities. Croatian HEP Group has accounted loss only in 2011. Due to unfavourable hydrological conditions they needed to increase imports of electricity (at higher price) and despite growth in operating income they had has accounted losses (HEP Group, 2012).

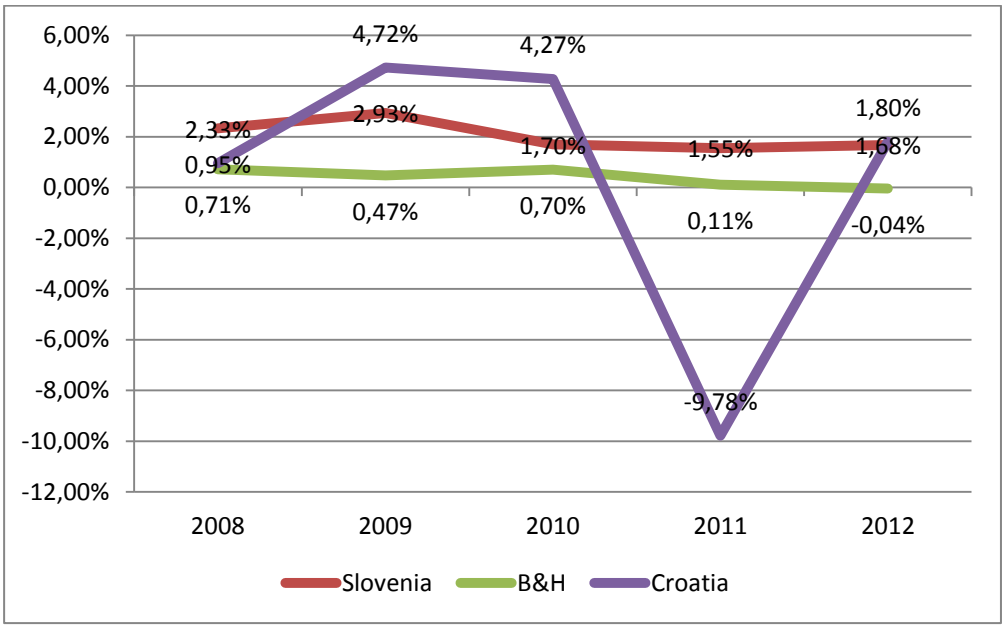

Figure 2: Return on Asset (ROA) for Bosnian, Slovenian and Croatian State Owned Electric Utilities

Data from Figure 3. and Table 1,2 and 3. shows that in analysed period State Owned Electric Utilities from Bosnia and Herzegovina on average have Operating Margin of 4.54%, State Owned Electric Utilities from Slovenia have Operating Margin of 5.23% and State Owned Electric Utilities from Croatia have Operating Margin of 2.33%. This results indicates that Bosnian companies have slightly lower Operating Margin and in certain periods are less profitable than Slovenian companies, while Croatian companies have lowest Operating Margin of analysed countries.

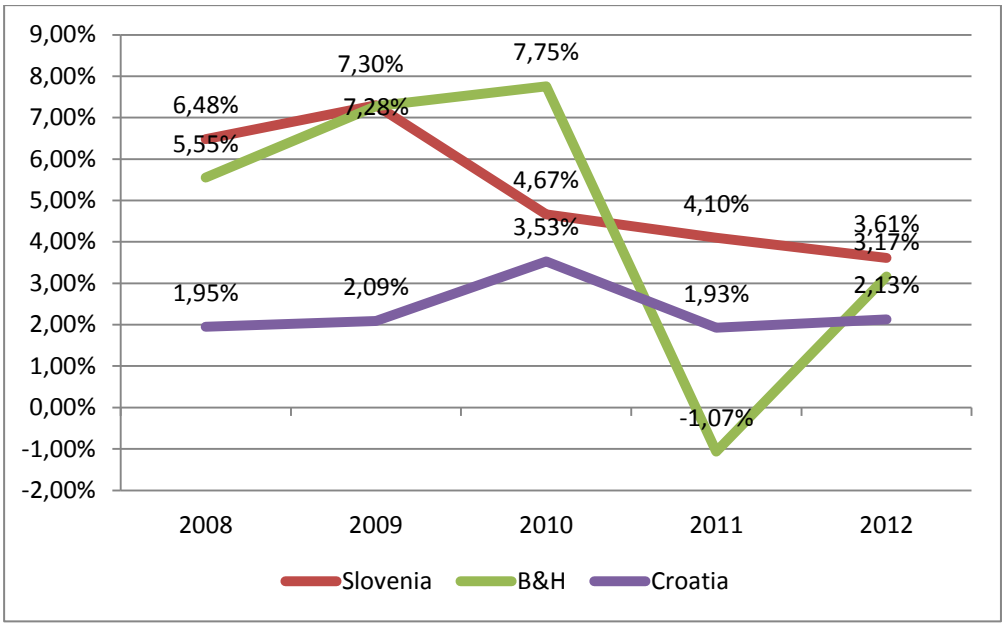

Figure 3: Operating Margin for Bosnian, Slovenian and Croatian State Owned Electric Utilities

Similar situation is with Net Profit Margin of analysed State Owned Electric Utilities. Data from Figure 4. and Table 1. shows that in analysed period State Owned Electric Utilities from Croatia have lowest Net Profit Margin. Net Profit Margin of Croatian State Owned Electric Utilities indicates that they are less profitable and less efficient in converting revenue into actual profit. Moreover, it shows that they have poorer control over its costs compared to Slovenian State Owned Electric Utilities. State Owned Electric Utilities from Bosnia and Herzegovina have negative trend of Net Profit Margin in analysed period.

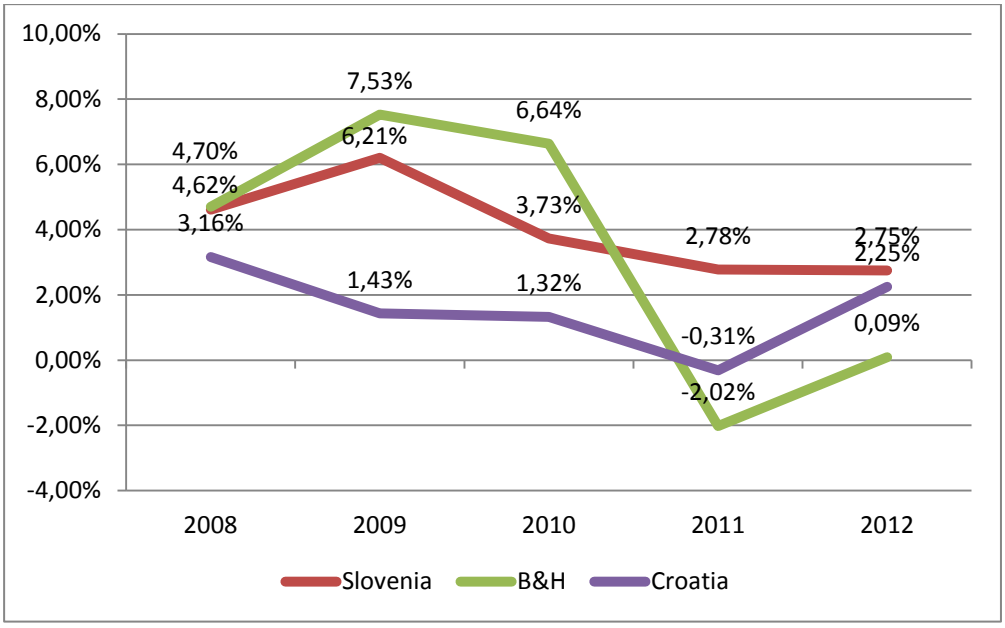

Figure 4: Net Profit Margin for Bosnian, Slovenian and Croatian State Owned Electric Utilities

Figure 5. shows larger percentage of assets of State Owned Electric Utilities from Bosnia and Herzegovina are financed/owned by shareholders, which is not the case in State Owned Electric Utilities from Slovenia and Croatia where almost half of assets are financed by debt. Bosnian State Owned Electric Utilities have not had large investments in asset and therefore did not require large financing. This high Equity Ratio shows that Bosnian State Owned Electric Utilities have been largely financing its assets by its equity and it means that they will be able to processed with future investment projects and they do not have large obligations to its creditors.

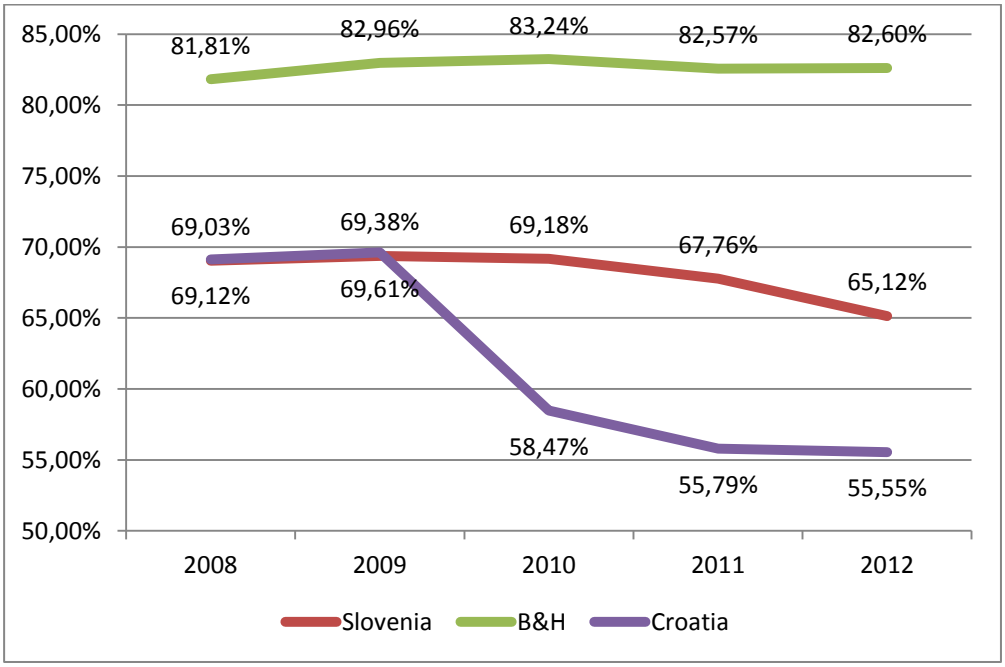

Figure 5: Equity Ratio for Bosnian, Slovenian and Croatian State Owned Electric Utilities

Analysis of indicate that in analysed period State Owned Electric Utilities from Bosnia and Herzegovina have significantly lower Net Income per employee than State Owned Electric Utilities from Slovenia and slightly lower Net Income per employee than State Owned Electric Utilities from Croatia. Moreover, Bosnian Electric Utilities have negative trend and constant decrease of Net Income per employee in analysed period, while Slovenian and Croatian Electric Utilities have positive trend and constant increases of Net Income per employee. This shows that managers of Bosnian State Owned Electric Utilities do not have ability to use their human resources efficiently to create profits for company. Furthermore, this indicates overemployment in Bosnian State Owned Electric Utilities.

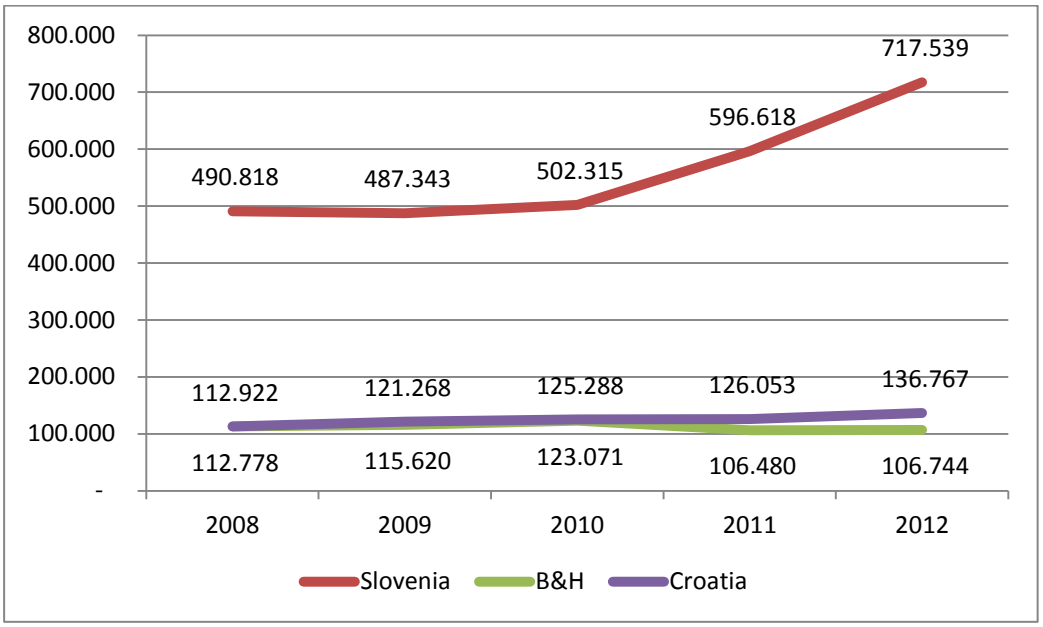

Figure 6: Net Income per employee for Bosnian, Slovenian and Croatian State Owned Electric Utilities

Data from Figure 7. shows that in analysed period State Owned Electric Utilities from Bosnia and Herzegovina considerably lower S/T ratio than State Owned Electric Utilities from Slovenia and Croatia. Again, results indicate negative trend in S/T ratio for Bosnian companies in analysed period. Therefore, Bosnian State Owned Electric Utilities are not efficient in managing assets at its disposal to generate sales revenue. Higher S/T ratio of Slovenian and Croatian State Owned Electric Utilities suggests that they require much smaller investment to generate sales revenue and, therefore, have higher profitability.

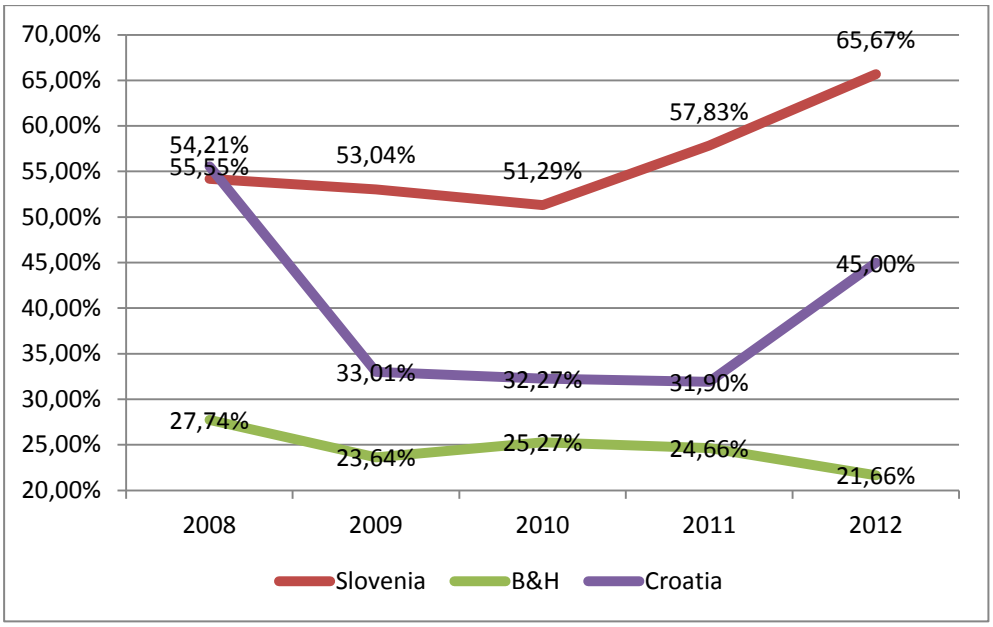

Figure 7: S/T Ratio for Bosnian, Slovenian and Croatian State Owned Electric Utilities

4. CONCLUSION

Issue of performance and competiveness of State Owned Electric Utilities is of great importance, specially when electricity market is fully opened and as State Owned Electric Utilities no longer operated in monopoly market where competition was not possible.

Thought analysis of sample companies it can be concluded that Bosnian State Owned Electric Utilities are not well governed and that government is not doing much to change situation in these companies. Moreover, big problem presents overemployment, which is also result of poor governance of these companies and not including experts in boards and top management positions in companies.

In period after electricity market opening in Slovenia and Croatia there has been a steer towards lower employment rates in order to achieve more efficient economic operations and optimize business processes. Moreover, Slovenian and Croatian State Owned Electric Utilities had positive trend in most of KPI's in period after electricity market opening. This also needs to be one of primary goals of Bosnian government and government should learn lessons from its neighbouring countries whom already went trough this process.

The results reveal that State Owned Electric Utilities operating in opened market have better performance and are more competitive than State Owned Electric Utilities which operate in closed market. The broad conclusion that emerges from the results is that market opening and new competition entering markets has pushed companies to improve their governance practices and performance in order to survive on the market.

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ANNEXES

-> Year = 2008

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	12	.0066667	.007785	0	.02
ROA	12	.0066667	.007785	0	.02
Operating_~n	12	.0558333	.0705122	0	.27
Net_Profit~n	12	.0458333	.0734177	0	.27
Equity_Ratio	12	.8175	.1241791	.62	.99
Net_Income~e	12	112778.2	43202.91	69968.66	184646.7
ST	12	.2783333	.1507456	.05	.45

-> Year = 2009

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	12	.0033333	.0210339	-.04	.02
ROA	12	.005	.0178377	-.03	.02
Operating_~n	12	.0716667	.114084	-.07	.27
Net_Profit~n	12	.0741667	.1360787	-.09	.3
Equity_Ratio	12	.83	.1114369	.67	.98
Net_Income~e	12	115620	47261.44	64395.68	181227.7
ST	12	.2366667	.1118711	.06	.36

-> Year = 2010

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	12	.0083333	.0133712	-.01	.04
ROA	12	.0066667	.0107309	0	.03
Operating_~n	12	.0775	.1128253	-.03	.3
Net_Profit~n	12	.0658333	.1053529	-.02	.26
Equity_Ratio	12	.8325	.1120167	.65	.98
Net_Income~e	12	123070.6	53972.97	65993.91	220508.3
ST	12	.2525	.1184848	.07	.37

-> Year = 2011

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	12	0	.0112815	-.02	.03
ROA	12	-.0008333	.0090034	-.02	.02
Operating_~n	12	-.0116667	.104606	-.33	.09
Net_Profit~n	12	-.0208333	.1196554	-.39	.08
Equity_Ratio	12	.825	.1216179	.63	.98
Net_Income~e	12	106479.9	45980.35	67290.8	185952.1
ST	12	.2458333	.127312	.04	.37

-> Year = 2012

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	12	-.0008333	.0156428	-.04	.03
ROA	12	-.0008333	.011645	-.03	.02
Operating_~n	12	.0308333	.0748888	-.12	.17
Net_Profit~n	12	-.0008333	.0773961	-.14	.17
Equity_Ratio	12	.825	.107238	.66	.98
Net_Income~e	12	106743.7	48480.31	53006.61	196999.8
ST	12	.2175	.1093057	.03	.31

Annex 1. Descriptive statistics of KPIs per year for Bosnian State Owned Electric Utilities

-> Year = 2008

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	9	.0333333	.0384057	0	.11
ROA	9	.0233333	.0295804	0	.09
Operating_~n	9	.0644444	.0758471	.01	.24
Net_Profit~n	9	.0477778	.0613958	0	.19
Equity_Ratio	9	.69	.0655744	.58	.8
Net_Income~e	9	250951.3	44685.54	182124.4	323714.8
ST	9	.5411111	.0892251	.38	.65

-> Year = 2009

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	9	.0388889	.045674	-.01	.11
ROA	9	.0277778	.0366667	-.01	.09
Operating_~n	9	.0733333	.0906918	-.01	.23
Net_Profit~n	9	.0611111	.0745729	-.01	.2
Equity_Ratio	9	.6933333	.0928709	.54	.84
Net_Income~e	9	249174.3	30907.27	209668.2	293804.4
ST	9	.53	.1202082	.34	.74

-> Year = 2010

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	9	.0244444	.0328295	-.03	.08
ROA	9	.0155556	.0255495	-.03	.05
Operating_~n	9	.0466667	.0497494	-.03	.14
Net_Profit~n	9	.0355556	.0447524	-.04	.11
Equity_Ratio	9	.6911111	.0780135	.54	.8
Net_Income~e	9	256829.5	62779.33	174180.4	396909.1
ST	9	.5144444	.1185444	.25	.68

-> Year = 2011

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	9	.0233333	.0158114	.01	.05
ROA	9	.0155556	.0088192	.01	.03
Operating_~n	9	.0388889	.0271314	0	.08
Net_Profit~n	9	.0277778	.0164148	.01	.05
Equity_Ratio	9	.6766667	.0883176	.52	.84
Net_Income~e	9	305045.9	123465.8	203772.3	547911.8
ST	9	.5777778	.1886649	.25	.87

-> Year = 2012

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	9	.0255556	.0212786	0	.06
ROA	9	.0166667	.0122474	0	.03
Operating_~n	9	.0366667	.0239792	0	.07
Net_Profit~n	9	.0277778	.0204803	0	.05
Equity_Ratio	9	.6522222	.074293	.53	.78
Net_Income~e	9	366872	203300.7	206889.1	783457.8
ST	9	.6566667	.303315	.22	1.15

Annex 2. Descriptive statistics of KPIs per year for Slovenian State Owned Electric Utilities

-> Year = 2008

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	1	.02	.	.02	.02
ROA	1	.01	.	.01	.01
Operating_~n	1	.02	.	.02	.02
Net_Profit~n	1	.03	.	.03	.03
Equity_Ratio	1	.69	.	.69	.69
Net_Income~e	1	112921.5	.	112921.5	112921.5
ST	1	.56	.	.56	.56

-> Year = 2009

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	1	.05	.	.05	.05
ROA	1	.05	.	.05	.05
Operating_~n	1	.02	.	.02	.02
Net_Profit~n	1	.01	.	.01	.01
Equity_Ratio	1	.7	.	.7	.7
Net_Income~e	1	121267.8	.	121267.8	121267.8
ST	1	.33	.	.33	.33

-> Year = 2010

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	1	.04	.	.04	.04
ROA	1	.04	.	.04	.04
Operating_~n	1	.04	.	.04	.04
Net_Profit~n	1	.01	.	.01	.01
Equity_Ratio	1	.58	.	.58	.58
Net_Income~e	1	125287.8	.	125287.8	125287.8
ST	1	.32	.	.32	.32

-> Year = 2011

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	1	-.02	.	-.02	-.02
ROA	1	-.1	.	-.1	-.1
Operating_~n	1	.02	.	.02	.02
Net_Profit~n	1	0	.	0	0
Equity_Ratio	1	.56	.	.56	.56
Net_Income~e	1	126052.9	.	126052.9	126052.9
ST	1	.32	.	.32	.32

-> Year = 2012

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	1	.02	.	.02	.02
ROA	1	.02	.	.02	.02
Operating_~n	1	.02	.	.02	.02
Net_Profit~n	1	.02	.	.02	.02
Equity_Ratio	1	.56	.	.56	.56
Net_Income~e	1	136766.6	.	136766.6	136766.6
ST	1	.45	.	.45	.45

Annex 3. Descriptive statistics of KPIs per year for Croatian State Owned Electric Utilities

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Corporate governance in founders' controlled companies

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ABSTRACT

Ownership structure with the reference to the comparative studies worldwide, types, forms and patterns identified in companies as well as the logic behind the behavior of different owners constitutes an important theme in management studies. Research reveals the crucial importance of the ownership patterns with the reference to the shareholder identity and concentration of shares for the standards of corporate governance including control and monitoring mechanisms, transparency, board work. Corporate governance literature indicates that certain shareholder types may have impact on the adoption of pyramidal structures, dual class shares, board independence, structure of executive compensation and disclosure.

This paper focuses on the specific type of listed companies which remain under the control of the founder. The goal of the paper is to identify the corporate governance mechanisms adopted by founders in listed companies with respect to the way they exert control. It investigates whether founders tend to increase the control over companies via use of ownership mechanisms adopting dual class shares and pyramidal structures and via dominating the board lowering the number of independent directors. Using the hand collected data of a sample of 100 companies listed on the Warsaw Stock Exchange the paper addresses the gap in the literature of the unique form of ownership characterized by the control of the founders (first generation) who need to confront the entrepreneurial spirit and significant dominance in management and governance in the company with the features of listed companies in which ownership and control is shared among investors.

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1. INTRODUCTION

Ownership structure remains the crucial company's characteristics, belongs to the most important governance mechanisms, and delivers fundamental legacy for oversight and control (Fama and Jensen, 1983; Shleifer and Vishny, 1997). The studies on ownership structure patterns, dynamics and characteristics help understand the directions of strategic development of companies (Demsetz and Keith, 1985). Research reveals the crucial importance of the ownership patterns with the reference to the shareholder identity and concentration of shares for the standards of corporate governance including the aspects to transparency, board independence and composition, board committees, the incentive function of executive

compensation. Corporate governance literature indicates that certain shareholder types may have impact on the quality of board work, effectiveness of executive compensation and disclosure. The understanding of the relationships between the ownership structure and corporate governance and the impact of different shareholder upon the quality of corporate governance reveal to be of crucial importance for the functioning of any public listed company (Allen and Gale, 2000). Particularly, the understanding of these relationships proves to be important for emerging markets where corporate governance notes significant development catching up with the world wide recognized standards and best practice. Also the founder control appears to be a specific potentially interesting characteristics of dominant individual investor who founded the enterprise and needs to share the control with other shareholders. Founders represent a specific type of shareholders who reveal strong control, the problems of responsibilities delegation, charismatic leadership, long term vision and emotional attachment to the firm. As the post transition and emerging markets are characterized by the growing number of de novo firms, they offer an unique opportunity to examine the founder strategy with respect to corporate governance. Such research would face significant constrains with the developed economies characterized by the stable company base of institutional ownership.

This paper focuses on the specific type of listed companies which remain under the control of the founder. The goal of the paper is to identify the corporate governance mechanisms adopted by founders in listed companies with respect to the way they exert control. More precisely the paper investigates whether founders tend to increase the control over the companies via use of ownership mechanisms adopting dual class shares and pyramidal structures and via dominating the board lowering the number of independent directors. Using the hand collected data of a sample of 100 companies listed on the Warsaw Stock Exchange the paper addresses the gap in the literature of the unique form of ownership characterized by the control of the founders (first generation) who need to confront the entrepreneurial spirit and significant dominance in management and governance in the company with the features of listed companies where ownership and control is shared among investors. Therefore the paper identifies the control patterns adopted by founders asking also about the corporate governance standards of the board independence. The contribution of the paper is the identification of the corporate governance mechanisms referring to control such as the adoption of pyramidal structure, dual class shares and the presence of independent directors

on board. These findings add to the understanding of corporate governance in the specific context of founder controlled companies.

The paper is organized as follows. The first section discussed the ownership structure from the perspective of potential principal agent conflict focusing on the specific case of the founder control over the company. The second section delivers the overview of the corporate governance in Poland with the reference to the transition and emerging market challenges. And finally the third section outlines the research methodology and results discussing the founders' strategy towards control and corporate governance. The final remarks are presented in the conclusion section.

2. FOUNDER CONTROL AND CORPORATE GOVERNANCE

The analyses on ownership structure distinguish degree of concentration (dispersed vs. concentrated ownership) and the shareholder identity (individual vs. institutional shareholders, state ownership, managerial ownership, financial and non financial) (Shleifer and Vishny, 1997; Faccio and Lasfer, 2000). Moreover, the studies focus on the identification of methods enhancing control versus the shares owned realized by the use of dual class shares or the adoption of pyramidal structures. The analysis of ownership structure allows to relate a specific ownership patterns and characteristics to companies behavior, strategy, governance and performance. The perspective of agency theory provides framework of the analysis of the benefits and challenges of different ownership structure patterns for corporate governance and performance indicating way and means for lowering the classing principal agent conflict.

The issue of the specific type of founder control in listed companies remains relatively unexplored in the literature constituting a gap in the corporate governance research. Yet taking into account the characteristics of the emerging markets as well as the dynamics in developed economies the founders control appears to be an important mechanism for management and governance. The existing literature on founder controlled companies derives from two main well established research streams of concentrated ownership as well as the family ownership. Concentrated ownership is perceived as a positive mechanism mitigating the problems of dispersed ownership such as leads to increased principal-agent conflicts as the residual rights of control are in the hands of executives (Monks and Minow, 2004). Majority shareholders do not face the limited possibility to monitor and control executives

and experience the problems of hidden action, hidden information and hidden intention (Jensen and Meckling, 1976; Shleifer and Vishny, 1997). Ownership concentration also mitigates the free rider problem as the holders of larger stakes are interested in collecting and processing information for the evaluation of the executives (Grossman and Hart, 1988). Majority shareholders may be more active than the dispersed owners and getting involved in the supervision and governance (Monks and Minow, 2004; Holderness and Sheehan, 1988). The positive impact of the dominant shareholder reveals an asymptotic functions as the improvements in efficiency and firm value are possible to a certain point (Neun and Santerre, 1986). The ownership concentration proves to be an important monitoring mechanism being the second best solution when market/ external mechanisms are not working well (Morck and Steier, 2005). The majority shareholder is able to internalize the costs of collecting information and to exert effective control over management as they possess significant stakes and crucial know how. The active engagement in monitoring and control appears to be an efficient strategy for majority shareholders. Concentrated ownership however is seen as a drawback to raising significant funds and risk diversification assured by the dispersed ownership. Some doubts refer also to the threat of the majority shareholder abusing their position via representatives on the board favoring them at the cost of minority shareholders (Fama and Jensen, 1983). The dominant shareholders may expropriate minority shareholders through a tunneling or compensation policy (Stulz, 1988), blocking dividend payout or limited access to information. Additionally, the ownership concentration may be exerted with the use pyramidal structures and dual class shares, adopted separately or jointly. Pyramids consist of several layers of ownership relationships characterized by complicated structure of cross shareholdings and mutual capital interlocks with listed companies placed at the apex of these structures (Perkins et al., 2008). They are the ownership type constituting of multi level companies with cross shareholdings which form relations of control (Zattoni, 1998; Bennedsen and Nielsen, 2006). The form of a pyramid allows for the separation of control and cash flow rights (i.e. participation in profit) (Claessens et al., 2002) what is viewed as the process of leveraging control rights versus cash flow rights (Villalonga and Amit, 2007). The pyramidal structure assures the controlling shareholder, very often the founders or founder's family, to maintain control over decision making process, to conduct value transfer within the group via related party transactions (Khanna and Palepu, 1999).

The second research stream of the theoretical framework on founders' controlled companies derived in the vast literature on family companies which "have been recognized as an

important governance structure of business organizations in both developed and developing economies" (Chu, 2009) as more and more is known and understood on their contribution to the development of national economies, employment and GDP growth. Research indicate that family firms constitute over 35% of the S&P 500 Industrials, and families own nearly 18% of their firms' outstanding equity (Anderson and Reeb 2003). Yet despite the numerous presence of family firms still little is known about the strategic approach of families and founders to corporate governance (Barontini and Caprio, 2005). According to the principal agent theory founder and family control appear also to be important governance mechanisms as it depicts some degree of ownership concentration and is related to the involvement in management and supervision (Shleifer and Vishny 1986), vision and motivation for firm growth (Chu, 2009; Jayaraman et al., 2000), strong identification with the company and the decrease of the classic principal agent conflict (Wasserman, 2003) characterized with short-termism and myopia of corporate managers (Bertrand and Schoar, 2006). The family control may however be seen as a drawback for effective corporate governance due to the dominant position in the decision process, the tendency to lower the board independence (Anderson and Reeb 2004), interest in non pecuniary consumption which draw scarce resources away from profitable projects, focus on family's interest as the expense of firm performance and minority shareholders (Ramachandran and Marisetty, 2009; Anderson and Reeb 2004). Founder who perform also the executive functions expose firms to a self-control problem (Schulze et al., 2001) what increases principal agent conflict and is detrimental to performance. As the literature review indicates founders do tend to adopt dual class shares or use pyramids in order to maintain control over the established companies. As studies in emerging markets and continental Europe suggest both solutions benefit the controlling shareholders, provide for lower transparency of listed companies and may result in the majority (controlling) shareholder abusing minority shareholders rights (Zattoni, 1999; Perkins et al., 2008). Pyramids are formed to provide the control over the company. Founders may reveal the tendency to focus on the family control and the internal shareholding to maintain control and may hinder the access to information and influence over the company for the minority shareholders. Thus, with the intention to increase control founders should reveal the tendency to adopt dual class shares and pyramidal structures. Moreover, since the board has significant power and exert influence over the company founders may also strive to dominate the board and lower its independence appointing fewer independent directors. On the basis of the literature review the following hypotheses were formulated:

H1: The adoption of a pyramidal structure is more frequent in the founders' controlled companies

H2: The adoption of dual class shares is more frequent in the founders' controlled companies

H3: Board independence is lower in the founders' controlled companies

3. CORPORATE GOVERNANCE IN POLAND

3.1. Transition reforms and privatization schemes

The studies on ownership of Polish companies have been carried out for the last 23 years starting with the transition reforms and privatization schemes. There are no research conducted before 1989 since the pattern of ownership was exerted by the dominance of the state (via the State Treasury) and the Party (via its members appointed to serve on the executive position). The system was referred to the so called "destroyed capitalism" (Balcerowicz, 1995) as it faced the lack of private ownership and the lack of meaning of private ownership. The state control and the regime of the citizens' ownership proved to be highly inefficient in the process of rights, incentives and assets allocation. The reforms introduced in 1989 focused on the type I reforms (macroeconomic stabilization, price liberalization, the reduction of direct subsidies, the breakup of trusts, the mono-bank system) and type II reforms referring to rebuilding institutional framework, large-scale privatization, the development of a commercial banking sector and effective tax system, labor market regulations and institutions related to the social safety net and establishment and enforcement of a market-oriented legal system and accompanying institutions. These reforms appear to be crucial from the perspective of the shift in ownership and control and hence the development of corporate governance structure. The privatization programs included the so called case by case privatization understood as the sale of the state owned company to strategic (industry) investor assuring for full control in the case of the direct sale or the dominant stake in the case of companies listed on the stock exchange. Fortunately, the stakeholders' opposition delayed negotiation over the mass privatization program which to this date is viewed as the worst privatization method and which in the Polish case covered (luckily) only 512 companies (as compared to 14,000 in Russia). The popularity of management buyouts and employee stock ownership plans remained low and only a marginal number of state owned companies followed this path. The strongest impact upon the shift of ownership and control was however executed by the rise of the companies set up after 1989 and developed by the founders. The

trend strengthened significantly with the economic boom noted after Poland's accession to the European Union in May 2004 supported by the start of the OTC market in 2008. The shift in ownership and control was additionally accompanied with the government determination to complete privatization process (2008-2011). According to the statistics of the Ministry of Treasury in terms of number of companies privatized of 8,453 state owned companies in 1990, 7,770 have been privatized by the end of 2011 (State Treasury, 2012a). 2,307 companies were privatized via direct privatization that appeared to be the dominant ownership transformation scheme, 1,753 companies were commertialized, 502 underwent indirect privatization, 512 were included in mass privatization program and 1,932 were covered by the liquidation procedure. However in the register as of January 1st, 2012 there were 530 state enterprises of which the state fully controls 179 (100% stake), in 47 companies the state operates as the dominant shareholder and in 156 it operates as the minority shareholder (State Treasury, 2012b).

In sum, the Polish picture on the ownership corresponds with the characteristics of post-transition and emerging market. Corporate governance is based upon the role of hierarchies (World Bank 2005a; World Bank 2005b). As noted by Berglöf and Claessens (2006) the crucial control role is played by large shareholders, whereas the monitoring function of external mechanisms (stock market, market for corporate control, reputation) is significantly weaker. Concentrated ownership is viewed as a result of a set of different factors such as privatization schemes (favoring strategic, industry investors), weaker investor protection (bigger stake increases safety of the investment) and the civil law tradition (Coffee, 1999). The potential of monitoring from the board remains unexplored and hindered. The board is unlikely to be influential when the controlling owner can hire and fire board members. Additionally, the quality of law enforcement depends critically on the quality of the general enforcement environment.

3.2. Ownership of polish listed companies

Studies on Polish listed companies reveal the stable trend of the ownership structure over the whole period they were conducted after 1989. The shareholder structure of Polish companies shows a significant concentration of ownership characterized by the average majority shareholder stake estimated at 41% shares (Kozarzewski, 2003, 2006; Aluchna, 2007; Urbanek, 2009). The significant ownership concentration indicates that the majority of corporate governance challenges refer not to the problems of dispersed ownership and conflicts between shareholders and managers but mostly to the problems of majority shareholder policies toward minority investors (Shleifer and Vishny, 1998). The ownership structure analysis depicts a slight evolution of the identity of the dominant shareholder which results from the privatization schemes and the development of the emerging market. Not surprisingly, the strategic foreign investor appeared to be the most frequent identity Dzierżanowski and Tamowicz, 2002). Strategic foreign investors were surpassed by domestic private and domestic strategic investors in line with the economic development and surge of newly set companies controlled by the founder. The ownership structure of Polish listed companies is presented in Table 1.

Table 1: Ownership structure of Polish companies (no. of sample companies, % of sample companies)

Shareholder category	1st largest	2nd largest	3rd largest	4th largest
Executives	88 (25.1%)	49 (17.3%)	31 (15.3%)	18 (14.5%)
Supervisory board directors	39 (11.4%)	40 (14.1%)	28 (13.8%)	12 (9.7%)
Other individual	24 (7.1%)	24 (8.5%)	25 (12.3%)	13 (10.5%)
Strategic foreign investor	60 (17.1%)	18 (6.4%)	8 (3.9%)	5 (4.0%)
Financial foreign investor	6 (1.7%)	14 (4.9%)	9 (4.4%)	5 (4.0%)
Strategic domestic investor	71 (20.3%)	26 (9.2%)	16 (7.9%)	6 (4.8%)
Financial domestic investor	28 (8.0%)	66 (23.3%)	47 (23.2%)	42 (33.9%)
NIF	4 (1.1%)	2 (0.7%)	-	-
Pension fund	7 (2.0%)	36 (12.7%)	35 (17.2%)	20 (16.1%)
State	14 (4.0%)	4 (1.4%)	1 (0.5%)	1 (0.8%)
Cross shareholding (to be liquidated)	4 (1.1%)	4 (1.4%)	3 (1.5%)	2 (1.6%)
Dispersed ownership	7 (2.0%)	-	-	-
Total	350 (100%)	283 (100%)	203 (100%)	124 (100%)

Source: compilation based on Urbanek (2009), pp. 392-393.

As presented in Table 1 domestic individual investors prove to be the most frequent majority shareholders of Polish listed companies. The individual investors often combine the role of majority shareholders (playing key roles via their representatives in supervisory board) and the role of executives at the management board. Therefore they may combine ownership and control exerting decision making and supervision over the company. As noted by Berglöf and Claessens (2006) emerging and transition economies are characterized by the ownership concentration and majority shareholders' involvement in governance and management. The importance of industry investors as well as of individual investors acting via other companies (holding companies, financial vehicles) in the ownership structure of Polish listed companies led to creation of corporate groups and the development of pyramidal structures which show to be a popular phenomenon noted recently. Although the literature on Polish pyramidal structure is very rare, the initial research reveals that pyramids were identified in 50% of the largest listed companies (Aluchna, 2010). The development of founder control firms as well as the emergence of pyramidal structures provide interesting potential for the analysis of the ownership and control pattern in Polish listed companies.

4. RESEARCH

4.1. Methodology

The research addresses the central question on the control mechanisms adopted in companies in which founders possess the controlling stake. The data was collected between October 2013 and March 2013. For the purpose of the research 100 companies listed on the Warsaw Stock Exchange, the set of 25% of overall population, were investigated. In order to assure for the representative sample, the analysis covered 25 largest companies out of every 100 in terms of market capitalization. The sample was composed of non financial companies listed on the Warsaw Stock Exchange. In the case of bankruptcy and the lack of data two companies were rejected and replaced by the subsequent companies on the list. As no data base was available all data used for the purpose of this analysis on ownership structure and board was hand collected. The research used the following variables:

- Company size measured by assets (in PLN)
- Degree of ownership concentration (concentrated from the threshold of 30% votes, dispersed)

- Founder's control – binary variable (0,1) for the control of the founder over the company of at least 30% of votes
- The size of the stake of votes controlled by the largest shareholder
- The stake controlled by the founder – the percentage of shares controlled by the founder
- The use of dual class shares – binary variable (0,1)
- The use of a pyramidal structure – binary variable (0,1)

The statistical analysis was conducted with the use of the standard SPSS software version 21.

4.2. Results

Descriptive statistics – the overall sample

The descriptive statistics reveal that 71% of sample companies are characterized by the ownership concentration understood as the stake of the majority shareholder of 30% of votes and more. The general characteristics of the concentration and size variables is presented in Table 2.

Table 2: Descriptive statistics

Variable	Average	SD	N
The stake of the largest shareholder	42.88	21.725	100
Assets	3062515	7847866.15	100
Market cap	2124.36	5775.648	

As shown in Table 2 the average stake of the largest shareholder accounted for nearly 43% of votes. The breakdown of sample companies with the reference to the identity of the largest shareholders is presented in Table 3.

Table 3: The breakdown of sample companies with the reference to the identity of the largest shareholders

Shareholder identity	Number	Percent	Cumulative percent
The state	11	11.0	11.0
Foreign investor	15	15.0	26.0
Domestic investor	30	30.0	56.0
Individual/ founder	29	29.0	85.0
Financial	14	14.0	99.0
Other	1	1.0	100
Total	100	100	

The founders' involvement in the ownership structure was noted in the case of 62% of sample companies while the presence of such an investor on supervisory or management board was revealed in the case of 36% studies firms. The average number of shareholders disclosed in the annual reports of sample companies was estimated at 3.5 investors. Additionally, the descriptive statistics reveal that in 74% of samples companies there are up to 4 notified shareholders disclosed in the annual report (i.e. controlling 5% or more) with the following breakdown:

- One notified shareholder – 16% of companies
- Two notified shareholders – 19% of companies
- Three notified shareholders – 16% of companies
- Four notified shareholders – 23% of companies

The detailed data is presented in Figure 1.

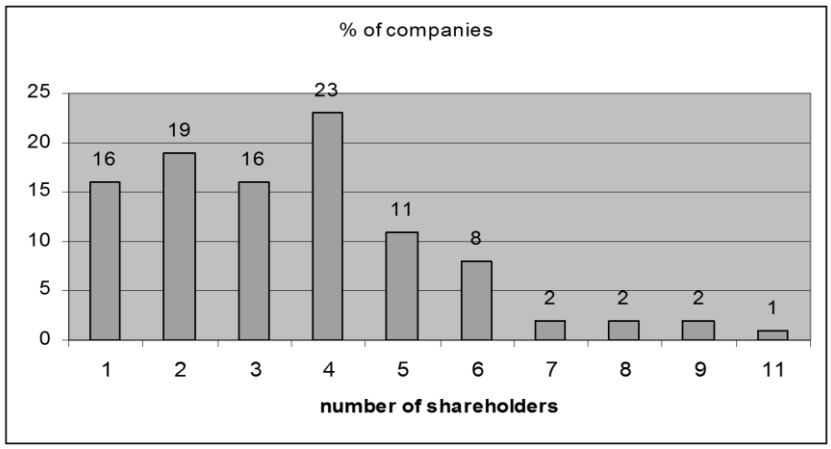

Figure 1: The number of shareholders in the ownership structure of sample companies

56% companies adopted pyramidal structure as the mechanism for control while 14% used dual class shares. The collected data denoted the most severe structural problems of Polish companies – amongst sample companies 84 companies do not form board committees (except for the audit committee), 40 companies do not appoint independent directors, IR websites of 24 companies were categorized as very poor.

Statistical analysis

To test for the first hypothesis assuming that the adoption of a pyramidal structure is more frequent in the founders' controlled companies the following regression model:

$$pyramid = \alpha_1 assets + \alpha_2 founder + \varepsilon \quad (1)$$

where:
pyramid – the use of a pyramidal structure in a company
assets – company size measured by assets
founder – the control of the company by its founder
α_1, α_2 – model parameters
ε – residual
The regression results are presented in Table 4.

Table 4: The adoption of pyramidal structure and founder control - regression results

		B	SD	Wald	Df	Sig	Exp(B)
Model	Assets	-0.0269	0.119	5.101	1	0.024	0.764
	Founder	-0.044	0.014	9.523	1	0.002	0.957
	Const	4.190	1.623	6.666	1	0.010	65.993

As shown in Table 4 the statistically significant regression results indicate that there is a link between adoption of pyramids and founder control. Thus, the results support hypothesis H1.

To test for the second hypothesis assuming that the adoption of dual class shares is more frequent in the founders' controlled companies the following regression model:

$$dual\ class\ shares = \alpha_1 assets + \alpha_2 founder_2 + \varepsilon \quad (2)$$

where:

dual class shares – the adoption of dual class shares in a company
assets – company size measured by assets
founder – the control of the company by its founder
α_1, α_2 – model parameters
ε – residual

The regression results are presented in Table 5.

Table 5: The adoption of dual class shares and founder control - regression results

		B	SD	Wald	Df	Sig	Exp(B)
	Assets	-0.404	0.209	3.742	1	0.053	0.668
	Founder	0.025	0.014	3.490	1	0.062	1.026
	Const	2.766	2.573	1.156	1	0.282	15.896

As shown in Table 5 the statistically significant regression results indicate that there is a link between adoption of dual class shares and founder control. Thus, the results support hypothesis H2.

To test for the third hypothesis assuming lower board independence in the founders' controlled companies the following regression model:

$$Independent\ directors = \alpha_1 assets + \alpha_2 concentation + \alpha_3 founder + \varepsilon \quad (3)$$

where:
independent directors – the presence of independent directors on the supervisory board
assets – company size measured by assets
concentration – the ownership concentration (the stake of the largest shareholders above 30% of votes)
founder – the control of the company by its founder
α_1, α_2 – model parameters
ε – residual

Table 6: The presence of independent directors in founder controlled companies - regression results

		Unstandardized coefficients		Standardized coefficients	t	Sig
		B	SD	B		
Model	Const	-1.775	0.676		-2.627	0.010
	Assets	0.191	0.044	0.434	4.372	0.000
	Concentration	0.151	0.182	0.079	0.826	0.411
	Founder	0.007	0.004	0.153	1.564	0.101

As shown in Table 6 the statistically significant regression results indicate that there is a link between the board adoption and founder control. Thus, the results do not support hypothesis H3.

5. DISCUSSION

The descriptive statistics reveal that the founders' control remain a frequently noted governance mechanisms as it is noted in 62% of sample companies. In the case of 30% sample firms founders get involved in management and supervision indicating that the underdevelopment of the separation of management and control amongst Polish listed companies. 71 of 100 sample firms reveal concentrated ownership and the average stake of the largest shareholder is estimated at nearly 43% what is consistent with the previous studies. Since the newly founded companies are managed or supervised by the first generation of entrepreneurs it is expected that the pyramidal forms depict relatively simple patterns. The Polish market economy has been developing for the last 20 years, so has corporate governance what is illustrated by three final variables denoting the most severe structural problems of Polish companies. Amongst sample companies 84 companies do not form board committees (except for the audit committee provided by the hard law), 40 companies do not appoint independent directors, IR websites of 24 companies were very poor. Statistical analysis delivers additional insights of the characteristics of founders' controlled companies in Poland. The analysis reveals statistically significant results indicating that the founders' controlled companies appeared to be smaller in terms of market capitalization.

The regression analyses delivered statistically significant results indicating that the founders tend to maintain control via ownership mechanisms using dual class shares and pyramidal structures. The statistically significant link supported hypotheses H1 and H2. The control of

the founders is however not associated with the lower board independence. The regression analysis indicated just the opposite – founders controlled companies reveal statistically significant higher board independence measure by the number of independent directors on board. This finding does not support hypothesis H3. This evidence suggest that the control via ownership mechanisms appears to be sufficient for founders and they do not see need for appointing afflicted directors to the board leaving it with the recommended scope of independence or autonomy. An alternative explanation would however question the role of the board in the situation when the founder is able to change its composition immediately ad well as the truly it would cast doubts on the real independence status of board directors of Polish companies.

6. CONCLUSION

This paper focuses on the specificity of founders' controlled companies addressing their overall characteristics and the standards of corporate governance. The paper attempts to fill in the gap in corporate governance literature since there is practically no research on corporate governance practices of Polish founders' controlled companies which make for 62% of the sample firms. As the statistical analysis revealed as compared to their peer the founders' maintain the control over the companies via ownership mechanisms of dual class shares and pyramidal structures but do not dominate the board with the affiliated directors lowering its independence. Therefore the control via ownership mechanisms appears to be sufficient for founders and does not impair the standard of board independence.

The research has however several limitations. The research is based on a small sample of 100 firms covering 25% of companies listed on the Warsaw Stock Exchange. The hand set data was collected for 2011 only. The wider time span of the data would allow to trace the dynamics of the founders' control in Poland as well as depict additional statistical relations. The analysis uses simple statics and traces characteristics of the sample companies while a more complex statistical analysis would be helpful in understanding the logic of founders' control in Poland.

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Complex Assessment of Essential Financial Indicators in Corporate Governance

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ABSTRACT

The **corporate governance** foremost is determined by the expected competitive advantage-oriented changes as well as by the modern and effective management techniques that stimulate the sustainable growth. The complex evaluation of the efficiency of corporation performance may be also indicated as prerogative when reasoning the strategic business decisions and corporate strategy in general. The research aims to generalize the major principles for evaluation of a whole of financial indicators and to construct the adequate assessment models. The framework for complex assessment according to essential financial indicators, identified for a particular corporation and oriented essentially to the multiple criteria evaluation methodology, is presented below. For certain companies from the selected industry (their target group), as basic evaluation criteria, such indicators as profitability, asset and investments return, leverage and liquidity levels, as well as cash flows equilibrium, dividend yield - may be accepted. It is expedient to detail and purposeful group these indicators. For these purposes, Simple Additive Weighting (SAW) method of quantitative evaluation by multiple criteria is suggested. According to the adequate evaluation models, an overall index is determined with respect to the significance of the primary indicators, estimated by expert way. In this assessment process, both the primary criteria (i.e. financial indicators) and the indexes of their groups are also covered. The complex assessment of financial indicators reflecting corporate governance effectiveness is presented for Lithuanian corporation case to illustrate the application of the analytical research results. Such quantitative assessment process is particularly relevant under conditions of dynamic changes of the surrounding macro factors affecting corporate strategy. It is characterized by adaptability (according to the whole of evaluation criteria for an assessment in specific conditions); and it is applicable to the complex investigation of the quality and effectiveness of corporate governance. The algorithmic procedures of proposed assessment process may be incorporated into business management and strategic decisions support system.

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1. INTRODUCTION

The problems of entrepreneurship development, also its transformation processes in conditions of dynamic changes of the surrounding macro factors affecting corporate strategies are widely discussed in scientific research works. Simultaneously, the investigation of interconnections between input of entrepreneurship competitive advantage on country's economic advancement, on the one hand, and country's macroeconomic situation on particular company's performance results, on the other hand, is relevant (Fleisher 2003). It is stressed that the development foremost must be oriented on the expected competitive advantage-oriented changes as well as the modern and effective management techniques that stimulate the sustainable growth. The complex evaluation of the corporation performance efficiency may be also indicated as prerogative when justifying the strategic business decisions and corporate strategy in general (FSF Principles …, 2009). The analytical approach to these processes may be defined as an important object of scientific research.

Of course, the primary financial ratio analysis based on accounting information and financial statements is usually carried out in order to assess the company's financial management performance. The financial statements of companies are examined for comparison in the particular sector that reflects their financial performance characteristics. Many authors emphasize that the relative financial performance indicators have great importance in assessing corporate's financial position, operating results, cash flows, forecasting the probability of bankruptcy. Their analysis leads to a critical look at the performance in comparison with its main market competitors, at the corporate financial position to provide options for improving and adjusting the strategic management decisions (Ramanathan, 1985; Mackevicius, Valkauskas, 2010). Together, it is highlighted that too little attention is paid to accounts of cash flows and changes in equity of companies as a basis to calculate the more relative performance indicators. However, such an analysis should be seen as a complex evaluation of the initial phase.

Inadequate accounting and financial statements not properly prepared, and the accompanying analysis of the company's financial performance may effect on predictable development, the company's value creation, to damage the interests of the owners. Of course, as the result of the absence of reliable information, the company can't make effective strategic management decisions, and investors can't make the right choice of investment property. The papers highlighted the need for a comprehensive analysis approach that comprises the choosing of

compound indicators for measuring the effectiveness of intangible resources management (Zigan, Zeglat, 2010; Harrison, Rouse, and De Villiers, 2012).

R. Laporta, F. Lopez-De-Silanes, A. Shleifer and R. Vishny (2002) examined the effects of legal protection of minority shareholders and of cash-flow ownership by a controlling the valuation of corporations. They found the evidence of higher valuation of companies in countries with better protection of shareholders minority and in companies with higher cash-flow ownership by the controlling shareholder.

A meaningful interpretation of financial innovation, according to which the intermediaries engineer securities with cash flows (preferred by some investors), was presented by N. Gennaioli, A. Shleifer, and R. Vishny (2012). They modified assumptions concerning the investors who neglect certain unlikely risks as well as their demand on securities with safe cash flows. As was stressed, the financial intermediaries cater to these preferences and beliefs by engineering securities perceived to be safe but exposed to neglected risks. Because the risks are neglected, the security issuance is also excessive. When investors eventually recognize these risks, they must fly back to the safety of traditional securities, and markets become fragile, even without leverage, precisely because the volume of new claims is excessive.

In order to meet the wider information needs of users, it is possible to perform an analysis of the financial indicators totality divided into three groups, i. e. evaluate: 1) the financial condition, 2) performance results, 3) cash flow sustainability. However, in financial analysis, the primary indicators of these groups should be purposefully selected according to the object of analysis, in addition to taking into account what the purpose and objectives is raised for analysis. For example, P. Williams and E. Naumann (2011) stresses the importance of the need for expanded investment analysis, because it has the effect (as one of the major sources of evaluation), on the decisions not only of the company owners, but also customers, suppliers, investors. Besides, the balanced scorecard system provides that the assessing the company's financial situation has to be dealt with four critical aspects of the company (customers, innovation, domestic and financial). A key feature of the integrated performance measurement system is that it includes both the absolute and relative financial and non-financial indicators (Lopes, 2013). In addition, the emphasis is done on integration of the performance optimizing, the simulation of financial situation and Balanced Scorecard calculating methodologies. Thus, it can be an important tool for identifying areas for improvement, ensuring continuous operation to be more efficient.

In the process of an adaptation of the performance analysis content, the indicators can be tuned according to the company's marketing strategy, i. e. under the balanced scorecard system formed after an investigation of targeted marketing activities. This may be the subject of an analysis of the some indicator groups, which mainly affects the marketing strategy (Mackevicius, Valkauskas, 2010):

1. Gross and net profit analysis;
Asset profitability analysis;
Return on investment analysis;
Dividend analysis.

2. Market share growth analysis;
Sales growth analysis;
Cash flow equilibrium analysis;
Solvency and liquidity analysis.

3. Analysis of long-term liabilities;
Analysis of the relative short-term debt;
Relative operating cost analysis;
Leverage analysis;

4. Analysis of the employment of financial resources;
Bankruptcy probability analysis;
Investment risk analysis;
Analysis of the cost-minimization options.

In addition to widespread horizontal, vertical and the relative financial analysis, also logic, econometric, heuristic (psychological), statistical (correlation and regression analysis) and other specific analysis methods are applied. Meanwhile, the considerable attention is also given to the relative financial indicators and systems analysis methodology development. So, I. Kotane and I. Kuzmina-Merlin (2012), examining the SMEs financial results for improving the assessment problems in Latvia, highlights that they usually use the average indicators of the branch calculated by adequate technique in order to evaluate the creditworthiness of the borrower financial institutions.

When expertizing a whole of financial indicators, there are few preconditions to be improved:

- the calculations of financial indicators to be used were developed many years ago and they are considered to be universal: they do not consider the size of the company and the form of business organization;
- the quality of information included into financial statements is most complex issue based on which the financial coefficients are calculated;
- the specific requirements of international standards are not always satisfied, and sometimes there are not clear whether financial statements were drafted according to the international standards.

As a result, the information on financial statements and financial coefficients of companies calculated on this basis sometimes can mislead the investors taking into consideration the conditions mentioned above (Principles …, 2010). The size of corporation and financial cycle stage is also important to take into account. As it is known, the most characteristic feature of SMEs is limited financial resources and difficulties in receiving them. Due to it, for example, the receiving of bank loan has become very topical in the context of borrowed capital. Therefore, some authors propose the inclusion of indicators of borrowed capital in general, such as bank loans, and exclusively carry out the company's credit policy evaluation (Kotane, Kuzmina-Merlino, 2012).

On the other hand when studying corporate governance quality, and particularly the relation between governance level and performance results, W. Khiari, A. Karaa, and A. Omri (2007) have achieved that the probability of being in the cases is more important when the firm size, the dividend yield and the return on equity (ROE) are high. While a high leverage level decreases the chance to be in the non-performing group**.** They concluded that the highest performing system is characterized by an inside control efficiency and an inside financial control efficiency. The non-performing system is characterized by a managerial discretion, an ownership concentration, a dominance of the board by the CEO and a manager entrenchment.

In this context it is clear that the formation of generalized assessment principles still remains actual, taking into account the quantitative assessment of the general methods and orienting it on MCDM system. Actually, the available potential for the theoretical and methodological quantification of social processes can be a conceptual basis when addressing this problem (Zvirblis, Buracas, 2012a, 2012b).

This paper aims to create the major principles for evaluation of a whole of financial corporate governance indicators and to construct the adequate assessment models. *The object of research* is corporate governance. *The methods of research* are systemic analysis of scientific publications and quantitative assessment methods, multiple criteria *SAW* method.

2. THE SUBSTANTIATION OF COMPLEX EVALUATION METHOD

The examination of quantitative evaluation methods in general, the Analytic Hierarchy Process (AHP) method can be distinguished in particular; it is based on the relationship scale use and application when evaluating the effectiveness of auditing services. But the problem is that the important precondition - to maintain a coherent scheme of priorities for the entire hierarchical structure - is often violated. The essence of the priorities' synthesis is in the setting of general priority for local priorities what requires the politically correct formulation of the task (Mizrahi, Ness-Weisman, 2007).

Without a doubt, the multiple methods are those of the most promising. They may be divided into four main groups: ranking, grouping (classification), evaluation and optimization methods, of which the group of evaluation methods is closest to lifting tasks and corresponding to test object is. The *Simple Additive* Weighting *(SAW)*, *Complex Proportional Assessment* (*COPRAS)* as well as Technique for Order Preference by Similarity to Ideal Solution (*TOPSIS)* methods are distinguished within this group. The application of these methods are reviewed in detail by W. Zhang and H. Yang (2001), F. Peldschus (2007), E. K. Zavadskas and Z. Turskis (2011), M. Doumpos, C. Gaganis, and F. Pasiouras (2012).

The complexity of the tasks and an extremely wide range of criteria determined the methods of multicriteria choice. These techniques include models, the application of which requires the relevant information, and evaluation conditions can be described as deterministic. In principle, the evaluation is based on the criteria that characterize the object of evaluation matrix (based on statistical data or expert assessments) and the criteria significance (weight) matrix.

The quantification of social processes is widely applicable, especially for the integrated values of SAW method. But this method allows you to combine the original variables (factors) of different nature and to determine the integrated size when all indicators are maximized. In addition, it is assumed that given variables (factors) are mutually independent, as it was revealed by W. Zhang and H. Yang (2001), V. Podvezko (2011), R. Ginevicius, V. Podvezko,

and Sh. Bruzge (2008). The sum of the normalized indicators' values weighed (no dimensional) is calculated by such a way, and the best option is usually in line with the highest value of the integrated criterion. In particular, it is important to develop adequate criteria and indicators system by using the SAW method, which requires, in principle, to examine the evaluation methodology taking into account the specifics of the problem solved.

As the absolute and relative indicators with various dimensions can be covering the maximized indicators (R_{ij}), they are translated into the appropriate comparison, i. e. normalized rates r_{ij}, in the general case, when applying this method, for example, by the following formulas (Podvezko, 2011):

$$r_{ij} = \frac{R_{ij}}{\sum_{j=1}^{m} R_{ij}} \quad (1)$$

where r_{ij} – normalized value of *j*- indicator within *i*- est group.

Under this approach requirements, the minimized indicators can be covered if they are transformed into maximized. The values of minimized indicators (min R_{ij}) can be transformed to normalized rates r_{ij}, for the general case by such way:

$$r_{ij} = \frac{minR_{ij}}{R_{ij}} \quad (2)$$

The formula (2) shows that the value of minimized index (the lowest possible within grading system) takes the maximum value in this way to the unit. Basic model of the criteria that determine a certain level of the measured object, can be expressed at the general case for the whole evaluation using SAW method (Zhang, Yang, 2001; Zvirblis, Buracas, 2012a, 2012b), in this way:

$$Y(I) = \sum_{i=l}^{i=h} a_i x_i \quad (3)$$

where *Y(I)* - general evaluation index; X_i - scores of the evaluation criteria describing general index a_i - the parameters of the significance of criteria' direct effect on the amount of integral index *Y(I)* (when using this method, an important condition is: the parameters of the significance must be set in the range [0,1], and their sum must be equal to 1), *n* - number of evaluation criteria in the system.

Importance of the criteria can be set so solely on the basis of the calculations using objective information for and by expert way (Ginevicius, Podvezko, Bruzge, 2008). The reliability of expert evaluations is achieved by an appropriate technique, for example, according to the values *W* of the concordance coefficient and to the significance of χ^2 parameter for this factor (with determining the concordance coefficient *W* and the Pearson's chi-square test - the significance parameter χ^2 of concordance coefficient for the achievement of reliability of expert examination data; Kendall, 1979).

As pointed out by the authors of *COPRAS*, this method is applicable to the quantification of multiple processes, possible alternative solutions (considered a discrete number of decision / project making alternatives), as well as when it comes to coverage of the maximized and minimized evaluation criteria describing the evaluated object (Zavadskas, Kaklauskas, 1996). The impact of the maximized and minimized evaluation criteria (indicators) by *COPRAS* method on the generalized result is assessed individually. If only maximized criteria are applied and their values are distributed by the classical normalization (amount of normalized values for each criterion equal to one), the results of calculation by *COPRAS* method should coincide with the obtained results of the evaluation by *SAW* method. So, the applying of *COPRAS* is foremost associated with an arrangement of compared alternatives in their preference order as well as reasoning the most effective one (Kaplinski, Peldschus, 2011; Podvezko, 2011; Zavadskas, Turskis, 2011).

TOPSIS method may be applied when making the comparative assessments (if decision or project making solution alternative has been determined by the shortest distance to the ideal one and the greatest distance from the negative one). It is based on specific aggregation function representing ,,closeness to ideal" (vector normalization is applicable); however, it does not consider the relative importance of these distances (Kaplinski, Peldschus, 2011).

The several methodological emphasis, that are relevant for the evaluation of social processes according to multicriteria methodology, have to be distinguished, such as:

- Characteristic of each approach
- The highest possible number of alternatives evaluated
- The maximum number of parameters, which describes the options
- Formation of the system of primary and integrated evaluation criteria
- The adequacy and reliability of objective information necessary foe assessment
- The authenticity of the assessment process formalizing
- The options of the assessment process description by quantified primary criteria
- Incorporation options of expert evaluation into a comprehensive process of evaluating

- The opportunities of making the professional group of experts
-The methodological possibilities of the results' reliability analysis

Further analysis of the optimization problem (in the sense of decision results) of an investigated system in perspective, it is appropriate to focus also on the *objective function* method when the alternative is supposed to be optimal when it satisfies the two conditions. First, it is one of the expected variants, and second, it ensures that the proclaimed goal of maximum (or minimum) could be reached. In general, in order to find the optimal solution (by mathematical programming), you should create a model of optimization, especially involving mathematical expressions (dependencies), describing the main characteristics of the simulated object, indicators and relationships between them, also their system.

In addition, this model includes an objective function which expresses the choice of optimality criteria, as well as addictions describing the specific conditions that must be satisfied when seeking of the problem solution. The system of constraints is expressed as a system of equations and inequalities which reduces the set of possible options. Linear programming problem is solved if the objective function is linear and all the restrictions are described by linear functions (i. e. the recorded equations and inequalities are of the first degree). This is the mathematical programming area with great application value and the theoretical field best explored; although the setting of adequate objective function, foremost in finance management, is often problematic.

It was concluded, following the analysis carried out, that the *SAW* method is applicable by priority for the complex valuation of financial indicators that reflects a state of corporate governance. The key to his advantage in this case is that the *SAW* method, in principle, allows one to evaluate the indicators of a corporation analyzed separately, in addition to but not including the alternative options and their compositions.

3. PRINCIPAL PROVISIONS FOR ASSESSMENT AND ADAPTED MODELS

It is essential to include the whole of financial indicators relating to corporate governance of a particular company, when comprehensively assessing the adequate specificity of the performance in each sector. The financial indicators of several target groups, of course, should

be included into the system of criteria. Thus, the partial criteria that determine the integrated criterion and, in turn, covering the initial evaluation criteria (financial ratios), which has significant influence over the size of the assessed value, should be included into complex system of assessment.

Some authors considering the information provided by industrial companies identified the operational profitability, financial condition, financial management and resource management indicator groups (Mackevicius, Valkauskas, 2010). The indicators describing level of financial risk leverage can be singled out in this context; one should also pay attention to the cash flows equilibrium. It can be assumed that this is the main criteria for the general case. However, their whole has to be supplemented by specific criteria and indicators that are meaningful and revealed in the SWOT analysis, and for the identification and assessment of competitors in the market at the specific and the more significant cases.

The request to maximize the indices of the company's activities (when forming its financial performance database) for a complex is often problematic to fulfill in practice. Therefore, the present correlative assessment models have been adapted according to criteria and indicators as covering the whole, i. e. according to the information stored in the database. In principle, the assessment (by means of the said *SAW* method) of the multitude of essential financial indicators (as primary evaluation criteria), two indicator pillars are expedient to compile. Together it should be noted that description of these pillars can draw attention to the 5-8 most important (identified) primary indicators as evaluation criteria.

A whole of typical indicators has been analyzed taking into account not only the scientific publication findings, but also the global economic competitiveness indicators included into few pillars by World Economic Forum (*WEF*). The following integral indicators for example, for Lithuania in 2011-2013, may be usually indicated: creation of value chain breadth, firm-level technology absorption, availability of latest technologies, spending of companies on R&D, state of cluster development. They, of course, are important whereas reflect corporate governance level in a country in general. At the same time it must be noted that we focus on an assessment of financial performance indicators.

The expanded financial indicator pillars adopted for manufacturing corporations and compiled taking into account these preconditions, also the results of an accomplished initial investigation, are presented below. It should be emphasized that covering financial indicators are calculated mainly according to the audited financial statements of companies.

Pillar *A*:

A1. Sales growth rate

A2. Gross margin of profitability

A3. Net margin of profitability

A4. EBITDA

A5. Sales profitability ratio

A6. Price earnings ratio

A7. Return on assets (ROA)

A8. Return on investment (ROI)

A9. Dividend yield.

Pillar *B*:

B1. Solvency ratio

B2. Liquidity ratio

B3. Coverage ratio

B4. Cash flow to revenue ratio

B5. Cash flows equilibrium

B6. Stock turnover ratio

B7. Market value of securities

B8. Scored risk level of securities.

The pillar (*A)* of essential financial indicators was focused on indicators having quantitative expression. There are included mostly the traditional indices - sales growth rate, gross and net margin of profitability, ROA, ROI, sales profitability ratio. The more complicated financial indicators (both calculated using data of company‘s profit and loss statement, determined on basis of appropriate market data) have been included into pillar (*B*), i.e. solvency, liquidity, coverage ratios, cash flows

equilibrium (by common analysis, the cash flows equilibrium doesn't applied before). Such indicators as the stock turnover ratio, market value of shares and bonds as well as scored risk level of securities may be indicated mostly for companies which shares are listed on the market.

The determination of overall index relatively (comparative) reflecting corporate governance effectiveness is based on the models suggested for indexes of pillars of financial indicators identified for particular corporation and having different impact significance on dimension to be measured. The models in this case express the direct relationships in investigated system; values of the primary financial indicators must be transformed into dimensionless and maximizing.

Firstly, the pillar index *A(I)* (as first partially integrated criterion in the complex evaluation process) applying the *SAW* method must be estimated, and the following background model may be employed:

$$A(I) = \sum_{i=1}^{i=r} a_i A_i ; \sum_{i=1}^{i=r} a_i = 1, \qquad (4)$$

where A_i - normalized value of the primary criterion (sales growth rate, margin of profitability, ROA, ROI, etc.); a_i – the significance parameter of a primary criterion A_i according to impact on the pillar index *A(I); r* – number of primary criteria determining the pillar index *A(I)*.

In analogous way, the integral index *B(I)* of the pillar *B* (as second partially integrated criterion) may be defined on basis of an equation:

$$B(I) = \sum_{i=1}^{i=s} b_i B_i ; \sum_{i=1}^{i=s} b_i = 1, \qquad (5)$$

where b_i – the significance parameter of impact of a primary criterion B_i (coverage ratio, solvency ratio, cash flows equilibrium, stock turnover ratio, etc.) on the index *B(I); s* – number of primary criteria determining the pillar index *B(I).*

To calculate the *B(I)* index according to the model (5) the normalized values of certain primary criteria of the pillar *B* (not having quantitative expression) should be determined by expert way, without quantification (among them the cash flows equilibrium), as mentioned above, in the range [0,1] when

1 is consistent with the absolute highest rating. Besides, the dimensionless values fixed on derivative estimate basis may be also applied.

The value of the index *CGE(I)* (overall score**)** may be determined on the basis of indices *A(I)* and *B(I)* previously calculated in accordance with their weights. When you have two primary criteria pillars and SAW method is applied, it can be determined according to the following simplified model:

$$CGE(I) = k_a A(I) + k_b B(I); \quad (6)$$

where k_a and k_b - weights (determined by expert ranking) of the partially integrated criteria *A(I)* and *B(I)* respectively describing the degree of their impact on the overall index *CGE(I);* the sum of weights must be equal to 100 percent.

The oneness of the proposed models is also in the using of different, not predetermined, significances of primary criteria and in the adequate differentiation of pillar weights.

As we can see, such approach supposes hierarchical assessment process to be defined. On the first stage, primary evaluation criteria have been examined, the pillars of essential (identified) financial indicators have been configured, the indices of these pillars and overall index have been calculated on basis of presented models, using *SAW* method on the second stage. So, we propose the complex assessment technique for indicators relatively reflecting the effectiveness of corporate governance in particular corporation; it is developed according to the principles of multiple criteria evaluation methodology in *MCDM* system and may be incorporated into a company's decision support system.

4. ASSESSMENT CASE: THE LITHUANIAN FURNITURE MANUFACTURING COMPANIES

Complex assessment of financial performance indicators was carried out using the principles developed for the case of two competing Lithuanian furniture manufacturing companies in Vilnius (VLB) and Klaipeda (KLB) according to their semiannual financial statements for 2013. Their shares are listed on OMX Vilnius' Stock Exchange, and were assessed as a whole in accordance with the identified evaluation criteria (Table 1). The assessment models (based on *SAW* method) were adapted according to identified evaluation criteria for each pillar.

The normalized values of identified (maximizing) criteria [A_i] and [B_i] for the general case can be calculated by the formulas presented above (their variants are presented by Podvezko, 2011). In this case, they were calculated by simplified way: [A_i]= $A_i / A_{i\,max}$ and respectively [B_i]= $B_i / B_{i\,max}$ (A_i and B_i - the values of the financial indicators for respective *A* and *B* pillars of the companies; $A_{i\,max}$ ($B_{i\,max}$) - maximum (highest) value of the indicator between comparable (competing Lithuanian and foreign markets) companies. If value of any financial indicator of the company is the highest among comparable companies, then its normalized value is equal 1.

Table 1: Results of the estimation of pillar indices for Lithuanian companies in first half of 2013 by *SAW* method

Pillars of identified financial indicators	Symbol	Normalized value for (VLB)	Normalized value for (KLB)	Significance parameter
Pillar A				
Gross margin of profitability	A2	0.73	0.69	*a*=0.26
Sales growth ratio	A1	0.81	0.77	*a*=0.21
ROA	A7	0.59	0,63	*a*= 0.18
ROI	A8	0.69	0.65	*a*= 0.18
Price earnings ratio	A6	0.88	0.87	*a*=0.17
Index of pillar A	***A(I)***	**0.74**	**0.72**	
Pillar B				
Liquidity ratio	B2	0.78	0.74	*b*=0.28
Cash flow to revenue ratio	B4	0.71	0.75	*b*=0.22
Coverage ratio	B3	0.81	0.69	*b*=0.19
Solvency ratio	B1	0.88	0.83	*b*=0.18
Stock turnover ratio	B6	0.77	0.71	*b*=0.13
Index of pillar B	***B(I)***	**0.79**	**0.75**	

Identified indicators have uneven weights, reflecting their different influence of profitability, liquidity and other indicators on overall index. This were ranked by seven experts (including the authors), and calculated concordance coefficient *W* (Kendall, 1979) revealed the consistency of their opinions. The calculation of a parameter χ^2 (distribution of concordance coefficient) would be superfluous procedure according to the number of indicators identified in each group. Achieved value of *W* = 0.74, when the compatibility is considered satisfactory if *W* = 0.7-0.8. The weights of pillars were evaluated adequately: for pillar *A* weight 40%, for pillar *B* – 60% (table 1).

Evaluation results for the corporations (VLB and KLB) are as follows: index of pillar *A* respectively is 0.74 and 0.72, index of pillar B is 0.79 and 0.75 (Table 1). Calculations of the overall index according to model (6) show that it is equal 0.74 for KLB and 0.77 for VLB, mainly due to better scores of such indicators as gross margin of profitability, sales growth ratio, coverage ratio, ROI; scores for cash flow to revenue ratio and ROA reduced the gap.

Figure 1 reflects the essential procedures of typical multicriteria evaluation process. Both options can also be simulated providing by primary indicators, as well as by their groups, also according to their different impact on the significance of the parameters. The comparative ranking for target group of companies according to partially integrated criteria as well as overall index of financial indicators can be performed by including the additional programming block.

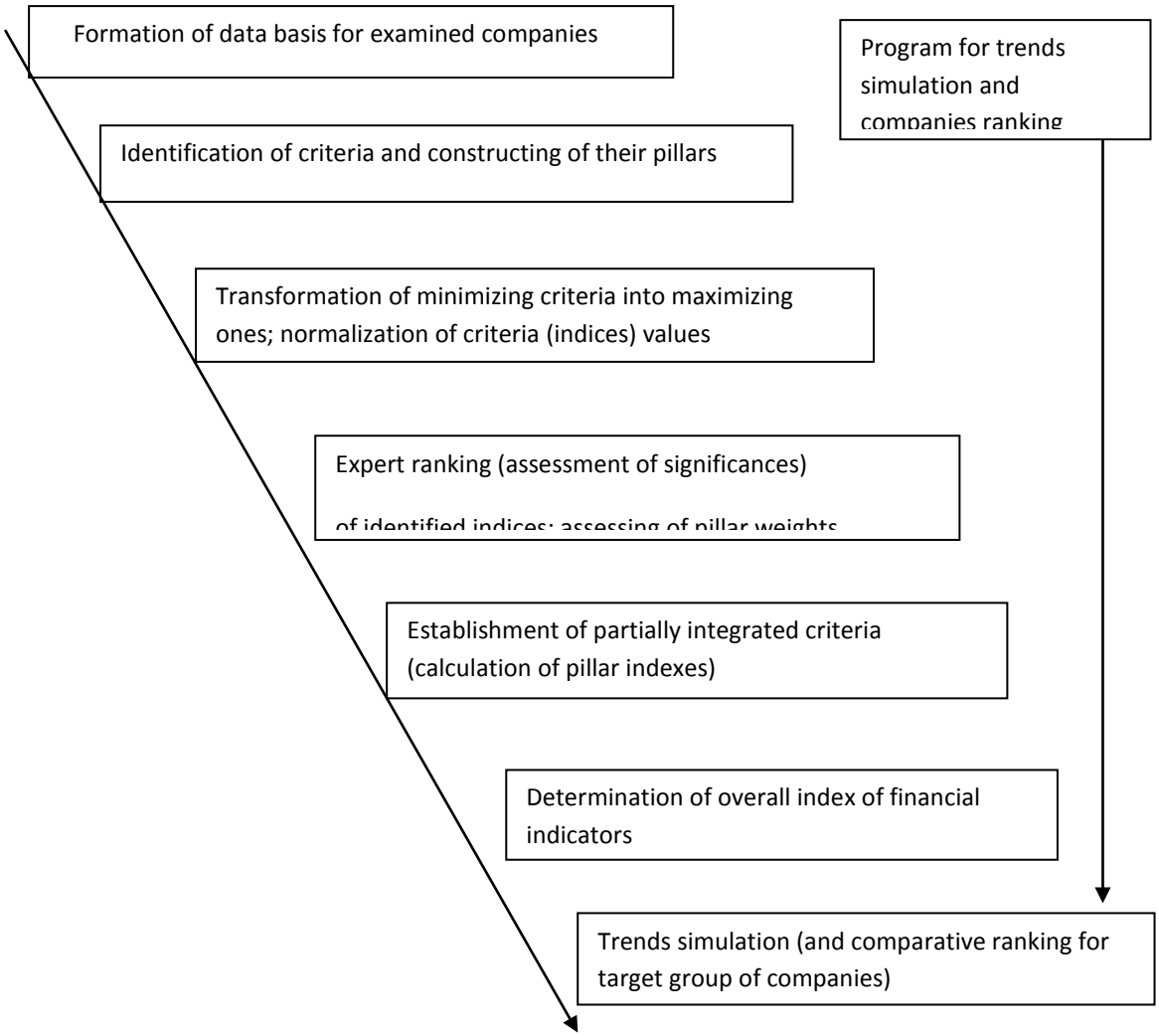

Figure 1: Typical algorithm scheme of the multiple criteria assessment procedures

It should be emphasized that *COPRAS* method is worthy to be applied in order to evaluate and rank the companies in this sector in Lithuania, according to key financial performance indicators. The principles of mathematical expressions using this method would be as follows (Podvezko, 2011):

$$K_j = S_{+j} + \frac{S_{-\min} \sum_{j=1}^{n} S_{-j}}{S_{-j} \sum_{j=1}^{n} \frac{S_{-\min}}{S_{-j}}}; \qquad (7)$$

where K_j – the complex evaluated value of *j* – th company; S_{+j} and S_{-j} – respectively the sums of normalized values of maximizing and minimizing primary evaluation criteria.

$$S_{+j} = \sum_{i=1}^{m} \tilde{r}_{+ij}; \quad (8)$$

where S_{+j} - sum of weighed characteristics of $\tilde{r}_{+ij}$ for maximized indices *i* the best value for which is the largest for all corporations;

$$S_{-j} = \sum_{i=1}^{m} \tilde{r}_{-ij}; \quad (9)$$

where S_{-j} - sum of weighed characteristics of $\tilde{r}_{-ij}$ for minimized indices *i* the best value for which is the minimal for all corporations;

The values for $\tilde{r}_{-ij}$ are consecutively calculated by formula:

$$\tilde{r}_{ij} = \frac{r_{ij}\omega_i}{\sum_{j=1}^{n} r_{ij}} \quad (10)$$

where x_{ij} - value of *i* –th index on *j*- th corporation; q_i – significance of šio this index; *n* – number of variants (corporations) to be compared.

The proposed evaluation process is characterized by the adaptivity of the original and integrated evaluation criteria to meet the specific evaluation. This is an important methodical tool for uncovering corporate reserves in order to improve their governance and financial performance and, as result, to ensure the sustainable development of the company.

5. CONCLUSIONS

The enterpreneurship development also its transformation problems as well as interconnections of country's macroeconomic situation with the particular company's performance results are widely discussed in scientific research works. However, it is not enough of studies dedicated to the complex assessment technique of indicators reflecting **corporate performance** efficiency; the adequate quantitative evaluation methodology is still not applied in this field.

We find that quantitative multiple criteria evaluation methods that are the basis of the *MCDM* system are well suited for complex assessment of an integral whole of financial corporate performance indicators. Actually, the adequate assessment technique should be incorporated into decision support system of a company. It means the determination of the overall dimension for financial indicators having different importance parameters for increasing company's competitive strategy. The main principles and assessment technique may be also based on a set of financial indicators identified for particular corporation (as primary evaluation criteria) selected into task pillars (as partially integrated criteria). It should be emphasized that essential key financial indicators are calculated by using audited company's balance sheet and profit (loss) statement.

The analysis of integrated quantitative assessment methods revealed that at present case it is appropriate to carry out using the *Simple Additive Weighting (SAW)* in a while, and the *Complex Proportional Assessment (COPRAS)* is appropriate for comparative evaluation of competing companies of a whole sector. It allows the *SAW* method to be applied despite the different nature of the criteria (i. e. both quantitative and qualitative their parameters) when they are maximized and to set the integral measure according to their differentiated significance.

Whereas a whole of financial indicators in particular company is assessed, the proposed technique is based on the models adequate to applied *SAW* method. The key to his advantage in this case is that the *SAW* method, in principle, allows one to evaluate the indicators of a corporation analyzed separately, in addition to but not including the alternative options and their compositions. This approach is backed-up on the consecutive procedures of a hierarchical assessment system. Foremost the normalization procedure of primary financial indicator values must be also fulfilled, the impact significance parameters of primary criteria may be calculated using the *AHP* method or assessed by expert ranking method. Further, the indexes of each pillar have been established and, in turn, the generalized measure - the overall index - has been determined, applying promising assessment models. The oneness of this

technique lies also in the applicability of different significance parameters of criteria and weights within the task pillars.

We noted that the *COPRAS* method may be also recommended when the case of the target group of competitive companies in industry is investigated with purpose to evaluate and rank the companies in the sector with the essential activities of financial indicators reflecting corporate governance effectiveness. The performed complex assessment of Lithuania's furniture manufacturing companies VLB and KLB in this study in accordance with measurement technique reasoned for the first half of 2013 that overall (relative) index of identified primary financial indicators was scored 0.77 and 0.74 respectively (theoretically maximum score may be equal to 1). As it was indicated, the overall index for company VLB prevail firstly with better scores of such indicators as gross margin of profitability, sales growth ratio; for this company, and the score of cash flow to revenue ratio is worse.

An algorithm of computer-generated assessment process may be recommended to apply when modeling the different trend effects (in particular, with the scenarios formation). The application of such complex assessment technique is significant also for making reasoned company's strategic decisions also for the growth of competitiveness and at the same time for sustainable development of a company.

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The Concept of Human Resources Corporate Developing as a Factor of Labor Performance Growth

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ABSTRACT

The practice of using and distributing economic resources in contemporary national economies reflects insufficient effectiveness of their running including human resources management. The continuous trend of their (these resources) unreasonable using indicates that: on the one hand the abilities of workers are realized lower than possible level on the other hand the available potential of human capital is limited to perform certain labor functions. The aim of the article is to elaborate the concept of human resources corporate developing on the basis of staff assessment methods synthesizing the aspects of theory marginal productivity and modern methods of effective human resources management. The author's idea, which the concept is based on, proposes continuous stage-by-stage corporate training on an employer's or manager's initiative and personal learning from the position of employee him/herself. The application of classic and innovative approaches in staff management oriented on labor productivity growth, optional combining professional abilities of a worker in a team as well as effective methods of staff assessment by recruiting and using labor force further the achievement of staff match and settlement of arising contradictions. The presented article will be of use to scholars, post-graduate students, doctoral candidates, human resource managers and persons who are interested in problems of labor performance growth.

ARTICLE INFO

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Competence, Human resources management, Labor efficiency, Qualification, Staff conformity

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1. INTRODUCTION

The practice of distributing and using human resources in contemporary organizations reflects insufficient effectiveness of their running both on rational and moral point of view. On the one hand abilities of workers are realized lower than possible level on the other hand the available potential of human capital is limited to perform certain labor functions that leads to probable economic losses as a result of staff mismatch to corporate requirements. The application of classic and innovative approaches in staff management oriented on labor productivity growth, optional combining professional abilities of a worker in a team as well as effective methods of staff assessment by recruiting and using staff further the achievement of staff match.

To solve the problem of staff mismatch on corporate level it is important to expose possible causes its appearance.

They can conclude:

1) Drive for saving and cutting costs in result of recruitment of low-qualified labor force;
2) Application of incorrect recruitment techniques that do not allow assessing applicant's professional mastery objectively;
3) Workers' disinclination to develop their professional abilities and competences according to changing conditions, requirements and technologies;
4) Employers' unwillingness to train employed specialists because of economic or psychological motives;
5) Absence conditions for human resources developing in some organizations.

The list of reasons for appearance of staff match can be continued in dependence of goals of participants of labor relations, company size and its functions and so on. Researchers' attention is concentrated on human resources management techniques (HRM-techniques) oriented on application of methods of recruitment, assessment and staff development leading to reduction staff mismatch. The aim of the article is to elaborate the concept of human resources corporate developing synthesizing the aspects of theory marginal productivity and modern methods of effective human resources management including stage-by-stage corporate training.

Let us note that application of classic and innovative approaches in staff management oriented on labor productivity growth, optional combining professional abilities of a worker in a team as well as effective methods of staff assessment by recruiting and using labor force further the achievement of staff match and settlement of arising contradictions.

On this stage, it is necessary to consider the category «staff match» which is a determinative meaning in the article. *Staff match, in other words, professional and qualifying match* is suitability of an individual employee, his/her professional competence for held position or executable labor functions. The rate of this suitability is exposed on the quantitative or qualitative level forming the general picture of a worker's professional competitiveness and competence:

a) In regard of certain position (the characteristics stated in the corporate competence card are considered as the reference ones);

b) In labor market in the whole (a professional portrait created on the basis of a skilled manuals and general requirements to specialists is considered as a sample).

The level of professional competitiveness in regard of independent working position is evidence of professional match or mismatch – partial or full unsuitability of an employee that leads to rising or decreasing professional mobility. *The rising professional mobility* reflects the realization of labor potential lower than possible level when abilities are partly uninvolved (that is not advantageous in the first place for the worker him/herself because his/her competitiveness rate allows performing tasks that are more complicated). *The digressive professional mobility* is professional limitation by performing labor functions (that is not advantageous in the first place for an employer because labor performance of a worker less according to standard requirements). In case of need, staff match can be calculated for a group of employees employed in continuous production cycle or interrelated to solve general problems on the concrete stage or for a team executing project.

The above stated aspects of mismatch (rising or digressive mobility) reflect underlying economic and managerial contradictions on the level of economic subject (organization) arising in interrelations between owners and hired staff (managers and subordinates). The basic methodological functions of contradiction principle reflect «searching the possibility of settling previous contradiction and forming new, more developed economic relationship» (Motcherny, Larina, Nekrasova, 2010).

The economic contradiction reflects interthinking, internegation, interpenetration of objective economic demands, individual goals by producing, changing, distributing and using both material and spiritual goods in conditions of limited resources. The fundamental contradiction of management is «that on a par with objective need for giving public character to management setting apart management object from elaborating and taking managerial decisions is taken place» (Nekrasov, Golovko, 2011).

The different elements of staff policy (hire, professional adaptation, employment of labor force, corporate training, planning and developing career) are oriented on settlement of economic and managerial contradictions from the position of professional and qualifying match achievement. The internal contradiction is a source of development and improvement that stimulates in its turn human resources management (HRM) to match different economic interests and search of ways of effective interrelation of labor relations participants. On this base the task of HRM is

creation of the concept of staff corporate developing including directly workers' training and improving their professional skills to raise labor performance.

2. INTERRELATION OF STAFF MATCH AND PERSONNEL RECRUITMENT

In the realty, absolute staff match (100 % worker's labor potential realization on the one hand and 100 % economic resources operation to decide organizational questions and involve available human capital on the other hand) is a complicated task (like absolute full employment) in view of continuous changes. Both production conditions (new equipment is implemented, manufacturing technologies are improved) and the worker him/herself whose professional skills level is subject to continuous dynamics (rising or on the contrary dropping) are changed. It is reasonable to speak about optional limited by real circumstances realization of professional abilities. However this fact should not prevent try to achievement staff match close to perfect 100 % ratio necessary for optimal distributing and applying human resources because their irrational using is economically unreasonable for both subjects.

In particular, *employer* faces the next variants:

1) In case of staff employment with human capital higher than the required one:
   - Looses advantages from unrealized worker's labor potential;
   - Bears more expenses caused more costs on keeping qualified labor force (if labor remuneration is proportional to competence and qualification rate).
2) In case of staff employment with limited human capital receives potential profit less because of labor force mismatch in view of its low qualification).

In his/her turn *employee* faces the next variants:

1) Has losses of profit caused his/her own unrealized labor potential possessing professional competitiveness on the rate higher than the required one;
2) Receives labor remuneration less if his professional competitiveness lower than the required one and pay is proportional to qualification rate and labor output. It is suggested linear dependence between qualification rate and return from labor that is the lower qualification rate is the lower labor output (utility) from labor contribution into production performance (similar situation is does not always happen in realty because the formal qualification rate cannot influence on labor efficiency either).

The last variant is especially advantageous for an employee (applicant) because the accepted reference level stimulates professional development and competitiveness growth on in-house and external labor market.

The employer aimed at maximization of labor force utility in his/her own interests creates recruiting policy providing maximal (optimal) quality of the most profitable for organizational requirements applicants. However, in real circumstances they often hire unsuitable staff in view of different reasons:

- Scarcity or full absence of suitable labor force on labor market;
- Implementing new technologies whose pace is quicker than the one of professional learning;
- Limited organizational resources to recruit required specialists, satisfy their needs (incentive, social etc.) and supply expected by them benefits;
- Inadequate (irrelevant) competence staff level assessment in view of information misrepresentation by recruiting and «embellishment» of professional abilities by an applicant;
- Inadequate competence staff level assessment in view of absence of suitable resources (staff, information, finances etc.) to carry out full-fledged assessment.

To rise rate competence assessment quality «interview on competences» is applied. Their range is very various that's why 5-10 key criteria having most significance to defined position and fulfill certain professional tasks are chosen in the result. «Interview on competences lets assess not applicant's presentations about him/herself but his/her actions: what he does, did at previous working place in details, how he/she fulfills the suggested problem situations» (Mironova, 2014).

Therefore, the aim of staff recruiting is supply optimal number of the most appropriate to employer's (organization) requirements applicants and creating working field for the next stage – staff selection whose task is to choose necessary quantity of the most suitable persons of available challengers.

The aims of staff recruiting and selecting form HRM strategy in point of forming (planning labor needs, recruiting, selecting, assessing and employing) human resources (Figure 1).

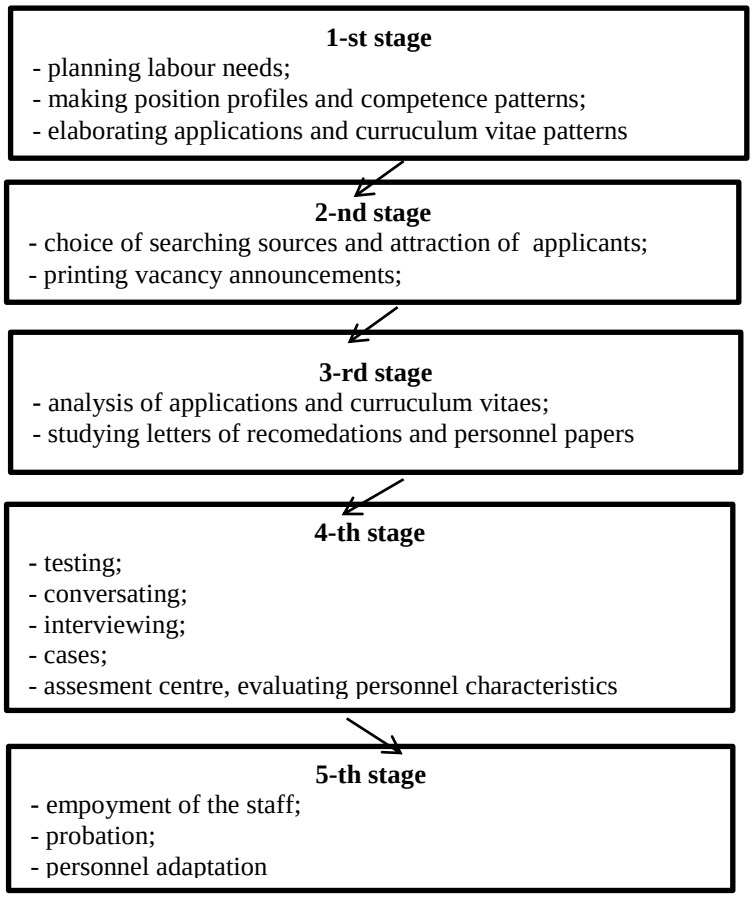

Figure 1: Forming human resources

Human resources manager (HR manager) should carefully analyze workplaces models taking into account linear and functional managers desires, elaborate or improve having position profiles and competence patterns in according to that vacancy announcements, applications and curriculum vitas samples necessary for primary selection stage are made. The last ones (applications and curriculum vitas) are so structured to get maximum of reliable and objective information about applicant with the least costs of time and other economic costs as well as not to miss valuable applicants.

The methods applied by assessment centers have been became actual. They let «to simulate working situations by which a person has to show if he/her can or cannot do it. In stress situations when a participant is limited with time, resources, for example, cannot use prompts, he has to make all decisions himself» (Vutchetitch, 2014), that gives a chance to show his abilities at the maximal level. The reliability of received data is high enough – «each participant is observed by some persons – at least two observers by each exercise». In addition to that, «some methods let look at the participant by various situations. There are interactive methods – the participant communicates with other participants or with role

players by solving the task; … individual group exercises – the participant is solving tasks him/herself and assessors analyze, make conclusions from his/her results» (Vutchetitch, 2014). So a person can be seen from different positions and his/her competence can be assessed more objective.

The result of recruiting company suggests at least that employed labor force is suitable for employer's expectations. In this case, costs on it including expenses entrepreneur's labor are equal or approximately equal to its return including the least entrepreneur's return – payment of entrepreneurship factor that forms break-even-point:

$$I_{lf} = C_{lf} \quad (1)$$

where I_{lf} – return from using labor force;

C_{lf} –costs on labor force.

The ideal for an employer result characterizes situation when realized labor force exceeds his (employer's) expectations and gives higher return including payment of entrepreneur's labor in comparison with expenses on it and in comparison with planned return that leads to additional surplus value:

$$I_{lf} > C_{lf} \quad (2)$$

By other variants when misbalance between worker's professional level and held position, performed labor functions is exposed and expenses on labor force do not justify investments in human capital made by its employing and using the problem of staff mismatch is arising:

$$I_{lf} < C_{lf} \quad (3)$$

Let us consider possible variants of employer's behavior faced the problem of staff mismatch. One of variants suggests diminishing payment until worker's average labor efficiency is equal with the standard one – the indicator fixed in organization or comparable with the average indicator in this professional field on labor market in the whole. Till average labor efficiency

of a new employee matches the required level, costs on employment of mismatched staff are higher than the planned ones per wage-unit paid to it. The reason is insufficient labor efficiency fulfilled by low-grade labor force. In the result the employer either receives profit less (if the price of goods is not marked up and paid more higher reward in comparison with labor return) or marks up price and does not win as a rule as average price dictates price forming conditions for goods and services producers on competitive market.

Therefore, staff mismatch arisen as a result of recruitment of unsuitable human resources reflects one of sides of organizational contradictions. Similar «contradiction between demand of management objects in observance of private interests, need for balance between interests and demands and objective possibility of effective satisfaction of management objects' demands, interests» (Nekrasov, Morozova, 2013) is possible and reasonable to solve by corporate staff developing.

3. CORPORATE TRAINING AS A FACTOR OF STAFF MATCH ACHIEVEMENT AND ECONOMIC CONTRADICTIONS SETTLEMENT

The negative affect labor performance from mismatching labor force the English scientist J.M Keynes reflected and noted that «we subsume, so to speak, the non-homogeneity of equally remunerated labor units in the equipment, which we regard as less and less adapted to employ the available labor units as output increases, instead of regarding the available labour units as less and less adapted to use a homogeneous capital equipment» (Keyns, 1992).

How can the employer constructively settle the problem with mismatching labor units? One of the alternative variants suggests that unsuitable staff «can be trained to work». The question is that how long, how much costs (expenses of organization resources) and what methods. Depending on permissible expenses level and time the most appropriate form is chosen:

- Learning by means of suppliers of educational services (accredited educational institutions – high schools, colleges, specialized secondary schools, training units etc.);
- Learning directly in organization work being discontinued (full or part) if there are available training units, rooms or specialized divisions;
- Learning directly at workplace without discontinuing work (as a rule it has informal character).

In terms of science, we are interested in the last element is the most advantageous and profitable for organization variant by evident reasons:

- Its relative economy (in comparison with the first and second variants – in the first one organization incurs directly money and time costs, in the second one – time costs that are transformed into alternative costs);
- Its positive influence on professional and social adapting in a team;
- It provides direct feedback with the trainee because his/her labor return is clearly reflected in labor process as the worker sent to learning justifies the contributed investments some time later;
- Possibility to be used as a tool of informal training at a working place, element of career management system and personal development;
- Suitability for use as a tool for settlement of economic contradictions between organization and staff by creating joint organizational culture.

There is close interrelation between staff development and joint organizational culture. The last is oriented on creating communal spirit to rise company's competitiveness and cultivation of relationships of cooperation, spiritual believe, convergence of interests. Firstly, the worker rising his/her professional mastery gives more labor return in the result. Secondly close interrelation is created by communicating between the trainer (coacher, mentor) and the trainee, exchange of minds is occurred, actual production problems are discussed.

Nevertheless, the above stated element has weaknesses too. Adapting the employee for new position or carrying out new additional functions is mostly informal as absence of regulated training procedure and educational paper is watched in the result. By this reason, the employee cannot formally confirm acquired knowledge and skills if it is necessary.

Typical situation is peculiar to an employee. In spite of rationality and economy reflected in stage-by-stage mastering additional competencies the informal learning at workplace is opposed having formal institutional restrictions in certain professional fields to. The employee is often able and has a possibility to acquire related skills but in view of absence of formal evidence of appropriate document, he does not have a right to be employed in concrete occupation. For example, experienced educator without degree does not have a right to give lectures in high school even by mastering big store of knowledge and skills. A teacher in comprehensive secondary school knowing two foreign languages cannot teach the second one if it is noted in the diploma only right to teach the first one. The same is true as the specialist

him/herself in practical activity or with help of private consultant learns additional foreign language. Mechanic employed in automobile sales centre – representative of certain automobile plant (official dealer) cannot formally carry out repair and diagnostic works by absence of the certificate given by this plant about training and confirmed the right to work with car of his brand in spite of experience and mastery.

4. THE CONCEPT OF INFORMAL TRAINING AT WORKPLACE

Let us get down to consideration of human resources informal training at workplace as a factor of their professional development, growth of organization profitability, labor return and performance, cost reduction due to staff recruitment and achievement of staff match.

Human resources informal training at workplace characterizes their development for the purpose of acquisition by them of additional professional or social competences during labor activity without receiving educational document. There are following kinds of additional professional competencies:

Differential – competencies in professional field not related directly to the basic activity (or related indirectly). Mastering them and practical application in addition to main competencies assists growth of general labor performance. For example, lecturer of economic and managerial disciplines in a high school leaves the courses for actor skills that at the first sight do not influence in any way influence on teaching quality and performance. Studying in details, we make sure that acquisition of the second competence raises self-confidence, oratorical skills level and communications effectiveness by teaching, giving lectures and other public activities.

Related – competencies in related professional field (or the same professional field in related directions) assisting higher labor efficiency and performance in basic occupation. Psychotherapist received training additionally in a consulting psychologist, marketing expert in car sales centre gained skills to work as a sales manager – these are examples of main and related competences combination. The relation can be in vertical, horizontal or mixed form:

- *Vertically* – a teacher in a comprehensive secondary school combines teaching with administrative operations (position of head of curriculum department, director) – additional professional competences are acquired for the purpose of labor activity optimization, duties combination.

- *Horizontally* – a teacher of English and German, German and French etc. that is competences combination at the same level;
- *Mixed* – the elements of horizontal and vertical relation are combined – the teacher of German is rising professional mastery in teaching English (horizontal development) and at the same time acquiring skills in managerial work to carry out duties of director (vertical development).

Complementary - competences whose interrelation provides required professional level (right to have one or another position) in specific occupation. Let us consider that definition «complementary competences» is logically and semantically related to definition «complementary goods». Similar to complementary goods whose mutual consumption satisfies the same consumer's want complementary competences satisfy the same professional want (in terms of the employer or labor market) by carrying out certain functions.

The difference of complementary competences from the differential ones is that the second ones can be applied separately as single occupations. In the abovementioned example lecturer can work not leaving courses for actors and vice versa.

The essence of complementary competences is that their separate application is unmeaning and does not let carry out the aggregate of labor operations in certain occupations. For example, for the teacher of foreign languages mastering both language itself and teaching methods is obligatory (Figure 2). Practical application of foreign languages without teaching methods forms professional mastery level in other spheres (interpreter, translator, guide, tourist, aircraft etc.) as well as acts as an additional complementary competence in certain professions – an engineer, a journalist, an economist etc.

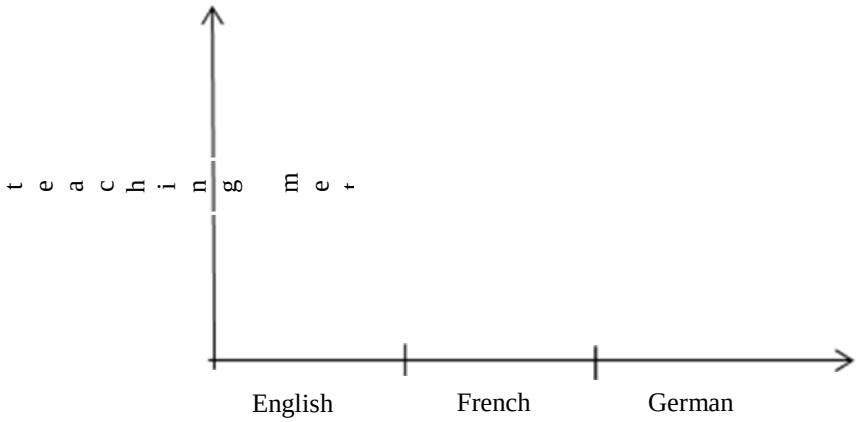

Figure 2: Subject orientation in occupation «teacher of foreign languages»

Follow-up (step-by-step grown to the main competence) - competences whose mastering is not possible without mastering the subordinate ones. Acquirement of financial mathematics is not possible without knowledge of basics of general mathematics, translation theory and praxis – without knowledge of foreign language at minimal level.

Let us note that learning one or another competences is made in vertical or horizontal form (do not miss with vertical and horizontal career though there is some likeness). The first characterizes step-by-step developing in certain occupation. For example, in direction «Management» Russian Federal State Standard for High Education provides on primary stage learning disciplines «Mathematics», «Statistics», «Economics», «Basics of Management», «Marketing», «Accounting», at the next stage – «Financial Management», «Human Resources Management», «Strategic Management» and so on. Then depending on the chosen profile (specialization), the specialized courses are coming. Therefore, specialization «Human Resources Management» includes subjects «Scientific Organization and Work Measurement», «Assessing Labor Staff Performance», «People Rewarding Management» and so on. So horizontal form suggests mastering competences on the same level by extended principle:

- Basic level – «Mathematics», «Statistics» and so on;
- General professional level – «Economics», «Basics of management», «Marketing», «Accounting»;
- Professional level – «Financial Management», «Human Resources Management», «Strategic management»;
- Specialized level: «Human Resources Management», «Scientific Organization and Labor Measurement», «Assessing Labor Staff Performance» (*specialization «Human*

Resources Management»); «History of Project Management», «Basics of Project Management», «Project Management», «Operation Management», «Business Plan of Investment Project» (*specialization «Project management»*).

Vertical form reflects studying disciplines by growing principle that is as per considered levels in the whole by studying as well as mastering competences in promotion career process. Therefore, improving professional skills is accompanied by increase of additional competences needed to hold higher position – specialist subject to promotion studies for example Management Psychology, HRM, Assessing Labor Staff Performance.

So in person's professional development they differ basic part (basis) consisting of general professional and personal-social competences forming fundamental human capital and variable part including additional variable (varying) competences depending on narrow specialization and professional interests.

5. CORPORATE STAFF DEVELOPING AS AN ELEMENT OF CAREER MANAGEMENT SYSTEM

Significant part in corporate staff developing is assigned to furtherance of professional promotion and growth that is aimed at «changes related to workplace or position in enterprise from the one hand and change of labor content from the other hand. Actually personal development is executed by means of following methods (Wyoer, Dyoring, 2010):

- *Coaching.* The workers are aimed at qualitative carrying out their current tasks and professional growth by trainer (coach). Linear manager who performs orienting, consulting, training and leading function can be as a coach. The aim of coaching is raising workers' professional skills.
- *Mentoring* is a specific form of promoting (growing) young staff. Experienced executive performs mentor's function responsible for beginner's assistance and involvement into work.
- Planning professional direction and career promotion. The method is oriented to preparation of qualified specialists (beginners executives) to perform leading functions. The specialist is planning his/her professional development. If he/she executes planned points step-by-step career growth is guaranteed.

Association of Career Professionals (Russia) did in year 2011 survey about having career management system in organization. Divergence of opinion among human resources managers and subordinates is interesting. 72 % of HR-managers answered positively and only 16 % of employees noted practical use of career promotion methods relating them. It underlines contradiction between declared points and real results. The reasons for such non-accordance can be varied from desire to economize on personal development to scarcity of human resources as a result of busy schedule of specialists responsible for personal development or absence of such specialists in principle.

It is empirical tested that investment (not only in monetary form) into workers let get feedback from them, expose their labor potential and receive serious economic effect. Significant part by implementing career management system is assigned to managers who plan their own and their subordinates professional promotion in accordance with corporate and private goals. Ways of exposure and analysis of worker's talent «who begins to be interested in company's opportunities, is extending his/her functions, tries to raise his/her competences at new rate, is catching new complicated tasks, inquiring about feedback, shares his/her experience with colleagues, is extending contacts and so on» (Berger, 2014) are applied in career coaching.

Career management system is aimed at analysis of workers' talents and strengths, their integration with corporate goals as well as knowledge management – «creating such organizational environment which new knowledge would like to be generated in» (Suslov. 2012). Choose of appropriate way of personal development mostly informal that allows by means of step-by-step mastering additional competences to raise professional level and labor performance is very important here. In the whole informal professional promotion suggests workers' assistance and furtherance of personal development as training (teaching) is aimed at formal raising professional skills.

6. GOALS OF STAFF INFORMAL DEVELOPING

Applying the concept of human resources informal development without dropping work the employer is aimed at achievement of the next objectives:

1) *Monetary costs reduction on recruitment of marginal labor power.* If number of labor functions in a group (or in certain professional field) is limited and it is unreasonable to

recruit a marginal worker so one of the employees (the most suitable one) is trained directly at workplace or stimulated for self-learning to fulfill related functions.

By appropriate labor organization a marketing expert in car sales centre is able to master skills of sales manager during his/her working day and without evident losses for main labor activity. A piece of marketing functions (sales process check, watching clients servicing quality) is made directly in show-room. At the same time, the expert learns sales manager's working process for the purpose of mastering related competences in situation if demand is risen or clients more carefully approach to car choice (purchase) – ask unconventional questions, require more attention and so on. Similar tactics are done by scarce number of sales managers (going on holiday and so on) or scarcity of their working hours to work with available clients. In this case the marketing export fulfills a piece of additional sales functions for the benefit of solving his/her tasks – establishing and building more effective communications with clients and staff; exposure of more effective sales methods that will help him/her based on empiric facts to form recommendations in improving servicing. Using similar method another person related to realization of machines for example specialist in car crediting can at the same time carry out a part of sales functions too if it does not cut marginal and average labor efficiency in his/her basic occupation.

In his/her turn, the sales manager in car sales centre can be trained as a cashier too. As a rule upon completion of purchase of car manager prepares the purchase contract for signature of both parties (client and organization represented by concrete person) and cashier accepts payment. To economize costs the manager can accept it too having special training. Nevertheless, often it is not enough only practical knacks for making payment operations to fulfill functions of cashier. It is needed formal justification of training that as a rule will not take much time.

In the abovementioned example with car sales centre drive for costs reduction on recruitment of additional staff is accompanied with achievement of parallel aim – *improvement of servicing quality.* Many clients do not keep patience careless treatment to themselves if they have decided to purchase, they do not have much time to wait, they are arrogant men and so on. In this case, it is all the same to them who answers the questions interested to them. The essence is the officer should know reliable and needed information about goods, satisfy consumers wants adequately and with due professional level. Similar to this way combining functions is carried out in other occupations too.

2) Other costs reduction (time, legal, institutional) having economic value on recruitment of marginal staff.

The aggregate of various functions is distributed between available employees in following principle: their workday is not changed from quantitative position but from the qualitative one it is more varied in comparison with the specialists doing similar but homogeneous operations in other organizations. Working shift of a worker doing single-type operations is represented in the next formula:

$$Wsh = f(x) \tag{4}$$

where Wsh – working shift,

x – single-type operation.

On the contrary, the shift of a worker with various in meaning operations is represented in the formula:

$$Wsh = f(x_1, x_2, x_3, x_4, x_5) \tag{5}$$

where x_1, x_2, x_3, x_4, x_5 – varied in meaning operations.

The number of varied operations is changed depending on kind of professional activity, organizational tasks, management style, labor organization policy, arrangement of objectives, quality of planning, staff development policy and methods as well as on individual motives of a worker (labor process with varied in content functions suits the workers tending to continuous professional improvement, oriented to settlement of original professional tasks).

The same in length workday by workers with broad specialization solving various tasks is qualitatively different from working shift of specialists with narrow specialization doing homogeneous operations. Similar division of labor in principle of broad specialization is generally applied in small enterprises where the number of labor functions is great, they all are various and it is unreasonable to recruit marginal specialists (for the purpose of distribution of homogeneous operations in principle of narrow specialization) from a position of distribution of time, legal, institutional costs. Available employees do more various operations in comparison with organizations having so high number of homogeneous operations that single workers can do them during the whole working day. For example, it is unreasonable to recruit several marketing exports with different specialization (analyst, brand

manager etc.) as all functions related to marketing and brand management can do the only officer.

3) Other costs reduction on staff recruitment leads to solution of the problem of complementarity and substitution of human resources that it is transformed into the next objective.

In high school the disciplines are occasionally changed among teaching staff to achieve this goal. In particular, at the Department of Management interchange of disciplines is taken place approximately according to the next scheme: one specialist teaches in the first semester «HRM» or «Basics of Management». In the next semester or next student's year the subject «Organizational Behavior» is added. Some time later «Basics of Management» are changed with «Strategic management» etc. (Table 1).

Table 1: Approximate scheme of the specialist's professional development at the Department of Management

Student's year	**List of disciplines**		
1-st	Basics of Management	Human Resources Management	-
2-nd	Basics of Management	Human Resources Management	Organizational Behavior
3-rd	Organizational Behavior	Staff Management	Strategic Management
4-th	Organizational Behavior	Staff Management	Strategic Management
5-th	Staff Management	Strategic Management	Business Planning

Stage-by-stage personnel development is fulfilled. When the definite result in certain disciplines teaching is achieved an additional subject is offered to the specialist that assists to solve individual tasks (raising professional mastery and broadening specialization) and achieve organizational objectives. If current need in broad specialization is even absent the permanent probability of appearance the problem of scarcity of suitable staff in the future exists. Executives orientated to successful settlement of professional tasks in long-term period taking into account continuous changes of external and internal environment practice similar strategy. Its application in educational institutions is especially actually by the reason of occasional staff absence (taking part in conferences, workshops, extension courses, rising professional skills, change experience and so on).

6. OVERCOMING FORMAL INSTITUTIONAL RESTRICTIONS

The situation is applicable to the specialist having educational document (note in the document justifying the right to do certain functions) but not mastering skills in this occupation enough. Therefore, the executive formulates the goal for him – to improve (restore) the formally noted competences. The teacher of foreign languages in comprehensive school teaches German. The second foreign language noted in the diploma is English which he has not practiced for some years on graduation from a high school. Evidently, that earlier acquired knowledge needs to be restored and it takes time costs.

Let us introduce that there are pretenders knowing English better from practical point of view:

- a translator who does not have a right of teaching.
- a specialist whose qualification does not let formally teach the language on the certain grade for example in senior high school as he/she has left a training school and is studying in college (high school) by correspondence;
- a teacher of other disciplines learnt English in informal way.

These applicants suit for position of teacher of English more in terms of practice. However there is institutional restriction expressed by absence of appropriate educational document (or appropriate note in the document) from them that. Organization can undertake the next staff measures:

- stimulate the most appropriate in formal features applicant to restore knowledge and skills or improve them in optimal for both parties way (without assistance, with assistance of private tutor, on the special courses and so on);
- stimulate the most appropriate in actual features applicant to bring them to conformity with formal institutional requirements for example to be taught in convenient for both parties way (by correspondence, in evening classes, distance learning, short-time courses, rising professional skills) to get educational document.

The next advantages follow from achievement of abovementioned objectives from informal training and staff development for employer:

- Cutting training costs;
- Rising staff flexibility and substitution;

- Growth of professional competences number per an employee and quality of mastering them;
- Cutting costs on recruiting marginal staff;
- Achievement of compliance with the institutional requirements in certain professional spheres;
- Forming aiming at team spirit and cooperation;
- Strengthening mutual trust between managers and subordinates;
- Development corporate interrelations in labor teams;
- Improvement of economic base of solidary team;
- Positive image of company as an employer oriented to continuous staff development and creating conditions for professional improving.

Let us note that in situation of limited number of functions in certain professional direction and groundlessness of recruitment of a special worker in economic, institutional, legal, moral terms as a result of unjustified costs on employment, adaptation and keeping personnel they apply outstaffing techniques.

Outstaffing techniques are sometimes not reasonable, for example:

- They are not desired;
- They are not optimal in terms of economy (that is it is practical to train available people);
- Though special works are not continuous, they are carried out occasionally.

In this situation the emphasis is made just on the policy of corporate development and training people for the purpose of rising their flexibility, substitution, labor productivity and performance as well as staff mismatch reduction in long-term out-look.

7. THE ROLE OF LABOR PRODUCTIVITY ASSESSMENT IN STAFF DEVELOPMENT

Considering economic component of effect of teaching and staff investment, labor division let us expose how reasonable for an employer is mastering each next following competence by an employee to do rising number of labor functions or increase labor performance. Indeed from economic point of view the whole worker's potential can be compared with human

capital whose successful investment provides dividends to its owner (employee) and user (employer). Russian scientist E. Korotkov analyzes human capital as the aggregate of following elements (Korotkov, 2010):

- Person's education and his/her abilities to continuous rising educational level;
- System of professional knowledge, knacks and skills in their developing and enriching calls forth worker's ability to labor in certain contents and complexity;
- Rate of competence, willingness to functions and role professional activity;
- Personal abilities development, mobility, motivation, dignity and health;
- Creative potential as a result of education and developing abilities, motivation of development and improvement;
- Psychological relationships in organization characterizing culture of activity;
- Elements of value system.

Realization of labor abilities is taken place in process of labor activity, which is determined kind and nature of labor dividing into the regulated and creative one. The first is based on the specified standards (ultimate indicators of production, labor productivity, using work time, quality of products) assigning realization limits of labor power. Productivity of such labor can be raised through its intension and optimal organization based on maintenance of physical, ergonomic, social and other parameters needed for successful fulfillment of manufacturing operations.

Maximal productivity standard of regulated labor activity is determined number of made products per standard hour. Generally the standard of maximal average productivity per standard hour of work time during shift is applied as a reference index. It is calculated as a proportion of general number of product units made during the whole shift and number of hours worked.

$$AP_l = \frac{Q_I}{h_W} \tag{6}$$

where AP_I – average productivity of an individual;

Q_I – production quantity made by an individual;

h_w – hours worked.

The perfect index proposes potentially the most permissible standard which should be oriented to. In particular F. Taylor (Taylor, 1992) subjecting to analysis time units provided for doing working operations wrote that it is more effective «perform observations of first-class workers if the such ones can be found but these people should only be observed when the work with maximal productivity. On receipt of «the shortest terms» for the first-class worker it is already not difficult to calculate the percent on which the average worker drops behind this record». Therefore, the founder of scientific management studied production conditions when maximal productivity is achieved.

In the calculation practice of this index some deviations from theoretically perfect variant as a rule are allowed as a result of various psychophysiological (tiredness, disinterested, depressive feeling and so on) and organizational (equipment error, resources delivery stoppage and so on) factors. Let us assume the perfect index of maximal average turner's labor productivity according to Taylor's methods (by perfect psychophysiological and production circumstances) proposes making 20 parts per standard hour of work time. In terms of facts based on analytical estimating (based on dates about maximal average productivity for previous periods) the standard equal to 18 parts is fixed.

Similar calculation method is partly applied in regard of intellectual labor proposing fulfillment of single-type operations during certain period of time too. Labor productivity is calculated by analogy. For example for translator working with technical literature the perfect maximal index is equal to 1,5 sheets per standard hour, the real one – 1,3. In the example the matter is about the translator doing translation of typical documentation (instructions to equipment) with similar vocabulary, word expressions etc. That is time costs on the translation itself are the lowest, typing and design take more time.

Both real indicators expressed in parts and sheets are reference either in an organization or on professional labor market in the whole. The fixed standard is a basic factor for remuneration of labor according to the result (in case of efficiency wage) or to standard output (in case of time-rate) in terms of employer.

On competitive labor market, the average standard affects determination of market average labor remuneration. The exposed divergence between actual and standard index just forms field for professional improving for an employee or applicant.

In regard of a worker getting remuneration according the result determined number of products units (efficiency wage) this mismatch is a direct stimulus to increase personal labor productivity (depending on strength, tempo, knack, quality) and effectiveness as the material factor is mostly determinant. As for time-rate so stimulation to more productive activity is a difficult task as level of labor remuneration is not actually changed.

The difference from the sample indicator is exposed through methods of observation of labor process (the most popular are the photo of workday, benchmarking, comparative estimating, analytical estimating and microelement analysis) and is compared to fixed indicators of standard output. By staff recruiting the calculating process of correspondence with benchmarks is much complicated and the result (the employee) is often far from ideal because of falsification and misrepresentation of information needed for applicant's assessment.

Analyzing the calculating mechanism in regulated labor process we conclude that the next results get by assessing worker's activity is a basis for his/her following professional development:

- *Difference between standard and real maximal worker's labor productivity* (level of real labor productivity is lower than the benchmark). In this case they recommend to worker to rise his/her professional level doing the same competences till productivity of labor is equal to the standard one;
- *Match of worker's real labor productivity to the standard one* (level of real labor productivity is equal to the benchmark). In this case the worker can acquire following professional competences doing prior labor functions at the same time as carrying out new professional tasks does not negatively affect qualitative and quantitative point of labor productivity in already fulfilled operations (for example seamstress carrying out homogeneous operations according to the benchmark can master other related functions in clothing manufacture);
- *Difference between standard and real maximal worker's labor productivity* (level of real labor productivity is higher than the benchmark). In this case it is desirable to worker to master following professional competences doing prior labor functions at the same time as carrying out new professional tasks does not negatively affect qualitative and quantitative point of labor productivity in already fulfilled operations (for example translator of technical texts can get down to studying economic literature for the purpose of improving his/her professional skills and so on);

– *Difference between standard and real maximal worker's labor productivity* (level of real labor productivity is lower than the benchmark) and this index has been not improved for a long time at that. In this case the worker can try to acquire following professional competences doing prior labor functions at the same time. If carrying out new professional tasks does not negatively affect qualitative and quantitative point of labor productivity in already fulfilled operations (examples with seamstress and translator are suitable) so training can lead to successful results both in new professional segments and in already fulfilled activity. Reorientation to settlement of varied tasks often stimulates the worker assisting his/her diversion and concentration.

However, the other variant is possible too: labor productivity reduction in both directions. That's why the employer should assume and carefully calculate all possible outcomes of switching over to related activity.

Represented variants are integrated in the table (Table 2).

Table 2: Economic reasonability of mastering additional competences

Variants	Improvement in already acquired competence	Mastering new competences
1 – level of real labor productivity is lower than the benchmark (in short-term period)	+	
2 – level of real labor productivity is equal to the benchmark		+
3 – level of real labor productivity is higher than the benchmark		+
4- level of real labor productivity is lower than the benchmark (in long-term period)		+

The case is somewhat different from productivity of creative labor. The activity of translator in abovementioned example is mostly related to the routine one. At the same time, activity of translator of belles-lettres is referred as the creative one as even by high mastery of a specialists translating process is not carried out by simple substitution of standard word combinations and their thinking takes much time. We can calculate maximal translating tempo on the assumption of the fact that translator reading a foreign text understands it automatically without using a dictionary and other assistants and created text does not require

additional editing. However, in most cases the translation requires additional editorship and reviewing requiring additional costs that are not come under instantaneous calculating – objective calculation is done at the end of work. Similar activity can be restricted by regulations – duration of work time, goal-setting in periods of time but as opposed to routine labor process consisting of homogeneous operations labor productivity here does not directly depend on strength, physical health, ergonomic factors. Certainly they affect significantly but creative mood, inspiration and other components with difficulty entered set standards play more role.

As for measurement of creative labor needed for assessment and exposure of worker's match to the benchmarks it is necessary to choose appropriate criteria that often are not reflected quantitatively. For example, it is difficult enough to measure labor of marketing export, top-manager, designer in terms of quantity. In this case, either compatible units of measurement (points) are chosen or resultant criteria of match are determined, for example, performance indicators for month (quarter, year) that are formed based on general Key Performance Indicators (KPI) and transformed into labor indicators. So for marketing export we can note following criteria:

- rising clients loyalty level;
- rising service quality;
- advertisement costs reduction;
- rising wants for available and prospective goods and so on.

It is not possible to determine level of accordance with benchmarks for creative labor during one day by the reason for absence of objective data. On the contrary assessment of regulated labor is fulfilled both in its process (in case of time-rate wage where efficiency of time costs and result is evaluated) and by final result for the certain period of time. Efficiency of such labor depends as abovementioned on its strength (tenseness, applied efforts), enthusiasm that is an individual factor and regulation, labor organizing, clear flowsheet that are organizational factors. The intensity is determined physical state, working capacity level, enthusiasm – psychological mood at that. Linear dependency is observed till the certain limit – the achievement of maximal average labor efficiency per standard hour (Figure 3), following which is diminishing marginal productivity as law of diminishing return enters into force because of limitation of physical factors (person's ability to work with constant return during continuous period of time).

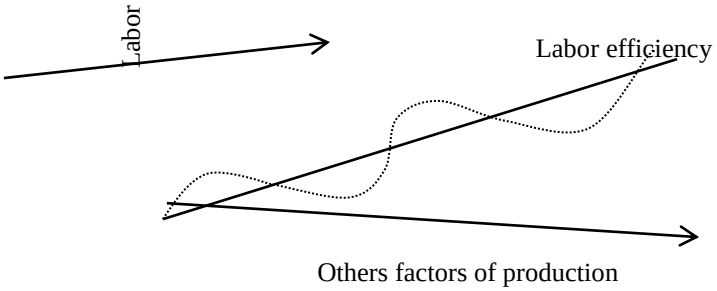

Figure 3: Linear dependence of labor return on labor potential and organizational conditions in regulated labor process

Creative labor efficiency dependence on appropriate factors is mostly nonlinear but stage-by-stage, in some cases uneven (Figure 4), leaps are occasional (heterogeneous), larger or smaller at that. So for example activity of marketing export cannot immediately give any results that is his/her physical, intellectual, moral efforts lead neither to efficiency nor to return from economic point of view no to performance determined other indicators (rising clients loyalty level, rising service quality and so on) at once. Though a month (quarter, year) later result of his/her work affected improvement of financial and economic indicators can be larger in the aggregate (more efficient) than the same one of another specialists carrying out regulated (routine) labor for the same period of time.

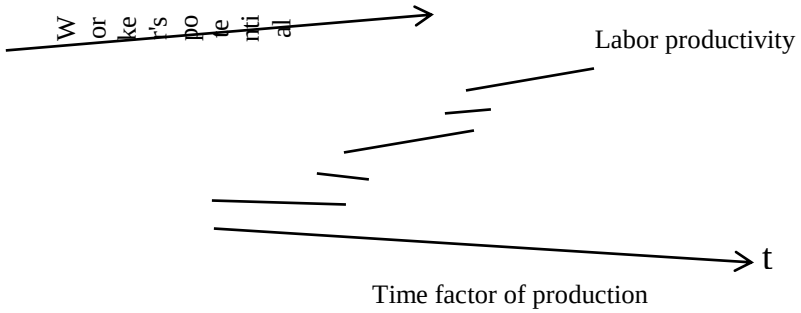

Figure 4: Uneven dependence of labor return on labor workers' potential in creative labor process

At the same time limits between regulated and creative labor are often indistinct as the same labor activity can be differently considered depending on its application, direction and subjective perception of a worker him/herself. So a hairdresser's working day can be varied from routine activity which can be easy regulated (in case of homogeneous operations) to the creative one (in case of creating original haircuts, coiffures and searching methods of approaching a client).

Therefore, by exposing matching to the benchmarks the matter is not so much about division of labor process into routine can be easy regulated and creative as about complexity of measurement and assessment of efficiency and performance of either labor. From this point of view labor can be divided into that:

- is subject to quantitative measurement (in labor process or according to the result per unit of standard time) – for example, labor of a turner, seamstress and other occupations whose result can be calculated in physical units of products;
- is indirectly subject to quantitative measurement (in compatible units – monetary, timely or other equivalents for example points) – in occupations proposing heterogeneous but related operations for example labor of a tailor, hairdresser, cook, translator and so on. Efficiency of more complex operations can be calculated by their reduction to simpler homogeneous operations;
- is assessed on the basis of achievement of qualitative match to the benchmarks – labor of marketing export, top-manager, designer. For these occupations appropriate

qualitative criteria are determined according KPI transformed into labor performance indicators in HRM.

Optimal using worker's potential can be calculated on the basis of measurement of alternative labor expenditures and alternative return from labor applying the method of switching over to alternative functions. In organizational practice its application is possible in process of «experimental rotation» proposing horizontal replacement inside or outside subdivision in informal way. It is applied:

- *Firstly* for replacement in related professional segment for the purpose of determining larger return from labor and following exposure which kind of activity of two alternative ones is more efficient in terms of maximal output for both employee and employer. The method of calculation of alternative expenses between two related kinds of activity lets calculate maximal output for the certain period.

If alternative action gives a positive affect reflected in raising labor efficiency or performance so informal rotation is transformed in the formal one justified with institutional (legal) conventionalities by mutual consent of the parties. Advantages for employer are acquirement by a worker of additional professional competences, raising his/her mastery on internal labor market and ability to carry out more number of functions. Advantages for employee are decreasing monotony of labor, expansion of professional field and as a result rising quality and competitiveness of his/her labor power.

- *Secondly* this method is applied for the purpose of replacement of a worker into another subdivision in the same professional direction and competence that is determined mostly moral factors such as organizational conflicts, personal disaffection etc. If the worker is actually a highqualified specialist in his/her occupation so in many cases management is ready to create conditions for him/her in spite of his/her inability to adapt in certain group.

Calculating analysis of labor optimization based on absolute and alternative costs assists maximization of labor utility function by other equal production conditions.

For calculation of labor utility function maximization two or more kinds of activity which worker's potential involved into are analyzed. A standard hour is as a conventional unit, the result is measured in units of products or comparable units are measurable. This method is more convenient for regulated labor activity with time-rate and efficiency-rate wage when it is

necessary to determine labor productivity of a single worker, which is calculated as division of number of products for analyzed period (shift) into number of worked hours in according to abovementioned *formula 6*.

This formula has various applied points of application which let consider worker's efficiency and expose effectiveness of realization of his/her abilities from different points of view. *Firstly* involvement efficiency of staff potential carrying out regulated activity can be measured and compared in two or more alternative labor activities through experimental rotation. Workers are horizontally replaced inside an organization. On the basis labor efficiency of each activity is exposed. In the result manager based on objective dates about labor output can take various measures if labor efficiency in alternative engagement is:

- higher that real dates of efficiency justify – experimental informal rotation is transformed into the formal one and employee with his/her consent is replaced into another subdivision or provided with new functions;
- can be potentially higher – the employee can replaced stage-by-stage without sharp jumps in basic activity for the purpose of smooth mastering in practice new professional competences or replacement of existing gaps through formal and/or informal training;
- significantly lower – this justify current worker's unsuitability for held position.

Secondly in creative and less regulated activities in which it is not possible to measure end result in material items application of the *formula 6* has more brooded applied character in view of having authority by the worker to plan his/her labor process partly on his/her own even in the frames of general production cycle. It is determined the type of activities themselves, their orientation not to clear time regulation but to labor performance, for example in the form of project, implementation of the concrete idea and so on. The end time terms are fixed, to their finishing the worker should show the result. However, in the frames of these terms he/she varies available time depending on his/her own and related coworkers' productivity.

In the issue generally acknowledged rule in according to which labor efficiency depending on its intensity (strength) reflected in output of end products (calculated according to *formula 6***)** can be accepted as a basis of calculating methods by carrying out homogenous operations by regulated activity. This principle is less applied by measuring labor expenditures and returns in nonproduction activity not having as a result manufacturing goods in direct materialized form. In connection with that in contemporary society various kinds of non-manufacturing

labor (non-productive services, getting and using information, management activity) acquired more grower popularity so it is reasonable to modify calculating methods according to abovementioned *formula 6***.**

That is why the need for calculation of individual labor for the purpose of determining its optimal efficiency is arising. Calculation of average productivity is done according to abovementioned *formula (6)*, calculation of marginal productivity – as a difference between potential involvement by using aggregate *n* units of time and *n-1* worked hours. *1* is considered here as a marginal hour.

The calculation is done per each of elements (functions) of individual activity. For example in marketing export's work doing daily some different functions (monitoring quality of competitors' service, analysis of return from advertisement, development of recommendations concerning to goods promotion improvement) average productivity calculation is done in each of elements. At the same time output of marginal productivity that lets calculate growth or decrease of average total depending on number of worked hours spent on one or another function gives clearer picture. The task of a manager (or worker him/herself) is to form such a combination of returns from labor expenditures (and as far as possible expenses of other production factors), in our case (for marketing export) three elements which maximal labor efficiency justified optimal application of abilities and distribution of worker's efforts during workday is achieved by. The calculation is done according to the next formula:

$$GOP_l = \sum_{i=1}^{n} (h_w * AP_m) \qquad (7)$$

where GOP_I – general optimal productivity of an individual;

Σ – amount of maximal average efficiencies of single elements (functions, engagements);

n – quantity of elements;

i – number of element;

h_w – hours worked (expended on doing a certain labor function);

AP_m – maximal average productivity of an individual for hours worked planned to fulfill this element.

The calculation is significantly eased if dates in each engagement and each hour worked are placed into the table (tables 3, 4) that gives pictorial view of a worker's productivity change

during a working day and employment of various functions. It is calculated by both manager or authorized person and the worker him/herself. Its objectivity is risen if it has mutual basis (represented by manager and worker) that is it is confronted as a balance (table 7). In the whole such staff analysis proposes solution of the next tasks:

- Assessment of labor efficiency and performance in current basic activity;
- Assessment of labor efficiency and performance in alternative related activity;
- Assessment of workers' abilities to professional development, training and switching over to alternative functions.

Table 3: Dynamics of productivity (Function A)

The whole working day	10 hours									
Working period	The first 3 hours			The second 4 hours				The third 3 hours		
Productivity per standard hour	1	1,2	1,2	1,6	2	2	1,6	1,2	1,2	1
Succession of working hours	1	2	3	4	5	6	7	8	9	10

Table 4: Dynamics of productivity (Function B)

The whole working day	10 часов									
Working period	The first 3 hours			The second 4 hours				The third 3 hours		
Productivity per standard hour	1	1,4	2,2	2,2	1,4	1,1	1,1	1	1	0,6
Succession of working hours	1	2	3	4	5	6	7	8	9	10

Based on dates in tables 3, 4 let us calculate optimal (maximal by given conditions) productivity and place the got results into tables (tables 5, 6).

Table 5: Interrelation of labor productivity and hours worked (function A)

Labor time, hours	Average productivity
10	1,4
7	1,371
6	1,5

Table 6: Interrelation of labor productivity and hours worked (function B)

Labor time, hours	Average productivity

10	1,3
5	1,6
6	1,55
7	1,48
4	1,7

Let us make up the aggregate table of abilities to work of a worker in the given example (table 7).

Table 7: Distribution of abilities to work of a worker in fullfilled functions

Alternatives	Engagement A			Engagement B		
	Time, hours	Average productivity per hour (units of products)	General productivity (units of products)	Time, hours	Average productivity per hour (units of products)	General productivity (units of products)
1	2	3	4	5	6	7
A	10	1,4	14	0	0	0
B	9	1,4	12,6	1	1,7	1,7
C	8	1,4	11,2	2	1,7	3,4
D	7	1,37	9,59	3	1,7	5,1
E	6	1,5	9	4	1,7	6,8
F	5	1,5	7,5	5	1,6	8
G	4	1,5	6	6	1,55	9,3
H	3	1,5	4,5	7	1,48	10,3
I	2	1,5	3	8	1,3	11,2
J	1	1,5	1,5	9	1,3	11,7
K	0	0	0	10	1,3	13,0

The above stated table gives a chance to understand that maximal productivity is achieved at point E (9 units during function A and 6,8 units during function B). This calculation is the same according to *formula 7***.**

The suggested calculating method of single worker's optimal productivity can be taken as a basis by implementation in an organization of skills grades system oriented to labor assessing when not position but the worker him/herself and his/her potential takes first place. This

system lets solve the question of optimization of staff number and structure to a certain extent that is especially actually for companies having problems in staff policy. The task of human resources management is in searching methods oriented to reduction of inside barriers preventing from rising labor productivity.

7. CONCLUSIONS

In the whole in contemporary management practice both non-production and production labor activity is based on new concept of labor division in principle of completeness operations. It is determined opposition of present worker to be involved into labor process on the basis of classic paradigm of specialization and cooperation (in according to Smith's concept) and technique of labor organization (in according to Taylor's concept). Changes in employment structure taken place for last decades create the prerequisites for professional self-realization on higher level which include:

- Circumstances for combination of different occupations;
- Relative freedom in choose of kinds of employment – hired labor or self-employment as well as combination of these kinds, their convergence proposing employment in organization and parallel functioning on external labor market with continuous supply of labor power;
- Possibility to influence not only of employer on the employee but on the contrary too – influence of employee on employer as a result of high quality level of workers and rising degree of person's socialization.

Application of the concept of optimal labor division makes staff substitution easier and assists all-round development of workers' professional abilities as most of them fulfill more different functions in comparison with the worker employed according to classic Smith's model of operations distribution.

To our mind active implementation of methods of flexible division of labor in management practice confirms the fact that they can «refuse human resources management as the aggregate of costs and to start their run as the aggregate of persons»(Drucker, 2010).

In this connection we can see that difference in performance labor nature depending on the essence of labor activity underlines using different components of workers' potential as

aggregate of psychophisiologic, skills and social characteristics. Managing his/her own potential the worker is able to distribute it and correct individual inequalities in form of uneven productivity. So *optimal distribution or optimization of potential* is the best of available alternatives by set working conditions (environment) distribution of intellectual, physical, personal-social (activated or prospective) individual characteristics which are directly or indirectly oriented to creating welfare having worth.

Organizational staffing with suitable workers (beginning from top-managers to day-to-day management) is a decisive factor of providing competitiveness in most spheres. Optimal staffing depends on suitability of each worker for held position and production environment. To achieve this objective on the first stage staff recruitment of appropriate qualitative and quantitative level on labor market is necessary. At the same time people's quality is not a constant indicator. Its criterion is changed coupled with business development, restricting, diversification of production. That is why the need for its constant improving depending on production circumstances is rising that determines want for its occasional test to suitability for standard characteristics.

If quality indicator in result of its testing is mismatch to made requirements the aim of management is creating conditions for adjusting in accordance of worker's professional level with production characteristics. One of the variants of achievement of this match is improving worker's potential and his/her teaching that is reproduction of personnel abilities to work relevant production development level and necessary for individual development. From this point of view process of reproduction of labor power is none other than forming human capital that is needed for rise and support through its investing. This investment is carried out both in material (training at the expense of a company, health service etc.) and in nonmaterial form (moral motivation, creation of organizational circumstances for exposure, development and realization of abilities) at that.

Purposeful forming and developing human capital of a certain kind enriches tools of management and so let rise organizational competitiveness, use new up-to-date techniques, arise production performance. Making an emphasis on staff development with minor expenses we propose that human resources management is aimed at optimization of worker's potential which assists rising production efficiency by specified conditions.

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Changing board dynamics: the impact of board evaluations

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ABSTRACT

In the past decade formal corporate governance codes, laws and practices have started to focus on responsible board behavior and transparency in the boardroom. Negative board dynamics have been observed as contributing to business performance issues, damaging corporate behaviors and negative signals to stakeholders. This paper provides an integrated view on board dynamics combining the key theories and concepts from the practical corporate governance literature, the behavioral economics and the neurosciences fields into a comprehensive board dynamics framework. The aim is to help board members/advisors/governance committees to develop better board evaluation practices, by studying new evaluation techniques and theoretical insights into board dynamics. The "fill-out-the-form" board evaluation practices are slowly changing and new trends aim to create long-term value from board governance.

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1. THE EMERGENCE OF BOARD DYNAMICS AS A KEY CORPORATE GOVERNANCE ELEMENT

Well-known companies like, SNS Bank, DSB, ABN-Amro, Ahold, Rochdale or Vestia have been perceived successful in different industries, but they have a common feature. They provided big corporate governance scandals in the media in the last decade and called for

urgent corporate governance reforms in The Netherlands. The problem seems more universal with similar cases at Enron, Parmalat, Siemens, HP, Disney, Shell and Siemens. The issues of fraud, audit failure, accountancy scandal or the whistleblower CEO at Olympus (Woodford, 2012) were just the start of governance failures. In the past few years corporate governance scandals have appeared all over the media and brought the attention to the possible dysfunction of companies' boards itself. Were the non-executive board members doing their job properly? Did they follow the accepted standards of board operation? In most cases they did. Setting only strict rules of operation miserably failed, and a new perspective is needed on good board processes. It is not just about procedural rules, monitoring and regulations anymore; it is how we build high-functioning, critical and efficient working groups. (Clarke, 2008; Lorsch, 2012). Good board dynamics cannot be legislated, but it can be built over time. By having an open and trustful atmosphere directors can fulfill their roles in a more efficient way without being trapped in a rigid position. While we have been used to building efficient groups within the hierarchical set up of companies, we have less experience in building these groups at the peak of the hierarchy (Charon, 2005).

In the pre – Enron era, the world of corporate governance, board evaluations and addressing the issue of building a high-functioning, critical and efficient working board was hardly seen as an issue. After the big corporate governance failures of the business world came into light like the Enron scandal in 2001, the issue of group dynamics did not appear as priority in corporate governance. Codes and roles described the most important ways of operating the board (task, responsibility, procedures, etc.), but the major emphasis was certainly not on the quality of interaction and the behavior of board members. However, more corporate governance failures made the shareholders and the public aware that codes, risk management did little to address the dysfunctional sides of board and more emphasis was put on more transparency and higher accountability within the organization. These two issues became the flagships for the post-Enron governance era and defined a new direction for corporate governance (Clarke, 2008). In 2009 an economic crisis with an almost meltdown of the financial sector shook the world and most blame was put on the acting CEOs and the regulators of the organizations, but the failure of the board as a whole remained largely unnoticed (Lorsch, 2009). As times changed the effectiveness of group dynamics in good governance of the organization became clear and more details appeared in the governance codes as well (Eenennaam van & Soesman, 2008). Having external legal pressure and more individual/collective responsibility, boards changed their role from passive to active, which

required changes also in board dynamics. Critical selection of new board members based on skills and diversity (more women, young people, and different cultural background), creating open atmosphere and yearly evaluation of the work became the new standard for good board dynamics (Lorsch, 2012).

Board evaluation is mentioned as a corner stone of obtaining and creating good board dynamics which more governance codes have started incorporating it in a very detailed way (Laurens, 2009). Evaluating the board' performance would include discussing the quality of board meetings, the credibility of reports, the degree of knowledge and interpersonal cohesion. By taking it a step further, individual directors should be evaluated based on their skills, resume, participation and effectiveness during meetings (Maanen van, 2010). The UK Governance Code (2008) was the first to describe that critical evaluation is needed on the individual level and an external facilitator could do an objective review in a more effective way. The Dutch Corporate Governance Code Monitor Committee from 2008 onwards gave more attention and guidelines to how evaluation should be done and the most recent "best practices" require annual reports on the used methods of board evaluation. At the moment The UK Governance Code is one of the most advanced, in terms of evaluation, and who should be responsible for the evaluation of whom. For instance the non-executive directors are responsible for the evaluation of the chairman. The Dutch code lets the companies decide who and how they should be evaluated. The UK code recommends a yearly board evaluation, with a minimum of external evaluation every three years. From the Dutch codes only the "Code Banken (2010)" recommends that every three years an external facilitator should be invited for board analysis. An interesting contrast is the Swiss Corporate Governance Code (2008) as they mention board evaluation very briefly and besides a required annual evaluation there are no further guidelines mentioned.

1.1. Boardroom dynamics: a framework

Boardroom dynamics often reverts to as the whole spectrum of interactions between the members of a board. When one is thinking about the dynamics or interactions that are taking place among the individual board members in their different roles, tasks, meetings and settings, the richness of these interactions are plentiful. Analyses of the Bay of Pigs invasion

of 1963, the disaster with the Columbia Space Shuttle in 2003 among others have revealed whole layers and subtleties of groupthink in board situations.

We take the perspective of the individual actor or board member as a starting point and then build forward. The individual board member has certain traits that make one act in a certain way in a specific board. The interaction with another individual board member adds to the dynamic of board. The (social) position, coalitions and the adherence to the norms within the overall makeup of the group of the board create a certain dynamic. The relationships with and influences of other stakeholders is the final level that determines the board dynamics.

Interestingly enough the corporate governance literature that is strongly rooted in practice has developed some ways of dealing with these dynamics. We add what we consider key insights from behavioral economics to the four levels of interaction of which an individual board member is a part. Regarding the social sciences, we have taken the key insights from the field of neurosciences to construct the boardroom dynamics framework.

The boardroom dynamics framework (Table 1.) summarizes the major insights on board dynamics from the corporate governance, behavioral economics and neuroscience literature. On each of the four levels of interaction, we have put the key insights and the key concepts of the three streams of literature in the framework. For instance, on the personal level, the corporate governance literature provides key insights on individual decision making styles, how to deal with integrity and morality dilemmas and the issue of individual responsibility/accountability in a board. Key concepts in corporate governance literature include individual decision making (1) where the article of Frame (2012) on framing decision is our suggested reading, while on dealing with biases (2) in board decision making of Finkelstein et al. (2009), "Think again: Why Good Leaders make Bad Decisions and How to Keep it from Happening to You", is a board room classic on the topic. Dealing with dilemma and moral issues (3) Karssing (2011) is a key one for the Dutch boardroom setting, while accountability (4) appears in Roberts' work (2005) a lot. In the reference list you can find more corporate governance articles dealing with board dynamics at the personal level. Board roles and practices are discussed by Lorsch (2012) while looking at the development and challenges boards face in the 21st century. It is an important study as it describes the relationship and communication among the board members, and emphasizes the critical points of becoming a good board as a whole. Naturally, the government and external stakeholders also play a crucial role in corporate governance and the introduction of the governance codes

created a legal framework for companies both on industrial and national level as well. For example the "Code Banken" or "Zorgbrede Governance Code" were introduced by the financial and the healthcare sector to set specific governance standards for their own industry. Table 3. will provide more insights on evaluation in different corporate governance codes.

The behavioral economics literature and research usually studies the social, emotional and cognitive factors on individual decision- making in terms of economics while looking at the possible consequences of those decisions. This theme on the personal level of board dynamics provides us with insights on how personal motives, personal risk-taking behavior, will power, judgment about certainty of outcomes plays a role. The Nobel prize winner, Kahnemann has done some excellent studies showing how personal motives, risk taking, judgment, will power all play a role in an overly positive risk taking or an overly controversial decision making process. These elements all belong to the so-called bounded rationality topic as a starting point for understanding behavioral economics. Taking a step further and looking at the group level the composition, the size and the selection of the board become crucial, as it defines what kind of board you want to be or could be in the future. The topic of board diversity provided an interesting research topic for many scholars as gender, age and cultural differences play an important role and their influence could not go unnoticed in the decision-making process. Manzoni (2012) provides a very interesting view on boardroom conflicts and the reasons for a dysfunctional board. On the company level transparency and compliance with the codes are the key terms (Hermalin, 2007) for behavioral economics. The constant development of governance codes, and new rules for disclosure and reporting are trying to meet the demand for more transparent organizations, from the internal and external stakeholders' side as well.

Neuroscience is a scientific study of the neurological system that collaborates a lot with other fields like philosophy or psychology. Social neuroscience is one of the most well known branches to the wider public as it describes how biological systems affect social processes and behavior. As scholars realized the important effects of psychology on boardroom interaction/intervention there is more and more attention given to neuroscience in terms of boardroom dynamics. Basic human needs define personal attitude in individual decision-making (Meche, van der, 2012), while the level of trust, the willingness to be part of a group, the power relations and conflict situations affect interpersonal relations. On the next level, the aim for social cohesion and coalition- building in important questions is very strong among

the board members. It defines how important board members could be in the decision-making process and how the power game is played among them. In addition to that, as van Maanen (2012) describes groupthink and pecking order (who is the real leader) could change board dynamics into a negative direction as it takes over individual decision-making. In terms of external relations, there is a strong pressure on the board to demonstrate uniformity and well-functioning presence to avoid any kind of negative signaling to shareholders, which could be harmful to the company's image.

The importance of reviewing boardroom dynamics and how the board functions could be nicely explained by an empirical study called the "Wet Monkey Theory" by Albert Einstein. In this experiment they choose a group of monkeys who are allowed to take a banana in the first round. However, in the second and the third round they made the monkeys wet when they were going to pick a banana. Afterwards as a result, none of the monkeys wanted to have the fruit. Then they added new monkeys to the group and the newcomers followed the behavior of the old monkeys without any explanation. The basic idea of this experiment is interpreted in board dynamics, as new members of the group face set rules and informal ways of doing the work, and they accept it without actually getting an explanation. These norms and behavior are not always the most suitable; therefore, a critical view on the board process is needed by doing constant evaluation.

1.2. Board dynamics from different perspectives

Table 1: Different perspectives on board dynamics

	Corporate Governance	Key concepts	Behavioral Economics	Key concepts	Neuroscience	Key concepts
Group level including external stakeholders	The way companies accept and interpret governance codes while filling in a socially responsible role in the society.	- Governance codes both on national and industrial level	External and internal stakeholders demand more transparency from the companies, while the government sets new rules for disclosure and reporting.	-Regulatory framework - Transparen (Hermalin)	From this perspective it important to understand what kinc signals the company is willing send to the external world.	-Uniformity pr -Positive signa (Lorsch)
Board level	On this level board's role and the issue of collective responsibility/accountability is described while taking ethical business behavior into account in the decision-making process.	- Business ethics (Karssing) - Collective Accountability / Responsibility (Roberts) - Board's role (Lorsch)	It describes the way of selecting board members, diversity within the group, the features of different board sizes and the task division in the boardroom.	- Board selection - Board diversity (Manzoni) - Board size (Maanen, van)	On the group level the issue of groupthink and how the individual could be part of the group appears. The use of pecking order and the start of coalition building describes this level the most.	- Coalition building - Pecking order (Manzoni) - Social cohesion - Groupthink (Maanen, van)
Interpersonal level	The relationship and level of communication among the board members and with the management board (special attention to CEO and the Chairman).	- Relationship and communication (Lorsch)	The status quo and the bargaining power of the individual directors or smaller groups within the board could influence the decision-making process.	- Bargaining - Status quo (Diamond)	On the interpersonal level the most common human interactions could be described like the issue of trust, power relations among board members and conflict management.	- Trust (Kahnemann) - Power relations - Conflict (Pick)
Personal level	Individual decision-making process in terms of integrity and morality and the question of individual responsibility /accountability from a board member's perspective.	- Individual responsibility (Frame) - Integrity - Morality (Karssing) - Accountability	The personal motives, risk-taking behavior, the willpower of the individual and how board members judge certain decision outcomes play an important role here.	- Personal motives - Willpower - Judgment - Risk-taking (Kahnemann)	It relates to all kind of basic human needs that an individual can experience as part of bigger group and how it affects the behavior of the board members.	- Basis human needs (Meche, van der) - Neuroscience (Nobel)

One of the most important challenges boards face is to prevent governance failures in the organizations they govern. The four major categories of problems that are primary subjects to board`s attention: strategic, control, ethical and interpersonal relationships. While the first two refer to performance failures, the latter two describe negative board dynamics (Maanen van, 2012). A board evaluation could be an effective internal tool to help prevent them from occurring both on an individual and at board level and stated as a primary condition for quality improvement in the boardroom (NKCC, 2013).

What are the advantages of having board evaluation in terms of changing the way board members work? First of all, it provides a formal feedback moment where uncomfortable topics could be discussed in a very detailed way without exceeding the limits of acceptable social behavior. In addition to that, new board members could receive immediate information on board processes, expected culture and dynamics during their term. Moreover, an evaluation can bring attention to bad routines and poor personal performance that takes place within the boardroom (Maanen van & Veltrop, 2010). Naturally, board members mention some negative effects of evaluation. They claim that it can change the pleasant working atmosphere in the group or it could be too confronting for certain colleagues. Board members who are serving on the board for a long time might not be open to criticism or evaluation that could lead to governance failures (Maanen van & Veltrop, 2010). Therefore, regular evaluations need to be conducted even if the cohesion of the board will be in danger.

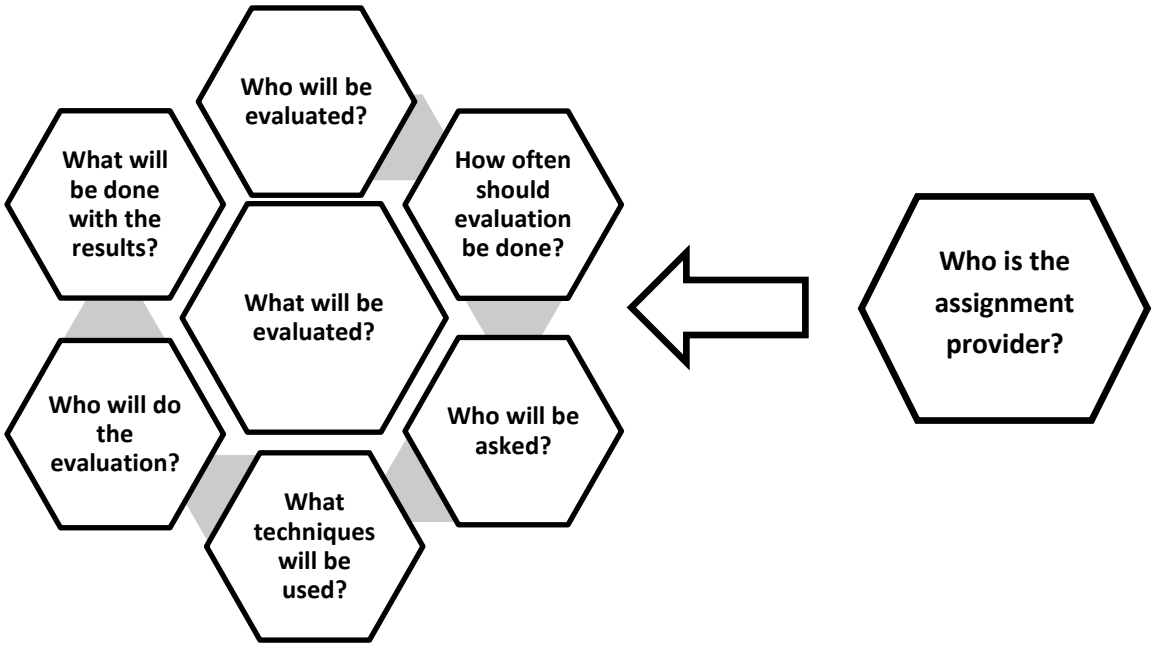

Figure 1.: Board evaluation circle

Board evaluation could be requested from both the internal and the external stakeholders' side. On one side, governance codes require annual board evaluation in most countries and companies must comply with this external regulation. Government is the most powerful external stakeholder in that matter and it influences the frequency and process of board evaluation. On the other side, unsatisfied investors are the most common internal assignment providers and their main concern lies on effectiveness and decision-making abilities of the board. In case of serious personal and professional issues within the boardroom, the Chairman is allowed to ask for board evaluation as well. The nature of the assignment provider already gives the direction of the evaluation, the techniques that will be used and defines if internal or external evaluator is needed (Deloitte, 2012).

The Board evaluation circle (Figure 1.) describes the seven main questions board evaluation should address (Kiel, 2005), as they could bring attention to negative board dynamics or confirm the existing good framework. As a start it is important to define what will be evaluated (Maanen van & Veltrop, 2010). Is the motivation to show corporate leadership or to resolve problems? The board should discuss and agree on the objectives of board evaluation, while specific objectives to review is best delegated to small groups or individuals. The most common goals include clarifying any potential problems, identifying the root of these problems or testing the practicality of existing solutions. Besides choosing the objective of the evaluation, it is necessary to define the skill set of the people who will be evaluated. It could mean talking about the board as a whole, individual directors or key governance personnel. The principle is to find all participants with a major impact on the reviewed objective while taking cost-and time implications into account. For developing a shared understanding of governance roles and responsibilities a group evaluation is the most suitable, but it has limited insight into performance problems. To identify strengths/weaknesses and to analyze particular issues in depth, individual evaluation should be considered (Minichilli et. al, 2007). However, it carries the danger of being too subjective on matters of personal contribution and performance. Peer evaluations could provide a more objective review on individual performance and can identify skill gaps in a more detailed way.

Usually the facilitator decides if the scope of the evaluation is internal or external (Kiel, 2005). Internal evaluation involves the board members, the CEO, senior management and other employees of the organization. By having external evaluations stakeholder' s

perspective and issues can be brought to the board's attention. This could include evaluating customer/supplier relationship, shareholders and financial markets or governmental relations. After choosing the scope of analysis the facilitator will decide on who will conduct the evaluations. There is a possibility to appoint an internal evaluator like the chairman, a non-executive director or a board committee. This scenario has the advantage to demonstrate authority to external stakeholders and to help establishing standards/ culture of performance within the boardroom. In addition, it is a very cost-effective option and confidential information could be kept within the organization. However, it brings up the question of transparency, internal biases and proper disclosure and if the internal evaluator has the necessary skills and time to conduct the analysis (Institute of Directors). On the other hand, appointing an external consultant would be useful in case of board incapability and lack of transparency within the organization. An external could play a mediator / messenger role and recommend different approaches, framework or perspectives. It is highly advised to use an external evaluator in case of difficult issues, in times of major reorganization or if the individual director evaluation is done for the first time. The higher level of technical skills and independence could compensate for the high costs of involving an external consultant.

There are different techniques available for conducting board evaluations. Most of the time the results of the analysis will determine the most suitable method of evaluation. Qualitative data is best used to find roots of the problems or getting detailed information on a certain subject. It provides in-depth knowledge about certain issues, but it could be easily biased and it requires judgment on the part of person undertaking the review. The most common ways of collecting qualitative data is individual in-depth interview, focus group interview, observation, case studies and company documentation. Martin Hilb (2006) introduced a standardized board interview situation with a set of cards as a support tool. The set of red cards helps to indicate which corporate governance factors are the most important for the board member and the green cards help to rank the satisfaction with those governance practices. Afterwards, the main reason for dissatisfaction at each highlighted issue is explored and an action plan is developed to change those practices (Hilb, 2006). For analyzing board dynamics, observation and focus group interviews are used most of the time. These provide insight, with the help of group interaction, and are the most effective ways of seeing board members in action. However, they are not really suitable for discussing sensitive issues and it is subject to an observer's bias. Case studies are time consuming, but can dive into specific areas unique to the organization.

On the contrary, quantitative data is very specific and measureable and could help in comparing board member performance with one another. Usually, the facilitator decides on the timing of the survey and it is used in conjunction with other techniques. It is subject to individuals' subjective assessment of certain issues and carries the danger of responder bias. Online questionnaires can gain large amount of information in a short time and the data could be easily compared and comprehended. Surveys are usually standardized, but there is a possibility for including open questions to capture individual opinion and needs. This type of survey is called the semi-standardized survey (Hilb, 2006). However, board members might dislike questionnaires and it is not suitable for analyzing sensitive issues (Deloitte, 2012). The "8 W" concept developed by Martin Hilb (2006) is a successful board evaluation tool regarding board dynamics. On one side, it analyzes issues related to board policies e.g. board guidelines, board culture, board structure, board meeting management and board diversity. On the other side it pays attention to other important board factors like board champions, board stakeholders and board feedback. The self and external evaluation is done both on the individual board member's level and on the joint board level as well. Besides having individual feedback the board is responsible for its own self-review, the so-called 360 feedback process. The main aim of the "8W" evaluation technique is to find out which factors are the most important for the board's success and how satisfactory those requirements are at the moment.

Different psychological tests could be used during the evaluation process to measure personality styles and psychological preferences. The Myers-Biggs Type Indicator (MBTI) analyzes the preferences how people perceive the world and make decisions in general (The Myers & Briggs, 2013). For individual evaluation the Cognitive Profile Inventory is also used as it could help to identify people's own cognitive styles and to predict behavior with regard to thinking, learning and problem-solving (The Myers & Briggs, 2013). On the interpersonal and group level usually the intensity of interaction among board members and conflict management within the board is evaluated. The FIRO test (Fundamental interpersonal relations orientation) helps to analyze the level of affection, inclusion from the board member's side, while finding out which individuals have remarkable control in the group (FIRO-B, 2012). Conflict management depends a lot on the member's conflict style and their responses in a complex situation. The Thomas-Kilmann conflict mode instrument measures the individual's response to conflict situations by working along the axes of assertiveness and

cooperativeness (Thomas & Kilmann, 2013). Usually in case of external evaluation these tests are used as consultants could choose the most suitable ones for certain boards.

After the evaluation is completed, the question is to whom the results should be released. It could be board members (evaluation focused on board dynamics), chairperson/board member (individual director performance) or senior management team (board-management relationships). If the board is seeking performance improvement internal stakeholders should be informed, while for building up a reputation for transparency could be best done by involving external stakeholders as well. An interesting discussion remains about the role of the CEO and to what extend he/she should be an active participant during the whole process.

There is an ongoing discussion on how often board evaluation should be done. Boards with clearly articulated and understood policy are conducting it on an "as needed" basis, but it is not a common example. Some organizations prefer extensive evaluations every 2-3 years done by an external facilitator (Code Banken, 2010). The disadvantage of this type of evaluation that many changes could occur during this time frame; therefore, solutions to certain problems could be delayed. The annual review is most used by board members as it connects evaluation to strategy formulation processes time-wise. However, this could become too complacent and predictable for boards and that could outweigh the advantages of the evaluation. For the future boards many scholars recommend an ongoing process as it evaluates the effectiveness of each board meeting. The advantage of using this method is "front of mind" issues, quick feedback, little time / effort needed and encouraged discussion and interaction from the board members' side.

It is interesting to see what is happening after the self-evaluation procedure is done, what are the actual changes boards make. There is an annual survey done by PWC trying to summarize actions taken by boards after the yearly evaluation (PWC, 2013). According to their survey 57% of the boards took some actions and seeking additional expertise was the most common one (35%). They realized the importance of the committee's composition and boards make regular changes in the committee's structure as well (30%). Diversifying the board has an increasing number (17%) as more female and international members are welcomed on the boards. Changing the whole board's structure is less common than changing the committees (14%), but not re-nominating a director could be one of the actions taken. The relationship between the management and the board could be improved as well (12%) by changing the dynamics and communication between them. On the individual board member level extra

counseling and trainings are provided after the evaluation (12%) to improve their performance. Naturally more actions could be taken, but these actions are the most common ones according to the survey. 43% of the boards felt that there is no need to make any changes after the self-evaluation process.

By looking at the above-described evaluation circle (Figure 1.) and its main elements, a distinction could be made between advanced/least advanced governance codes in terms of evaluation. The national corporate governance codes give a good indication how developed the board evaluations are in a certain country. Table 2. (Evaluation in corporate governance codes) highlights the most important aspects of evaluation mentioned in the following codes: Dutch Corporate Governance Code (2009), Code Banken (2010), Gedragscode voor Commissarissen en Toezichthouders (2009) from The Netherlands, The UK Corporate Governance Code (2012), Guidance on Board Effectiveness (2011), UK Stewardship Code (2010), the Swiss Corporate Governance Code (2008), the Swedish Corporate Governance Code (2010) and the OECD principles on Corporate Governance (2004). The comparison helps to identify the differences in terms of business culture and how soft control instruments are used during the evaluation procss (Luckerath-Rovers, 2011). It seems that the frequency of the evaluation and the members being evaluated is standard in most codes, but the other elements differ by country. While the British and the Dutch Code find it important to discuss the method of the evaluation and allow internal/external evaluation, the Swedish Code focuses more on who should be evaluated and what happens with the results.

External evaluation as an important element of transparency and corporate governance is only required by The UK Code and the Code Banken in The Netherlands. It is interesting to see that the Swiss Code only mentions evaluation very briefly and it does not specify any requirements for the evaluation. The Guidance on Board effectiveness developed by the British Financial Reporting Council follows exactly the guidelines of the UK Code, while the UK Stewardship Code complements the UK Code and gives more governance guidelines to institutional investors. The OECD principles are currently under review, as they try to strengthen the core values based on experiences from the past 10 years.

In 2014 a new initiative has been taken in The United Kingdom to set general standards for board evaluation. This proposed Code of Practice along with a framework would provide a better overview on how board evaluations should be done and how companies and advisers could work together more effectively. Key features of this proposed code are: clarity on

conflicts of interest, safeguards against insider trading, not more than two consecutive assignments for consultants, creation of independent adviser body and more focus on effective communication between client and adviser (Medland, 2014). The draft code has been developed for external evaluation by Advanced Boardroom Excellence consultancy, but the internal evaluation part is still open to public discussion. This draft is focusing on the competencies and capabilities of the consultant, the expectations of the client by the consultant, the terms of engagement and on creating an effective evaluation process (ABE, 2014)

Table 2.: Evaluation in corporate governance codes

	The UK Corporate Governance Code	*Dutch CG Code*	*Code Banken*	*Gedragscode voor Commissarissen*	*Swiss Corporate Governance Code*	*Swedish Corporate Governance Code*	*OECD Principles on Corporate*	*Financial Reporting Council Guidance*
Evaluation at least once a year								
Internal/external evaluation is allowed								
Board and individual board members must be evaluated as well								
Evaluation of board member's skills and competencies								
The process/method of evaluation must be reported								
The organization can decide on the method of evaluation								
At least every 3 years external evaluation								
Non-executive directors should evaluate the chairman								
Evaluation should be sent to the nomination committee								
CEO should be continuously evaluated								
Executive management is not allowed to be present during the evaluation meeting								

Board dynamics and evaluation are more and more important at the governance table and companies integrate the corporate code guidelines into their day-to-day management (Hilb, 2006; Maanen van, 2012; Luckerath-Rovers, 2011). It is a developing field and multiple instruments have been introduced to create effective decision-making in the boardroom. Many governance codes follow the example set by the UK Corporate Governance Code as it gives the most detailed description on role/responsibility of the directors and how evaluation should be done. For example in The Netherlands most of the required governance conditions are fulfilled, but there is still remarkable management involvement during the evaluation process and it is mostly done without the help of an external facilitator (Monitoring Commissie, 2012). However, this change is not only challenging for the policy makers, but also for the board members. How are the most important issues brought to the table? Which design should be used for evaluation and which board member is the weakest link in the boardroom? These are some issues every board is facing today, but finding the right instruments to solve these problems differs by company. The direction is given for good board dynamics, but the way to achieve this goal is still unclear. Changing the way of group interaction and having a critical view on their own functioning requires willingness for change and a new mindset from the directors' side, so hopefully at the end not the Enron board members will be the smartest guys in the room.

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The Assessment of Formal Barriers to the Formation and Survival of Small Businesses in Lithuania

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ABSTRACT

Small-and-medium size enterprises (SMES) are considered to be a key to economic development, and market completion. Small businesses are also a crucial source of innovative potential and job creation. In the aftermath of the recent economic crisis many countries experience high unemployment rates. A strong small business sector can provide employment opportunities and contribute to economic growth and speedy recovery. Though the creation of small firms and self-employment is ostensibly encouraged in formal government policies, in practice small businesses are affected by multitude of barriers, both formal and informal. This study explores the relationship between the level of formal barriers such as taxation, accounting requirements as well as other relevant regulations, and the likelihood of small business creation and survival in Lithuania. It uses statistical data, legal documents, and experts' evaluations to determine the regulatory burden experienced by small businesses. The results of the research indicate that regulatory requirements are significant factors in small business formation and performance. Findings of the paper contribute to a better understanding of how entrepreneurship happens and how policy makers could shape their policies to effectively encourage small business formation and sustain their operations medium and long-term.

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1. INTRODUCTION

Entrepreneurship is a multidimensional concept. Among other things, it implies innovation and business start-ups. Small businesses are crucial for job creation, economic and social development, and competitiveness of the country. Therefore the economic policy in many countries devotes attention to entrepreneurship and offers incentives for small business creation. Nowhere the importance of entrepreneurial activity is reflected better than in the project called Global Entrepreneurship Monitor (GEM) the report based on the population surveys and experts' opinion conducted globally each year since 1999 (GEM, 2012). According to the GEM 2012, based on the level of economic development Lithuania is efficiency-driven economy, placing it between highly developed countries that are classified

as innovation-driven economies and less developed countries classified as factor-driven economies.

This classification is important for the assessment of the level, success and impact of entrepreneurial activity in country's economy. It implies, among other things, that Lithuanian policy makers have to devote more attention to the sustainable growth of small and medium size enterprises in order to become an innovation-driven economy. This paper necessarily focuses on a narrow aspect of such a complex phenomenon as entrepreneurship, namely the existence of formal barriers to small business creation, performance, and ultimately survival.

The objective of the research is to reveal the current situation with respect to entry regulations, taxation, and accounting requirements obligatory to various legal organizational forms of small businesses in Lithuania and recommend ways to make regulatory burden more amenable to businesses. To achieve the aims of the paper the method of experts' evaluation has been used. The results indicate that small businesses perceive the regulatory and tax burden as excessive and a considerable obstacle to the successful development of this sector of the economy.

The paper is organized in the following way. In sections two and three a review of the literature concerning entrepreneurship and the background of small business sector in Lithuania is presented. The fourth section is devoted to the description of the research method used in the paper. The results of the experts' survey are presented and discussed in section five. Finally, the last section concludes and provides recommendations.

2. LITERATURE REVIEW

Economists agree that entrepreneurs, and the new businesses they establish, play a critical role in the development and well-being of their societies. Small business development is seen as crucial for economic growth, innovations and market completion in advanced democratic economies. (Z. Acs, Audretsch, Braunerhjelm, & Carlsson, 2012; Z. J. Acs & Audretsch, 1990). Global Entrepreneurship Monitor defines entrepreneurship as "any attempt at new business or new venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business" (Global Entrepreneurship Monitor, 2012).

Insights into the entrepreneurial startup environment distinguish *nine entrepreneurial framework conditions*, namely: financing, governmental policies, governmental programs, education and training, research and development transfer, commercial infrastructure, internal market openness, physical infrastructure, and cultural and social norms. (Global Entrepreneurship Monitor, 2012). Though majority or all of those conditions are relevant for entrepreneurial activity at different stages of economic development, this paper limits itself to the review of literature relevant to the identification of institutional factors that encourage or hinder this activity. At least two of those factors are directly related to government policies.

The *government policy* entrepreneurial framework condition relates to the extent to which government policies influence new and growing small businesses. This includes the tax regime, labor market regulation, social security legislation as well as regulations and schemes that specifically aim at the small business sector (GEM, 2012). Researchers also have recognized the importance of institutional factors such as regulation of entry and the rule of law on the level of entrepreneurial activity (Aidis, Estrin, & Mickiewicz, 2009, 2010; Levie & Autio, 2011).

Government policies can either facilitate the establishment of small business or create barriers. Based on previous research and with the focus on transition economies Aidis (2005) distinguishes four types of barriers affecting new business operations: formal, informal, environmental, and skills. (Aidis, 2005). The most important barriers seems to be formal barriers such as high level of taxation (Bohatá & Mládek, 1999; Hashi, 2001) and the general regulatory environment (Brunetti, G. Kisunko, & B. Weder, 1998). Informal barriers such as corruption (Tonoyan, Strohmeyer, Habib, & Perlitz, 2010) and unfair competition from the large informal economy(Muent, Pissarides, & Sanfey, 2001) are also significant hurdles for small firms. Environmental barriers such as lack of financing and low purchasing power further interfere with SME development. Skill based barriers include the shortage of business related skills. Using the dataset based on a mail survey sample of 332 SME owners in Lithuania Aidis (2005) tests the relative importance and interrelation of those barriers. The results indicate that the most significant barriers are formal barriers related to frequent changes to taxes, the tax level, ambiguity of tax policies and environmental barriers related to low purchasing power and lack of funds for business investment. (Aidis, 2005).

3. BACKGROUND

In Lithuania the business is classified as “small business” if its annual receipts do not exceed 1mln. Litai (1 Euro = 3.45 Litai) per year and the number of employees is not more than 10 persons ("The Law of the Republic of Lithuania on Profits Tax," 2001). Owners of small business can choose to legally register its economic activities in several ways. It can operate as a joint-stock company, small partnership, individual enterprise (sole proprietorship), or carry out individual economic activity with a business certificate or with a business license. Four of these business types with the exception of individual economic activity with a business license and relevant regulatory, taxation, and accounting requirements are summarized in Table 1.

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Table 1: The comparison of small business organization types in Lithuania

	Small partnership	**Joint stock company**	**Individual enterprise**	**Individual activity with a business certificate**
Who can found a business?	Only physical persons (up to 10 members)	Physical persons and legal entities	Only physical person	Only physical person
Requirements for registration.	Registration upon agreement of the founders.	The initial capital of 10 000 Lt is required. Registration in the register of legal persons.	The initial capital is not required. Registration in the register of legal persons.	The initial capital is not required. There is no registration in the register of legal persons. Certificate is issued by tax authorities.
Legal responsibility	Limited civilian responibility of private legal entity. Responsibily limited to the property of legal entity.	Limited civilian responibility of private legal entity. Responsibily limited to the property of legal entity.	Unlimited civilian responibility of private legal person. Responsibilty covers the property of legal entity and owner‘s property.	Status of legal entity is not bestowed.
Taxes required to pay	Profits tax (PT), rate 5 %. Taxable base is determined taking into account allowable deductions, limited allowable deductions, and unallowable deductions. Personal income tax (PIT)on wages and salary rate 15% (Wages and salary in fact coincide with the amount of money the member of the partnership can withdraw for personal needs. The member can choose the amount he deems	Profits tax, rate 5 %. Taxable base is determined taking into account allowable deductions, limited allowable deductions, and unallowable deductions. PIT on dividends at the rate of 20 %.	Profits tax (PT), rate 5 %. Taxable base is determined taking into account allowable deductions, limited allowable deductions, and unallowable deductions, except expenses for owner‘s SIT and HIT. Income derived from individual acitivy is treated as wages and salaries and taxes at 15% of PIT.	PIT : 15 % rate for free professions; 5 % rate for other economic activities. Ta taxable base can be determined: 1) income minus allowable deductions, limited allowable deductions, and unallowable deductions except expenses for owner‘s SIT and HIT, or 2) income minus standard deduction equal to 30 % of

	Small partnership	Joint stock company	Individual enterprise	Individual activity with a business certificate
	wages and salary) Personal income tax (PIT), rate on dividends 20 %. Social insurance tax (SIT) of 26.3% on the income taxed at the 15% PIT. Health insurance tax (HIT) of 9 %. The ceiling of 71 424 Lt is applied for calculating SIT and HIT (in 2012).		Social insurance tax (SIT) of 26.3% on the income taxed at the 15% PIT. Health insurance tax (HIT) of 9 %. The ceiling of 71 424 Lt is applied for calculating SIT and HIT (in 2012).	receipts. It is not required to provide evidence (documents) for this deduction) SIT rate 28,5 %; HIT rate 9 %. The taxable base is equal to 50 % of taxable income for PIT purposes. The ceiling of 71 424 Lt is applied for calculating SIT and HIT (in 2012).
Accounting requirements	Accounting can be done by the member of the parnership. Accrual basis. Required financial statements: Balance sheet, Profit and loss account, Explanatory note. Shortened form of statements. 1) Applies Business accounting principles (BAP)(based on GAP) only relevant for partnerships, or 2) Applies complete BAP	Accounting is done by a hired accountant. Accrual basis Required financial statements: Balance sheet, Profit and loss account, Changes in stockholders equit, Explanatory note. Shortened form of statements. Applies complete BAP.	Accounting can be done by the owner. Accrual basis. Required financial statements: Balance sheet, Profit and loss account, Changes in equity. Explanatory note. Shortened form of statements. Applies complete BAP.	Accounting can be done by the person engaged in individual activity. On cash or accrual basis. If the person is a registered VAT payer – only on accrual basis. A person keeps receipts-disbursements journal. There‘s not requirement to produce financial statements.

Sources: ("The Law of the Republic of Lithuania on Personal Income Tax," 2002; The Law of the Republic of Lithuania on Profits Tax," 2001)

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Small businesses constitute the majority of enterprises in Lithuania. As shown in Figure 1 small businesses registered as joint-stock companies and individual enterprises (sole proprietorships) account for about 74%-78% of companies.

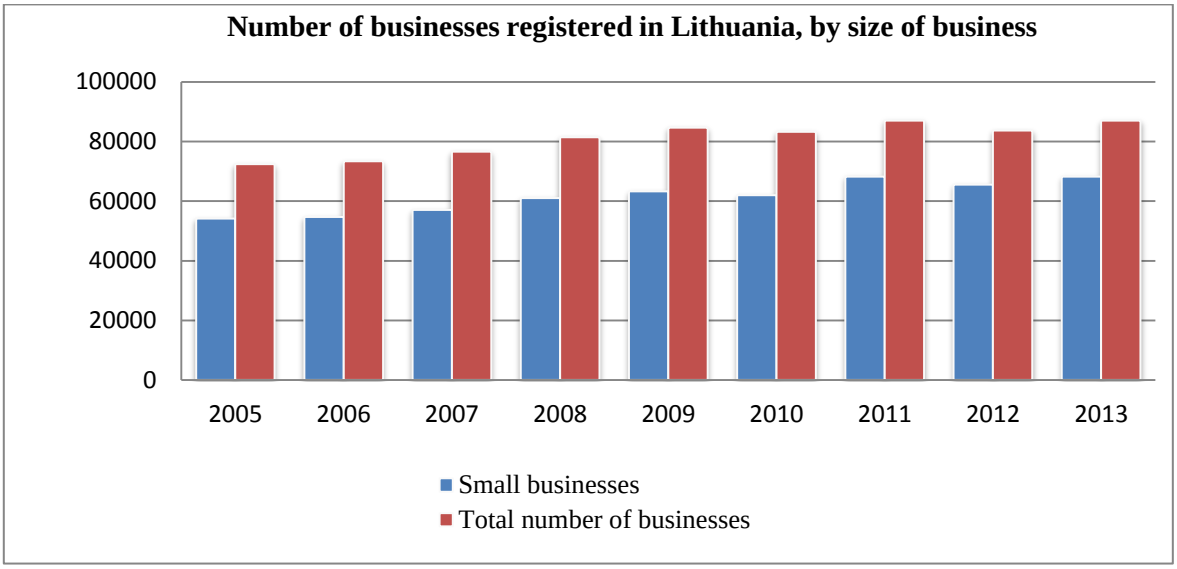

Figure 1: Number of businesses registered in Lithuania

Source: (Statistics Lithuania, 2013)

However, the totals hide quite a turbulent nature of small business creation and survival. Sometimes the number of businesses that discontinue their activities is higher than the number of businesses that register their business during that year. It's best to observe those activities by the type of legal business organization. As shown in Figure 2, numbers of individual enterprises that cease their activities constantly exceed the number of businesses that start their activities that year. It's interesting to note that the economic recession is not visibly reflected in the number of instances of new business creation right after 2008. This might reflect the necessity –driven entrepreneurial activity: as jobs become scarcer self-employment becomes a more attractive option. The decline in the number of registered individual enterprises after 2010 might also reflect the fact that other forms of legal business registration might have become more beneficial taking into account accounting requirements, and changes in tax rates that came into effect in 2010.

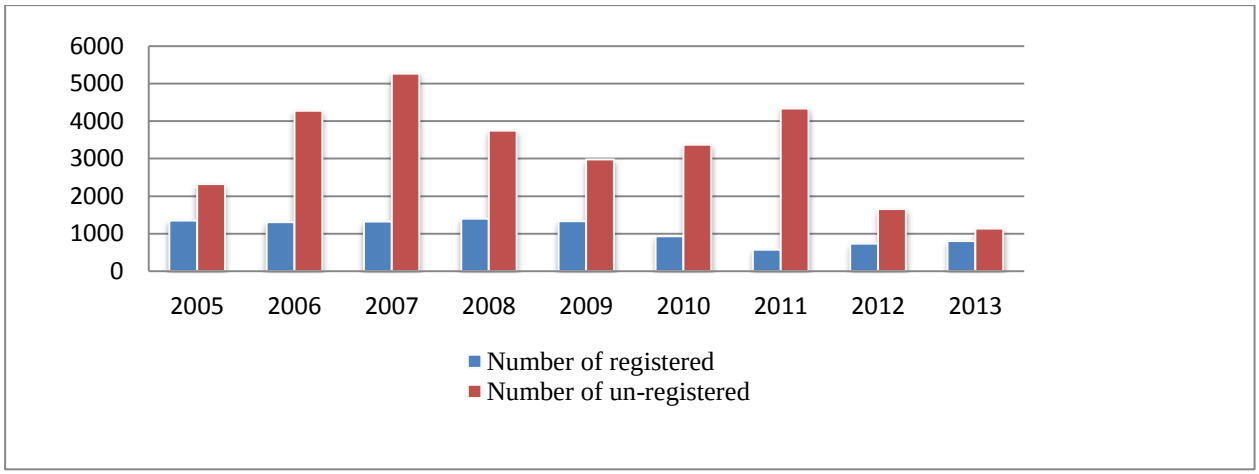

Figure 2: Number of individual enterprises that started and ceased their activities in a given year Source: (Statistics Lithuania, 2013)

If we take a look at the business creation and "destruction" process of joint-stock companies that employ less than 10 employees and therefore qualify to be classified as "small business" for taxation and accounting purposes, the picture is less bleak. Figure 3 shows the growing trend to register small business as a joint-stock company. The survival rate is much higher than for individual enterprises. The average rate of business termination was about 24% during the observed period.

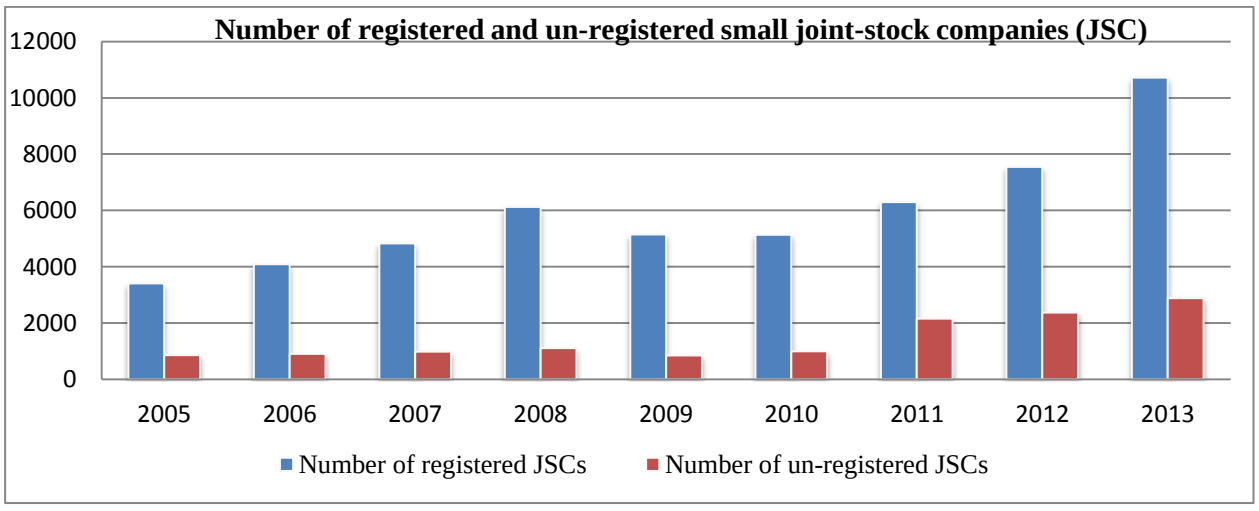

Figure 3: Number of joint-stock companies that started or ceased their activities in a given year Source: (Statistics Lithuania, 2013)

The same sort of turbulence in business creation can be observed in the change of the number of persons engaged in economic activity with a business certificate issued by tax authorities.

(See Figure 4). Although the data for earlier years is not available, in the years from 2008 to 2010 the number of individuals that discontinued their business activities exceeds the number of individuals that formed businesses. The overall trend of individual business activities is rather stable with a number of newly issued business certificates roughly matching the number of revoked certificates. There is a noticeable spike of starts-ups at the end of year 2012.

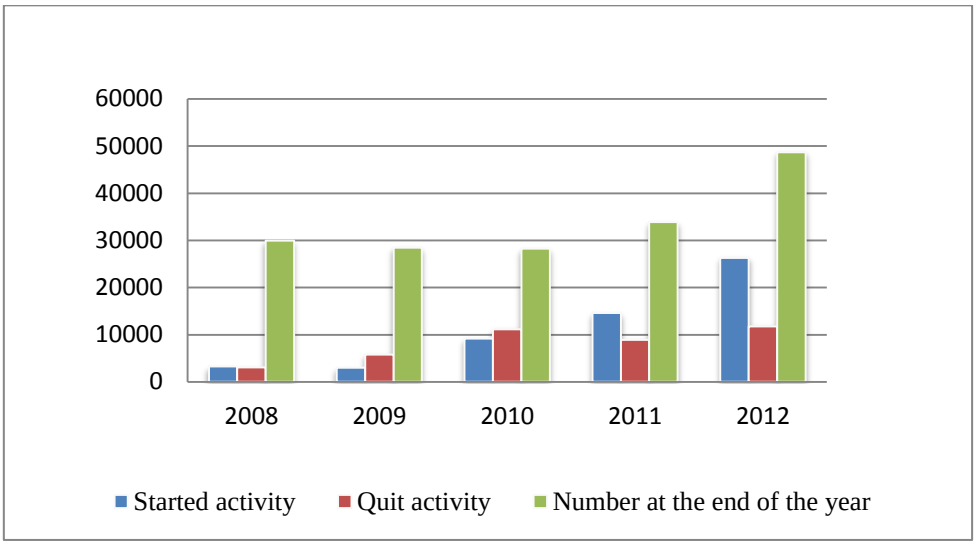

Figure 4: The number of individuals working with business certificates

Source: (State Tax Inspectorate, 2013)

If we compare those three legal forms of small business registration in Lithuania, there are clear indications that in recent years entrepreneurs prefer to conduct their business activities organized either as joint-stock companies or by acquiring a business certificate. Business organization through the registration of an individual enterprise is clearly out of favor with businessmen. This might reflect the fact that economic activity with business certificate enjoys a more favorable taxation treatment and faces lower accounting requirements than individual enterprises. Individuals working with business certificates do not have to keep double entry accounting, and the personal income tax rate has been reduced from 15% to 5% since 2010 ("The Law of the Republic of Lithuania on Personal Income Tax," 2002). Some of the business owners may also switch their legal incorporation from individual enterprise to a joint stock company because of the limited liability status.

In order to make more flexible conditions for small business start-ups and operations a new legal business organization type, called "small partnerships“, has been enacted in September of 2012. It is expected that this type would have an advantage over an individual enterprise or an individual business activity with a business cerificate by giving it a status of limited liability. Among the drawbacks can be mentioned a limited possibility for the members of the partnership to share the profits, the requirement to prepare preliminary financial statements, limits placed on the partners to work by job contracts. It is too early to judge if this business organization type has met the expectations of businessmen. The statistical data on the earnings of the members of small partnerships and other performance indicators are not yet available.

4. METHODOLOGY

The aim of the research is to examine the level of the current regulative burden as perceived by small business owners and managers and to solicit expert's recommendations on the possible easing of taxation and accounting requirements that might hinder the development of small business sector in Lithuania.

The method of experts' evaluation has been chosen for this research. This method belongs to the class of qualitative research methods. The method of experts' evaluation is understood as a generalized experts' opinion. It uses a specialist's (expert's) knowledge, experience, and intuition. The experts' evaluation is a procedure that allows us to consolidate the opinions of separate experts and draw a common conclusion (V. Rudzkiene, 2005). In the case of experts' evaluation it is impossible to draw a representative sample. Instead a sample is drawn based on the non-probabilistic selection method. "The reliability of the expert's evaluation method depends upon the selection of experts. Selected experts must be competent persons, have specialized expertise in the area directly related to the research object" (Tidikis, 2003 p. 517). The size of the group (number of experts) also depends upon the competency of experts (V. Rudzkiene & Augustinaitis, 2009). In order to ensure the validity and reliability of experts' evaluation the size of the group should not be less than five experts. However, sometimes the number of experts may reach 30 or 40. The optimal recommended size of the group is from 8 to 10 experts (V. Rudzkiene & Augustinaitis, 2009). For this research the owners, managers of various forms of small businesses, and accounting specialists were chosen as experts' pool. As it happens in some small businesses the owner of the business also serves as a manager

and an accountant in addition to performing other tasks. In order to select competent respondents the following requirements were applied: the expert's educational attainment could be no less than a college degree or higher and the expert must have no less than 5 years of job experience in small business management and/or accounting.

In this research the experts' evaluation was conducted with the use of a survey. A questionnaire was designed and sent out for the experts to fill out. This method allows data to be gathered in a time-saving manner. The questionnaire uses close-ended (multiple choice and ranking) questions as well as some open-ended (comment box) questions. Ranking questions employ a Likert scale with five possible answers using a 1-to-5 rating scale where "1" means "strongly agree" to the notion and "5" means "strongly disagree" of the notion. The questionnaire[1] contains 17 questions. Each question is designed to achieve certain goals as reflected in Table 2.

Table 2: Research goals and corresponding questions in the questionnaire

Goals	Questions
1. Evaluate tax burden and complexity of taxation rules as perceived by small business operators in Lithuania	2, 3, 4, 5, 6, 7
2. Evaluate the complexity and burden of accounting requirements	8 ,9, 11
3. Disclose overall attitudes towards small business regulation burden and its impact on the growth of small businesses	12, 13
4. Assess the ease/difficulty to register a small business	2
5. Evaluate the competence of experts and gather some basic information as the type of organizational form of the business, gender of the respondent, and position in the firm	1, 10, 14, 15, 16, 17

The questionnaire was sent to 13 experts. In total 11 questionnaires were received, nine of which met the competency requirements and did not contain missing values and were used in the analysis.

This method requires formal testing of the compatibility of experts' evaluations. The compatibility of the expert evaluations was tested using Kendall's *W (*Kendall's coefficient of concordance). Kendall's coefficient of concordance for ranks (*W*) calculates agreements

[1] The full questionnaire is available from the author upon request.

between experts as they rank a number of items according to particular characteristics. If the test statistic *W* is 1, then all the survey respondents have been unanimous, and each respondent has assigned the same order to the list of items. If *W* is 0, then there is no overall trend of agreement among the respondents, and their responses may be regarded as essentially random. The following hypotheses are formed:

*H_0: The expert evaluations are conflicting (*Kendall's *W is equal to zero);*
*H_A: The expert evaluations are similar (*Kendall's *W is not equal to zero).*

Kendall's coefficient of concordance is calculated according to the following formula:

$$W = \frac{12S^2}{m^2(k^3-k)-m\sum_{l=1}^{r} T_l} \quad (1)$$

Where W is the coefficient of concordance
S^2 is the sum of squared deviations
m is the number of experts
k is the number of alternatives
r is the number of rows that contain coinciding ranking
T_l is the number of coinciding rankings in the first row of ranks

For the data set based on the survey Kendall's *W* has been calculated using statistical package SPSS (version 13). Results are presented in Table 3.

Table 3: Test statistics for expert compatibility

Kendall's Coefficient of Concordance	.394
Chi-Square	24.849
Degrees of freedom	7
Number of experts	9
Asymp. Significance	.001

Source: calculated by the author using SPSS

The calculated Kendall's coefficient of concordance of 0.394 indicates a sufficiently high level of agreement among experts in evaluating proposed items. We can reject the null hypothesis that the experts' evaluations are conflicting at the 0.00 level of statistical significance. The test statistics indicate that results obtained through the chosen methodology are robust.

5. RESEARCH RESULTS AND ANALYSIS

In total, responses to nine questionnaires have been used for the analysis. Six respondents had experience in the operations and managements of joint-stock companies, one was the owner of an individual enterprise and two were engaged in individual business activity with a business certificate. All respondents had a college degree including one with a master's degree. The years of experience in business ranged from 5 to over 20 years.

The first question was aimed at finding how easy it was to register a business in Lithuania. The results are summarized in Figure 5 and clearly indicate that registering a business is not burdensome. The overwhelming majority of respondents agree that registration of business was a short simple procedure.

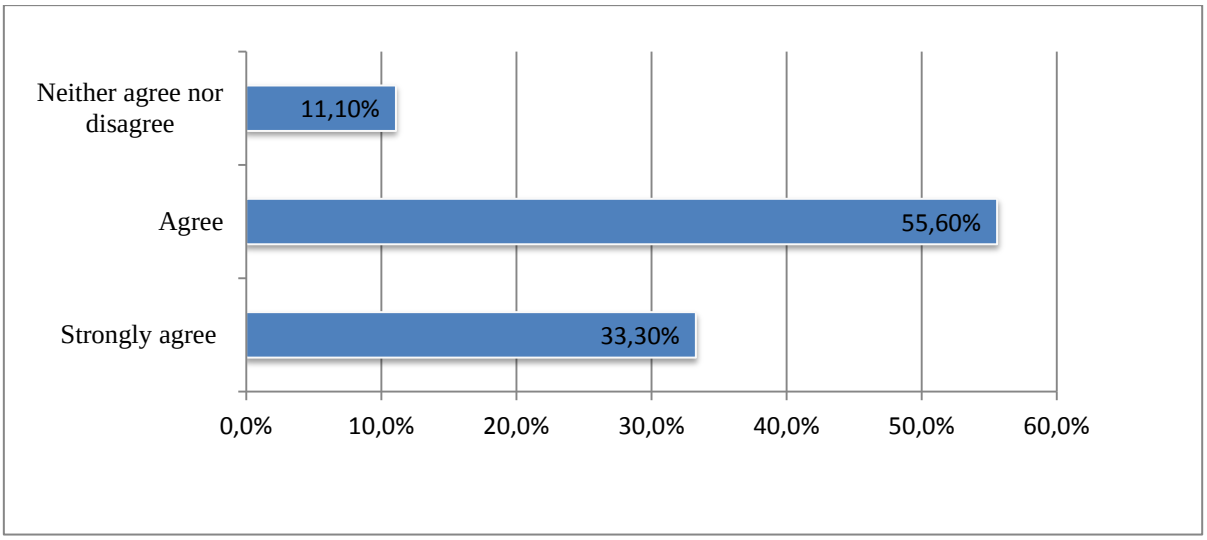

Figure 5: The procedure of business registration was simple and short. Please, indicate from "1" meaning "strongly agree" to "5" meaning "strongly disagree"

The next three questions asked respondents to rank statements related to the tax burden on the scale of "1" meaning "strongly agree" to "5" meaning "strongly disagree". The results are indicated in Figure 6. 67% of experts disagreed with the notion that the taxes the businesses have to pay are not high. In correspondence with this "inverted" question respondents almost in equal proportions agreed with statements that the number of taxes the small businesses have to pay is high and that overall tax burden hurts their business. Most of the respondents (over 55%) also considered that the tax calculation and payment procedures were complicated.

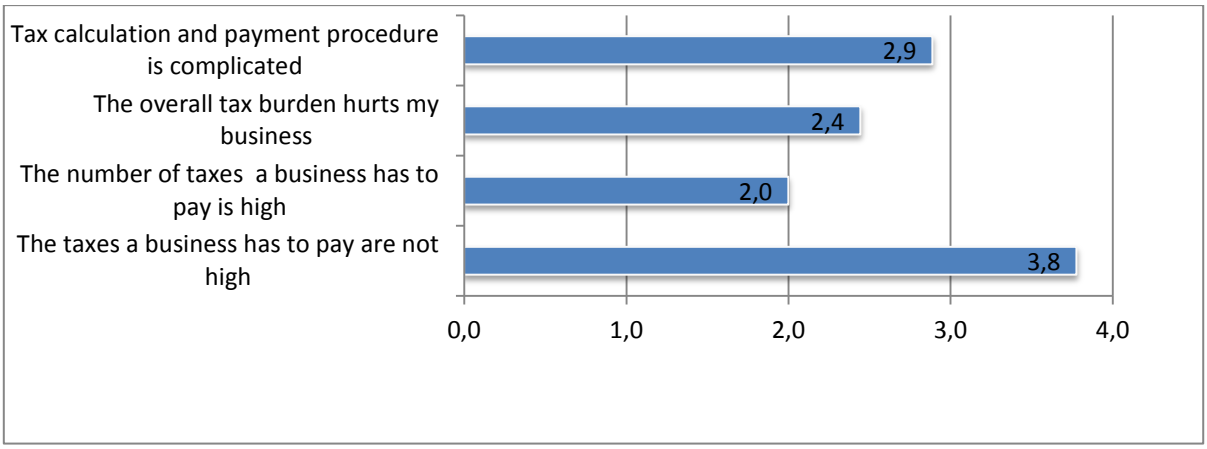

Figure 6: Please, evaluate the given statements by indicating "1" meaning "strongly agree" to "5" meaning "strongly disagree"

In order to get a more specific indication on the burden of tax accounting respondents were asked how many hours on average they spend to calculate and pay their taxes. The answers vary by type of the business. An owner of the individual enterprise indicates that on average it takes from 10 to 20 hours to calculate, declare and pay taxes for a tax period. Persons engaged in business activity with certificates indicate that it takes them from 5 to 10 hours to do their taxes. Answers provided by experts on joint-stock companies varied from "5 to 10" hours to more than 30 hours. (See Figure 7).

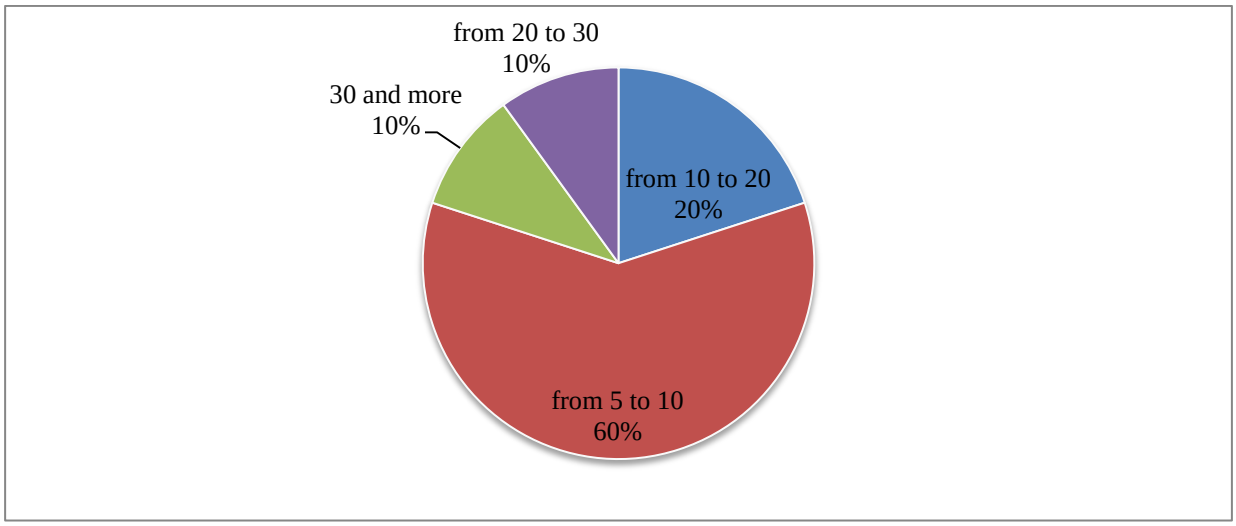

Figure 7: On average how many hours do you spend to calculate, declare and pay your taxes for a tax period?

The aim of the next three questions was to evaluate the accounting burden experienced by small firms and sole proprietors. On the scale of "1" meaning "strongly agree" to "5" meaning

"strongly disagree" respondents were asked to rank statements related to accounting requirements. The results are presented in Figure 8.

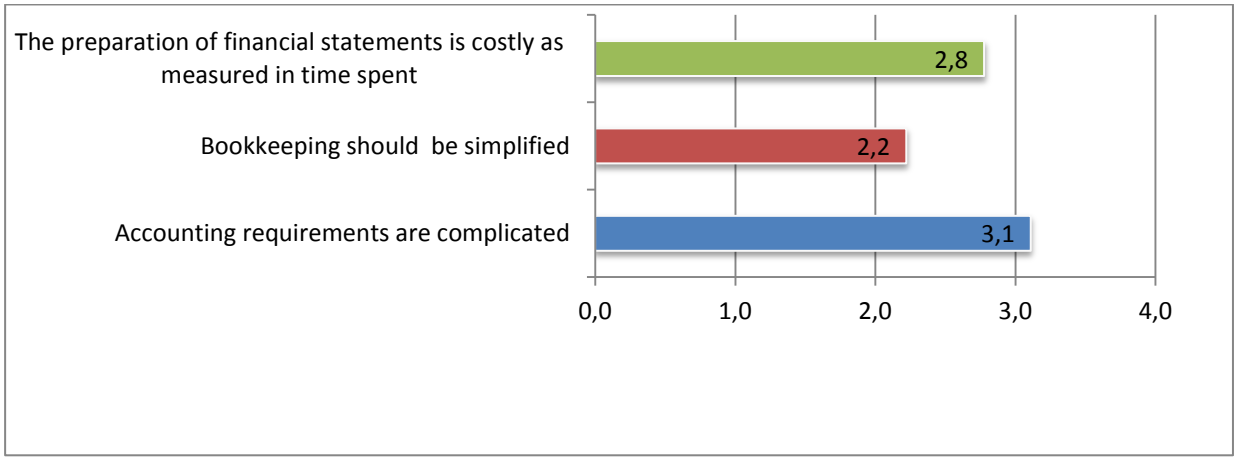

Figure 8: Respondents' ranking of statements related to accounting requirements.

Only 30% of respondents agreed that accounting rules were complicated but the overwhelming majority agreed that bookkeeping should be simplified. The majority also agreed that it takes much time to prepare financial statements. The results may be interpreted that though accounting rules are not complicated, the preparation of reports is time consuming.

Finally, in order to disclose whether formal regulation burden is considered an important barrier for the formation and performance of small business two general statements were formulated. Respondents were asked to rank the importance of regulatory burden for the successful development of small business relative to importance of economic conditions in general. As indicated in Figure 9, majority of the respondents agree that the regulation burden is high and hinders the formation and performance of small business. Opinion was split on whether or not the overall economic conditions like infrastructure, purchasing power of consumers, and the availability of the qualified labor force were more important for the development of small business than the reasonable regulation burden.

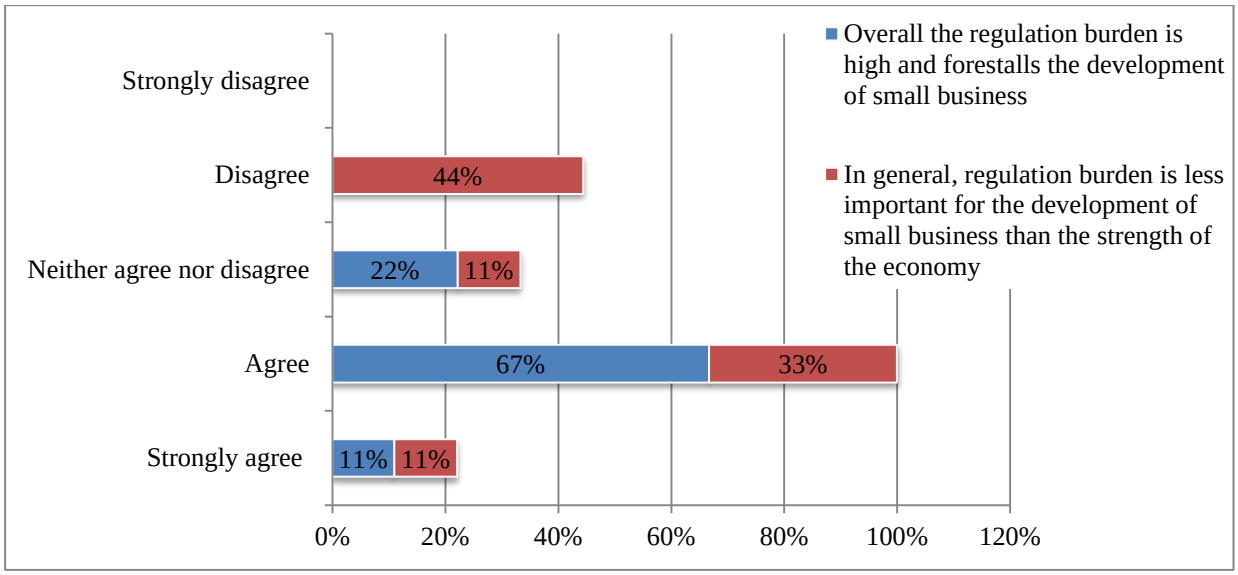

Figure 9: Respondents' evaluation of the relevance of regulation burden versus economic conditions for successful small business development

It follows that experts admit that sound economic environment is a factor that influences the formation of a strong small business sector, however the reduction of regulatory burden is equally if not more important. The respondents were given an opportunity to write comments about the experience managing small businesses. The experts provided the following recommendations:

- Currently each tax imposed on businesses (social insurance tax, health insurance tax, profits tax, personal income tax) is paid separately. In order to save tax payers' resources and time it should be made possible to pay all taxes by a single transfer. Currently separate tax returns (declarations) are filed for each tax though the tax base is often the same. A single tax form (declaration) should be prepared so that all parties engaged in tax administration would receive the information necessary for tax administration purposes in a single form. This would mean filing a single tax return and making a single payment.
- Newly created businesses (up to two years) should be given tax breaks and allowed to keep simplified accounting.
- The social insurance tax rate should be reduced. The calculation and declaration of personal income tax and value added tax should be simplified.
- Reduce taxes on labor, reduce the number of reports required to submit to various government institutions, simplify financial accounting rules.

6. CONCLUSION

Results of the research provide evidence that formal barriers hinder the development of small business in Lithuania. Overall high taxation level, complicated tax calculation rules and time-consuming accounting requirements are perceived as significant burden on small businesses. Although other conditions like infrastructure, the purchasing power of consumers, and the availability of the qualified labor force are recognized as important factors for the successful entrepreneurial activity, the regulatory burden may contribute to high small business failure rates. Businesses in Lithuania are given several options to legally register and carry on their activities, but none of them offer simple and fair taxation rules or relieve from quite burdensome accounting requirements. Though some forms of legal business organization may be more favorable for small businesses than others, the total array of rules and regulations seem confusing for all but very few experts.

Given the predominance of small businesses in the industrial-commercial structure of Lithuanian economy, the policy makers should make more effort to remove the remaining formal barriers to entrepreneurial activity. Fewer taxes and simpler accounting rules would make the whole regulatory system more transparent and amenable to business.

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Green Economy and Social Responsibility in the Italian agri-food sector: the focus on the wine sector.

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ABSTRACT

This paper aims at investigating the reasons why the environmental variable and issues - such as sustainability, social responsibility and all those behaviours that can be attributed to the general definition of Green Economy - , are generally covering a more and more marked and growing influence on the contemporary economy and, in particular, entrepreneurial behaviour. Our intention is to underline how the integration between business ethics and value creation has become inescapable for the business realities, not only to withstand the competition, but also to ensure the survival itself. After a general overview, it has been decided to focus the analysis on the impact that these issues have on a sector such as agri-food in general and wine in particular, which, paradoxically, are the ones that for long time have shown little sensitive towards the above-mentioned issues. The objective of this work was to highlight the importance for contemporary business realities, to pursue the integration of the social and corporate strategies, including environmental performance, economic results and competitive enterprise. The set of human activities, technological progress and the uncontrolled exploitation of resources has led to heavy imbalances in the terrestrial ecosystem, risking compromising the ability of future generations to meet their own needs. One possible solution is, therefore, represented by the sustainable development and the desire to pursue economic growth compatible with social equity. In this context, sustainability, lived in the past as more ethical than economic, is gaining importance and a much more concrete profile, designed to produce economic returns as well as on image.

ARTICLE INFO

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business ethics, green economy, sustainability, social and corporate strategies, sustainable development, value creation, wine sector

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1. INTRODUCTION

The profound changes that characterize the contemporary reality have been changing irreversibly our daily way of life, thinking and perceiving the world and human society. Global warming has been for long time a topic that requires a global and deep rethinking on the sustainability of our current development model; the financial crisis has been a shock so

strong to create a clear discontinuity of perception and feeling, showing an even more growing interest in the issue of sustainability.

The signals of actuality of the theme can be readily observed both in the increasing attention from consumers, - especially in those more informed and evolved segments-, in the growing media coverage and political attention on ecological issues, as well as in the economic ethics; in the presence, again, of the theme in the communication of many companies and in the assumption by investors of sustainability as a criterion to evaluate the enterprises solidity and, finally, in the experimentation of a possible "system break" both from a financial and scarcity of resources (water, oil, ...) point of view (water, oil, ...).

From a theoretical point of view, sustainability remains a strong and ideal values, a commitment to future generations to preserve the environment by limiting the exploitation of resources and reducing the environmental impact of products and processes. Moreover, sustainability is also a commitment to the community through an economic activity able, at least partially, to return to the community and the territory what it has received from them. In practice, it means that the company has to propose a business capable of being renewed and long-lasting: to operate by taking into account the resources (financial and environmental) actually available and act responsibly towards all its stakeholders (consumers/customers, employees, territories in which the company operates) with regard to environment, safety, social and cultural cohesion).

This paper aims at offering a detailed analysis of possible instruments and the different strategies that, with regard to environmental, social, territorial, are able to enhance in a sustainable manner the food quality by encouraging the development of a sustainable culture. After a general overview on the concept of sustainability and, therefore, on a different approach to the same way of doing business, we focus on the issues and on the instruments of CSR food highlighting in particular the contribution it can make to business competitiveness food.

The last part of the paper is focused on the business of green wine. In fact, the wine sector is an area of great significance in the Italian food system. It is the reason why it is absolutely relevant investigating, in the light of the above disclosure, if there are conditions in the cultivation Italian wine able not only to meet the requirements of quality and price demanded by the market, but also to protect the environment and health through sustainable

development.

Therefore, in this paper the research questions are essentially two:

"What is the conceptual framework in which to contextualize the strategies and tools for the sustainable exploitation in the food industry?" and "Since the Italian wine industry is very important especially in terms of export, what may be the economic consequences on the economic results and the business strategies by using modern methods of organic agriculture respectful of the precepts of social responsibility?".

The methodology used in order to write this paper is deductive. Moreover, this investigation has been based on the analysis of the literature about the subject of corporate social responsibility, in the food industry and in particular in the wine sector.

2. SUSTAINABILITY AS A POSSIBLE SOLUTION TO THE ECONOMIC CRISIS

In the context in which we live, characterized by a heavy financial and economic crisis of devastating effects, reflection on a "future model" of business appears as necessary as inevitable. In this perspective, sustainability, thought in the past as more "ethical" than economic, has acquired a new importance and a much more concrete profile these days. In fact, sustainability not only seems to be less utopian, but also a theme of necessary and realistic redesign that might produce, in due course, economic returns as well as on image.

The spread of social responsibility is part (Jain *et al.,* 2010, pp. 42-43) of the cultural evolution of our society, acting as a challenge to capture quickly and with foresight. It is necessary that companies resize on real resources, living the sustainability as an opportunity and not as a constraint and cost, and recreating a new relationship with the society in which they operate (Jain *et al.*, 2010, pp. 44-45).

It seems necessary, then, a redefinition of evaluating criteria and parameters of companies solidity: sustainability has to become an element of rating for investors use. It is a challenge that requires wide unusual horizons and the full involvement of all social actors: companies, which have to be able to combine the pursuit of profit with a vision founded on the centrality of the person; institutions, which have to be guarantors of an environment favorable to the development of CSR (Corporate Social Responsibility) and, last but not least, civil society

must provide the right incentives and impulses to the world of business and management.

A challenge, then, that needs tools and practice; communication and leadership (Beda and Bodo, 2006). To advance CSR it is necessary a large awareness of the relationship between business and society and, at the same time, a rooted adherence to the strategies and activities of companies (...) (Porter and Kaplan, 2006).

The integration between the business and society needs requires good intentions and strong leadership. It requires adjustments in organization, relations and "incentives"; joining philanthropic activities with the management of the social impact, instilling a social dimension into business activities: in this way CSR policies can be an effective tool for the enhancement of people, knowledge and the knowledge encoded in the same organizational structures.

The integration of social and environmental considerations in decision-making and relationships with stakeholders requires, then, not only a change of mindset and guidance of the people, but also the acquisition of a new cultural sensibility and a wealth of knowledge that can involve all organizational components. This requires an ability to promote transparency and introspection of the company that increasingly looks inside itself, realizing that innovating, having a good reputation and a good level of sustainability are essential conditions to become a company capable of enduring benefit.

It follows that the interpretation of corporate social responsibility as a strategic driver for the development of people is now more than ever important for organization competitive success. In this perspective, top managers and those who manage and coordinate the people in the company, must be the promoters of CSR strategies capable of stimulating members of the organization to learn new ways of doing business and, later, of consolidating practices and values compatible with the expectations of the social partners: only in this way the CSR strategies will increase with more strength and incisiveness (Cocozza, 2010).

The CRS is achieved through the adoption of voluntary actions and strategies that tend to improve the social and environmental quality (Dupuis, 2005).

For all those businesses that operate in the food sector, the environmental dimension has crucial importance (Trisorio, 2004). The impact of agriculture occurs on multiple components: air, soil, water, biodiversity and landscape (Romano, 1998 Signorello *et al*.,

2004). Its protection is not left to the initiative of free enterprise, but today falls increasingly on the political agenda not only of individual countries, but also of European policies that set limits and try to contain the effects of negative externalities (N_2O emissions and CH_4, water pollution, soil contamination, depletion of the landscape) (Briamonte *et al*., 2008). In Italy, the National Action Plan on Corporate Social Responsibility 2012-2014 identifies the strategies of the Italian State in order to create a more favorable environment to the behaviors of CSR volunteers, whose objectives are to increase the culture of responsibility in business, citizens; to support businesses that adopt CSR; to contribute to the strengthening of market incentives for CSR; to promote transparency and disclosure of information. The actions taken will have strong repercussions on reference areas and enhance the overall quality of the product made in Italy.

To support the management-oriented CSR it has to be reminded the UNI ISO 26000 guidelines that aim at "helping organizations to go beyond mere compliance with the law, promoting a common understanding in the field of social responsibility and integrating other tools and initiatives for Social Responsibility, but not substituting for them" (UNI EN ISO 26000). In it are identified seven principles of social responsibility:

1. Accountability;
2. Transparency
3. Ethical behavior
4. Respecting the interests of stakeholders;
5. Respect for the principle of legality;
6. Compliance with international norms of behavior
7. Respect for human rights.

Among the tools by which an organization is able to report in a transparent manner their own path of social responsibility is the sustainability report (Castellani, 2011, Campedelli, 2005).

3. SUSTAINABLE ENTREPRENEURSHIP

Previous sections show the need of a new approach to action by the company, an action that takes into account the interests of all its stakeholders and the impact of a social and environmental impacts that may have in the medium - long term.

A different approach to the same way of doing business involves, however, not only a change in strategic and economic decisions, but also a transformation of the organizational culture which takes new values and points of reference and adopts different strategies communication both inwards and outside.

The company, facing the need to make sense of the reality that is changing, starts to produce new cognitive maps by means of which defines its vision and mission. It follows that the introduction of socially responsible approaches within a company gives an impetus to the creation of an organizational culture centered on new values. Companies are no longer judged only for their economic performance, but also for the way in which the result has been achieved, both in terms of quality of products and services offered and both in terms of fairness and transparency of the conduct taken against their public and private stakeholders.

Entrepreneurship socially responsible is, therefore, the integration of ethical concerns within the strategic vision of the company: it is a manifestation of the will of large, small and medium-sized enterprises to effectively manage the issues of ethic and social impact in them and in the areas of activity. The inclusion of the environmental variable in every business decision gives rise to a new approach in the definition of business strategies: the green/environmental management, a management model in which the firm represents a point of reference for all those involved in environmental concerns as it has the responsibility to define programs and introduce management tools that may themselves be models able to influence all players in the network.

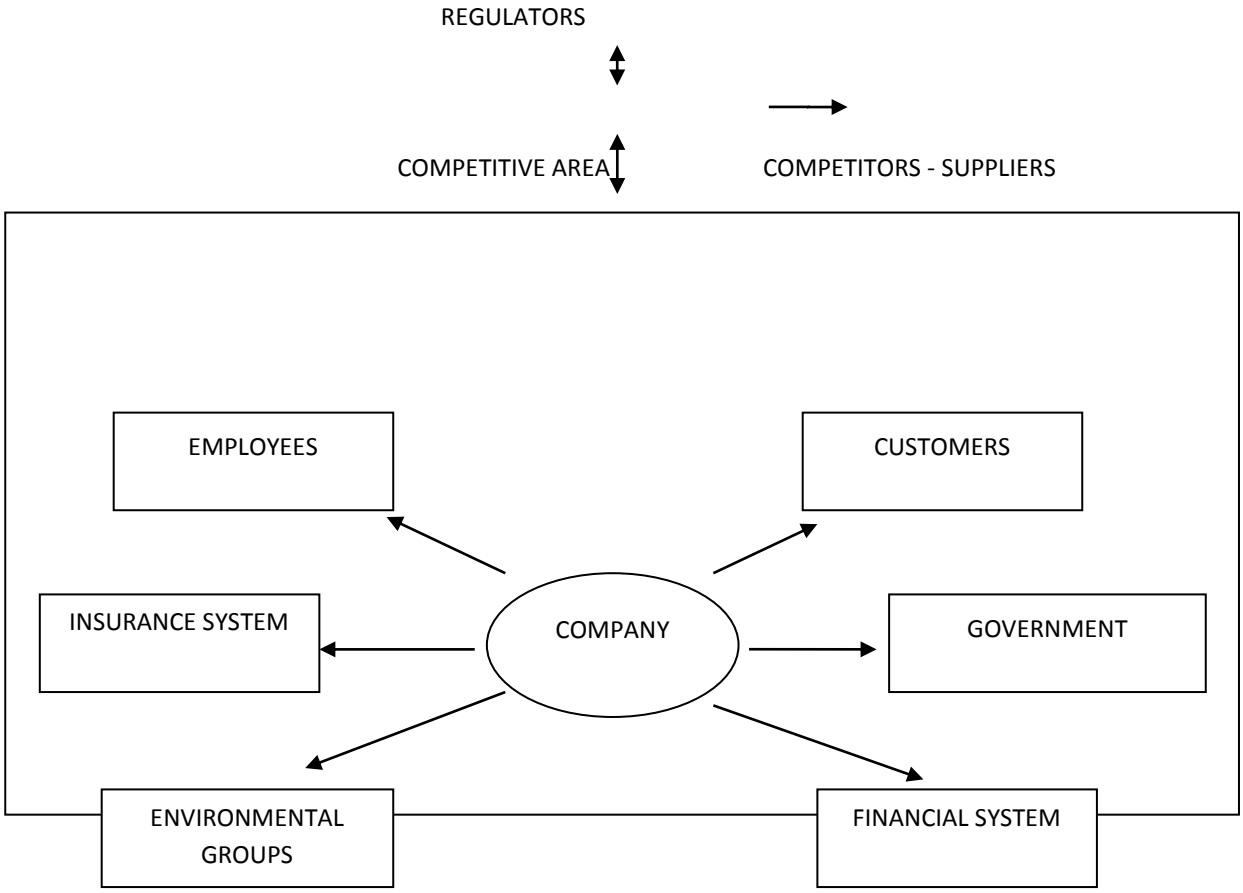

Figure 1: The network of the company.

Source: *Bertolini et al., (1996)*

A correct and efficient consideration of environmental issues, may:

- become a positive factor for competition against other companies;
- contribute to obtain the highest price-sensitive consumers in revenue in relation to the environmental problem;
- promote a reduction of production costs direct or indirect;
- expand the credibility and social legitimacy of our own business;
-increase confidence and a greater social sharing of our own choices;
- increase the level of identification of people in the enterprise, and their degree of motivation.

4. TOOLS FOR SOCIAL RESPONSIBILITY IN THE ITALIAN AGRI-FOOD SECTOR

The focus on the theme of social responsibility and ethical conscience of companies appears to be a topic of great interest even in a highly strategic sector of our economy: the agri-food system.

In fact, even in this sector the introduction of production processes based on quality has resulted in a substantial change in the production structure and the balance of the market in a more competitive direction; in particular, policies that aim at making strategic use of quality in agriculture, have acted on the level of competition in the sector, through two important variables:

- The ability to control the quality of the producers;
- The level of information on the quality of the agricultural product available to the operators (intermediate or final consumers) that express the question.

Over the years there has been, therefore, an increasing in sensitivity and attention to health and food safety, the environment and the territories (Modenesi *et al.*, 2007). The consumer, more careful and critical, asks more and more often the company for communicating these issues: if in the past it was required agricultural production able to feed the society, later it has been required that such production incorporate the guarantee of safety and health that have to have food in general, up to require a higher and higher quality. These days, the company also requires to the primary sector production techniques that are respectful of natural resources, the environment and the landscape. The needs/expectations of the consumers of these "added value" to the food places, not just individual companies, but entire food system and public policies for the sector, faced with new challenges and, in particular, faced with the necessity to satisfy these needs, in order to strengthen their competitiveness on domestic and international markets.

In this context, CSR is the differentiation strategy that can make the company unique in its sector with particular characteristics recognized and required by the consumer.

The instruments of social responsibility can be traced to responsible management tools that affect the supply side and are designed to support businesses in the integration of the principles of responsibility in strategic and operational processes (codes of conduct, certification) and tools for socially responsible consumption which act on the demand side

and aim at influencing the choices of consumers (labels, brands) (Briamonte *et al*., 2008).

Specifically:

- Human Resources: The human resources development through growth of workers skills as well as through a management policy that takes account of equal opportunities, integration of immigrants and the quality of work (Censis, 2004).

This is a deeply delicate issue. The small size of the business system, in fact, makes it difficult to deal with this problem, which is compounded by the characteristics of the production, plagued by problems such as the low level of security, high seasonality, extensive use of immigrant labour and irregular work. In this sense, CSR can be an important instrument to enhance and develop the changes taking place upstream and downstream, on farms that in some cases pay particular attention to their workers and their working conditions.

- Product: it is absolutely necessary, then, to have an integrated approach to product that takes into account the expectations of consumers about the quality characteristics, territoriality and transparency. With regard to food consumption, the literature shows that consumers tend now to prefer safe products made with environmentally sound techniques and social needs. (Grunert, 2006).This is a product strategy that ensures authenticity, security, but also those elements that give value added services such as identifiable, traceability, innovation and truthfulness of information.

It is worth noting that social responsibility is not measured in relation to the number of instruments adopted, but it represents a new way of managing the corporate activities capable of driving social change and responding to consumer expectations by integrating the system of risk management and opportunities (Briamonte *et al.,* 2008).

It is now popular a growing sensitivity of quality of life that accompanies a more conscious consumption management and a renewed interest in the health and family life (Annunziata, 2011). Consumers and producers are also in agreement that the pursuit of quality can be an important antidote to the dangers of the production approval (Cesaretti *et al.*, 2010). The quality of agro-food products, therefore, has taken a substantial importance in the buying process and helped decline the concept of production in a broader supply and territory dimension. In order to ensure food safety according to an integrated and scientific approach, the European Union has also undertaken the harmonization of national laws on local products -already present in Italy, France and Germany-, by identifying three different levels of

specificity: designation of origin (PDO), protected Geographical Indication (PGI) and certificate of specificity.

- The protected designation of origin (PDO) is attributed to agricultural production and food products whose characteristics are due mainly (though not exclusively) to the geographical environment, "including the natural and human factors". All stages of the production of the raw material, machining and processing, must be done in the area of origin.
- The Protected Geographical Indication (PGI) is restricted to products from a particular region. These products have at least one characteristic that binds them to the land of origin. Moreover, it is sufficient that one phase of production, processing and post-processing, takes place in their territory of origin.
- The Community legislator, then, has also established a more generic Certificate of Specificity named as "Traditional Speciality Guaranteed" (TSG). The STG is not about the territorial origin of the product, but rather the peculiarities of the raw materials or the manufacturing process and possible subsequent processing.

In addition to the PDO and PGI products, the national legislator (with Legislative Decree n. 173 of 30/04/1998) has also identified an additional category of food products which has strong traditional productive connotations and that do not follow the health rules usually applied in the industrial productions. Moreover, the national legislator has adopted new tools such as specific rules for productive activity, a control systems over the entire food chain (from farm to table) and effective measures able to provide information to the consumers. It makes possible to trace the route of food, animal feeds and their ingredients; in other words it allows to know the reverse route of the product (from the table to the field) and consequently its basic ingredients. It follows that the label is an useful tools for consumers as it gives more accurate information about ingredients, nutritional values and methods of food production and about a whole series of national and international checks organized in order to track cases of adulteration and counterfeit foodstuffs.

5. THE GREEN WINE BUSINESS

According to the Ismea ISTAT data processing that compares the data of January-June 2014 with those of the same period in the last year, it emerged that Italian exports of agri-food products close the first half of 2014 with a rise of 1, 6% in value, determined exclusively by the good performance of processed foods (+2.6%), compared to an interruption of the agricultural exports (-2.7%). Albeit at a slower pace when compared with the growth rates for the last three years (respectively +8.7% in 2011, 5.6% in 2012 and 4.8% in 2013), the trend of international sales of the sector is slightly better than the Italian export in general (+ 1.3% in the first half) (Ismea, 2014). The wine sector, in particular, is an area of great significance in the Italian agri-food system. "Wine is one of the Made in Italy ambassadors and Italian companies are showing great skills in dealing with the difficulties of the market, the changes of styles consumption and the competition that comes from countries that only recently are venturing with this ancient art" (Unioncamere, 2009). The world of wine has a turnover in Italy of eight million euro; the entire capital of this industry (including the value of the equipment and facilities related to the production of wines, spirits and liqueurs, balsamic vinegars) is of nearly 50 billion euro. There are 1.2 million people employed in the wine sector, including the stage of the distribution. While the usage of wine is increasing in the world, but slightly decreasing in Europe, Italy confirms itself as the worldwide leader in the production and marketing of wine (nearly one-fifth of the wine sold in the world is made in Italy) behind only France.

In fact, Italy, the second largest exporter of wine with an international level share of 18%, is holder of 61.7% of the global market share, along with France and Spain, confirming its global leadership in international sales of the wine sector .

Even for Mediobanca (Studio Mediobanca, 2014), the most successful Italian factor of this sector is the export. The first pre-final for the year 2013 reports an increase of 4.8%, more abroad (+ 7.7%) than in Italy (+1.8%), compared with the contraction of manufacturing (-0,3%) and a slight improvement from of food industries (+0.3%). Total sales of 2013 are of 24.1% above the level of 2008, the export sales of 40.4%, the national of 10.7%, confirming the trend of the last six years (except 2009).

The 2012 wine sector closed with revenues up 7.7% on 2011 (+ 9.3% for exports, 6.1% in Italy), more than marked by the food industry as a whole (+ 2%) and the beverage (+4.6%),

while the Italian manufacturing industry has contracted (-2.1%). The growth rates of sales are down from 2011, and are back at 2010 levels. The European Union remains by far the most important area for the export of Italian wines, accounting for more than half of total exports, 51%, an increase in value of 9.2% on 2012 when it accounted for 50.5 %. The second target area is North America, which accounts for 32.7% of exports (34% in 2012), an increase of 3.9%; Asia and Australia are up 11.3%, although with limited weight equal to 4.3%. Finally, the contribution remains marginal in Latin America (1.4%), while the rest of the world (Africa, Middle East and European countries outside the EU) amounts to 10.6% (10% in 2012), an increase of 14.9%.

Table 1.: *"Assoenologi" forecast on wine production in 2014 by region (compared with the average of the last 5 years and 2013)*

REGION	Average production 2009/20013 (Sourse ISTAT)	hl production 2013 (suorce ISTAT)	+/- % expected compared to the average of the last 5 years	+/-% expected compared 2013	Everage hl expeted 2014*
PIEMONTE	2.697.000	2.580.000	- 14%	-10%	2.330.000
LOMBARDIA	1.292.000	1.301.000	-14%	-15%	1.110.000
TRENTINO	1.220.000	1.362.000	-5%	-15%	1.160.000
VENETO	8.425.000	9.148.000	-8%	-15%	7.780.000
FRIULI V.G.	1.217.000	1.173.000	-13%	-10%	1.060.000
EMILIA ROMAGNA	6.735.000	7.396.000	-1%	-10%	6.660.000
TOSCANA	2.576.000	2.657.000	+5%	+10%	2.700.000
MARCHE	881.000	1.039.000	+24%	+5%	1.090.000
LAZIO/UMBRIA	2.237.000	2.472.000	+22%	+10%	2.720.000
ABRUZZO	2.627.000	2.728.000	-6%	-10%	2.460.000
CAMPANIA	1.722.000	1.644.000	-23%	-20%	1.320.000
PUGLIA	6.022.000	5.908.000	-21%	-20%	4.730.000
SICILIA	5.825.000	7.282.000	-12%	-30%	5.100.000
SARDEGMA	530.000	530.000	+9%	-10%	580.000
ALTRE**	889.000	933.000	-10%	-15%	800.000
TOTALE	44.895.000	48.161.000	-7%	-13,5%	41.600.000

* Average productive presumed for each region

** (Valle d'Aosta, Liguria, Molise, Basilicata, Calabria)

Table 2.: *Total Export Italian Wine January-June 2010/2014 **

	2010 gen giu	2011 gen giu	2012 gen giu	2013 gen giu	2014 gen giu	Val Var % gen giu 13/14
Mondo Valore	1.776	2.026	2.169	2.351	2.387	1,5%
Mondo Volume	10.035	11.295	10.176	9.858,9	9.946,5	0,9%
Mondo VMU	1,77	1,79	2,13	2,38	2,40	0,6%

* Amounts in millions of euro // Volume in thousands of hectoliters VMU € / liter

Today, wine production has to meet not only those quality and price requirements necessary to satisfy market needs, but it must also follow a series of increasingly stringent standards imposed by the Italian and European legislator aimed at safeguarding the environment and the health of both the consumer and supply chain operators.

It must be considered, then, that there is now a greater awareness of the issues of environmental protection and health that increases the demand for products perceived as safer, such as organic and biodynamic.

Organic viticulture comes from a proper agronomic management, thanks to which it is possible to get the best safeguard of plants.

- The choice of the site and area development allows climatic conditions (light, ventilation, and so on) and soil (porosity, drainage, and so on) suitable for the quality of the grapes
- The hydraulic - agrarian systems represent the first and indispensable tool for land conservation;
- The genetic choices regarding "cultivar" (*a cultivated plant, obtained with genetic improvement, which summarizes a set of specific morphological, physiological, and agronomic commodity of particular interest and transmissible though seed and plant parts)*, "clone" and "portainnesto" (*the lower part of a plant multiplied by the grafting technique*), should be studied to improve the ecological adaptation to the environment in relation to the Eurosystem adopted plant (which defines the amount of available environment for each plant and adjusts the amount of 'interaction between plants);
- The organic fertilization ensures the protection and slow release of nutrients;
- The cover crop helps in controlling the physiological balance of plants, improving the water-mineral nutrition, and prevents erosion and enhances the agrosystem;
- The led fight and damage thresholds indicate the moments of real need for action

"fitoiatrico" (*chemical treatment performed as a preventive measure, intended to prevent pest attacks in the bud)*;

- The mechanization demands and at the same time allows for greater uniformity in the vineyard;
- The proper canopy management is of strategic importance. It is significant to control the microclimate at the level of clusters and vegetation, on which depend the conditions more or less favorable for pathogens.

The most discussed aspect of organic viticulture is to prevent parasites, that are the main limitation to this kind of cultivation. The winegrowers fear of losing their product is more than justified and requires careful defence.

In the conventional chemistry fight, among fungicides (CPP) coverage, the "ditiocarbammati" (fungicides) provides excellent disease control, protected from the risk of resistance; on the other hand, are not well acceptable to many important natural limiters and the improvement of recent formulations "rameiche" (absence of cytotoxicity) allows a valid alternative also in the first stage of the season.

The most difficult choice for organic wine grower is the renunciation of the use of systemic products that, undoubtedly, has the important advantage of protecting the vegetation of formation. But, in addition to overt resistance phenomena, many bad experiences have confirmed inadequate protection of the bunch. The current phytoiatric research trends are, in fact, facing molecules with high lipophilicity and distribution capacity on the surface and in this way we have obtained excellent products for the defence of the bunch. After all, the ability to sublimate and diffuse in the gas phase is the prerogative of sulphur and cupric products. Organic viticulture therefore requires more attention and effort, but for this reason it represents a logical development of integrated agriculture and the highest professional level of the wine entrepreneur. As a result, the grapes produced according to serious and modern methods of biologic farming guarantee an excellent quality, authenticity and wholesomeness with not many risks and costs compared with conventional techniques.

The aware "wine lover", therefore, is more and more interested not only in the quality, but also in those values that include social and ethical commitment, and the safeguard of environment and territory. In the manufacturing enterprises diagrams are no longer only defined processes of viticulture and wine-making, but increasingly also the working conditions of the staff, the quantities of carbon dioxide, nitrogen oxides and sulphur emitted

into the atmosphere, the kilowatts of electricity, cubic meters of methane, the litres of diesel consumed, the tons of destroyed waste and recycled ones, the pounds of pesticides and fertilizers used. All this aims to provide consumers with a wine which has social and environmental "benefits" measurable, verifiable and comparable.

In this way a new idea of working is being consolidated everywhere in line with a trend that many companies are interested in following in order to obtain an advantage in terms of image and profit (Menghini, 2007).

A definition of sustainable viticulture we can find it in Resolution CST 1/2008 International Organisation of Vine and Wine (OIV)[1], which describes it as "Global approach commensurate with the systems of production and processing of grapes involving both the longevity of economic structures and land, obtaining quality products, taking into account the needs of a precision viticulture, risks to the environment, product safety, consumer health and enhancement of property aspects, historical, cultural, ecological and aesthetic".

The need to share these issues on the international scale has led to the elaboration of a document "Vision on the future sustainability of our wine and vineyards"[2] (Capri *et al*., 2014) in which they propose ideas for setting public policy and business for the sustainability of wine throughout the supply chain contemplating the environmental, social and economic, identifying innovation and cooperation keys to remove the constraints that make it difficult to implement sustainability.

Some scholars (Casini *et al.,* 2010) have proposed a model for classifying approaches to sustainability of the cellars:

- Cellars devoted, that have a strong orientation towards sustainability and invest heavily in employee training and communication;

- Cellars unexploiters, that adopt sustainable behavior but do not communicate their actions, therefore the benefits that may result from their behavior are limited;

[1] The International Organisation of Vine and Wine (OIV) is an organization that operates in the interest of the international wine world that is committed to providing growers and wine producers the tools to encourage the spread of production processes consistent with the principles of sustainable development in order to avoid unfair competition and to promote dialogue in the world of production with the distribution system and society as a whole, with regard to issues of sustainability.

[2] This document is the result of the international conference held in Simei in 2013 on "Sustainable viticultrure and wine production".

- Cellars opportunists, that do not pay particular attention to sustainability, but tend to heavily emphasize the few sustainable practices introduced.

6. CONCLUSION

The set of human activities, technological progress and the uncontrolled exploitation of resources has led to heavy imbalances in the terrestrial ecosystem, risking compromising the ability of future generations to meet their own needs.

One possible solution is, therefore, represented by the sustainable development and the desire to pursue economic growth compatible with social equity. In this context, sustainability, lived in the past as more ethical than economic, is gaining importance and a much more concrete profile, designed to produce economic returns as well as on image.

The search for competitiveness aims at the objective of sustainable socio-economic, environmental and territorial pushing food companies to go out of their borders and redesign new strategies in the awareness of the new social and cultural role played.

Sustainability, although it doesn't have yet well defined contours (Warner, 2007), is a prerequisite in order to gain a sustainable competitive positioning (Borelli *et al*., 2010).

The actions of social responsibility should not be seen as an additional cost, but as a strategic investment in the medium and long term able to positively influence the performance of businesses and to improve the prospects of development in terms of greater visibility and better strategic positioning on market and value creation.

Indeed, companies can choose between different degrees of sustainability that are determined by a number of internal factors such as the motivation of top management, awareness of its benefits and the analysis of the cost / benefit, and external pressures groups environmentalists, regulators, standards.

The awareness that the production of quality products passes through the introduction of sustainability practices is now widespread.

It is a daunting task for the food and wine companies, especially for those of modest size, but

we believe that the key to success for this challenge of sustainability could be identified in the ability to introduce appropriate organizational and process innovations, to network in order to create sustainability programs (especially for small farms) and in the ability to communicate effectively to the final consumer the immaterial surplus that the product contains.

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The role of academic spin-offs in entrepreneurial innovation and regional development. *The Apulia case.*

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ABSTRACT

In a recession context, characterized from a slowing down of the productive activity and from an increment of the unemployment rate, regional development policies of local authorities should consider initiatives apt to stimulate enterprise creation. This paper focuses on the role of academic spin-offs in generating entrepreneurial opportunities for regional development. After an introduction about the importance of networks among universities for technology transfer and development of academic spin-offs and definition of relevant literature on entrepreneurship and processes of identification, evaluation and exploitation of entrepreneurial opportunities to create new business, the paper moves to the analysis of the enabling conditions for promoting the birth of new academic spin-offs. In particular, we investigate how business innovation could take place from patents and research at the university level, in order to contribute to the economic development of a region. Academic spin offs represents an important mechanism for technology transfer from universities and research institutions to the real economy. The paper highlights the results obtained in Apulia Region, which started in 2007 a network called "Rete ILO Apulia" (where ILO stands for Industrial Liaison Office), with the aim of putting together the efforts of Apulia universities and research institutes (ENEA and CNR), providing them a set of resources and capabilities for technological transfer and entrepreneurial innovation. This project has financed the birth of several spin-offs academic from 2007 to 2012, which have been examined at the end of the paper. The main hypothesis of the paper is that the sustainable growth of academic spin offs in this region contributed to the development of the Apulia area and entrepreneurial innovation.

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1. INTRODUCTION

Higher education plays an increasingly critical role in the economic competitiveness of local, state and national economies and is the basis for continuous innovation (Lane & Johnstone, 2012). The many economic impacts of universities are specific and sustained, both for a direct impact in strengthen workforce skills and indirect impact on the symbiotic relationship of campus and surrounding communities (faculty, staff, student, visitors, companies, public administration, and so on). Higher education is a key actor in the revitalization of urban

communities, in the development of responses to declining economies in rural areas, and to the competitive strategies of regions, states and nations (Trani & Holsworth, 2010). According to Porter (1990), the Competitive Advantage of Nations would no longer be tied to abundant natural resources and cheap labor, rather would be increasingly based on creative and scientific innovations. This new paradigm of economic development positioned universities as primary engines of economic growth (Romer, 1990). As a matter of fact, governments increasingly adopt comprehensive strategies designed to improve their competitiveness in the global economy. In this new environment, governments have begun to realize that higher education institutions are important "anchoring tools" as they help to attract and retain students and alumni. Governments also recognize that such institutions drive innovation and industry development, and have begun to invest in research institutions, research parks and research programs. Beyond the engagement in educating students, much of the economic development contributions derived from higher education come through partnerships with the government as well as the local community and industry. As countries move into more advanced economic stages, higher education becomes increasingly important. Countries with factor-driven economies gain competitive advantage based on what is available within the nation, primarily natural resources and unskilled labor. As stated before, in this stage, the most important factors in the GCI are institutions, infrastructure, macroeconomic framework, health and primary education. Moving into an efficiency-driven economy, wages tend to increase and productive economies need to figure out ways to support the increased wage demands and further improve quality of life. They do this by enhancing the efficiency of the production process and quality of products. The competitive advantage of nations at this stage is driven by quality and accessible higher education institutions, efficient and well-developed markets, and the ability to effective use technology. Moving from an efficiency driven economy to an innovation-driven economy requires a nation to produce and take advantage of new products. A nation must be able to both create and utilize innovation. This requires a research infrastructure and entrepreneurial culture that can foster innovation as well as an educational infrastructure to support knowledge acquisition, skill development and critical thinking among the nation's workforce. In the globalized knowledge society, the competitiveness of a region depends on local strengths and innovation. The future success will come to those areas that can meet global standards and join global networks and markets. Due to these considerations, the EU is encouraging universities to focus more on their 3rd role, on the way towards the entrepreneurial university. Basically, the University must take care that all about technology transfer is understood as the

set of actions that are carried out by taking responsibility to manage and enhance the products resulting from its institutional activities, research and teaching. This responsibility could be the beginning of a chain of innovation , being able to identify the search results, select them and give them a fair value for transfer through various forms that can be licensing out, the creation of enterprise agreements and structures joint research and development and accordingly proceed to define policies, procedures and tools. The university is focused on two core activities: higher education and scientific research activities related and inseparable. Other tools that, by virtue of Technology Transfer, to be evaluated are the patent, the creation of new business activity and joint research between universities and industry. These instruments have a certain logic connected to the time of development, the objectives and targets reference. The short-term objectives are the basis for those of medium-long term that are building a select portfolio of patents, contracts and / or agreements for commercial exploitation, of new start ups that can bring to market the property intellectual generated . One of the tools by which the University can bring to the market the results of scientific research, have an economic return derived from these results, creating opportunities for skilled employment and economic wealth tied to highly innovative activity is the creation of academic spin-off. The opportunities related to that instrument are many, from the creation of a network or cluster of companies linked to the University (opportunities of collaborations and research contracts) to a useful contribution to the development of the territory. The role of the network among the universities in a regional area has been central for regional development and networking, especially for shared commitment to playing a transformative role in the regions. Through educational and research contributions to regional economic, social, cultural and environmental development, this network could play an important and distinctive role in advancing the regional prosperity, productivity and identity. As key sources of knowledge, research and innovation, professional skills and regional development capacity, the member universities play a central role in building strong regions. Regional strength drives national success.

2. THE IMPORTANCE OF EXTERNAL ENVIRONMENT TO PRODUCE ENTREPRENEURIAL OPPORTUNITIES

What we have just outlined is a key element at the base of a larger argument in terms of entrepreneurship, specifically in the context of entrepreneurial opportunities and their

determinants. In this field, Schumpeter offered one of the major contributions in terms of entrepreneurship and managerial skills, in 1934. According to the Austrian economist, the entrepreneur is constantly looking for economic opportunities, evaluating situations that allow introducing innovation factors. This entrepreneur is distinguished by a business director as it aims to introduce new combinations of production factors over the process, where the manager simply seeks to organize the factors efficiently on the basis of technical possibilities dates. For Schumpeter, entrepreneurial innovation can occur in at least five ways: a new product or a new quality of the product, a new method of production, a new form of organization, a new market, a new source of raw materials. In Schumpeter's model, the key to economic development is represented by the profit belonging to the entrepreneur in relation to innovation made. The Schumpeter's work was taken up and deepened in numerous studies, identifying the entrepreneur as a person who takes advantage of opportunities to become competitive imbalance agent equilibrium (Kirzner, 1973), describing the different types of entrepreneur in relation to innovations (Abernathy & Clark, 1985), clarifying the main sources of entrepreneurial opportunities (Drucker, 1985). In any case, the function that seems to characterize the entrepreneurial function is innovation, which calls into question the process by which individuals identify and pursue opportunities that take into account the resources are not necessarily owned by them (Stevenson & Jarillo, 1990), but whose employment in a new venture allows an exploitation (Shane & Venkataraman, 2000). Opportunities, for Shane, are objectively given, ones that individuals can seize by generating business ideas that are interpretations "of how to recombine resources in a way that allows pursuit of that opportunity" (Shane, 2012). An essential role, in entrepreneurship theory and research, is covered by the external environment. The concept of external environment is intended to include those forces and elements external to the organization's boundaries that affect and are affected by an organization's actions as well as more general economic, sociocultural, political-legal, and technological forces which provide the broader context for the organization's operations (Covin & Slevin, 1991). Several scholars have developed theories and conducted research that demonstrates the inseparability of the external environment from the entrepreneurial process. In this sense it is possible to understand how the different environmental conditions can encourage or hinder entrepreneurial activity (Bruno & Tyebjee, 1982) and as they affect the impact of fiscal and regulatory environments (Kent, 1984), noting that political-legal forces can have a great impact on the pervasiveness and success of new ventures (Covin & Slevin, 1991). About environmental factors, particular attention was paid to government policies such as subsidies, public funding and policies that

support firms, characteristics of local contexts such as the presence of infrastructure and active investors, the role of innovation in the social context, cooperation between industry, universities and research institutions, the possibility of interacting with actors from other backgrounds (Lerner, 1999; Fini, Grimaldi, Marzocchi, & Sobrero, 2012). So, explanations for entrepreneurial discovery have evolved primarily around two perspectives: 1) the searching for and obtaining of information leading to new inventions and 2) the recognition process by which new discoveries are made (Alvarez & Barney, 2001). These two phases allow to individuals to identify and develop new opportunities that others tend to overlook or choose not to pursue. The discovery of opportunities is dependent on the possession of prior knowledge necessary to identify an opportunity and cognitive abilities of individuals ((Shane, Prior knowledge and the discovery of entrepreneurial opportunities (Shane, 2000; Shane & Venkataraman, 2000). Any given entrepreneurial opportunity is not obvious to all potential entrepreneurs; rather any given entrepreneur will discover only those opportunities related to his or her prior knowledge (Ren & Guo, 2008). Individual's personality traits, social networks, and prior knowledge identify an antecedents of entrepreneurial alertness to business opportunities (Ardichvili, Cardozo, & Ray, 2003).

3. THE ACADEMIC SPIN-OFF AS A DRIVE FOR INNOVATION

If we consider the growth of this phenomenon at the international level, we see that these actually grow faster where there is a relational context in which aspiring entrepreneurs are able to acquire academic assistance, advice, contacts, information, and funding necessary to undertake a difficult path of entrepreneurship. There are different definitions to describe the academic spin-off, in fact it's referred to a phenomenon in a growing phase, but it is characterized by various interpretations: economic nature and legislative nature. We move from a restrictive definition in which reference is made to firms established on the basis of intellectual property generated within universities, in which the public body of research is directly present with share capital to a more general definition in which identify themselves as academic spin-offs firms set up on the basis of competence and results obtained in the course of research programs, but which are not necessarily the subject of intellectual property rights transferred by the public to search the nascent enterprise. We analyze mainly the goal that is pursued further exploitation of the research results in the University. Historically, the primary objective of the academic environment provided for the formation of human capital and the

creation of new knowledge, to these objectives, it was joined yet another, mainly focused on the exploitation of research results in order to proceed with the processing of such results in industrial applications. Through the pursuit of these objectives, the university has become a "knowledge factory, a factory specialized human capital, a factory dedicated to technology transfer, as well as a factory with the mission of territorial development, through the promotion and management of projects for territorial innovation (Lazzeroni & Piccaluga, 2003) and despite in Anglo-Saxon countries the experience of universities in the exploitation of the research results was fairly established, in the regions of Southern Europe of guidelines they began to realize only in the second half of the nineties. Specifically, in Italy, the first regulations by the Italian legislation in respect of Academic Spin-off took place in 1999, through Legislative Decree number 297 of 27 July 1999 concerning the "Reorganization of the discipline and the simplification of procedures for the support of scientific and technological research, the dissemination of technology, to the mobility of researchers. " This decree was an attempt to create the basis for promoting the activities of scientific and technological research by giving universities the possibility of interventions aimed at the creation of spin -offs, defined in such a condition as " a new high-tech economic initiative aimed industrial use of research results " with the aim of promoting technology transfer. A second important step was taken the following year, with the enactment of the Ministerial Decree number 593 of August 8, 2000 by means of which they were made operational the provisions contained in Legislative Decree 297/99 (although this Ministerial Decree became effectively operational February 17, 2001 following the publication in the Official Gazette No. 14 of 18 January 2001). With this decree were identified criteria for the allocation of state funding for these initiatives by identifying the business in the category of persons admitted to such interventions only universities and EPR that are equipped of university regulations containing the rules of the authorization procedures set out in Legislative Decree no. 297 / 1999. Furthermore the D.M. 593/ 00 ruled that such actions would have been financed by the Research Grants Fund (FAR). Anyway, the main targets of the spin-off are definitely to promote contact between the university research facilities, the world production and local institutions, to support research and disseminate new technologies with a positive impact on industrial production and social well-being of the territory. In an era of knowledge-based competition, technology transfer from university to firms is a key issue of the wealth of nations and regions. The creation of academic spin-off companies is one of the ways through which such a technology transfer process (TTP) can be pursued. Although in Italy this form of

TTP has become more and more popular in recent years (Netval 2008), the gap compared with other EU countries remains significant (Parente & Feola, 2013).

4. A COMPREHENSIVE PROCESS MODEL

In the first part of the paper we have analyzed some sources of regional development, linking these concepts in the second place to notions of entrepreneurship opportunities and external environment, this to identify in the field of entrepreneurship, the conditions at the base of regional development that may lead to growth results. A tool perfectly compatible with the concepts of entrepreneurial opportunities and external environment is definitely one of the Academic spin-off that represents the value of the array of academic and scientific innovations in the real competitive environment, so the right balance between seizing the business opportunities provided by an external environment that stimulates, through incentives and by making its facilities available to develop entrepreneurship phenomena. A process model which highlights the interrelationship between logical and linear variables analyzed until now can be expressed as follow.

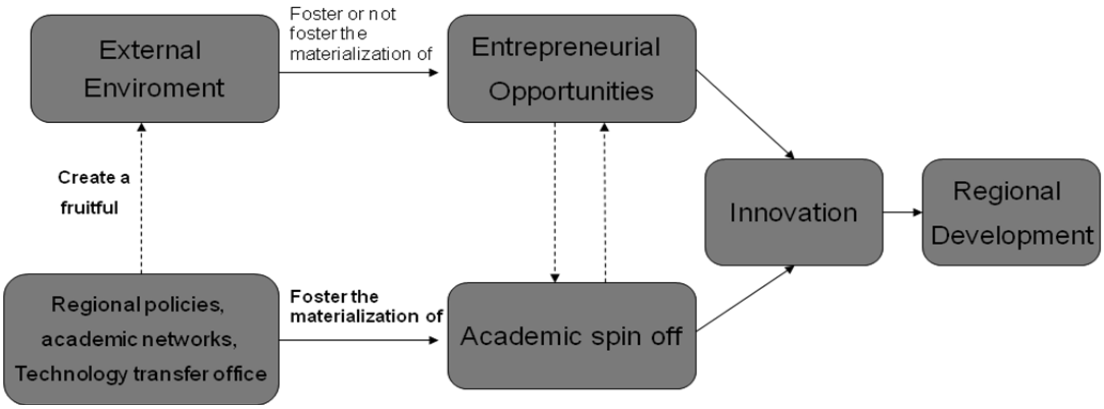

Figure 1: The paper process model

Several scholars have developed theories and conducted research that demonstrates the inseparability of the external environment from the entrepreneurial process. In this sense it is possible to understand how the different environmental conditions can encourage or hinder entrepreneurial activity (Bruno & Tyebjee, 1982). A key role, in this context, is covered by the network among the universities in a regional area that has been central for regional

development and networking, especially for shared commitment to playing a transformative role in the regions. Create university-wide awareness of entrepreneurship opportunities, stimulate the development of entrepreneurial ideas, and subsequently screen entrepreneurs and ideas by programs targeted at students and academic staff. Through educational and research contributions to regional economic, social, cultural and environmental development, this network could play an important and distinctive role in advancing the regional prosperity, productivity and identity. As key sources of knowledge, research and innovation, professional skills and regional development capacity, the member universities play a central role in building strong regions. Furthermore, over and above economic, socio-cultural, political-legal, and technological forces that provide the broader context for the organization's operations, the University have one of the tools by which can bring the results of scientific research to the market, have an economic return derived from these results, creating opportunities for skilled employment and economic wealth tied to highly innovative activity is the creation of academic spin-off. Academic entrepreneurship by way of university spin-offs is an emerging field of research focusing on the process of creating, discovering, and exploiting technological opportunities created by university research (Van Burg, Romme, Gilsing, & Reymen, 2008). The opportunities related to that instrument are enormous, from the creation of a network or cluster of companies linked to the University (opportunities of collaborations and research contracts) to a useful contribution to the development of the territory.

5. THE APULIA CASE

In Italy, in particular the Apulia region in the last decade part of the programming has been directed to the incentive of these phenomena with the measures that we explain below. A first step was taken in 2004, the year in which, thanks to the Regional Law n. 1 of 07/01/2004, was born the Regional Agency for Technology and Innovation (ARTI). The stimuli underlying the establishment of this institute are represented by the presence, in public research, substantial wealth of skills, knowledge and results still undervalued in the industrial and economic, so that universities Apulia, were in a less developed stage from the point of view of the organization of technology transfer, unlike other Italian universities that instead could already boast an extensive network of offices for the management of technology transfer processes with human and economic resources. Another aspect that distinguishes universities in Apulia

concerned the small number of international patents resulting by a poor utilization of research results, as well as missing all the research agreements with companies. In this climate all focused on a downward trend, in any case, we started to record an increase in the creation of and participation in science-based startups and incubators, noting 22 academic spin-off firms located in Apulia. Having recognized the importance of coordination in the management of technology transfer activities, Apulian public universities began to take part in the inter-university project co-funded by the Ministry of Education called "Network of Industrial Liaison Office" (NILE) therefore began to strengthen innovation policy favoring the creation of technology clusters, specifically inter-university competence centers and offices for technology transfer. For this reason ARTI Apulia decided to make available to the region of stable structures, operating within the districts with the aim of making university technology transfer operations through the establishment of high-tech districts, incubators, regional competence centers. And so, in November 2006, ARTI Apulia received by the Department of Economic Development of the Region of Apulia, in the area of the Framework Program of the Ministry of Economy and Finance and the Ministry of University with the use of the funds arising from the Fund for Underdeveloped Areas, commissioned to carry out a project that had as objects the identification of a measure dedicated to the birth and development of the Apulian Network of Industrial Liaison Office with the involvement of universities in Apulia namely: the University of Bari, the University of Salento, the University of Foggia and LUM Jean Monnet University. The result of this assignment was the stipulation of an agreement protocol for the start of activities with the five universities in the Apulia region. With the signing of this protocol, in July 2007, took the measure officially start "Regional Network of the ILO" converted "Intervention co-financed by the European Union under the POR Apulia 2000-2006 - Measure 3.13. The project essentially aims were: to equip five Apulian universities offices for the stable development of its scientific heritage (ILO - Industrial Laison Office), use the wealth of research already available in universities and untapped for product innovations, growth of new business and employment in sectors with a high content of knowledge through patents, licenses and spin-off and thus increase the impact of the costs of university research on the overall economic and entrepreneurial development of Apulia and improve collaboration between public facilities.

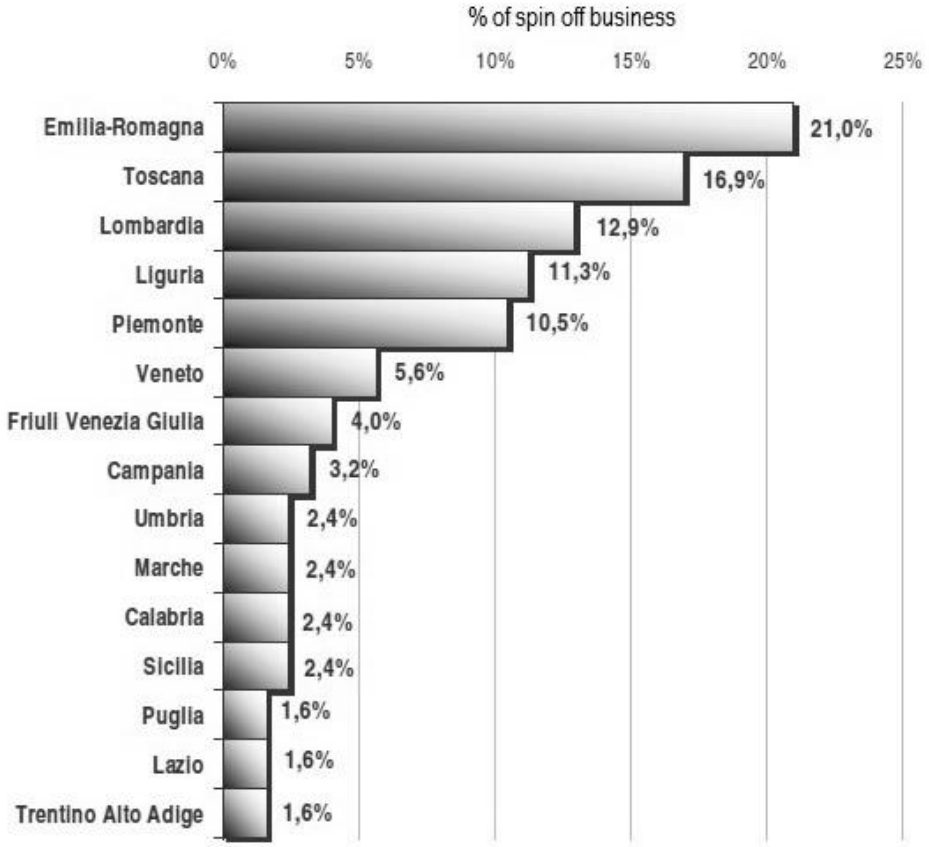

Figure 2: Regions of localization of spin-off business (no. 454

Source: Netval (2007)

The project is organized accordingly in various activities relating to the internal and external organization of the offices, the licensing and operation of spin-offs, as well as some cross-cutting activities, in particular, the project activities are expected to create industrial liaison office (or Office for Technology Transfer, whatever you want) in the universities of Apulia with full capacity management and operational processes of valorization of research and technology transfer and ensure the effectiveness and sustainability over time, these offices provide the system of negotiable instruments and operational tasks to achieve technology transfer from research to the market, encourage the creation of new spin-off companies as well as the growth of the newly established and to promote the extension of patent. The resources made available (Speech co-financed by the European Union under the POR Apulia 2000-2006, Measure 3.13) in the period from 24 July 2007 to 31 December 2008 amounted to 3 million € and the resources available for the consolidation phase (Action 1.2.3 of the PPA

Axis I, ERDF OP 2007-2013) from 15 April to 31 December 2013 amounted to 6 million €. Consideration of the foregoing, it is clear how the external environment had been created from 2007 onwards as a result of regional planning and the European Union, has encouraged the development of the scientific heritage of universities through transversal technology transfer among universities, and through the creation of spin academic off. The results of five years speak for themselves. In 2005, the number of academic spin-offs in Apulia amounted to 7, with a percentage of the total number of Italian spin-off of 1, 6% as the graph (Netval, 2007). In order to identify the consequential events, following the creation of an external environment fruitful for growth from the point of view closely related to the number of spin-offs, that contain in a number the incentive structure of the university system and regional research, substantiated in part as follows (data sources Annual Reports NETVAL and mapping ARTI). According to the data analyzed shortly before, our region boasts 85 research spin-off businesses with a percentage share of 8% on a national basis with an average life of 5 years, but if we turn to consider the data provided by the European Innovation Scorecard European Commission in 2009, the performance of our region is analyzed from the point of view of innovative companies and on the basis of a wider system of indicators, assumes a position of the head relative to those of the South and is placed in the median group at the national level.

Table 1: The Apulian academic Spin Off

Years	**Spin off no.**		**% Total Italian Spin off**	**% Variation**
	Absolute Value	***% Variation***		
2005	**7**	**-**	**1,6**	**-**
2011	**79**	**+ 1.029**	**8,0**	**+ 400**
2012	**85**	**+ 7,59**	**8,0**	**0**

Source: Annual Reports NETVAL and mapping ARTI

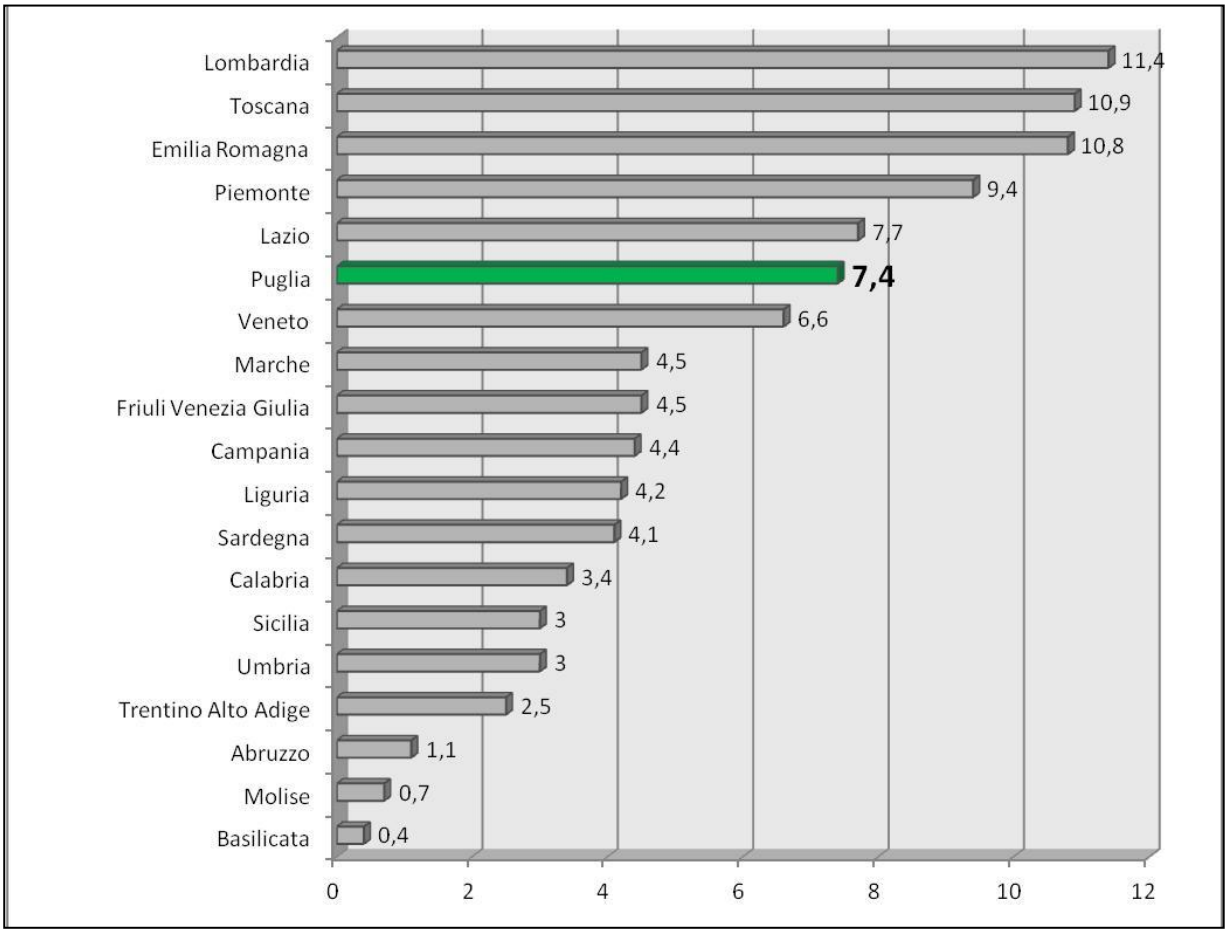

Figure 3: Regions of localization of spin-off business (no. 1082) – 31.12.2012

These results are the fruit of a path focused on the enhancement of entrepreneurship within the ILO research and academic institutions active support mechanisms in favor of academic spin-offs, mechanisms focused on the establishment of links between the university system and the regional national networks of reference specifically refers to the association of university incubators and the association of UTT, also brought to the attention of investors and financial intermediaries experiences of high-tech startups from Apulia. So, In order to compare the graph of the regions of localization of academic spin-offs at 31 December 2012 (n = 1,082) with the graph about the 2005, it is clear that the development of the Apulia region has gone from being the third last with 1,6% of spin-off active at a 7.4% occupying the first position among the regions of Southern Italy and the sixth position at the national level, after Lazio at 7.7%, 9.4% in Piedmont, Emilia Romagna 10.8%, 10.9% Tuscany and Lombardy 11.4%. Furthermore, the Apulia innovation grade after the introduction of NILO

has increased from *medium-low* in the period 2004-2006 to average in only two years the Apulian, as shown the Figure 4.

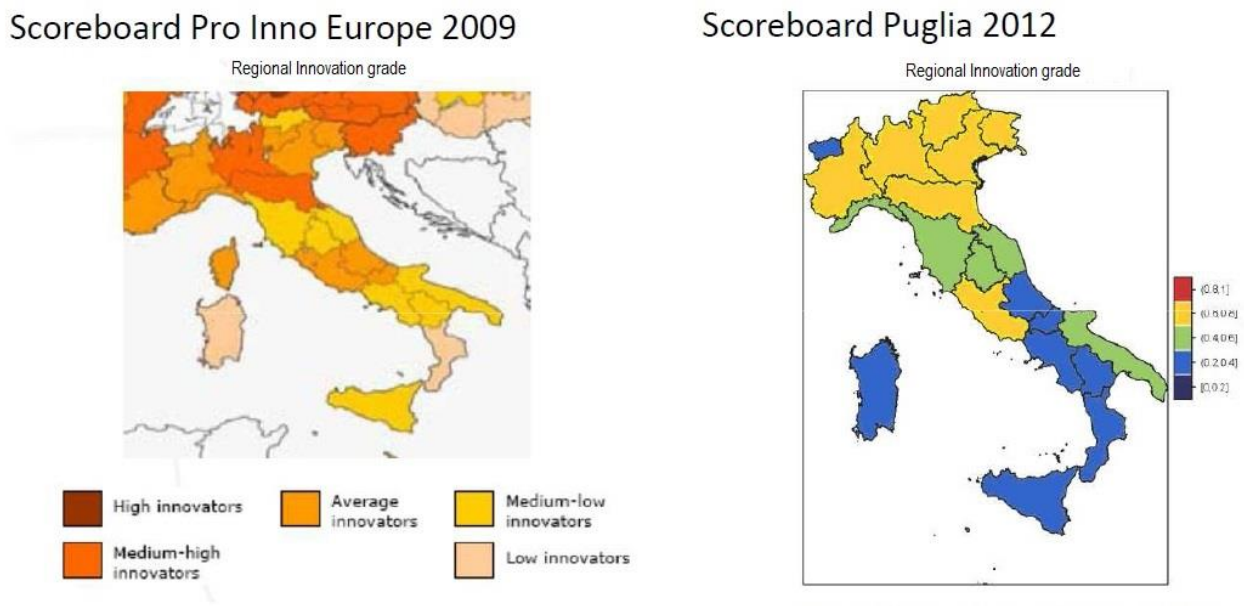

Figure 4: Comparative regional innovation grade 2004-2006 and 2006-2008

6. CONCLUSION AND LIMITATIONS

Innovation is one of the most important drivers of regional development (Florentina, 2013) and innovation speed - the time it takes to commercialize a technology – depend upon TTO resources, competency in identifying licensees, and the participation of faculty-inventors in the licensing process (Markman, Phan, Balkin, & Gianiodis, 2005).

In this paper has been highlighted the role of academic networks and academic spin-off as a drive for innovation and regional development, as endorsed by the results of the analysis of the case of the Apulia region (Italy). The institutional role of the Region in the2007-2012 planning has created an environment favorable to entrepreneurial opportunities, by fostering the creation of academic spin-offs and taking advantage of patents and research streams already developed at a university level but not really exploited as market opportunities. As a result, many innovative startups were founded starting from entrepreneurial ideas of researchers and students, bolstering the number of startups and innovation in that period of observations.

The limits of these observations are related to the absence of a real quantitative measurement of data relating to individual spin-offs and the real growth of the region that can document the importance of individual relationships.

This position paper aims to substantiate the relationship among the variables analyzed with the final outcomes. After the explaination of each variable and after have shown the case evidence, we can say that the relation between variables and outcomes is clear, and for a significant demonstration we leave the field open to possible quantitative analysis on the data pertaining to academic spin-offs.

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