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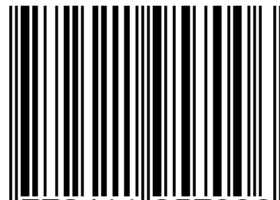
September - December 2019

Volume 5, Issue 3

ISSN 2411-9571 (Print)

ISSN 2411-4073 (online)

ISSN 2411-9571



9 772411 957006 >

REVISTIA
PUBLISHING AND RESEARCH

EUROPEAN JOURNAL OF ECONOMICS
AND BUSINESS STUDIES

September - December 2019

Volume 5, Issue 3

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Address: 11, Portland Road, London, SE25 4UF, United Kingdom

Tel: +44 2080680407

E-Mail: office@revistia.com

Web: <https://ejes.revistia.com>

ISSN 2411-9571 (Print)

ISSN 2411-4073 (online)

Indexed in Elsevier's Mendeley, WorldCat, RePEc & Ideas, Google Scholar, Crossref

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Social Media and E-commerce as Mechanisms to Enhance Entrepreneurship Among Graduate Students

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Abstract

In recent years, entrepreneurship has been one of the most discussed issues among government agencies, education institutions and international organizations, given the restrictions on the labor market. The above, since entrepreneurship is considered as an important mechanism to generate direct and indirect jobs. However, the increasing participation of electronic mechanisms in society has transformed the way we carry out our activities, redefining the processes through which the various goods and services are produced and offered. Therefore, there is a consensus towards the need for entrepreneurs to adopt a profile oriented towards social media and electronic commerce. However, this topic is still in its first stages, so it is necessary to identify how much these concepts have been integrated into the university entrepreneurial ecosystem, which represents one of the main channels for promoting entrepreneurial culture. After a study among a group of students graduated from university, it was detected that they attach high importance to social networks and electronic commerce, since they allow them to increase their presence in the markets at a relatively low cost; however, its adoption process has been heterogeneous, given the lack of knowledge of many tools and the lack of financing. Finally, a series of recommendations that could improve these skills among future entrepreneurs from the university level are indicated.

Keywords: entrepreneurial culture, digital skills, self-employment.

Introduction

The consensus about entrepreneurship as an optimal mechanism to create employments during this century has positioned it among some of the most analyzed topics around the globe, not only by governments but in the academic and enterprise context. Nevertheless, the accelerated technological findings and their implementation on business has provided entrepreneurs efficient tools to improve their ideas and boost innovation, producing spillovers to other groups and activities. Then, technological innovation has brought an ideal scenario for young entrepreneurs, considering that most of them are part of Y (millennials) or Z generations; the first group is usually known as those individuals born between 1981 and 1996 and the second one covers those ones born from 1997 onwards (Dimock, 2019). Both clearly associated to technology as part of their lives, using it at school, to buy and sell goods and services or to promote or apply their skills in labor market.

Based on the above, it could be thought that nowadays most entrepreneurs tend to start their businesses through digital platforms or using electronic mechanisms like, for example, social media and e-commerce. According to Michalczewsky (2017), e-commerce can be classified as follows (Table 1):

Table 1. E-commerce classification

Type	Meaning
B2B	Business to business.
B2C	Business to consumer.
C2C	Consumer to consumer.
B2G	Business to government.

C2B	Consumer to business.
-----	-----------------------

Source: (Michalczewsky, 2017).

This is relevant considering that the digitalization of economic activities and transactions can help overcome certain obstacles to more inclusive development, as mentioned by (United Nations Conference on Trade and Development UNCTAD, 2017). For example, information and communication technologies (ICTs), e-commerce and other digital applications can take advantage to promote entrepreneurship (including the empowerment of women as entrepreneurs and traders), productive activities, creativity and innovation, as well as the creation of decent jobs.

Also, digital solutions can increase the access of micro, small and medium-sized enterprises (MSMEs) in developing countries to financial services (online and mobile phone payments) and markets (for example, through virtual markets), and allow their integration into the supply chains of value. Likewise, e-commerce will be increasingly important to increase exports from developing countries, and double the participation of least developed countries (LDCs) in world exports by 2020 (United Nations Conference on Trade and Development, 2017).

Among these technological developments, social media takes an important place since it provides new opportunities for business, improving communications among consumers and producers (Rajagopalan & Jayansingh, 2016) and allowing organizations to reach new markets. Even more, (ORACLE, 2012) emphasizes that the intensification of social media has revolutionized relations between businesses and costumers, providing new trends in costumers experience. This also has opened new ways for increasing revenues faster than before (the pre-digital era) since, usually, social media campaigns target specific markets. Then, businesses that develop social media strategies have competitive advantages compared to those which not, considering the growing influence of electronic communication mechanisms in our society. Thus, social media strategies should be considered as part of business strategies (ORACLE, 2012).

For small businesses, social media delivers low-cost tools for advertising (Abuhashesh, 2014) which represent a mechanism for enhancing their competitiveness considering that they might not have as much resources as bigger companies do. Also, (Park, Sung, & Im, 2017) state that social media tools have gained researchers attention since they can be effective means to boost entrepreneurial projects. Then, these could be used for deploying businesses ideas or consolidating brands among costumers. Also, the (Australian Government, 2018) points out that smalls businesses which have deployed efficient digital platforms strategies or started to develop social media plans could experience these benefits: lower marketing expenditures, higher sales, increased website traffic, bigger scope to reach international markets, faster interaction with costumers, among others.

Problem

Despite the enormous contribution of e-commerce and other digital applications to ease trade, in Latin American & the Caribbean only 54% of total population uses internet while in transition economies or developed countries shares are 65% and 84% respectively (United Nations Conference on Trade and Development UNCTAD, 2018). In Mexico, 64% of total population uses internet but only 37% of individual 15 or older have an account in a financial institution, which is often a barrier to run electronic transactions, regardless of whether these are done under the model business to business (B2B) or business to costumers (B2C). Therefore, it is not a coincidence that Mexico dropped 5 positions, from 90 to 95, in the UNCTAD B2C E-commerce Index 2018 respectively (United Nations Conference on Trade and Development UNCTAD, 2018). Furthermore, (Blaise, 2019) mentions that Mexican consumers are increasing their online purchasing habits, since in 2017 only 7% shopped online weekly and in 2018 increased to 38%. About their preferences, clothes, food and electronics are the most consumed online items. Then, businesses have incentives to participate in digital platforms and increase their market opportunities.

As for the most used social networks among Mexicans, (The Ecommerce Foundation, 2018) reported that Facebook is by far the most popular, reporting 68.5% in 2018, followed by Twitter (14.1%), Youtube (11.3%), Pinterest (5.3%) and Instagram (0.4%). As mentioned by (Tobar, 2016), the future of e-commerce lies on social media since more costumers are heading through them. These premises point out the relevance for businesses to incorporate digital tools in order to satisfy costumers needs.

Objective

The general objective of this study is to identify the effect of social media and e-commerce as mechanisms to enhance entrepreneurship among graduate students. This is relevant due to labor market constraints which face graduate students from both public and private higher education institutions in Mexico; in this regard, the ManpowerGroup, quoted in (Mendoza , 2018), states that 50% of unemployed people in Mexico have coursed middle or higher education and this situation contributes to increase informal labor rate which is about 56% and represents a challenge to government. In addition, the Mexican Ministry of Labor and Social Welfare reported that in the second trimester of 2019 the unemployment rate in the age range of 20 to 29 years was 39% (Subsecretaría de Empleo y Productividad Laboral, 2019). Then, it is necessary to design strategies to boost employment among graduate students since they have gained knowledge and skills which could be transformed in productive projects that deliver formal jobs and incentivate economic growth. Also, this research seeks to link up two fundamental issues in our society nowadays: entrepreneurship and e-commerce. So, these results could represent an academic precedent for the study of these topics, fulfilling one of the main goals among universities: the generation and dissemination of knowledge to propel social development.

Methodology

This research is conducted by an exploratory study and results are strictly descriptive; As for the sample size, this was determined from the use of non-probabilistic sampling techniques, considering only twenty graduates from a public university in southeastern Mexico. In addition, this work is non-experimental since subjects involved in its development were not inducted to deliver specific answers, and, attending to its temporality, it is cross-sectional since data were collected in a single moment.

Then, data were obtained from the application of a research instrument, which was designed by the authors and consists of three sections: general information; entrepreneurial project information; and, social media and e-commerce. The characteristics of data do not provide enough information to perform deep statistical analysis. Nevertheless, these limitations are considered as opportunities for further studies which could enrich research in this area.

Results

This section presents the most outstanding results in each section and are summarized in three tables, starting by reviewing the general information got from the sample covered and is summarized next in Table 2:

Table 2. Part A. General information

Indicator	Results
Age	Average: 28.05; Younger: 26; Older: 30.
Gender	Male: 60%; Female: 40%
University Degree	Business Management: 70%; Tourism: 20%; Administrative Computing Systems: 10% .
Posgraduate	Yes: 30% (all at the master's level); No: 70% .

Considering Table 2, it is remarkable that 70% of individuals got a Business Management degree and only 30% of graduates have a master's degree. Then, information related to entrepreneurial activity is reported next in Table 3:

Table 3. Part B. Entrepreneurial Project information

Item	Main Results
1.- How long did it take you to start your first entrepreneurship project after graduate?	Less than 6 months: 5% ; Between 6 & 12 months: 10% ; Between 13 & 24 months: 15% ; More than 24 months: 70%
2.- Which was the main cause that raised the project?	I always envisioned myself as an entrepreneur: 15% ; I had a job, but it did not satisfy me: 25% ; I only found job offers far from my university background: 35% ; I could not find any job: 25%
3.- How many people started the project? Considering the owner	One: 25% ; Two: 55% ; Three: 15% ; Four: 5% ; Average: 2.

4.- Did you face any constraints for starting the project? If there were more than 1, assign a value of 5 to the most important, then 4 and so on.	No: 20% ; Yes: 80% ; Most popular: Financial (51. 81%); Technical (22.22%); Legal (11.11%); Human Resources (11.11%); Other: (3.7%).
5.- For how long has your project been running? Full years	Most popular: 2 years; Average: 2.6 years; Minimum: 1 year; Maximum: 4 years.
6.- How many direct jobs has created your project since it started? Not considering the owners	Most popular: 1 job; Average: 1.7 jobs; Minimum: 1 job; Maximum: 5 jobs.
7.- How do you describe the evolution of your project?	More than satisfactory: 15% ; Satisfactory: 50% ; Neutral: 15% ; Not satisfactory: 20% ; Not satisfactory at all: 0% .

As seen in Table 3, it is important to mention that most individuals started their projects at least 24 months after graduate and only 15% of them envisioned themselves as entrepreneurs. Also, it is relevant that 60% of them decided to become entrepreneurs due to job dissatisfaction (25%) or lack of opportunities to apply their university training (35%). Evenmore, all entrepreneurs stated that their projects have produced at least one direct job and 50% of them consider this experience as satisfactory, despite most of them faced a series of obstacles when started. Regarding the importance of social networks and electronic commerce, Table 4 shows results as follows:

Table 4. Part C. Social media and e-commerce

Item	Main Results
8.- Do you use social media to promote your products and services?	Yes, from the beginning: 15% ; Yes, but not from the beginning: 20% ; No, but I am considering it 30% ; No: 35%
9.- Which social media platforms do you use?	Facebook: 100% ; Instagram: 20% ; no other platforms were mentioned.
10.- In your opinion, which proportion of your sales are generated by social media platforms?	95% or more: 14.28% ; From 75% to 94% : 85.71%
11.- Can your costumers pay through electronic mechanisms?	Yes, since the project started: 57.14% ; Yes, but not from the beginning: 28.57% ; No, but they will be able to soon: 14.28%
12.- Do you consider that social media is an important mechanism to run your business?	Definitely: 71.42% ; Yes: 28.57%
13.- In your opinion, how social media boost entrepreneurial projects?	Increases market reach: 42.85% ; Lowers marketing costs: 42.85% ; Fastens communication with customers: 14.28%
14.- Finally, has social media ease up the process of becoming an entrepreneur?	Definitely: 14.28% ; Yes: 42.85% ; Neutral: 14.28% ; No: 14.28%

Regarding the relevance of social media and e-commerce to boost projects, it stands out that Facebook is the most popular social network among entrepreneurs but only 15% promoted their products and services through social media since their projects started. Likewise, 71.42% of individuals consider that social media is an important mechanism to run a business and about 57% account that it can ease up the process of becoming an entrepreneur.

Conclusion

The effect of social media and e-commerce on entrepreneurial projects is still a subject rarely studied in the Mexican context and even more when it is focused on graduated students. Therefore, the development of this paper provides a framework for further research; main results reflect a scarce entrepreneurial motivation among graduates since only 15% of them envisioned themselves as entrepreneurs and most of them took at least 24 months to start a project. Also, it was observed that individuals faced obstacles to initiate operations, which were mainly related to funding issues. Nevertheless, all entrepreneurs stated that their projects have produced at least one direct job and 50% of them consider this experience as satisfactory. As for the tendency of entrepreneurs towards the use of social media and e-commerce, a favorable trend was detected, as well as a positive perception about the value of these tools to boost the development of projects. In this way, most of the sample expressed to agree that these mechanisms drive the emergence of entrepreneurs. Therefore, it is suggested to design a follow-up program for graduate entrepreneurs, in order to divulge the results of their projects and share their experience with future generations, promoting entrepreneurial culture and the implementation of new

technologies in business. Finally, it is recommended to strengthen the research instrument to replicate this work in larger samples and process data through more robust statistical techniques.

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Renewable Energy Sources Development Risk Analysis and Evaluation: the Case of Azerbaijan

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Abstract

Steady increase in renewable energy production and supply allows gradually substitute environmentally harmful traditional energy systems. Developers of the renewable projects encounter various types of risks, inherent to these projects, and all these risks should be studied in advance and ways of their mitigation developed. In the paper risks related to the development of renewables in Azerbaijan are analyzed and assessed based on experts' opinion study. Typical for the projects on renewable energy, nine risks and risk components likelihood and their impacts have been evaluated by experts and, based on their opinion, risk levels are calculated, and a risk profile is constructed. In general, risks are sufficiently different. However, energy policy-related, grid access and financial risks are significantly influential and require more attention.

Keywords: renewable energy, risk analysis, risk likelihood, risk impact, risk level

Introduction

During the last decades, we are witnessing stable growth of renewable energy sources (Ritchie & Roser, 2019) and, as a result of this tendency, renewables share in energy production is increasing from year to year. For example, at present, it accounts for a third of the world electricity production (International Renewable Energy Agency. Renewable Capacity Statistics, 2018). Peculiarity of this tendency is that not only countries with limited energy resources are paying special attention to this issue, but also leading oil-producing countries significantly increased consumption of the renewables (wind, solar, geothermal, biomass etc) during the last decade. For example, the USA increased renewables consumption by 3.8 times, Canada - 4, Brazil - 5, Mexico - 2.3, and China – 30 times.

Taking into consideration that any oil and gas resources are limited, development of the renewables-based energy systems is of interest for Azerbaijan as well, especially development of the solar and wind-based systems. According to statistical reports (Ioannou, Angus & Brennan, 2017), wind and solar photovoltaics (PV) accounted for an approximately 77% of new capacity in 2016. In such circumstances, it is not unusual that in 2018, 10% of electricity produced in Azerbaijan was generated by renewables and it is expected that during the next decade this number will be approximately 35% (Yusifov, 2018).

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It is necessary to mention that despite the rich lessons learned and know-how accumulated, renewables projects developed in various countries encounter serious financial, technological, organizational, juridical and many other risks, and these risks in the most cases are region and country-specific.

As it is shown in Noothout et al (2016), European Union member countries till now have quite different risk profiles, and this is a common case for other regions as well (Jhih-HaoLina, Wu & Lin, 2016).

There is no general agreement upon the classification of renewables-related risks. Researchers, based on own experience, country-specific information, decision-making objectives, and applications, have been working with various categories of risks. In view of these specifics of the development of renewables, it would be useful to overview renewables-related risks and their identification and assessment.

To our best knowledge, the case of Azerbaijan has been outside of the mainstream of researches on renewable energy risk management. In this regard, we advance previous research works by scrutinizing risk factors in an oil-rich country having peculiar characteristics. Our findings will enhance our understanding of investment risk management in renewable energy projects and suggest effective policies for achieving sustainable energy development that would contribute to economic progress of Azerbaijan.

The remainder of the article is set out as follows. Section 2 provides a detailed literature review, identifies and classifies risks. Section 3 describes questionnaire and survey based on the risks. Section 4 defines risk assessment methodology and presents empirical results. Finally, section 5 provides conclusion and policy implications.

Risks identification and classification

Market risk, credit risk, liquidity risk, operational risk and political risk have been denoted in Wing and Jin (2015) as the main categories of risks, adversely affecting financial and technical indicators of the renewables related projects.

In Ioannou, Angus, & Brennan (2017), six risk categories were analyzed: political, economic, technological, legal, social and environmental.

Referring to the lack of the standardized classification of risks associated with renewable energy and wind parks in particular, the following classification of risks is proposed in The MITRE Corporation, Risk Impact Assessment and Prioritization (2015): Strategic / business risks, Transport / construction / completion, Operation / maintenance, Liability / legal risk, Market / sales risks, Counterparty risk, Policy / regulatory risks.

Franklin (2019) assumes that in the case of India major risks associated with renewable energy developments and marketing are market, credit, operational, liquidity and political risks.

In the last decades, achievements in the development of renewables and renewables-related risk management laid down a foundation for the applied research in this field (Ritchie & Roser, 2019; IRENA, 2018; Ioannou, Angus, & Brennan, 2017; Noothout et al, 2016; Jhih-HaoLina, Wu & Lin, 2016; Wing & Jin, 2015; Franklin, 2019; Rostami, 2016). From this point of view, study of risks inherent to Azerbaijan, as a potential region for development of renewables, is of particular interest.

Development of renewable energy system is a typical example of the project and before immersion into details of the renewables-related risk assessment, it would be useful to specify risk concept. There are many various definitions of the risk. In our research, we are utilizing definitions of risk given in Aven (2012) and PMBOK guide by Rose (2013).

Hancock (2015) analyses risk assessment and prioritization practices that have been commonly used for Enterprise Risk Management (ERM). Key considerations of risk assessment process such as risk assessment dimensions, scales used for likelihood and impacts quantification, ranking procedures are illustrated by examples.

Noothout et al., (2016) identifies nine country-related risks for the EU. Some of the risks embrace all three phases of the renewables project development process (planning, construction, and operations) and others are inherent only for the one or two phases.

Classification of risks associated with risk management of renewable energy projects in case of onshore and offshore wind parks (Gatzert and Kosub, 2016, July) includes seven key risks: strategic / business; transport /construction / completion;

operation / maintenance; liability / legal; market / sales; counterparty; political, policy, regulatory and associated sub-risks, and these risks are comparable with risks identified in Noothout et al., (2016).

Waissbein et al., (2013), based on risk environment, investment barriers and risk driver analysis, identify nine risk categories: power market; permits; social acceptance; resource and technology; grid/transmission; counterparty; financial sector; political; currency/macroeconomic risks.

Risk factors evaluated by investors of the renewable energy and presented in Ragwitz et al., (2007) include three key risk categories (political, technological and market risks), subdivided into more detailed categories like financial change of support system; conditions on access to the grid; planning and permit risk; financial risks; non-financial change of the support system; complexity of the support scheme; other administrative risks; risk of resource availability; risks on the regular market.

In general, absolute or relative severity of the economic, social, political, legal, technological, and environmental forces, creating risk and driving changes predetermines enterprise-level, region or country-specific project risk categories.

Complexity and uncertainty inherent to large scale RES projects require a well-grounded combination of the various approaches and tools. Country-level solution of such issue is given in Santoyo-Castelazo, & Azapagic (2014). A framework for analysis, based on life cycle approach and integration of the environmental, economic and social dimensions of sustainable development, is created. The framework includes scenario analysis, life cycle assessment, life cycle costing, social sustainability assessment, and multi-criteria decision analysis, which are used to assess and identify the most sustainable energy options. The application of the framework is illustrated in the example of future electricity supply in Mexico.

Energy is a basis of sustainable economic development and at present RES are becoming an inseparable part of this basis in many developed and emerging countries. Risks are a major barrier to financing RES projects and require various risk management mechanisms and tools. Guerrero-Liquet et al., (2016) discusses risk management tools in solar facilities. Within the PMBOK Guide framework, a combination of different decision-making methodologies has been carried out. The methodologies allow acquiring the knowledge by experts, revealing relationships between causes and effects, and making the best decision. For acquisition of the required information, Delphi and Checklist techniques, cause and effect diagrams, SWOT analysis are applied. Analytic Hierarchy Process (AHP) is used for the categorization and prioritization of risks. As case study, a real case in the Dominican Republic is presented.

A qualitative assessment of the critical risks of an offshore wind project in Persian Gulf in Iran has been made by Mirkheshti & Feshari (2017). Using the AHP method and six main decision-making criteria, the authors have prioritized the risks, namely "lack of capital, verification processes, network connectivity, technology constraints, design and quality of the foundation, demand changes, price fluctuations, and natural hazards" (Mirkheshti & Feshari, 2017). As a source of information experts' interview and literature review are used.

From the risk assessment standpoint, key notions are uncertainty, likelihood (probabilities), impact (consequences). Depending on nature of uncertainties and information available various qualitative and quantitative or semi-quantitative methods can be used for the risks description and assessment (Karmen et al., 2019; Haines & Sage, 2015; Simmons et al., 2017).

Qualitative methods are based on expert judgment and are used for the purpose of the exploratory research or when risk components have a very large degree of uncertainty and are not quantifiable. According to several surveys results, qualitative risk assessment methods are used most frequently. A proper application of the qualitative approach to the project risk management (Anna Korombel, Piotr Tworek, 2011) requires the knowledge of advantages and disadvantages of specific methods and techniques that are applicable in the subject area. Strength and weaknesses of some chosen techniques are given.

Ioannou, Angus, & Brennan (2017), used quantitative and semi-quantitative methods to model risks and uncertainties in energy system planning, feasibility studies, and development of optimal energy technology portfolios. According to the authors, "quantitative methods measure risks mainly by means of the variance or probability density distributions of technical and economic parameters; while semi-quantitative methods such as scenario analysis and multi-criteria decision

analysis (MCDA) can also address non-statistical parameters such as socio-economic factors (e.g. macro-economic trends, lack of public acceptance)".

Segal (2011) views the ERM as a cyclical process including risk identification (risk categorization and risk definition, qualitative risk assessment, emerging risk identification), risk quantification, risk decision making, and risk messaging. Segal (2011) pays special attention to the qualitative risk assessment as a kernel component of risk identification.

Approaches used for risks management in traditional energy systems, as it is accentuated in Michelez et al., (2011), are transferable for the risks management of RES. There are generic six steps that project risk management cyclical process includes project definition and requirements, risk identification, risk evaluation, risk control, risk follow-up revision and risk feedback. Risk identification step is based on brainstorming, Delphi method, experts interview, checklist, hazard and operability analysis, database, cause and effect diagrams. The output of the step is the risk register. All risks are subdivided into four categories: political, economic, social, and technical.

Questionnaire-based study of risks inherent in bioenergy projects (Bature et al, 2018) categorizes technical, political and regulatory, financial, social, and environmental risks. According to the survey, financial, policy and regulations, and the environmental risks are the most important.

Drivers and determinants of policy and regulatory risks associated with renewable energy investments in developed countries with a focus on Europe have been studied in Gatzert & Kosub (2016). Key drivers and determinants for policy and regulatory risk are categorized as economic stress situation, costs of grid management, technology and technological progress, type and size of financial support scheme, control mechanism, national targets, ideological change, socio-political uncertainty, moral hazard, acceptance risks, and institutional determinants.

As it is shown in Gatzert & Vogl (2016, August), policy risks play an important role in renewable energy projects and should be closely monitored and assessed. A model framework for assessing policy risks using fuzzy set theory, which also takes into account energy price risk, inflation risk, and resource risk, is presented. Research result shows that policy risk can have a serious impact on an investor's risk-return profile.

It is necessary to mention that during last decades methods based on fuzzy logics have been used for the risk assessment and management as a combination of the quantitative and semi-quantitative approaches (Shapiro & Kossi, 2015). However, in comparison with qualitative and semi-quantitative methods, probabilistic and fuzzy approaches are more time consuming from data collection standpoint and, at the same time, they are computational and knowledge-intensive in terms of problem solution, results interpretation, decision-making and implementation.

Questionnaire and survey

Taking into consideration renewables risk-related statistical data limitation, experts' opinion survey approach was chosen as an information collection tool. A group of experts was composed of the twelve specialists in fields of economics, business administration and energy systems. The experts were selected based on their experience and competencies.

Following Ragwitz et al. (2007), Michelez et al., (2011), and Nothout et al., (2016), our survey questionnaire evaluates nine multidimensional key risks. We analyze thirty one sub-risks associated with the development of renewable energy: country-related potential risk (political stability, economic development, legal issues, corruption, volatility of the exchange rate); social acceptability risk (local communities discontent with the environmental issues, opposition caused by the expected increase of the energy costs, risks caused by the lack of the knowledge about positive aspects of renewables); administrative risk (lack of transparent rules and procedures, corruption-related, delays in getting permissions and approvals); financial risks (insufficient investments, limited experience in the development of renewables, strict bank regulations); technical and management (likelihood of incurring losses due to deficiency of the operational experience and knowledge, local specialists knowledge and experience deficiency, misestimation of the resources, lack of the relevant industry, infrastructure limitation); grid access risk (legal, technical, generated by the insufficient experience, grid infrastructure and renewables mismatch); energy policy related risk (lack of support for the renewables); market and regulation risks (uncertainty of the governmental energy policy, legal issues, lack of the independent regulation, lack of independent producers and sellers, lack of an independent regulatory body); sudden change of the RES policy (strategy change, support change).

Table 1 Questionnaire fragment

N	Potential risks	Evaluate risk occurrence probability and risk impact (severity)									
		Probability of the risk occurrence					Severity of the risk				
		Very High	High	Medium	Low	Very Low	Very High	High	Medium	Low	Very Low
1	Country -related potential risks										
1.1	Political stability related										
1.2	Economic development related										
1.3	Legal issues										
1.4.	Corruption related risk										
1.5.	Volatility of the exchange rate risk										
.
9	Disruptive change of the Renewable Energy Sources Development policy										
9.1	Change of the strategy										
9.2	Change of the support policy										

The key point in any survey is a survey data processing and interpretation. Question framing predetermines and limits risk metrics and descriptions available. So, before formulating the survey questions and collecting data, we present data processing technique, describe risks and metrics that we are going to use.

Risk assessment methodology

Risk analysis and evaluation in application areas are mainly based on domain experts' opinion studies. When it comes to evaluation of the various indicators and variables based on experts' opinion, there is a temptation to assume that experts are operating with perfect and exhaustive information and that they are able to provide exact numbers. Unfortunately, in the most cases, subject area information is incomplete, imprecise and vague by nature. Based on knowledge and experience, experts operate with linguistic terms and, even though they provide numbers, these numbers are subjective estimates and approximations. Linguistic information provided by the experts, in order to be useful for a decision-making process, needs some preliminary interpretation, processing and formalization.

For the risk assessment, different number of levels can be chosen (Hancock, 2015), but in the most cases researchers prefer to use five levels scale as a scale having sufficient descriptive and discrimination efficiency.

According to the questionnaire, experts evaluate probabilities and severity (seriousness) of potential risks on five level linguistic terms scale: **Very High, High, Medium, Low and Very Low**.

Qualitative and quantitative information, acquired in the survey, can be integrated based on approaches used in Rose (2013, PMBOK guide) and Risk Assessment and Prioritization guide by MITRE Corporation (2014).

In case of symmetrical distribution and equal intervals, probability of the risk occurrence can be described by the intervals or as a midpoint of the intervals.

In some cases, researchers increase the number of intervals. For example, MITRE corporation has been using 11 intervals (The MITRE Corporation. Risk Impact Assessment and Prioritization, 2014), but in this case more statistical data should be provided to the decision maker and experts. Moreover, discrimination ability of the people is limited by the nine chunks of information that people are able to process simultaneously.

Risk impact severity can be evaluated on various scales. Based on experience and requirements, each organization determines risk scales and permissible levels of the risks for the system (PMBOK guide). If high and very high levels of the risk severity are not admissible, non-linear scale is preferable for the evaluation of the risk impact severity.

Non-linear scale can be constructed based on the following exponential function:

$$Y_i = \alpha * \beta^{i-1},$$

where α is value of the risk impact severity for the term “**Very Low**” and in the most cases, it is assumed that $\alpha = 0.05$; β is a base of the exponential function and value of the base shows how many times adjacent linguistic variables’ severity degrees differ; $i=1,2,3\dots k$ – are indexes of the linguistic variables describing severity of the risks, linguistic variables indexes ranked from the lower to higher severity - degree “**Very Low**” has index equal to 1, -“**Very High**” degree has index equal to k . In the most cases $k=5$. This number is based on the number of the linguistic terms that people are able to soundly differentiate and justify. According to [Wing & Jin \(2015\)](#), most people are able to keep and process 7 ± 2 chunks of the information simultaneously in their operative memories. Taking this into consideration, experts, as a rule, answer a questionnaire for a short time, and therefore, lower boundary of the interval is more reliable.

Choosing appropriate values for the α , β and k , we can determine minimum value of the degree, number of the degrees, and ratio of the adjacent degrees. If we choose $\alpha=0.05$, $\beta=2$ and $k=5$, then non-linear scale of the risk severity will be:

Very High	0.60
High	0.40
Medium	0.20
Low	0.10
Very Low	0.05

If the number of the experts equals Q and indexes $q=1,2,\dots,Q$ assigned to the experts, then risk factor for the r component of the risk i , according to an opinion of the q -th expert, can be calculated as:

$$RF_{qir} = P_{qir} * CD_{qir},$$

here P_{qir} is a probability of the risk component, CD_{qir} is the numerical value of the risk factor severity.

If the risk components from the standpoint of the influence are significantly different, then weight W_{ir} can be assigned to the each component and risk factor RF_{qi} for the i -th risk can be calculated as a weighted average of the components:

$$RF_{qi} = \sum_{r=1}^{m_i} W_{ir} * P_{qir} * CD_{qir}$$

Weights should satisfy the following constraints:

$$0 < w_{ir} < 1, \quad \sum_r w_{ir} = 1$$

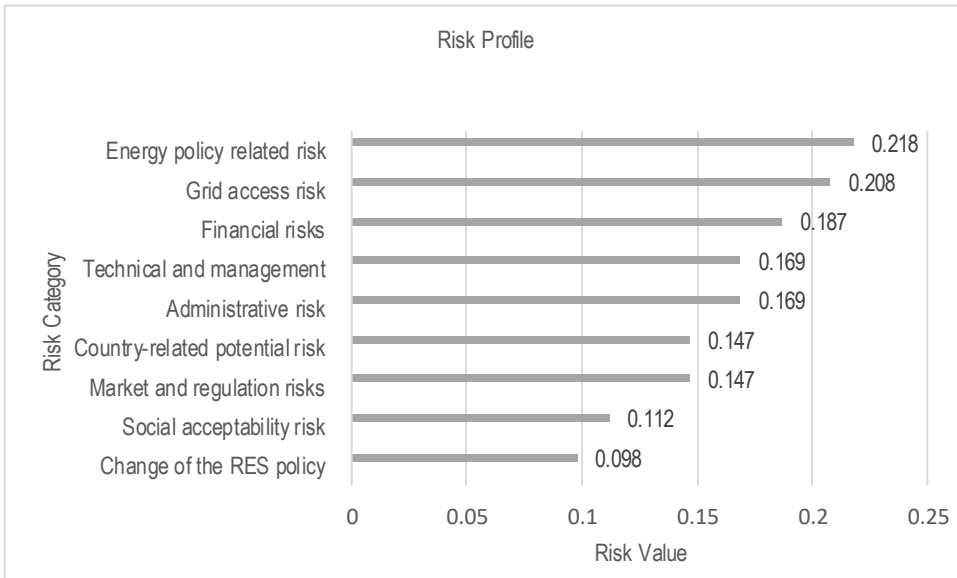
Some other scales can be used as well, but in this case, weights should be normalized before calculations.

Based on experts’ opinions, risk factor for each risk is calculated in accordance with the following expression:

$$RF_i = \sum_q^Q RF_{qi}$$

If a panel of experts decides that it is necessary to take into consideration differences between experts in knowledge level and competencies, then weights can be assigned to the experts as well, and in this case risk factor will be calculated as a weighted average.

Figure 1 Risk values calculated based on experts' opinion



According to the risk profile, there are sufficiently large differences between various types of risks. Most influential and significant are energy policy, grid access and financial risks according to the Kendall's concordance coefficient ($W=0.402$).

Conclusion

Environmentally friendly renewable energy sources are becoming the mainstream in the energy projects development. But, development of renewables, as any other business and technological innovations and undertakings, encounters serious country-specific, legal, administrative, technological, financial, and many other issues and these issues-related risks. Risks directly influence the objectives of energy projects and outcomes and should be analyzed and assessed in advance.

The case of Azerbaijan was studied in detail. Taking into consideration limitedness of the country experience in the development of renewables and lack of appropriate historical statistical data, an opinion study of experts was chosen to acquire the relevant information.

Survey questionnaire evaluated nine risks and thirty-one sub-risks, risk probability and risk impacts. Based on these indicators, risk value for each risk category was calculated and risk profile for the renewable energy systems in Azerbaijan was constructed. According to experts' opinion, most influential are energy policy, grid access and financial risks. According to the derived Kendall's concordance coefficient ($W=0.402$), there is medium level agreement among experts on the evaluation of expected risks in the development of renewables in Azerbaijan. The results of this research enhance understanding of investment risks in renewable energy projects and contribute to risk management policies on achieving sustainable energy development in Azerbaijan.

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A Comparative Analysis on the Required Commercial Competences for Women Entrepreneurship Development in Selected Countries

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Abstract

The scientific report is based on a desk research and an on-line survey done within an Erasmus + project, under Key Action 2 – Cooperation for innovation and the exchange of good practices, High Education Sector, named European Partnership for Social Inclusion and Creation of Skills for Women Entrepreneurship E-learning. The project is realized by three partner countries and it is focused on the social inclusion of women wishing to develop their own business in the area of trade and logistics through integration into entrepreneurship, acquiring practical skills and competences in order to generate financial, cultural and social value. A comparative analysis of the trade competences required for the development of women's entrepreneurship in the three partner countries is done. In the analysis, a study of the necessary literature in order to establish the theoretical and methodological framework of the study was initially carried out. Via a study of the existing competency models in the field of trade, the key necessary competencies for the realization of a trader have been identified. They serve to develop a questionnaire and they are the basis for the comparative analysis between the three partner countries. ¹

Keywords: women's entrepreneurship, trade competences, comparative analysis.

1. Introduction

The purpose of the scientific report is to derive and analyze the key commercial competences necessary for starting a business of low-skilled women in the selected countries on theoretical, methodological and practical analysis. The stated goal requires the following tasks to be solved: theoretical clarification of the skills and competencies of women entrepreneurs and characterization of the woman entrepreneur; adaptation of the methodological framework of the study and comparative analysis of the results obtained by the respondents from the selected countries.

2. Theoretical and methodological aspects of the business competencies of women entrepreneurs

R. D. Hisrich and C. Brush (Hisrich & Brush, 1984) analyze the management skills of women entrepreneurs. According to them management skills consist in:

Finance: providing capital, forecasting, budgeting.

Communication with staff: management, development and training.

Marketing: marketing research, promotions, sales.

Creating ideas / product innovations.

Business operations: inventory, production, daily operations.

Organization and planning: business strategy, policies and organization.

¹ The research was carried out within the framework of a project „European Partnership for Social Inclusion and Creation of Skills for Women Entrepreneurship E-learning“, Project 2018-1-BG01-KA203-048016 under ERASMUS + Programme, Key Action 2, Higher Education Sector

M. Sonfield, R. Lussier, J. Corman, and M. McKinney (Sonfield, Lussier, Corman, & McKinney, 2001, pp. 165-173) examine gender differences through the prism of the Entrepreneurial Strategic Matrix (see Fig. 1.). It is a situational model that suggests appropriate strategies for new and ongoing endeavors in response to identifying different levels of innovations and risk (Sonfield, Lussier, Corman, & McKinney, 2001, p. 166).

High Innovation Low	High level of innovation / low risk • Creating multiple innovations • Normative protection of innovation • Limiting investment and operating costs through control systems, contracts, etc.	High level of innovations / high risk • Reducing risk by reduction investment and operating costs • Maintaining innovations • Outsourcing of operations that require significant investment • Choosing forms for a joint venture
	Low level of innovation / low risk • Protection of current position • Limited return allowance • Assumption of limited growth / potential	Low level of innovation / high risk • Increasing the innovations who provide competitively advantage • Risk reduction • Using a business plan and objective analysis • Minimize investment • Optimization of financing costs • Choosing other business methods, such as franchising • Reject business idea
	Low Risk	High

Figure. 1. Entrepreneurial strategic matrix

Source: M. Sonfield, R. Lussier, J. Corman, M. McKinney, *Gender Comparisons in Strategic Decision-Making: An Empirical Analysis of the Entrepreneurial Strategy Matrix*, *Journal of Small Business Management* 2001,39(2), p. 166.

A brief description of the Bulgarian female entrepreneur is made after the identification of possible options for choosing entrepreneurial activity in women's society.

In the Annual Report on the Status and Development of SMEs in Bulgaria 2008, the Bulgarian female entrepreneur has the following profile (Ministry of Economy, Energy and Tourism, 2010, p. 146):

- active age (30–49 years);
- with higher and secondary specialized education, mainly economic and humanitarian;
- runs a small business in the services, hospitality and catering and trade sectors
- use of foreign languages;
- works with a computer and uses the internet;
- prefers working outside home;
- successfully combines work and family care.

National surveys in Bulgaria indicate that women entrepreneurs are running businesses that are in the services sector, including commerce. For this reason, in the identification of trade competencies, 26 posts were analyzed, developed by the Bulgarian Chamber of Commerce and presented in the National Competence Assessment System at <https://mycompetence.bg/>. They serve as the basis for the development of key commercial competencies, and also examines the curricula of leading economics universities in the country and abroad.

The research is of interest to the in-depth study of women's entrepreneurship in Bulgaria, conducted in 2012 by G. Gerganov and R. Nenova (Gerganov & Nenova, 2012). The authors outline the profile, motivation and best practices for female entrepreneurs in a specific sector of the economy - agriculture.

Based on the entrepreneurial theoretical framework outlined by Schumpeter and Kirzner, the author formulates adequate conclusions regarding the initiation of innovation in the studied sectors (Perkov, 2008).

The methodological toolkit used in this report has the following sequence:

Develop a survey based on existing theoretical assumptions about the competencies of women entrepreneurs.

Choice of a scale to measure the level of competence of the respondents - 5-point type Likert scale 1 - completely disagree, 2 - rather disagree, 3 - neither agree / disagree, 4 - rather agree, 5 - completely agree.

Conducting a survey.

Processing of questionnaires.

Results analysis.

3. Comparative analysis of the logistical competencies of women seeking business in Italy and Bulgaria

The respondents from Bulgaria indicate that their knowledge of leasing and leasing schemes is a competence with the highest average coefficient in services (3.00), and the lowest level is reported in women starting a business in industrial production (2, 25) and logistics (2,33). Data from Italy show us that women in the trade are the highest rated in this indicator (3.39). The lowest average level of knowledge of leasing is among women employed in industrial production (2,33).

The knowledge of factoring and the application of factoring operations are most strongly present in Bulgarian women starting businesses in the field of agriculture - 2.57. The lowest average coefficient for women in Bulgaria is 2.00 and refers to those wishing to develop activity in the industrial production. Italian respondents indicated that they had the highest average knowledge of factoring and the application of factoring operations when operating in the logistics sector (3,30). The lowest score for this competence is female entrepreneurs in agriculture (2.50). The great advantage of factoring is the fast availability of funds, which should be known to potential entrepreneurs (Pencheva, 2014, p. 110).

Consensus knowledge is most prevalent among Bulgarian women starting a business in the services sector (3,13). The lowest average coefficient for women in Bulgaria is 2.00 and refers to those wishing to develop activity in the industrial production. Respondents from Italy indicated that they had the highest average knowledge of consignment in the field of logistics (3.50) and the lowest score for this competence were women entrepreneurs in services (2.22).

The knowledge of commission mediation is the highest average among Bulgarian women entrepreneurs who wish to develop business in the field of trade and industrial production with equal value of 3.00. The surveyed Bulgarian women indicate that the lowest is the start-up in the Agriculture sector - 2.57. Results of a survey of women in Italy indicate that logistics professionals (3.50) have the highest average score, and women with e-commerce have the lowest average score for commission mediation competencies - 1,89.

Forwarding mediation competencies are the highest average among Bulgarian female entrepreneurs wishing to develop a business in the trade sector with a value of 2.90. Bulgarian women surveyed indicate that the lowest is the startup in the Agriculture sector - 2.28, followed by E-Commerce by 2.38. Respondents from Italy indicated that they had the highest average knowledge of freight forwarding in trade (3.00) and the lowest score for this competence were women entrepreneurs in services (2.09), followed by e-commerce by 2.22.

The competencies for exercising control over the execution of the mediation contracts are the highest average among Bulgarian female entrepreneurs wishing to develop a business in the field of logistics with a value of 3.00, and the lowest are the start-ups in the field of electronic trade (2.40). Respondents from Italy indicated that they had the highest average knowledge of exercising control over the execution of the concluded mediation contracts in the field of logistics (3.60), with the lowest score for this competence being women entrepreneurs in the field of e-commerce (1.89). Determining the effects of mediation operations is the highest competence average in the agricultural sector (3.14) and the lowest level is reported for women starting an e-commerce business (2.28). Data from Italy show us that women in logistics are the highest rated

in this indicator (3.20). The lowest average level of detection of the effects of mediation operations is women employed in services (2.09).

Conclusion and recommendations

The empirical results presented summarize the comparative aspects of the necessary trade competencies for the development of women's entrepreneurship in Italy and Bulgaria, the following could be identified as more important:

Both of the target groups from Italy and Bulgaria, regardless of the economic activity in which they intend to do business, need training to enhance their trade competences, due to their low average knowledge levels ranging from 1.89 to 3.60.

With the lowest average levels of knowledge of individual trading competencies are Bulgarian women wishing to develop businesses in the fields of industrial production, logistics, trade and agriculture.

The conclusion is similar for the Italian respondents, where the lowest average levels are in economic activities - industrial production, services, e-commerce, agriculture.

The highest average levels for individual competencies were indicated by Bulgarian women wishing to start a business in the services and trade sector, while trade and logistics were at similarly high levels in Italy.

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The Effectiveness of a Leniency Program in Algerian and Comparative Competition Law: New Guidelines

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Abstract

Experience shows that in large cartel cases, there are often problems with proof of participation. More and more sophisticated techniques are being put in place by the conspiratorial companies in order to leave as few traces as possible. Thus, with the clemency programs, the risk of denunciation becomes a reality in the world of cartelists, so that the cartel is destabilized from within. The only way to limit the risks of denunciation is to increase controls on members and to strengthen the system of sanctions. All these measures have a cost, which is not negligible and is included in the cost / benefit calculation. The result of the calculation, negative, can dissuade companies from forming cartels. On the contrary, for the competition authorities, the financial benefits are in principle large. For this, clemency programs can effectively combat this type of behavior.

Keywords: leniency, competition, behavior, sanctions, controls, companies.

Introduction

If there are criminal penalties, it does not seem that all competition law is criminally punishable. However, the "competition law" contains a wide range of behaviors, encompassing both restrictive practices of competition (dubbed "the little competition law"), such as discriminatory terms of sale, refusal of sale between traders or tied selling, and anticompetitive practices (or "big competition law"), such as cartels and abuse of dominant position. Countries have expressed concern that criminal sanctions may not have an excessive deterrent if the conduct to which they apply is not clearly defined. (OECD, 2003).

The problem in question is the following:

What are the contours of the criminalization and the intervention of leniency in competition?

In order to answer the problematic we propose the following plan:

I-the outlines of repression in competition law

II-the intervention of leniency in competition matters

III: The qualification of the leniency program

I- The outlines of the repression in competition law

To get a glimpse of the need for the application of criminal law in competition law, the first step would be to establish an inventory of the evolution of criminal business law, which is undeniably moving towards a movement of decriminalization.

The appearance and evolution of a criminal law "business" is more or less recent. The study of the problem involving the role of the legislator in protecting the interest of shareholders and creditors, has allowed the creation of appropriate offenses in the absence of the application of a common law. The increasing use and practice of criminal law undeniably characterizes the business world. It should also be noted that there is currently a downward movement, namely that of the

decriminalization of business life. Nevertheless, we will highlight that there is in parallel to this phenomenon, a reinforcement of the penal sanction.

The first specific offenses specific to business law will emerge from the creation of this law. The reasons for the latter represent the legal model related to the subsequent evolution of criminal business law:

-Development of the repression of fraudulent acts related to the "vagueness" of common law, which does not always concisely identify criminal acts that are reprehensible. The sanction of fraud specific to business law has its origin in the maladjustment of common law crimes in the business world and the difficulty of extending them because of the principle of strict interpretation of criminal laws.

-In this case, the criminal sanction is used by the legislator to ensure compliance with company law. The penalty placed next to the obligation gives it renewed authority and guarantees its enforcement. Thus, we are witnessing the creation of formal offenses whose purpose is more to oblige us to do than to punish.

As a result, there is a growth in the number of company law standards leading to a corresponding increase in bonds. This excessive criminalization has been criticized by penalist and commercialist doctrine, even calling it "a mistake in criminal policy".

The decriminalization movement hardly goes unnoticed and creates many expectations on the part of the various economic actors concerned. Indeed, is correlated to this movement, a destabilization of the criminal procedure to be taken into consideration by the company and its leaders. Also note, the media impact very powerful during the stage of the indictment and not enough during the orders of non-place thus leading to economic consequences even non-negligible market at all.

Thus, a large number of economic actors emphasized the essential character of the establishment of easily applicable, consistent, transparent and stable standards in order to optimize their understanding and therefore their respect. Unfortunately, this is not the case at present for these reasons:

- Legislative inflation and multiplication of incriminations in competitions
- Jurisprudential uncertainties about the prescription
- instrumentalization of criminal justice
- abnormal criminal risk for the company considered as being one of the reasons for the reluctance of foreign companies to set up in France (one of the major challenges of decriminalization is precisely the attractiveness of France for investors).

Decriminalization has nonetheless been perceived positively by some stakeholders, describing it as a device in the sense of the general interest and allowing the respect of a public order of protection; the latter imposes:

- Protection of the "weak against the strong" through the principle of equality before the law to protect the interveners being in a position of economic inferiority and to rebalance the situations of inequality; this can be done through legal tools, criminal or non-criminal, accessible to all;
- Protection of the security, health, and patrimony of the citizens, if necessary by requiring the setting up of counterparts to criminal offenses
- A legitimate expectation in the market, and therefore in the overall economic system.

In addition, the important and the principal of the criminal law of the business which is that which foresees the sanction of fraud must be strengthened and consolidated as the foreign examples highlight it. Indeed, in the era of globalization, we note the need to sanction fraudulent behavior in order to protect employment and growth through the protection of investments themselves.

Community law and certain international conventions thus form part of this movement favorable to the criminal sanction. Thus, the main issue of the decriminalization of the law in the business world is mainly the respect of equality before the law, the protection of the investments as well as the respect of the general interest by combining the legitimate need of confidence of the companies in the standard and the standard actors

Penal sanctions, in competition law, are heavy penalties, such as the prison sentence, accompanied by heavy fines, which the judge, even timidly, has continued to pronounce, and despite the development that preceded, the examination the movement of decriminalization, leads us paradoxically to note, that the penal sanction is reinforced, it is a renewal.

It should be noted, however, that the United States is a pioneer in the criminalization of competition law, and until then, has pronounced the most important penal sanctions, especially since the revision of the Sherman Act in 2004¹. The custodial sentences are hardened, such as the maximum duration of 10 years in prison. The statistics for the year 2009 demonstrate this: 144 criminal proceedings in progress, the highest number of prosecutions since 1992. (Barnett B. A., 2009).

Under a trend of decriminalization, we are actually witnessing a renewal of the criminal sanction.

The renewal of the penal sanction. The penal sanction seems to live a renewal. (Sylvain Jacopin, 2010).

Criminal sanction (and its enforcement) is the expression of the values of society at a given moment. When society evolves, this supposes that the sanction evolves too: questioning, modification ... Etc.

he penal sanction is no longer the only solution to offenses; it has actually redeployed itself elsewhere, under a semblance of decriminalization. In fact, there is every reason to believe that the criminal sanctions that the legislator seems to want to evict are reintroduced into the administrative repression.

Indeed, the study of the administrative repression makes it possible to detect similarities with the penal sanction:

- The AAI have particularly pecuniary property sanctions, close to the criminal fine, whose repressive purpose, at the base of the penal sanction, is not negligible here. We can even argue that the repressive purpose of administrative fines is much greater than that of criminal fines. In fact, the amount of the criminal fine is determined while the amount pronounced by the IAA varies according to the seriousness of the alleged acts, the extent of the damage caused to the economy, the situation of the business, recidivism or not ... Etc.

- The rule of clemency provided for in Article L462-2 of the French Commercial Code, is largely reminiscent of the device for "repentant" Article L132-78 of the Criminal Code, which allows individuals to communicate information to the authorities administrative or judicial, to benefit from a reduction of sentence or relaxation, when they participated in the preparation of the offense, committed an offense, or held information to prevent the commission of the offense².

As a result, the introduction of criminal sanctions would increase the likelihood of cartel detection, thus making the criminal risk even greater. The deterrent effect of the penal sanction is again demonstrated.

The objective of prevention is further satisfied by the control of the legal person over the deviant behavior of its employees. Undoubtedly, the introduction of criminal sanctions encourages companies to control their agents and to denounce them in case of violation of the competition law. Indeed, criminal sanctions encourage the corporation to monitor the behavior of its employees more closely, in particular by setting up information programs on antitrust laws (also known as compliance programs). Until then, the legal person did not have sufficient motivation to set up such programs, notably because of the insufficiency of the administrative repression which, at the end of a cost / benefit calculation, encouraged the company to participate in the cartel. Thanks to the penal sanctions, the establishment of information programs make it possible to

1 - The Sherman Anti-Trust Act of July 2, 1890 is the first attempt by the US government to limit corporate anti-competitive behavior: it signals the birth of modern competition law.

2 - In the state of French law, it should be made clear that the clemency granted by the administrative authorities has no effect on possible prosecutions by the judicial authorities.

reinforce the culture of the respect of the competition law of the employees of the company (whatever their hierarchical level) and educate them to the antitrust law (E. Combe, 2006).

The penalties imposed by the competition authorities, therefore, constantly refer to the techniques of criminal law. Moreover, the Coulon report even goes so far as to propose extending the transactional mechanism of criminal law into regulation. (Jean Marie Coulon, 2008).

This mechanism can be translated into fines paid to public treasuries, temporary suspensions of the exercise of the activity ... Etc. These sanctions, which are likely to affect individual rights, require, in a paramount way, the intervention of the judicial judge; This is indeed what the Constitutional Council recalls in a 1995 decision. (Constitutional Council, February 2nd, 1995).

The Coulon report therefore wishes to give the A.A.I.¹ a dispute resolution system specific to criminal law.

On the principle of "non bis in idem", the ground is favorable to the eviction of the penal sanction, putting an end to the cumulation, in favor of the administrative sanction. The Penal Code laid down rules to avoid excessive punishment in the event of a real plurality of the criminal offense; but we will note the lack of coordination between the form of administrative and penal repression, the principle does not apply. The removal of one of the two forms of sanctions is the solution.

Under the pretext of decriminalization, it is really a redeployment of the penal sanction, which only changes in its pronouncement; it exists as a rivalry between the administrative sanction and the penal sanction. The administrative sanction borrows from the criminal a few formulas, and largely competes with the penal sanction.

In reality, we are not witnessing a suppression of the criminal sanction, but rather a solution; a procedural solution indeed, which uses this duality between the two sanctions, as an instrument at the service of the punitive system.

Penal sanction has become a possible, and not exclusive, avenue of action in a punitive system that is broader than criminal law, since the repressive function of the law of regulation is based in the field of criminal law within European law.

Here each punitive process, allows the criminal sanction to reveal itself. The latter does not retreat, it is strengthened.

It is therefore possible to argue that the penalization of repression finds its place, and is necessary, even if it manifests itself other than in the conventional form of a penal sanction.

We can now check the desirability of applying the criminal law to cartels.

II-The intervention of leniency in competition matters

Do the main approaches to promoting compliance work? Answering this question will enable us to know if it is appropriate to introduce the custodial sentence, in view of the effectiveness or not of the arsenal already in place.

The main enforcement methods used by competition authorities to promote compliance with competition law are pecuniary sanctions and leniency programs. The frequency and intensity with which these methods are used has increased considerably over time; and yet the offenses of understanding, in particular, are not diminishing. The total number of international agreements detected, for example, increased from an average of 6.3 per year between 1990 and 1995 to 32.9 between 2004 and 2007. It could reasonably be expected that, if the conventional approaches had been effective, the number proceedings against cartels would have decreased during this period. Unless the sanctions are still too lenient or need to lengthen and increase prison sentences. (Discussion Paper, Financial and Business Affairs Directorate, 2011).

The lack of efficiency of the methods used to promote compliance with competition law demonstrates the desirability of applying the custodial sentence to competition law offenses. In fact, although the amount of the sanctions, although high, shows insufficient results, and the leniency program put in place, in order to increase the detection of the offenses, manifests several flaws.

1 - A.A.I.: means independent regulatory authorities.

We will demonstrate in this section that the deprivation of liberty is appropriate because of the counterproductive nature of the analysis of financial penalty and its ineffective accumulation between the administrative system and the penal system.

Economist Gary Becker¹, in his work on the rational modeling of criminal behavior, provides an economic basis for the idea that decisions to engage in law-abhorrent behavior are simply interest.

Before engaging in reprehensible behavior, each individual draws up a comparative table: benefits / costs, so that the agreement will only be formed if it is economically viable. In order to be profitable, the agreement must make a profit in excess of the costs of a possible sanction, added to the probability of detection of the agreement (benefit of the agreement > cost of the penalty + probability of detection). (Gary Becker, 1969).

Thus, the effective sanction, will be the one that will succeed in reversing this equation.

According to the economist, it would be wiser to concentrate his efforts. There is no need to try to detect all infringements of competition law, and to enforce sanctions that are simply equal to the benefits of the agreement in order to dissuade the perpetrators. It is better to reduce the detection percentage and increase the amount of the monetary penalty until the amount of the benefits of the infringement is negative. This is the "optimal" sanction, which should represent 150% of the turnover achieved on the market concerned by the company pursued.

A study carried out by the Office of Fair Trading (O.F.T.) confirmed that "the main contribution, fundamentally, is that the high amount of financial penalties is a crucial deterrent". (An Assessment of Discretionary Penalties Regimes, 2009).

The average amount of EU business-related pecuniary sanctions imposed was less than EUR 2 million between 1990 and 1994 and was around EUR 46 million between 2005 and 2009, an increase of 2200% . Similarly, the data recorded by the antitrust division of the US Department of Justice, shows that the average amount of pecuniary penalties imposed on companies, has increased from 480 000 USD to about 44 million USD, a variation of the order of 9000% .

These statistics make it possible to confirm that the instruction of reduced number of cases gave way to a higher monetary penalty, which is more judicious than to instruct several small cases to less repressive amounts.

John Connor & Robert Lande, conclude in an article, (An Assessment of Discretionary Penalties Regimes, 2009). that the profits of the offenders, are considerably higher than the fines that they cause. They therefore recommend a substantial increase in the amount of these fines both in the United States and in the EU.

However, other economists raise the question of the effectiveness of the pecuniary sanction, whatever the amount.

Douglas Ginsburg, and Joshua Wright, recall that "At this stage, there is no evidence that the imposition of financial penalties even heavier against companies would be more dissuasive. It may just be that the fines imposed on the companies do not produce the desired effect, so that increasing their amount is useless in the best case and could be counterproductive if the companies pass on the price they charge consumers. the additional cost of increasing monitoring and compliance costs " (Douglas Ginsburg & Joshua Wright, 2010).

Arrived at a certain amount, the repressive action becomes ineffective, even counterproductive.

An excessively high fine may exceed a company's ability to pay, thus driving it out of business and foreclosing it permanently. According to Frederic Jenny, companies may need assets representing six times their annual turnover to be able to pay an optimal fine. (Frederic Jenny, 2010).

1 - Gary Stanley Becker, (1930-2014), is an American economist, known for his work to broaden the scope of microeconomic analysis to many human behaviors. In 1992 he received the Swedish Bank of Economics Prize in memory of Alfred Nobel and in 2000 the National Medal of Science, a top American distinction. He was a professor at the University of Chicago, in the Department of Sociology and Economics.

The company should be punished but allowed to survive.

A priori, would be the consumers who would pay the high price. In addition, another significant element is that the penalty may be optimal in its deterrent capacity, but will be contrary to the preservation of competition and other current priorities, such as the preservation of employment and the fight against corruption. unemployment

Without going into mathematical considerations, Becker's equation of optimality of sanction, once perceived as abusive, could undermine the respect of competition law and be more harmful than beneficial. Extremely heavy fines could also raise fears that it would be too much of a deterrent, causing companies to overly invest in monitoring and compliance and to refrain from practices that are not really anti-competitive. These effects would ultimately result in higher costs for consumers.

To individuals: The idea of collecting bonuses, increasing profits, are sufficient arguments for business leaders, who do not care, the sanctions that could be imposed. The perpetrator could change his business, or even be punished, but the amount can not match the amount that will be imposed on the company. The divergence of interests may therefore lead business managers to place themselves against the rules of competition. The interest of the leader in question then takes precedence over the sanctions that can be imposed on the company.

Thus the high amounts of the pecuniary sanction to the company, could lead this company to increase these internal control mechanisms. But by referring to a concrete reality, business owners are often passive investors. Their scope will be limited to the impact of the company's behavior on its earnings performance. They will not prevent employees from engaging in illicit practices.

Anti-competitive practice therefore remains profitable, despite the heavy pecuniary penalties.

Whereas in Algerian law (ordinance 03-03 on competition, J.O.R.A 43 of 2003) the pecuniary sanction is provided only by the administrative system; in French law, they are provided for, both at the administrative level and at the criminal level.

We will try to demonstrate in the following, that our interest to demonstrate the appropriateness of the penal law, is on the effectiveness of its sanction depriving of freedom and not on its pecuniary sanction, which by cumulation with the administrative sanction, presents a total lack of interest.

Taking into consideration the administrative sanctions imposed, one realizes that the penal sanction has no added value.

Even by concealing the factor, that the pecuniary sanction is not able to tend towards the optimal sanction, this one has no interest in that it can be cumulated.

Indeed, among the penal sanctions in force in French law, one finds the pecuniary sanction. It should be noted that this is already provided for in the administrative system. Despite their independence from each other, the combination of the two can pose problems with regard to the aforementioned principle of "no bis in idem"¹.

Here is the problematic scene that could arise: an agreement was discovered by the competition authority, and is imposed by a pecuniary penalty of the administrative judge. The criminal judge intervenes and sends the authors of the agreement to prison. It is the same facts, the same causes, the same perpetrators who will be judged twice for the same offense. Surprisingly, however, this situation was validated by the Constitutional Council in a 1989 decision. (Constitutional Council, 1989).

, stating that "the rule according to which a person can not be punished twice for the same act does not apply in case of accumulation of criminal and administrative sanctions".

This position appears contrary to the commitments made by France in the Convention for the Protection of Human Rights and Fundamental Freedoms, Protocol No. 7 of which requires States parties to comply with the non bis in idem adage.

1 - The rule "not bis in idem" is a classic principle of criminal procedure, already known from Roman law, according to which "no one can be prosecuted, or punished criminally, for the same facts"

Although France has certainly expressed reservations on this point (Protocol No. 7 1984)¹, the scope of the latter may seem limited.

Moreover, this situation is unsatisfactory insofar as it entails more costs incurred by the State to regulate these sectors.

This problem of cumulation between criminal and administrative pecuniary sanction did not really exist. Indeed, the Conseil de la concurrence sanctioned legal persons, the criminal judge pronounced for its part sanctions against individuals. The reform of Article 121-2 of the Penal Code with the law of 9 March 2004 (law , 2004), generalized the liability of legal persons to all offenses, including Article L. 420-6 of the French Commercial Code.

Removing the administrative penalty to put an end to the double sanction is not the appropriate solution, because the French system of regulation of competition, relies mainly, in relation to the penal system, on the necessary means and expertise in the legal field and complex economic law of competition law. The economic and institutional players heard emphasized the effectiveness of this institution, whose effective action as a regulator of competition is undisputed.

It would therefore be more coherent to provide for an exception to the generalization of the liability of legal persons, by providing that Article L. 420-6 is not applicable to them because of the existence of administrative sanction entrusted to the Conseil de la concurrence.

At the economic level, the criminalization of competition law can also give rise to a number of problems. On the one hand, imprisonment has a cost, not only of the costs of living in the prison itself, but also of social costs, when imprisoned leaders no longer manage the business. In question. On the other hand, it is the entire economy that is also affected, in the sense that future leaders, frightened by increasingly heavy penalties, refrain from setting up companies or taking the lead already exist, so that growth and economic progress would be weakened. In particular, the Chamber of Commerce and Industry of Paris highlights that the repressive threat can paralyze the creation and development of SMEs, paralysis that will ultimately affect competition and innovation. In addition, the C.C.I.P. emphasizes an alteration of the attractiveness of the territories where the penal sanction is potential, so that the financing or the industries will be implanted on other territories where the legislation is more favorable to the companies. Norguet, For a criminal policy adapted to the life of business ", (C.C.I.P., 2008).

Thus pecuniary sanctions, or more generally sanctions, act on two axes of effects: a priori and a posteriori. The sanction produces a punitive effect after the infringement has been completed, thus a posteriori. The sanction also has a deterrent effect for potential offenders, so a priori.

In order for the penalty to have its intended effect, the offenses must still be detected, this is "supposed" to be the role of the leniency program.

III: The qualification of the leniency program

"The certainty of a punishment, even moderate, will always make more impression than the fear of a terrible punishment if to this fear is mingled the hope of impunity". (Cesare Beccaria, 1764).

The leniency program is "the most important event that has ever happened in the fight against collusive practices." (Scott Hammond, 2010).

1 - Article 4 - Right not to be tried or punished twice. No one shall be prosecuted or punished by the courts of the same State for an offense for which he has already been acquitted or sentenced by a final judgment in accordance with the law and criminal procedure of that State. [...] Reservation contained in the instrument of ratification, deposited on 17 February 1986. The Government of the French Republic declares that only offenses falling under French law under the jurisdiction of courts dealing with criminal matters should be regarded as offenses within the meaning of Articles 2 to 4 of this Protocol.

While the agreement is characterized by its great discretion, its detection is complex. Offenders usually have the best information about their illegal activities. They could even be the only ones to hold the information needed by the competition authorities to get the guilty convicted, so that the leniency program seems very effective.

Both in French law and in Algerian law, the operation of the leniency program is the same:

- A company that first denounces an agreement is exempt from pecuniary sanctions
- Companies that come after a first denunciation, providing additional information, will have their sanctions reduced.

The leniency program allows the agreement to be destabilized from within. As a result, the authors of the agreement will increase their member control systems, to reduce the risks of denunciations, which increases the costs put in place for the realization and sustainability of the agreement. The negative cost-benefit ratio (previously formulated by Becker) may deter companies from forming cartels.

-Example of the success of the leniency program:

In the plywood case (competition authority, 2008) the competition authority remained ineffective for more than 17 years, during which manufacturers coordinated the price increase. Only when the company UPM Kymmene Corporation denounced the agreement, the authority was able to impose a fine of 8 million euros. UPM has been fully exonerated.

Thus, only the competition authorities can do nothing. So, to increase the probability of detection, the leniency programs appeared very effective. The operation is simple: the company which denounces a cartel the first is exempted from any pecuniary sanction. Businesses arriving afterwards, but providing information with "added value", also see their sanction reduced according to the rank of denunciation. All national competition authorities have a leniency program, which is strongly inspired by the Community system (itself inspired by the American system).

Thus, the positive effects of the leniency program are easily identifiable. The ex-post effect, first of all, is obvious: clemency puts an end to collusion faster and the loss of the cartel price disappears.

But clemency also has several ex-ante effects.

First, with the leniency programs, the risk of denunciation becomes a reality in the world of cartelists, so that the cartel is destabilized from within. The only way for its members to limit the risk of denunciation is to increase controls on members and to strengthen the system of sanctions. All these measures have a cost, which is not negligible and is included in the cost / benefit calculation. The result of the calculation, negative, can dissuade companies from forming cartels.

On the contrary, for the competition authorities, the financial benefits are in theory great: thanks to the information provided by the informing company, the administrative costs of investigation and prosecution are reduced, and the financial resources thus saved can be redistributed on other, more complex surveys, which can then increase the probability of detection.

Then, the increase in the probability of detection leads to a significant psychological effect on the behavior of companies. Indeed, if cartels are regularly condemned and in various sectors, companies will tend to overestimate the probability of detection, and the cost / benefit calculation will be all the more affected.

However, on closer examination, the leniency program as presented by the European Commission and inspiring the national programs is not as satisfactory as it seems.

First of all, the company that breaks the promise of the agreement later pockets the reward of the denunciation. Indeed, the immune-producing company retains the gains it has made unlawfully during the life of the cartel, before denouncing it to the authorities. To this morally reprehensible gain is added the one she obtains at the end of the condemnation of the other members of the cartel: the latter being pointed out, customers will be redirected to the informing company, congratulated for its action. The latter will then see its sales increase, all to the detriment of other members of the cartel. (François Levêque, 2006).

Because the leniency program eliminates some or all of the penalties for violating competition law, these programs run counter to the goal of convincing society that these offenses are morally wrong: Massimo Motta and Michele Polo, in their

publication "Leniency Programs and Cartel Prosecution".(Massimo Motta & Michele Polo, 2003), show that the leniency program can, conversely, encourage fraudulent practices under certain conditions.

They observed that there is a trade-off between leniency and pecuniary sanctions because agencies are proposing reduced fines to companies to encourage them to disclose the existence of an agreement. If the reductions are excessive, and / or if the information disclosed only marginally benefits the agency, then the probability of detection induced by the program may be more important than the loss of deterrence due to reduced fines.

Thus, the company that denounces the agreement, keeps the gains it has made fraudulently. To this gain, there is the one that the company will touch when customers turn away from the companies denounced, to move to the company debater: sales of it will then increase.

This mechanism leaves room for vicious manipulation so that the companies could participate in an agreement, make illegal profits, denounce the agreement to obtain the immunity of the leniency program, and collect the gains of the denunciation by the increased customer base. These are strategies that could seriously threaten the effectiveness of the program.

It is clear, according to Connor that "The leniency program is essentially to buy "convictions in exchange for sanctions sold. (John Connor, 2008).

It is therefore, according to the leniency program, better to leave a member of the cart unpunished, in order to better apprehend all the culprits.

It is therefore essential that leniency, requested during one of the procedures, be guaranteed when the other is put in place. The cartel will be further weakened by the ax of criminal sanction that its members have the opportunity to avoid such a sentence by denouncing the first unlawful practice, the prison then giving back the effectiveness of leniency. In addition, the deferred potential will more readily accept collaboration with the antitrust authorities if it anticipates criminal immunity, so that the evidence and the conviction of the practice are obtained quickly, thus limiting the damage to the economy. and consumers. Thus, the extension of the leniency program to custodial sentences makes it possible, on the one hand, to favor a conviction and to minimize the risk of error and, on the other hand, to limit the duration of the cartel. As a result, the fine imposed by the administrative courts, taking into account the duration of the cartel, will be lower, without however weakening the punishment of the illicit practices, since the penal sanctions also contribute to the suppression of the cartels. (E. Combe, n ° 52)

Conclusion

The clemency program, very effective in theory, presents paradoxes, which tarnish the effectiveness of leniency.

The French example of cumulation of criminal and administrative pecuniary sanctions is not to be retained, but that the application of criminal law in the regulation of competition is not to be dismissed, in view of its capacity to pronounce imprisonment.

For the Algerian example, it will first be necessary to refer to the texts concerning leniency, to concentrate on the proper application of these texts by the competition council, and above all to develop a policy of consciousness directed towards the various companies that are active on the Algerian market to avoid even the birth of several disputes.

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How Important Are Linguistic Competencies on the German Labour Market? a Qualitative Content Analysis of Job Advertisements

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Abstract

Linguistic competencies (LC) are in many companies and industries an essential prerequisite for employees to accomplish tasks and integrate into a job. Under this premise, this paper summarizes the arguments and counterarguments within the scientific discussion on the relevance of LC in Job advertisements (J-Ads) in the German labour market. The main purpose of the research is to uncover the different importance of LC in the respective officially occupational category (OC) to examine whether connections between required LC and the tasks from the J-Ads. Therefore, this research represents an analysis of LC with regard to J-Ads, which was conducted on the basis of a qualitative content analysis. For the methodology of the research, 180 J-Ads were examined on the criteria of KLdB 2010. The investigation took place in a period from November 2018 to February 2019. The paper provides first evidence for the different importance of LC for the different OC and indicates ambiguities within J-Ads. Given evidence there are considerable inconsistent discrepancies between the required LC for applicants and the tasks to be performed, which can lead to inefficiencies in the recruiting process. The study confirms and proves that, in addition to implementation and conceptual problems, some management questions regarding the exploitation of LC in J-Ads can also be optimized through improved awareness and clarification of the ambiguity of the competence term.

Keywords: German labour market, Job advertisements, linguistic competencies, qualitative content analysis, occupational category

Introduction

The globalization of states, markets and humans has made it possible to overcome geographical boundaries. One result of these developments is the increasing pluralization of societies. People with different cultural backgrounds, ethnicities and different religions are shaping coexistence like never before. It can be stated that many Western industrialized countries are shaped by their diverse societies (Kalpaka, 1998). In order to make this coexistence of diversity in public space possible, Gutierrez-Wirsching et al. (2015) see communication via language as a decisive mediator. This hypothesis could be underpinned by using the increasing number of language courses offered in recent years as an indicator. And from a political perspective, language ability has long been understood as an imperative of integration. This imperative can also be seen in the state structures in which students have increasingly acquired language and cultural skills in their careers and have enshrined them in their curricula. Applied to the economic context, it can be stated that language skills have long been regarded as key competencies of employees in order to survive on the international market.

Against this background, it becomes clear that language and concrete LC are of personal as well as social importance. For us, language catalyzes interpersonal contacts and restricts them when they are not present. Besides that, LC are in many companies and industries an essential requirement for employees to accomplish tasks and integrate into a job. Based on this, companies are continuously facing the challenge to attract and to ensure valuable workforce with this competencies on a competitive labour market (Masgoret, 2006). In order to attract and retain these employees, an effective recruiting plays a key role. There is evidence that effective recruiting is related to fluctuation and success (Korhonen, 2004). Since recruiting involves a high amount of resources, it is necessary to continuously improve and optimize it. One of the biggest

challenges in the recruitment process is the definition and transfer of requirements in job descriptions as well as the transfer of information to the target groups. As a result of this job-analysis, job seekers deduct information about the job and the organization from the message presented in advertisements (Highhouse & Hoffman, 2001). Against this background, this information is communicated in advance in the form of J-Ads in order not only to provide orientation for potential applicants, but also to create a self-image for the company (e. g. Frijters et al. , 2005). According to Rafaeli and Oliver, J-Ads intend to attract employees on the one hand and on the other hand to impress an audience about organizations (Rafaeli & Oliver, 1998).

In the light of the importance of approaching and selecting candidates in the recruiting process, we examine whether companies are already effectively communicating language-related information in J-Ads or whether discrepancies and inefficiencies can be identified through the different OC. In doing this, we examined J-Ads with a differentiated consideration of industries and OC with regard to LC. For the methodology of the research, 180 J-Ads were examined in a qualitative content analysis based on the criterias of Kldb 2010 and ISCO. The investigation took place in a period from November 2018 to February 2019. The analysis is based on German J-Ads that appeared on an online job search engine. The results of our research are presented in the following logical sequence: After introducing the relevance and need of this topic in job descriptions, the fundamental theory and concept on LC in J-Ads is provided. Therefore, the theoretical basis of LC and J-Ads and the role of communication skills regarding to LC is explained and reasons to understand LC as a recruitment challenge are given.

Literature Review

Although LC play an important role in language-related (Andresen, 2005) as well as in intercultural research (Burwitz-Melzer et al. 2012), there is no standard definition for the construct. In general, it can be defined as the ability to understand linguistic phenomena detached from their content context (Andresen & Funke 2003). However, all definitions of this topic often prove to be problematic in practice, precisely because of their breadth and specificity. Applied to the economic context, it can be highlighted that the operationalization of LC can be enabled in different way of nature. The spectrum ranges from spontaneous language skills in explicit situations to deep implicit linguistic comprehension that allows for the interpretation and understanding of contexts.

Consequently, the question arises as to whether it is justified to subsume these very different forms of LC under the same ability. The scientific discourse therefore still applies a term distinction developed by Chomsky in the 1960s, in which the conceptuality of LC is divided into two areas. According to Chomsky, the terminology of LC is distinguished in terms of „competence“ and „performance“ (Chomsky, 2006). Competence is the term used to describe a cognitive-abstract system of language knowledge and skills that distinguishes a native speaker. Native speakers are capable of forming any number of sentences in their first language (= mother tongue). In shape and structure are these phrases largely correct. However, this ability is potential that does not mean that a person actually forms all possible sentences. Performance refers to the current linguistic realization based on competence. Thus, the performance corresponds to a part of the competence. However, language productions are an expression of performance and, when voice performance is assessed, performance is judged rather than competence. For bilingual people, in a monolingual context, such as the vocational school or an aptitude test, only the performance of one of the two languages is considered. Thus a substantial part of the linguistic competence and performance of the bilingual person is disregarded.

In the psychology literature this topic is also viewed differently. A distinction is made between knowledge, ability and competence. The knowledge of a person is regarded as mental availability and the possibility of applying available knowledge. In learning theory, competence is also understood as a goal-oriented component in which problems can be successfully solved by combining knowledge and skills. A competence thus serves to be able to cope with additional tasks besides the routine (Littimore & Low, 2006). It can be stated that especially the distinctions from the point of view of learning psychology play an essential role, especially for the personnel selection process, since future employees have to perform and apply productive work in order to ensure company performance. LC can be divided into six areas from a psychological point of view. Understanding skills used to be referred to as passive language skills. The person reading or listening knows best that comprehension has nothing to do with passive behavior. Understanding is a highly active activity and for this reason, today we also speak of receptive language services (Savignon, 2018). This is always the case with both deep foreign-language and mother-tongue competence. Knowledge of the meanings of words and phrases and knowledge of grammatical forms and structures in a language is a necessary component of linguistic competence (Cummins, 2005). In Germany, there is a separation between oral and written language use. While listening

comprehension and speaking are largely experienced in dialect, reading comprehension and writing largely use high-level language. As many companies operate in global markets, they are often in the need of people with dual language skills (Noels, 2005).

For this reason, it is literary essential to include the subject of bilingualism as an object of investigation. From the perspective of learning psychology, bilingual people have two systems of linguistic competence (first and second language) with different characteristics in the individual areas. The second language is in turn divided into two specialized subsystems (oral dialect and written high-level language). For many migrants, the first language is also divided into two subsystems (dialect in the family and high-level language in the wider environment). It should be noted that linguistic competences are always influenced by the context and that successful communication takes place over several levels (Byram et al., 2013). It is therefore not always sufficient to be able to speak a language in order to learn and work successfully in that language. According to Gutierrez-Wirsching et al. (2015), LC is therefore shaped by cultural determinants. This leads to the conclusion that the language and the competence of language represent an effectiveness factor for everyday business life and that this is a prerequisite for both applicants and employees. The determination of these prerequisites as well as the degree of this requirement can be demonstrated in company practice by means of a requirement profile. The requirement profile is a binding, written fixation of the organizational prerequisites of a position in the company with regard to its objectives, tasks, necessary competences and resulting duties.

The requirement profile is an integral part of the recruitment process and describes which criteria the applicants must or should fulfill, it standardizes the ideas of the decision makers of the future jobholder and gives interested parties orientation for self-assessment (Littlemore & Low, 2006). The profile is usually the indispensable basis for a targeted and fair search and selection process. In addition, applicants can be better compared and evaluated. J-Ads are designed and advertised on the basis of requirement profile and previous planning. According to Ahsan et al. (2013), J-Ads must consist of three different components in order to be able to carry out an effective selection process. Here, J-Ads must always inform the employee about the job requirements and task activities. This includes titles, positions, requirements, qualifications, etc. In addition, organizational areas are listed that communicate the time frame as well as application modalities. Particularly in recent years, the high demand for highly qualified personnel on the employer side has led to increasing competition, which has led to the company using personnel marketing methods in J-Ads. This means that additional company information is communicated on the J-Ads.

Methodology

With the assumed necessity to evaluate sufficient LC in the recruitment process (Hershfeldt et al., 2009; Gregory et al., 2014), it is essential to examine the validity of linguistic components on J-Ads. To address these gaps, we conducted a qualitative content analysis in order to examine LC within the context of J-Ads and to account bias between explicitly requirements and tasks. Specifically, the current study aimed to 1) determine if there is an overriding importance and association of LC between the OC. 2) to examine whether requirement profile and task activities discrepancies were in job ads associated. To address these questions, we conducted the qualitative content analysis by evaluating nine different occupational groups with each 20 J-Ads. The analysis of J-Ads has meanwhile become of one commonly used method for assessing professional competencies (Nonthcumjane, 2011; Sproles & Rattedge, 2004; White, 1999). Therefore this qualitative content analysis were adapted by using the following procedure outlined by Maceli (2015) and Mayring (2010) to examine the primary research questions regarding the association between linguistic competence and J-Ads.

For this, we have prepared our systematic qualitative content review in total of 180 J-Ads according to the following procedure. First of all, we examined whether the J-Ads explicitly mentioned German LC as a part of the tasks or whether LC were mentioned exclusively in the requirements. In the second step, the same procedure was repeated in regarding to foreign LC. In this meaning J-Ads were evaluated which explicitly state foreign LC in both requirements and tasks or only in the activities or only in the requirements. In the third step it was examined, whether and to what extent undefined languages competences are mentioned as a requirement or in the tasks. J-Ads which did not name any LCs in the activities, i. e. also requirements, were also noted. The examined OC were selected according to classes 1-9 of the German Classification of Occupations 2010 (KldB-2010). The KldB-2010 was selected for this study because the international classification of occupations (ISCO-88) is only applicable to a very limited extent to the German labour market with its dominance of dual training programs and nationally recognized occupational profiles. Due to the fact that our study focuses on companies in competitive situations, especially in international markets, class 0 (military) was not considered, as there is only one employer, and the mobility of educational qualifications in the military is not always given. It is precisely this

classification, which is based on standardized vocational training, which enables better discriminatory power and differentiability than the partially generalizing factors of ISCO.

However, in order to include ISCO in the selection process and because academic occupations are usually examined, we have concentrated on non-academic occupations in ISCO classes 4-8, as these represent by far the largest proportion of the workforce in the German labour market. The following professions were examined: KIdB-1: Gardener, KIdB-2: Locksmith, KIdB-3: Assembler/ Mechanic, KIdB-4: IT Specialist, KIdB-5: Truck drivers, KIdB-6: Salesperson, KIdB-7: Assistant tax consultant, KIdB-8: Nurse, KIdB-9: Media Designer. In order to control the investigation, the J-Ads were collected exclusively from the online platform Indeed. Since Indeed has up to 90% coverage of accessible online J-Ads, a necessary range of J-Ads could be ensured. The J-Ads were collected over a period of four months from November 2018 to February 2019. In addition, only J-Ads in the Berlin area were examined, as there is a sufficient number of vacancies per class and differences in local labour markets could be avoided as a federal state with a median size. In addition, only J-Ads that were not paid to reach a higher rank in the search algorithm were taken into account in the survey in order to avoid any distortions. Furthermore only full-time J-Ads were considered for the study and no part-time or apprenticeships were analyzed. After identification of suitable J-Ads, the J-Ads were analyzed via MAXQDA and coded according to the qualitative terms and objectives mentioned above.

Results

For each OC in our sample the statistics for the search criteria are described in Table 1. As mentioned in the methodology we defined the following search criteria to examining the J-Ads. No LC mentioned (NLC), Requirement undefined "communication competencies", task profile with language references (LC-T), Requirement "German lang. competencies" (GLC-R), Requirement "foreign lang. competencies" (FLC-R). The result shows that many professions of OC have a discrepancy in their J-Ads.

Criteria	Total Documents	Percentage	KIdB-1	KIdB-2	KIdB-3	KIdB-4	KIdB-5	KIdB-6	KIdB-7	KIdB-8	KIdB-9
NLC	75	41,67	11	14	13	1	15	0	6	10	5
LC-T	38	21,11	4	1	2	5	1	7	7	7	4
GLC-R	16	8,89	3	3	2	0	3	1	2	1	1
LC-T + GLC-R	12	6,67	1	1	0	4	0	3	2	0	1
LC-T + GLC-R + FLC-R	11	6,11	0	0	0	4	0	1	1	0	5
LC-T + ULC-R	11	6,11	1	0	3	3	0	4	0	0	0
NLC + ULC	7	3,89	0	1	0	0	1	1	1	1	2
LC-T + FLC-R	4	2,22	0	0	0	0	0	3	0	0	1
FLC-R + GLC-R	2	1,11	0	0	0	1	0	0	0	0	1
FLC-R	2	1,11	0	0	0	1	0	0	0	1	0
LC-T + ULC + FLC-R	2	1,11	0	0	0	1	0	0	1	0	0
Sum	180	100,00	20	20	20	20	20	20	20	20	20

Table 1: Descriptive statistics about OC in relation to LC

No Linguistic Competencies mentioned (NLC)
Requirement undefined "communication competencies" (ULC)
Task profile with linguistic reference (LC-T)
Requirement "german lang. competencies" (GLC-R)

Requirement "foreign lang. competencies" (FLC-R) Overall, only 58% of the 180 J-Ads selected mentioned LC. It can be stated that some classes like e. g. KIdB-5 Truck driver do not mention any language elements in the J-Ads 15 times in total, but three times German LC are required in the remaining five J-Ads. Another example of this discrepancy can be seen in KIdB-8 Nurses. Here in 20 J-Ads only seven times LC are stated in the task activities but at the same time only two times LC are described in the requirements. However, a relative congruence could also be demonstrated in the context of all KIdB, particularly in KIdB-4 and KIdB-6. Here LC are mentioned in the tasks as well as in the requirements.

Furthermore, it can be seen that especially in KIdB-4 IT specialists also have a higher importance of foreign LC. In the class 6 Salespersons it can be stated that there are unclear and no explicit denominations of languages in the tasks as well as requirements are present. Furthermore it can be emphasized that the KIdB-1 Gardener, KIdB-2 Locksmiths, KIdB-3 Assembler, KIdB-5 Truck driver, KIdB-7 Assistants in tax, explicitly do not mention foreign LC both in the tasks and in the requirements, and thus foreign languages play an essential role only in KIdB-6 Salespersons. A perspective within an occupational group shows that we also have different terminology logic, possibly hermeneutics of LCs. For example, the occupational groups KIdB-4 IT specialists and KIdB-6: Salesperson represents a strong variance in the naming of LC. Here, language skills are considered necessary, but only unclearly defined. In addition to an individual consideration of the KIdB categories, a superordinate consideration of the discrepancies already discussed becomes clear. Figure 1 gives an overview of unique positions and overlaps. Language is explicitly mentioned in 54% of the J-Ads examined. However, only in 16% of the cases was a fit found between the task and the requirement profile. In most cases (27%) a verbal task was mentioned without explicitly demanding verbal competence. Even more astonishing are the 11% of J-Ads in which verbal competence is required without the task having verbal components in any way.

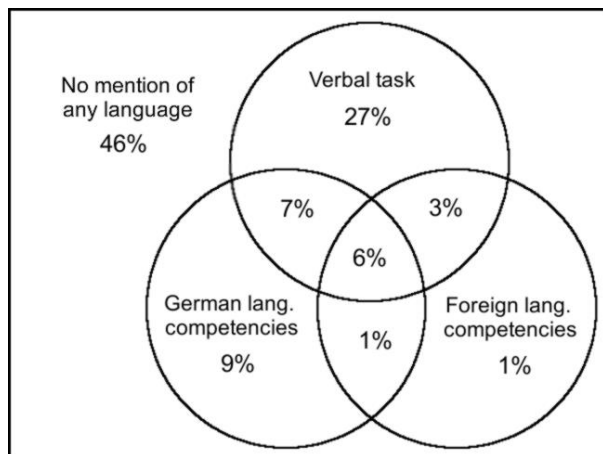


Figure 1: Overlapping LC in J-Ads leaving

At the occupational group level, language was most frequently left unmentioned by motorists (75%) and locksmiths (70%) and, as expected, least by salespersons (0%), with IT specialists also shining with 5% not mentioned. Unexpectedly, language was only part of the call for tenders for nurses in half of the cases examined. Both IT specialists and media designers require foreign-language skills in 35% of the cases.

Discussion

This study examines the relationship between LC and OC by means of J-Ads in respect to work out the different relevance and possible discrepancies and to make the recruitment process more effective. Overall, a different importance of LC in the OC can be understood by means of J-Ads. It can be stated that occupational groups which generally represent a personal reference also communicate a higher proportion of LC in the J-Ads. Surprisingly, however, it could be stated that the occupational group KIdB-8 of nurses only requires LC to a relatively limited extent. This is remarkable of the necessity of social interactions and increasing societal importance. Reasons for this could be fundamental recruitment problems in hiring suitable candidates which language skills are tested or trained afterwards. Since undefined or unclear requirements with regard to LC could be established, especially for the occupational group, the possibility of recruiting measures could be more effective. In addition, it was found that OC that are less person-related also show fewer language demands in the J-Ads. At first glance, this correlation is congruent and comprehensible. However, it is remarkable that LC must also play an important role in J-Ads for these occupational groups. A truck driver must also have LC attested to in his job profile. Here, however, it can be seen that the wide range of language skills can be trained in a few small courses and can therefore be considered secondary for recruitment. After Ahsan et al. (2013) misunderstandings and cultural factors play an essential role, which lead to operational conflicts. Conflicts are to be regarded here particularly from economical viewpoint as cost

factors, since they disturb the operational sequence of an enterprise and can lead to quality losses. From this perspective, companies must try to reduce these conflict potentials in order to avoid these negative aspects.

One aspect to avoid conflicts could already be contributed in the recruiting process and here in particular by effective communication of language skills. In addition to conflicts, the motivation of employees to work in a way that maximizes profits also plays an important role. Since the majority of scientific contributions already attest to a connection between employee motivation and customer loyalty as well as their contribution to increasing profits, it is necessary for many companies to secure employee motivation (Masgoret, 2006). The extent to which language skills have a direct or indirect influence on the motivation of employees is unclear and cannot be determined from these results. However, it can be understood that without language skills, the handling of these problems is made more difficult.

Conclusion

The presented study showed a different importance of LC with regard to their inclusion in J-Ads. If an explicit mention can also be postulated as an actual indicator for the importance of LC, this study was able to demonstrate effectiveness problems by means of J-Ads and to derive potentials for action. However, as in other studies concentrating on J-Ads as the object of investigation, there remains a doubt that implicit factors in the J-Ads also determine LC. This limitation can be strengthened above all by the fact that one must assume fundamentally that each task or J-Ads requires a certain degree of LC. However, since we have controlled this disturbance factor in this study, the study is greatly simplified. The following expressions such as team and communication skills or empathetic and competent behavior were not considered for the study, since this terms do not require a clear explicit verbal LC. However, it cannot be denied that these examples imply LCs. Thus, the ability to communicate, in addition to non-verbal forms, also represents the transfer of information via language. The same also applies in a limited way to a competent appearance, which is achieved precisely when necessary information is provided through the use of language. Furthermore, it can be stated that many companies have J-Ads written by computer programs or external service providers, so that possible ambiguities can also be traced here in the provision of services. This impression also becomes clear in the course of the study, since according to the findings there is no clear definition and hermeneutics of LC within the occupational groups and this ambiguity of the definition could also be proven for the discrepancy between tasks and requirements.

Recommendations

The results of this study might be useful for the managerial procedures focused on recruitment and personnel marketing. Recruitment has a considerable effect on organizational performance and also represents a major cost problem, and must therefore be constantly improved. The recruiter should learn to reduce the ambiguity of the terms in his J-Ads in order to prevent effectiveness problems and also to promote a more understandable image with the candidates. The good news from our study is that managers in recruitment on German labour market do understand that language matters, and thereby foster performance. Nevertheless, managers should be aware of the comprehensibility and importance of language as a competence, especially against the background of migration and social diversity, and should communicate this more clearly in J-Ads. More specific, the results of this study are relevant for management procedures to help recruiting issues to prevent and gain a better consciousness of misunderstandings in J-Ads and the effects of this on recruiting processes. The potential of obtaining the right candidate through a comprehensible list of tasks and requirements may increase when this is already communicated in the J-Ads.

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Collateral and Bank Credit – A Puzzle

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Abstract

The impact of firms characteristics on bank debt financing has always been a field of conflicts among economists (e.g. trade-off theory vs. pecking order theory). The pecking order theory predicts that firms holding more tangible assets are less prone to asymmetric information problems and reduce the agency cost. Generally, the supply of bank loans is expected to be higher for firms with higher collateral. In the empirical literature, this relationship is not always confirmed. We analyse this phenomenon from three points of view: meta-analysis of literature, country level data and case of Poland. This study provides a systematic analysis of the empirical literature on the usage of bank debt by conducting a meta-analysis. In particular, the problem of publication selection bias is discussed. We explore the sources of heterogeneity among studies including moderator variables in random- and fixed effects regressions. Our results indicate that there is an evidence of publication selection. Based on country level data we conclude that the impact of collateral on bank credit is negative. For Polish case we find that the impact of collateral on debt is positive, except for the subsample of large enterprises.

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Keywords: bank credit, collateral, meta-regression analysis, Polish firms, publication selection bias

Introduction

The aim of this study is to analyze a collateral and bank credit relation. On one hand, we conduct a meta-analysis, we make comparison of results differentiating between publications and verify publication selection bias, on the other, we explore the impact of collateral on bank loan financing based on the country level data and Polish firms level data.

Access to finance is key to business development. Investment, innovation and survival are not possible without adequate financing. In recent years, the uncertainty and instability caused by the economic crisis has affected businesses. The decreased international demand and increased competitiveness caused that both small and medium sized companies, and large firms faced greater difficulties in sustaining their profit levels and surviving in a unfavourable environment.

Modigliani and Miller (1958) formed the basis of modern thinking on capital structure. They claimed that under the assumption of perfect markets where for example taxes and transaction costs do not exist the value of a company would be independent of the capital structure. Nevertheless, subsequent studies have examined the determinants of capital structure and provided new theories with different views on the determinants of capital structure: the pecking order theory, the trade-off theory, the agency theory, the market timing theory.

For collateral the pecking order theory predicts that firms holding more tangible assets are less prone to asymmetric information problems and reduce the agency cost. Generally the supply of bank loans is expected to be higher for firms with higher collateral. Firms operating in industries characterized by a higher level of asset tangibility are expected to face lower credit constraints. Results of empirical researches are not always in line with this expectations.

¹ Meta-Regression Methods for Detecting and Estimating Empirical Effects in the Presence of Publication Selection

We start with meta-analysis, the analysis of empirical analyses that attempts to integrate and explain the literature about some specific parameter. The purpose of meta-analysis is to provide objective and comprehensive summaries of researches conducted by different authors. Meta-analysis is aimed at finding explanation of variation in the regression results published by independent researchers and presenting a statistical conclusion (Sauerbrei and Bletner, 2003). In order to econometrically analyse the sources of heterogeneity in published effects of collateral on firms' bank loans financing, we reviewed existing empirical studies. 30 studies on the determinants of bank loan financing, for which the dependent variables were constructed in a similar way were selected from the review of literature on sources of business financing (over 130 articles). Then we analyse collateral – bank credit phenomenon based on country level data. In the last phase we estimate a dynamic econometric model, describing how the long-term and short-term credit contracted by non-financial companies in Poland is affected by collateral. In the estimation we control for three categories of factors: macroeconomic (WIBOR3M and the effective currency rate), microeconomic – associated with the internal financial situation and structural.

Literature review

The pecking order theory predicts that firms holding more tangible assets are less prone to asymmetric information problems and reduce the agency cost. Generally the supply of bank loans is expected to be higher for firms with higher collateral. Firms operating in industries characterized by a higher level of asset tangibility are expected to face lower credit constraints. When firms use tangible assets as collateral, they reduce the cost of bank loans by limiting exposure and asset-substitution problems (Myers and Majluf, 1984; Detragiache, 1994; Boot et al., 1991; Leeth and Scott, 1989; among others). As a result higher levels of tangibility would imply more bank debt. Petersen and Rajan (1994) report that large firms with a high level of tangible assets use more bank credit. Cole (2008) shows that firms in certain industries, such as construction, manufacturing and transportation, are thought to be more creditworthy because they typically have more tangible assets that can be used as collateral than do firms in other industries, such as business services. Bougheas et al. (2004) confirm that the short-term debt share in total liabilities is higher for companies with a lower level of collateral. A higher collateral level provides greater access to long-term funding, thereby reducing the long-term debt share in total debt. Dewaelheyns and Van Hulle (2007) indicate that large companies with a high share of fixed assets in total assets use bank credit to a greater extent, while firms belonging to capital groups prefer internal financing, due to its lower cost. Cole (2010) finds that firms having less tangible assets do not use bank credit. According to findings presented by Liberti and Sturgess (2012), collateral – and non-specific collateral in particular – is a channel through which borrowers can mitigate bank-specific lending channel effects without turning to alternate lenders in the credit market. Firms with a low collateral level and a high probability of bankruptcy experience worst consequences of the shock. Companies pledging specific collateral (such as inventories, machinery and equipment, accounts receivable, guarantees and promissory notes) experience a smaller decline in lending when exposed to credit supply shock. Borrowers with a low creditworthiness, less collateral and generating lowest returns experience greatest declines in lending in response to the credit supply shock. Borrowers pledging non-specific collateral (real estate, cash and liquid securities) experience lower cuts in lending under a bank-wide credit supply shock. Jimenez et al. (2013) prove that firms with more tangible assets or cash tend to contract less new loans, relying on internal financing rather. The decisions on granting loans to businesses with certain specifications differ depending on the interest rate. Collateral is less important during the credit market constriction. The balance channel of monetary policy impulses transmission is based on the fact that the changes of interest rates lead to the changes in the values of collateral offered as security by potential debtors. The loss of value may force the businesses to limit the investment expenditure because their credit standing becomes weaker (Bernanke and Gertler, 1995). The increase of interest rates results in the drop of share prices and reduction of the cash flow value. It also decreases the value of the asset to be used as collateral and thus may lead to lower credit supply. The amount of the loan taken by businesses may be limited by the value of owned assets used as payment security.

Publication selection bias

Stanley and Jarrell (1989) considered why do researchers come to such different findings when they are investigating the same phenomenon. Is it because of statistical methods, model misspecifications, different data sets? The authors offered a quantitative methodology for reviewing the empirical economic literature. Proposed meta-regression analysis is the regression analysis of regression analyses. Meta-regression analysis not only recognizes the specification problem but also attempts to estimate its effects by modelling variations in selected econometric specifications.

There is a probability that the results obtained by the researchers may be affected by the problem of statistical significance selection (so-called: publication selection bias). The selection of publications occurs when the researchers and reviewers prefer the statistically significant results.

The funnel graph is a classic method used for the identification of the publication selection bias. It is a distribution diagram for the precision (measured usually as the inverse of the standard error) from the estimated coefficient. In the case of the absence of the publication selection bias, the diagram should resemble an upside down funnel – wide at the base, tapering as the values on the vertical axis increase. The funnel diagram should also be symmetrical, regardless of the value of the true effect, at which the estimations should converge.

30 studies on the determinants of financing with bank loans, for which the dependent variables were constructed in a similar fashion were selected from the review of literature on business financing sources (over 130 articles). Finally, 119 regressions from 22 publications were selected for further analysis.

The publications to date obtained positive, negative and insignificant estimations for collateral coefficient (Table 2). The lack of publication selection is evident when the estimated parameters change randomly and symmetrically around the “true” population effect. The asymmetry of the graph can be used as an evidence of the presence of publication bias in the literature. Based on the graphical analysis, Figure 1 indicates publication selection. It is worth noting that man econometric decisions, such as omission of variables, selection of the estimation method or functional form can also change the shape of the chart. However, the discussed sources of variance may be described as bias related to wrong model specification. Furthermore, the heterogeneity of the “true effect” between the studies, caused by the application of different sets of data for different times and countries may be the reason for the asymmetry in the funnel chart, even in the case of the lack of publication selection bias.

In Figure 1, the top point approaches the value near 0 and the mean of all collateral estimations is 0,089 – far more than the top chart value. The expected upside down funnel shape is determined by heteroscedasticity. The studies on small samples characterised by larger standard errors and the resulting lower precision are located on the bottom of the diagram which results in the more dispersed base of the chart. Figure 2 illustrates how the parameter estimations changed in time. There is no clear correlation visible for collateral.

In order to identify if there is publication bias in our meta-samples we follow Stanley et al. (2008) and we estimate equation (1).

$$t_i = \beta_{SE} + \beta_e \left(\frac{1}{SE_i} \right) + v_i \quad (1)$$

where: t_i – t – distribution, SE_i – standard deviation, β_{SE} , β_e – unknown parameters, v_i – random error.

Testing whether the constant is equal to zero ($H_0: \beta_{SE} = 0$) is equivalent to the testing of distribution asymmetry and can be used as the measurement of the occurrence of the effect of the publication selection bias on the results referred to precision-effect test (PET) (Egger et al., 1997; Stanley, 2008; Stanley, Doucouliagos, 2012). Whereas, testing whether the β_e parameter is equal to zero ($H_0: \beta_e = 0$) shows the direction of the bias with the studied effect (Egger et al., 1997; Stanley, 2008).

However, like any regression model, the estimates can be biased when important explanatory variables are omitted. Therefore, we need to include moderator variables to control for the possible heterogeneity across studies. Finally we perform a meta-regression analysis, incorporating into the model 21 possible moderators that take into account the study heterogeneity.

Like in any regression model, the estimates of MRA's coefficients can become biased when important explanatory variables are omitted. MRA model (1) can be expanded to include variables, Z_k , that explain variation in estimates and other factors, and K_j , that are correlated with the publication selection process itself.

$$t_i = \beta_{SE} + \sum \gamma_j K_{ij} + \beta_e (1/SE_i) + \sum \alpha_k Z_{ik}/SE_i + v_i \quad (2)$$

where: K variables may affect the likelihood of being selected for publication. Z variables may affect the magnitude of the estimator. In the meta-analysis the equation for the FAT and PET tests is estimated by both random and fixed effects models.¹

In order to confirm the results on the chart, which are often a subjective assessment of the researcher, the regression described by formula (1) was estimated. The results from the FAT test indicate that type I publication bias is present only in the case of assets structure, company size investigation (Table 3 – publication selection bias). The FAT tests in other categories fail to prove its presence. The PET tests' reject statistical difference of these estimates from zero. Adding moderator variables to Eq. (1) yields a weighted least-squares meta-regression model (FE – fixed effects) and method-of-moments (RE – random effects) of heterogeneity and publication bias. We present the results of Tau2 test for within variance of residuals (Table 3). For models estimated by Method of Moments we got Q statistics. The null hypothesis states that fixed effects model is correct. Q statistics for our models are large and their p-values are equal to zero. The real value of the actual effect probably varies between research, what means that the data are not consistent with the assumptions of fixed effects models.

Testing whether the constant is equal to zero is used as the measurement of the occurrence of the effect of the publication selection bias. We find that the intercepts in regressions for profitability, assets structure and company size are significant (Table 3 – publication selection bias). The inclusion of potential sources of heterogeneity removes publication bias just for the case of company size.

Potential explanatory variables included in meta-regression analysis are presented in Table 4. We include moderator variables to control for heterogeneity across studies. Table 3 presents the results of the reduced models, as during estimation, we observed that some moderator variables are not important in contributing to the potential source of heterogeneity, as they are not statistically significant.

We find now that precision coefficients in regressions for collateral (0,85) is significant (Table 3 – publication selection bias + heterogeneity). Estimates for the β_e parameter show the direction of the bias. In case of collateral we observe a negative bias. More often cited studies report collateral estimates that are larger (on average $5e-06$ lower). Furthermore, analysis with higher number of firms included are likely to report lower collateral estimates (on average 0,007 higher).

In summary, the results of the meta-analysis show the occurrence of the publication selection bias in the case of collateral. One reason for that can be wrong model specification, another reason may be connected with pressure for obtaining a statistically significant estimator.

Analysis of country level data

The objective of this part of the paper is to explore relation between collateral and bank credit in European countries. The sample was obtained from the database of the European Committee of Central Balance Sheet Data Offices (BACH / ESD, 2013) and encompasses European countries for the period 2000-2014. BACH (Bank for the Accounts of Companies Harmonized) is a database of aggregated and harmonized accounting data of non-financial companies in European countries, based on their national accounting standards. The database currently includes data for 11 countries (Austria, Czech Republic, France, Germany, Italy, Poland, Portugal, Slovakia, Spain and Belgium, Netherlands). The data sources for this database include financial statements (balance sheets and income statements) of individual non-financial corporations.

Based on Figures 8-12 we may see that macroeconomic effects are crucial as company financing methods differ significantly between countries. Equity is most prevalent among enterprises in Poland, Netherlands and Czech Republic while total debt is most widespread among enterprises in Austria, Portugal, Germany and Italy, where bank loans play a greater role. What we see in Table 5 is that at the country level tangibility, profitability, size of a companies and Interests

¹ The difference between the fixed effects and random effects estimates (for a weighted average estimates) can be the probable indicator of the effect of the selection of publications. This difference occurs because the less precise estimates are more biased in random effects models compared to fixed effects models. Random effects models reflect unobserved heterogeneity, which may be real or appears as the result of the methodology. Biase of the standard errors of estimates may also occur. It means that the more precise estimates may indicate on biase or inefficiency. Using random effects models can eliminate inefficiency or incorrect outliers. As a consequence of the foregoing we are using random effects and fixed effects models in this study

on financial debts/Total Assets are significant for bank loans in case of whole sample. Based on estimation of parameters, we note that collateral significantly determines the bank loan financing in the investigated countries, when considering the small and medium-sized companies. For both groups the impact is negative. The profitability of companies doesn't differentiate the use of bank credit to finance activities in the analyzed countries, regardless the size of firms. Interests on financial debts in small and large companies significantly differentiate the use of bank credit in countries. A similar conclusion was obtained for logarithm of total assets.

A case of Poland

Database used in the article was created on the basis of the financial statements of companies listed on the Warsaw Stock Exchange, Newconnect or the Central Table of Offers (CeTO), operating in the years 1998-2015. We focused on non-financial enterprises, which, according to the Central Statistical Office results in exclusion from the study firms operating (according to the Polish Classification of Activities, 2007) in section A (Agriculture, forestry, hunting and fishing), K (Financial and insurance activities) and O (public administration and defense, compulsory social security). In addition section T (Activities of households, households producing goods and providing services for their own needs) and Section U (extraterritorial organizations and bodies) were removed. Furthermore, some variables include outliers in only the upper values, so we truncate the sample at the 99 percentile to exclude these outliers. When variables include outliers in both the upper and lower values, we truncate at both the 0.5 and 99.5 percentiles of the sample.

Table 6 provides some summary statistics. As shown, the average share of total liabilities in the balance sheet total amounts is about 40%, which means that the Polish listed companies to a large extent finance with the foreign capital (Table 6). In the sample leverage ranges from 0 to 98%. Analyzing the chart of variation of leverage over time we see that the highest average amount of leverage was achieved in 2002, which was the result of significant increases in the stock market. A significant decrease in leverage in 2007 was a reaction to the restrictive monetary policy - a rise in interest EURIBOR3M and LIBOR3M, as well as the growing trend of market interest rates on bank loans, interest WIBOR3M. The increase in market interest rates on bank loans and interest WIBOR3M resulted in a decrease in debt lasting until the beginning of 2008. In 2011, an increase in leverage was observed in response to the decline in market interest rates on bank loans and interest rates in 2010. Restrictive monetary policy in 2000, 2004 and 2007 resulted in a decrease in leverage. On the other hand, the policy of low interest rates in 2003 and 2006 and in the years 2009-2010 (WIBOR3M and market interest rates on loans) caused an increase in leverage. This points to the fact that monetary policy determines the structure of financial companies.

A dynamic econometric model has been estimated, describing how the long-term and short-term credit contracted by non-financial companies in Poland is affected by three categories of factors: macroeconomic (WIBOR3M and the real effective currency rate), microeconomic – associated with the internal financial situation and structural. Parameters were estimated using the robust system GMM (Generalised Methods of Moments) estimator 13 (see: Arellano & Bover, 1995; Blundell & Bond, 1998).

According to the static and dynamic theory of trade-off the companies maintain the optimal level of leverage, and quickly adapt to the aimed value in the case of any deviations. The theory of the hierarchy of sources of funding and market timing exclude the existence of an optimal debt ratio. Researchers verify the validity of these theories by estimation of coefficient of the speed of adjustment. A high value of coefficient confirms the validity of the theory of trade-off. Based on the literature, it was observed that the coefficient reaching a value above 20% is considered to be high. However, the authors suggest that the slow rate of adjustment does not indicate a rejection of the hypothesis according to which the companies have an optimal capital structure. This slow rate may result from the existence of high adjustment costs that exceed the costs of staying outside the optimum. In our study the estimate of coefficient for lagged dependent variable is 58.45%. It means that companies adjust its current level of leverage to the optimal value at a rate of 41.55% per year (which means that companies need 1.3 years to reduce half of the distance to the optimum leverage). In comparison with results obtained by other researchers it is relatively high rate. The high values, 34% and 46% were received, among others, by Flannery and Rangan (2006) and Cook and Tang (2010) respectively. Fama and French (2002) and Huang and Ritter (2005) interpret the obtained slow rate of adjustment to support the theory of the hierarchy of sources of funding.

The size of the company shows a positive correlation with the level of leverage. This confirms the assumption of the theory of trade-off, the more profitable companies have a larger share of foreign capital in total assets. Large enterprises finance investments through external sources, in particular the long-term bank loan and sale of securities. Firms that generate

higher revenues, having more bargaining power and better access to credit have lower credit margins and increased foreign capital in the capital structure. Smaller companies finance mainly with profits generated or contributions owners.

We find that debt decreases with increasing profitability and effective tax rate. The results confirm the validity of the theory of the hierarchy of sources of financing, according to which companies capable to generate high profits have a greater tendency to use equity than foreign capitals. High taxes result from the large revenues that reduce the need for debt.

Growing companies have a greater need of capital, and therefore rely on external financing. The increase in sales is not able to meet the financial needs due to the problem of gridlock. According to the theory of the hierarchy of sources of finance companies prefer debt issue than shares. Our results indicate a positive correlation between the level of leverage and growth opportunities, which confirms the validity of the theory.

Tangible fixed assets may be treated as a collateral. The higher share of fixed assets in total assets reduces the lender's risk and increases the access to external capital, which is consistent with the theory of trade-off. Agency costs and information asymmetry can cause that lenders require guarantees in the form of collateral on fixed assets, and therefore expected positive impact of this variable on the size of the debt ratio. The variable asset structure works with lags, as the basis for verification of the credit are the financial statements for the previous year.

Liquidity is defined as the company's ability to timely repayment of current liabilities. Companies with high liquidity have a greater ability to pay the debt and therefore should use the foreign capital as a main source of funding. We got a positive relation between the level of debt and liquidity, which testifies to the support of the theory of substitution.

Non-interest tax shield is an important factor affecting the capital structure. It arises as a result of the existence of other than interest on borrowed capital, items that reduce the tax base, such as depreciation. In our study, non-interest tax shield reduces debt, which indicates that companies use rather depreciation than the interest paid on the debt. The results are consistent with the theory of substitution. In turn, the interest tax shield has a positive impact on the level of leverage.

It is assumed that companies with high expenditure on research and development prefer equity financing. However, our results indicate a positive relationship between intangible assets and the debt ratio. According to the theory of signaling, a well-developing companies increase the involvement of foreign capitals to signal the good prospects for the future.

In the case of other explanatory variables used in the model, theories regarding the choice of the capital structure does not give a clear indication as to the direction of the expected impact on the level of debt. The negative impact of the inverted index bankruptcy on leverage points to the fact that companies having a higher probability of bankruptcy are less likely to benefit from the financing of foreign capital. This may involve the fact that the threatened with bankruptcy companies will not be able to repay its liabilities. The median leverage in the sector is an important determinant of the debt ratio. Companies operating in the same industry are affected by a similar environment: market fluctuations, the impact of state institutions or changes in the market of suppliers and customers, which indicates the existence of a positive relationship between the variables.

The survey was repeated for industrial and service companies separately. High rate of adjustment of the current level of debt to the optimal level for both industrial (35.83%) and service companies (41%) proves the existence of an optimal capital structure and rapid effort to achieve it, regardless of the industry. The results are just slightly different in terms of the factors that influence the choice of debt in these two sectors of the economy. In both subgroups the same variables occurred to be significant determinants of debt. However, for industrial companies growth opportunities and the share of intangible assets in total assets have a negative impact on the dependent variable. The negative relationship between the debt and growth opportunities, according to the theory of substitution, reflects that costs of the financial risk (including bankruptcy) increase with the expected growth of the company, forcing managers to reduce debt in the capital structure. For service companies the relation is consistent with the theory of the hierarchy of sources of funding. Summing up, the influence of most variables used in the model indicates to the theory of substitution in case of Polish listed companies, irrespective of the sector of the business.

Due to the fact that the size of the company may affect its access to capital markets, the risk of bankruptcy and economies of scale in contracting capital, a model was estimated for small and large companies separately. An important conclusion derived from the analysis is that large companies slowly adjust the current level of debt to the optimal size. The adjustment rate for large companies is only 23.54%, while in the case of small firms it is 44.55%. This is because large companies are

characterized by lower volatility of cash flow, and therefore meet lower costs associated with a deviation from an optimal debt. Although the adjustment process in large companies is slower than in small firms, based on the literature for both cases it is referred as fast.

It turns out that for large companies, as in the case of industrial firms, growth opportunities and the share of intangible assets in total assets are negatively correlated with the level of debt. This is because the highly developing smaller businesses have a greater financial needs, so they lend more. The increase in sales is not able to meet the financial needs of small businesses because of the gridlock. For large companies an increase in sales growth increase the possibility of self-financing, which reduces the need for external financing. In large companies, payment backlogs are of minor importance, and sales growth results in an increase in revenues from debt repayment. Another difference between small and large companies is the negative impact of collateral on the level of leverage in the case of large enterprises. Higher fixed assets increase the availability of external capital as they reduce the risk of the lender. Therefore, the positive impact of collateral on debt is expected. However, for large enterprises increase in fixed assets reduces the demand for foreign capital financing. For smaller companies assets held in year t-1 increase debt, as they constitute collateral. This is because the basis for verification of the creditworthiness is the financial statements for the previous year. Moreover, in the case of large companies, variable non-interest tax shield is irrelevant. This is due to the fact that large businesses borrow more in order to maximize tax benefits. Smaller companies receive tax savings mainly due to depreciation, rather than the interest paid on the debt. Despite minor differences in the estimates of parameters, the impact of most variables points to the application of the theory of substitution in Polish listed companies, regardless of company size.

6 Conclusion

In this study we analyze a collateral and bank credit relation. This study pursues two objectives: on one hand, we conduct a meta-analysis, we make comparison of results differentiating between publications and verify publication selection bias, on the other, we explore the determinants of bank loan financing based on the country level data and Polish firms level data.

The described study is the continuation of the previous meta-analyses of the authors (Bialek-Jaworska, Dzik-Walczak, Nehrebecka, 2015). The benefit of this work is that, by aggregating results across a large number of investigations and exploiting between-study design variation, we point variables that modify them more precisely than could be done through qualitative review.

In the publications regarding bank loans, the publication selection bias was found for collateral estimates. When analyzing the determinants of bank loan financing based on the country level data we found that equity is most prevalent among enterprises in Poland, Netherlands and Czech Republic while total debt is most widespread among enterprises in Austria, Portugal, Germany and Italy, where bank loans play a greater role. At the country level collateral is significant for bank loans and the impact that we get is negative. Based on the empirical analysis of Polish firms we conclude that the long-term and short-term debt contracted by non-financial companies is affected by three categories of factors: macroeconomic, microeconomic and structural. We find that the impact of collateral on debt is positive, except for the subsample of large enterprises.

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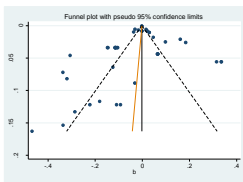
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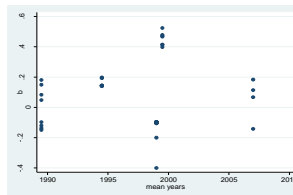
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Figure 1. Collateral: relation between the parameter estimation and the inverse of the standard deviation



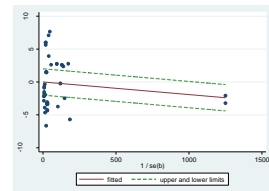
Source: own study based on the review of empirical literature

Figure 2. Collateral: change of estimated values in time



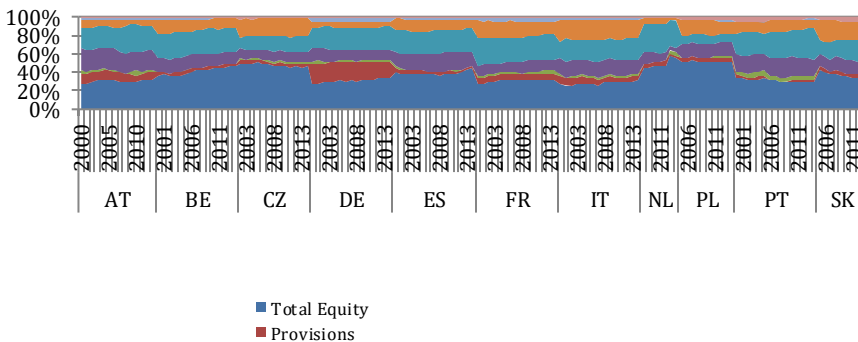
Source: own study based on the review of empirical literature.

Figure 3. Galbraith plot for the effect of collateral on bank credit financing



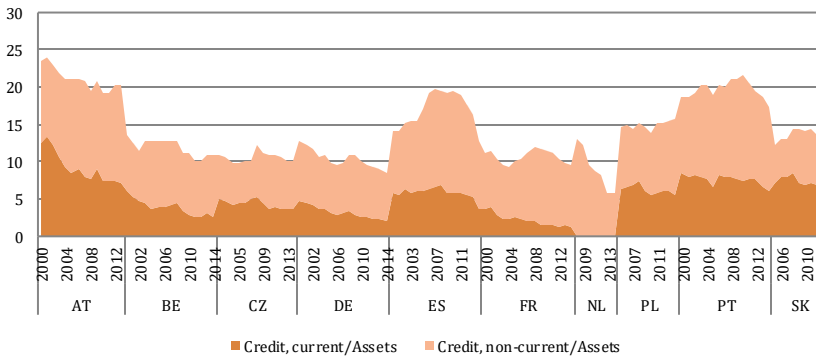
Source: own study based on the review of empirical literature.

Figure 4. Weight of each source of financing on total liabilities



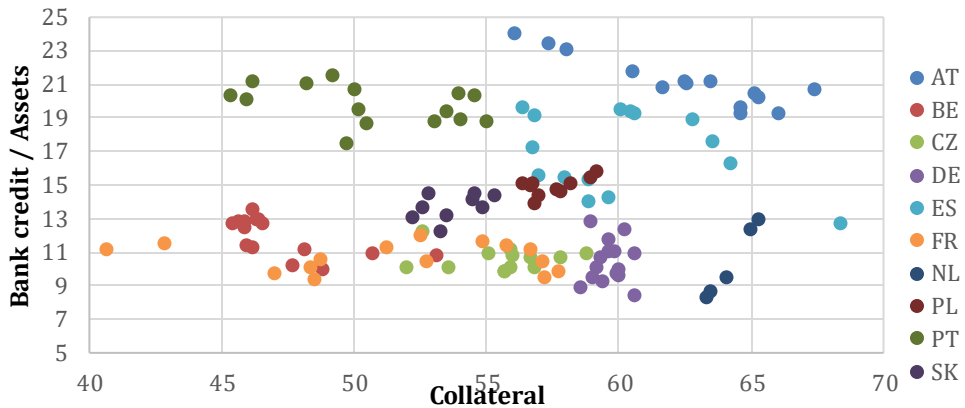
Source: Own Study Based on Bach Database.

Figure 5. Bank credit on total assets



Source: own study based on BACH DATABASE.

Figure 6. Bank credit and Collateral relation



Source: own study based on BACH DATABASE.

Table 1. List of articles included in the last phase of the meta-analysis

Authors and title	Years of research	Country	Publications
Alonso et al. (2005) Determinants of Bank Debt in a Continental Financial System: Evidence from Spanish Companies	1991-1996	Spain	The Financial Review, Eastern Finance Association
Białek, Dzik-Walczyk, Nehrebecka (2014)	1995-2011	Poland	Materiały i Studia National Bank of Poland
Boguszewski, Kocięcki (2000) Wpływ polityki pieniężnej na zachowania przedsiębiorstw w świetle danych GUS i badań ankietowych - wybrane zagadnienia	1994	Poland	Bank i Kredyt
Bougheas et al. (2006) Access to external finance: theory and evidence on the impact of firm-specific characteristics	1990-1999	Great Britain	Journal of Banking and Finance
Brown et al. (2011)	2003-2007	Bulgaria	Economic Policy
Berrospeide, Meiserzahl, Sullivan (2012), Credit Line	2006-		FEDS Working Paper

Use and Availability in the Financial Crisis: The Importance of Hedging	2008		
Cole, Sokolyk (2016) Who needs credit and who gets credit? Evidence from the surveys of small business finances.	1993, 1998, 2003	USA	Journal of Financial Stability
Cole., Bank Credit, Trade Credit or No Credit: Evidence from the Surveys of Small Business Finances (January 14, 2011). Available at SSRN: http://ssrn.com/abstract=1540221 or http://dx.doi.org/10.2139/ssrn.1540221	1993, 1998, 2003	USA	Office of Advocacy, U.S. Small Business Administration
Cole, Dietrich (2012) SME Credit Availability Around the World, Evidence from World Bank's Enterprise Survey	2006- 2011	80 countries	World Bank's Enterprise Survey
Cook (1999) Trade Credit and Bank Finance: Financing Small Firms in Russia	1995	Russia	Journal of Business Venturing
Demiroglu et al. (2012) Bank lending standards and access to lines of credit	1996- 2004		Journal of Monetary, Credit and Banking
Dewaelheyns, Van Hulle (2010) Internal capital markets and capital structure: Bank versus internal debt	1997- 2001	Belgium	European Financial Management
Ghosh, Sensarma (2004) Does monetary policy matter for corporate governance? Firm-level evidence from India.	1992- 2002	India	Advances in Financial Economics
de Haan, Sterken (2000)	1990- 1997	EU, Great Britain	De Nederlandsche Bank, Research Memorandum WO&E
de Haan, Sterken (2006)			European Journal of Finance
Huyghebaert, Van de Gucht, Van Hulle (2007), The Choice between Bank Debt and Trade Credit in Business Start-ups	1988- 1991	Belgium	Small Business Economics
Jiménez, Ongena, Peydró, Saurina (2010), Credit supply identifying balance-sheet channel with loan applications and granten loans,	2002- 2008	Spain	European Central Bank Working Paper
Jiménez et al. (2010)	2002- 2008	Spain	AMERICAN ECONOMIC REVIEW
Jiménez, Ongena, Peydró, Saurina, (2012) Credit Supply versus Demand: Bank and Firm Balance-Sheet Channels in Good and Crisis Times	2002- 2010	Spain	European Banking Center Discussion Paper
Jiménez, Ongena, Peydró., Saurina, (2009), Monetary Policy and Credit Crunch: Identifying Simultaneously the Bank Lending and Balance Sheet Channels	1992- 2006	Spain	Bank of Spain mimeo
Love, Peria (2014)	2002- 2010	80 countries	World Bank Econ Rev
Aghion, Askenazy, Berman, Clette, Eymard (2012)	1993- 2004	France	Journal of the European Economic Association

Source: own study based on the review of empirical literature.

Table 2. Summary statistics for the effect of collateral on bank loan financing

Variable	The direction of impact	# regressions	Mean	Median	SE	Minimum	Maximum
Fixed Assets / Total Assets	+	27	0,089	0,139	0,202	-0,401	0,524
	-	15					
	Not significant	12					

Source: own study based on the review of empirical literature.

Table 3. Linear regression results for publication selection bias

Variables	b (se)	
Publication selection bias		
1/se	-0,1139*** (0,0362)	
constant	2,1118*** (0,5891)	
Publication selection bias + heterogeneity		
Model	FE	RE
Publication bias (K-v variables)		
Constant	0,7868*** (0,1682)	0,8496*** (0,2086)
No. of firms	-5.44e-06*** (9.90e-07)	-5.63e-06*** (1.07e-06)
Study citations	0,00678** (0,0034)	0,0071*** (0,0033)
Genuine empirical effects (Z-variables)		
1/se	-0,1085*** (0,0096)	
Sector fixed-effects /se	0,1445*** (0,0335)	
N	46	
F (H ₀ : K variables are jointly not significant)	F(2, 41) = 17.31 Prob > F = 0.0000	F(2, 41) = 16.24 Prob > F = 0.0000
Test for residual between-study variance (of tau ² =0)		Q_res (41 df) = 1001.21 Prob > Q_res = 0.0000

* Significant at 10% , ** Significant at 5% , *** Significant at 1% . Mean error values are enclosed in round brackets.

Source: own study based on the review of empirical literature.

Table 4. Potential Explanatory Variables for Meta-Regression Analysis

Variables	Definition
Data Characteristics	
Panel data	1 if panel data are used (cross-sectional data are the base)
Time span	The number of years of the data used
No. of firms	Sample size/time span
Average year	Average year of the data used
Year of publication	Year when an article was published
Large	1 if large enterprises are investigated
Capital groups	1 if capital groups are investigated
Estimation Characteristics	
Differences	1 if the regression is estimated in differences
Year fixed-effects	1 if year fixed-effects are included
Sector fixed-effects	1 if sector fixed-effects are included
OLS	1 if OLS used for estimations (random effects, GMM, WLS, and others as a base)
Macro	1 if macroeconomic conditions variables are included
One-step estimations	1 if coefficients are estimated in one-step
Specification Characteristics	
Firm size	1 if the specification controls for firm size (sector competition)
One country	1 if one country firms are included in the regression

Lagged spillover	1 if the coefficient represents lagged foreign presence
Europe	1 if European countries are investigated
Publication Characteristics	
Publication date	The publication year of the study
Published	1 if the study was published in a peer-reviewed journal
Study citations	Study citations in Google Scholar per age of the study, as of May 2016
Journal rank	1 if the study published in high journal rank, 2013 ISI impact factor
Working paper	1 if research is a working paper

Source: own study based on the review of empirical literature.

Table 5. Country data level analysis of bank loans

Variable	Whole sample		Small firms		Medium firms		Large firms	
	RE	GLS	RE	GLS	RE	Random-effects linear models with an AR(1) disturbance	RE	Random-effects linear models with an AR(1) disturbance
Collateral (Fixed Assets/ Total Assets)	-0,187 (0,035) [-5,3]	-0,124 (0,038) [-3,3]	-0,041 (0,069) [-0,6]	-0,170 (0,057) [-3,0]	-0,269 (0,063) [-4,3]	-0,180 (0,054) [-3,4]	0,014 (0,053) [0,3]	-0,045 (0,042) [-1,1]
Profitability (ROA = Net Income/ Total Assets)	-0,489 (0,130) [-3,8]	-0,225 (0,095) [-2,4]	0,122 (0,300) [0,4]	-0,085 (0,234) [-0,4]	-0,429 (0,242) [-1,8]	0,067 (0,192) [0,4]	-0,181 (0,163) [-1,1]	0,038 (0,131) [0,3]
Interests on financial debts/ Total Assets	0,743 (0,421) [1,8]	1,325 (0,370) [3,6]	1,844 (0,638) [2,9]	1,423 (0,441) [3,2]	-0,176 (0,654) [-0,3]	0,052 (0,496) [0,1]	0,696 (0,585) [1,2]	2,237 (0,486) [4,6]
Size (Logarithm of Total Assets)	-0,553 (0,336) [-1,7]	-0,961 (0,366) [-2,6]	-1,386 (0,589) [-2,4]	-3,121 (0,633) [-4,9]	1,522 (0,618) [2,5]	0,263 (0,683) [0,4]	-1,177 (0,486) [-2,4]	-0,651 (0,520) [-1,3]
Constant	37,341 (7,054) [5,3]	39,089 (7,893) [5,0]	45,209 (12,014) [3,8]	84,714 (12,890) [6,6]	6,552 (10,833) [0,6]	22,717 (12,577) [1,8]	33,412 (9,923) [3,4]	23,450 (10,193) [2,3]
N	143							
Diagnostic	Statistical tests	p-value	Statistical tests	p-value	Statistical tests	p-value	Statistical tests	p-value
Test for panel-level heteroskedasticity	151.33	0.0000	158.15	0.0000	2.13	0.9952	-84.94	1.0000

Test for panel-level autocorrelation	29.476	0.000 3	13.669	0.004 1	52.296	0.0000	-0.034	0.9731
Test of cross sectional independence	1.816	0.069 4	0.802	0.422 5	0.666	0.5057	8.147	0.0171

Mean error values are enclosed in round brackets, t Student – in square brackets.

Source: own study based on BACH DATABASE.

Table 6. Description of variables used in the debt of polish enterprises model

Variable	Definition
Debt1	(Long-term debt+ Short-term debt) / Total assets
Debt2	Short-term debt / Total assets
Debt 3	(Long-term debt+ Short-term debt) / (Total debt+Equity -Revaluation reserve)
Firms' characteristics	
Company size	Logarithm of revenues
Profitability	EBIT/ total assets
Collateral	Tangible assets/total assets
Non-interest tax shield	Depreciation/total assets
Interest tax shield	Interest/total assets
Intangible assets	Intangible assets /total assets
Growth opportunities	(Revenue from sales (t) – Revenue from sales (t-1)) / Revenue from sales (t-1) ₁
Current ratio measure	Current assets/Short-term liabilities
Quick ratio measure	Current assets and inventories/Short-term liabilities
Effective tax rate	The current part of income tax /profit before tax
Inverted index bankruptcy	Nehrebecka, Dzik (2016)
Grants	Binary variable, takes 1 if firm got grants
IAS	Binary variable, takes 1 if firm have set of basic accounting records which are prepared and audited in line with IAS
Macroeconomic variables	
GDP	The growth of Gross Domestic Product
WIBOR3M	3-month WIBOR interest rate
REER	Effective rate of exchange

Table 7. Descriptive statistics of variables used in the model

Variable	Mean	Std. dev	Q1	Median	Q3	Min	Max
Debt	0,3928	0,2137	0,2240	0,3814	0,5493	0,0000	0,9821
Revenues	536923	2769538	22256	79039	255306	0,0000	79000000
Profitability	0,0691	0,0846	0,0015	0,0465	0,0965	0,0000	0,7770
Collateral	0,2661	0,2218	0,0729	0,2224	0,4102	0,0000	0,9673
Non-interest tax shield	0,0363	0,0334	0,0136	0,0294	0,0489	0,0000	0,4537
Interest tax shield	0,0066	0,0105	0,0000	0,0000	0,0101	0,0000	0,0354
Intangible assets	0,0312	0,0796	0,0008	0,0048	0,0198	0,0000	0,8654
Growth opportunities	0,1630	0,3772	-0,0537	0,0942	0,2989	-0,4331	1,1907
Current ratio measure	2,2986	1,9178	1,1179	1,5883	2,6870	0,5611	8,3258
Effective tax rate	0,0669	0,1103	0,0000	0,0000	0,1480	0,0000	0,3420
Inverted index bankruptcy	1,0447	2,2484	0,3887	1,0000	1,8662	-4,6108	6,1899
Median sector debt	0,3737	0,0949	0,3089	0,3552	0,4397	0,2477	0,6204

Table 8. Debt determinants – model estimation results.

Explanatory variable	Trade-off theory	Pecking order theory	Models with effect of the sector			Models with effect of the size		Robust models	
			Base model (Debt 1)	Manufacturing	Services	Small	Large	Debt 2	Debt 3
Debt in t-1			0,584 * 5 * (0,00 * 21)	0,641 * 7 * (0,00 * 87)	0,590 * 0 * (0,00 * 40)	0,554 * 5 * (0,00 * 57)	0,764 * 6 * (0,00 * 63)	0,42 * 36 * (0,00 * 28)	0,58 * 55 * (0,00 * 35)
Firms' characteristics:									
Company size	+	-	0,007 * 1 * (0,00 * 03)	0,012 * 2 * (0,00 * 05)	0,006 * 3 * (0,00 * 04)	0,004 * 1 * (0,00 * 07)	0,013 * 5 * (0,00 * 17)	0,01 * 04 * (0,00 * 02)	0,00 * 81 * (0,00 * 04)
Profitability	+/-	-	- * 0,116 * 9 * (0,00 * 76)	- * 0,121 * 9 * (0,01 * 84)	- * 0,174 * 7 * (0,01 * 09)	- * 0,044 * 5 * (0,01 * 78)	- * 0,277 * 7 * (0,01 * 23)	- * 0,08 * 87 * (0,00 * 81)	- * 0,13 * 83 * (0,00 * 70)
Collateral	+	-	0,114 * 1 * (0,00 * 44)	0,073 * 6 * (0,01 * 10)	0,086 * 9 * (0,00 * 47)	0,062 * 0 * (0,00 * 87)	- * 0,032 * 3 * (0,00 * 99)	0,02 * 77 * (0,00 * 39)	0,09 * 71 * (0,00 * 42)
Non-interest tax shield	-		- * 0,325 * 2 * (0,02 * 05)	- * 0,391 * 1 * (0,07 * 40)	- * 0,195 * 0 * (0,01 * 67)	- * 0,160 * 5 * (0,04 * 32)	0,006 * 8 * (0,04 * 52)	- * 0,11 * 45 * (0,01 * 80)	- * 0,25 * 87 * (0,02 * 09)
Interest tax shield			1,930 * 4 * (0,03 * 22)	2,392 * 2 * (0,08 * 62)	1,666 * 5 * (0,05 * 75)	1,695 * 5 * (0,10 * 44)	1,650 * 7 * (0,06 * 80)	2,65 * 85 * (0,04 * 17)	1,46 * 53 * (0,03 * 83)
Intangible assets			0,216 * 9 * (0,01 * 11)	- * 0,087 * 1 * (0,04 * 07)	0,068 * 2 * (0,01 * 42)	0,221 * 9 * (0,02 * 34)	- * 0,087 * 2 * (0,03 * 24)	0,20 * 24 * (0,01 * 14)	0,16 * 07 * (0,01 * 03)
Growth opportunities	-	+	0,035 * 8 * (0,00 * 15)	- * 0,012 * 4 * (0,00 * 55)	0,076 * 0 * (0,00 * 21)	0,019 * 7 * (0,00 * 27)	- * 0,011 * 9 * (0,00 * 68)	0,08 * 27 * (0,00 * 14)	0,04 * 81 * (0,00 * 12)
Current ratio measure	+	-	0,002 * 9 * (0,00 * 02)	0,005 * 2 * (0,00 * 06)	0,005 * 5 * (0,00 * 03)	0,003 * 1 * (0,00 * 06)	0,015 * 6 * (0,00 * 11)	- * 0,00 * 08 * (0,00 * 02)	0,00 * 25 * (0,00 * 04)
Effective tax rate			- * 0,093 * 4 * (0,00 * 44)	- * 0,050 * 9 * (0,00 * 62)	- * 0,043 * 3 * (0,00 * 57)	- * 0,063 * 1 * (0,01 * 08)	- * 0,028 * 2 * (0,00 * 72)	- * 0,06 * 96 * (0,00 * 44)	- * 0,06 * 98 * (0,00 * 38)
Inverted			- * - * - *	- * - * - *	- * - * - *	- * - * - *	- * - * - *	- * - * - *	- * - * - *

index	0,003	*	0,001	*	0,004	*	0,007	*	0,001	*	0,00	*	0,00	*
bankruptc y	2	*	7	*	5	*	2	*	8	*	31	*	35	*
	(0,00		(0,00		(0,00		(0,00		(0,00		(0,00		(0,00	
	03)		03)		03)		05)		03)		02)		02)	
	0,007	*	0,013	*	0,002	*	-	*	0,003	*	-	*	0,00	*
Inv estme nt rate	9	*	5	*	6	*	0,010	*	3	*	0,00	*	80	*
	(0,00		(0,00		(0,00		6	*	(0,00		47	*	(0,00	*
	10)		36)		09)		(0,00		21)		(0,00		12)	
							19)				09)			
Median	0,276	*		*	0,193	*	0,254	*	0,136	*	0,28	*	0,32	*
sector	9	*		*	8	*	0	*	6	*	47	*	00	*
debt	(0,00				(0,00		(0,02	*	(0,01	*	(0,00	*	(0,00	*
	57)				71)		48)		19)		52)		59)	
Grants	-	*	-	*	-	*	-	*	-	*	0,00	*	-	*
	0,009	*	0,019	*	0,019	*	0,008	*	0,019	*	92	*	0,00	*
	2	*	4	*	7	*	0	*	7	*	(0,00	*	57	*
	(0,00		(0,00		(0,00		(0,00		(0,00		11)		(0,00	
	20)		24)		53)		54)		29)				19)	
IAS	0,027	*	0,021	*	0,017	*	-	*	0,032	*	0,02	*	0,01	*
	3	*	5	*	0	*	0,015	*	2	*	56	*	68	*
	(0,00		(0,00		(0,00		2	*	(0,00	*	(0,00	*	(0,00	*
	14)		30)		22)		(0,00		22)		13)		16)	
							51)							
Macroeco nomic variables														
GDP	0,002	*	0,005	*	-		0,000		0,003		0,00	*	0,00	*
	7	*	3	*	0,000		8		7		49	*	30	*
	(0,00		(0,00		8		(0,00		(0,00		(0,00	*	(0,00	*
	02)		05)		(0,00		08)		05)		02)		02)	
					05)									
ΔWIBOR 3M	-	*	-	*	-	*	0,000		-	*	-	*	-	*
	0,001	*	0,003	*	0,002	*	0		0,000	*	0,00	*	0,00	*
	9	*	2	*	4	*	(0,00		9	*	29	*	15	*
	(0,00		(0,00		(0,00		03)		(0,00		(0,00		(0,00	
	01)		02)		03)				03)		01)		01)	
REER	-	*	-	*	-	*	-	*	-	*	-	*	-	*
	0,001	*	0,002	*	0,000	*	0,002	*	0,001	*	0,00	*	0,00	*
	2	*	3	*	8	*	2	*	2	*	26	*	13	*
	(0,00		(0,00		(0,00		(0,00		(0,00		(0,00		(0,00	
	01)		02)		02)		02)		02)		01)		01)	
Constant	0,051	*	0,168	*	0,064	*	0,226	*	-		0,19	*	0,04	*
	0	*	0	*	5	*	7	*	0,021		40	*	42	*
	(0,00		(0,01		(0,02		(0,02	*	6		(0,00	*	(0,00	*
	94)		76)		04)		07)		(0,02		84)		99)	
									94)					
Test statistic (p-v alue)														
Test	-		-		-		-		-		-		-	
	9,141		6,025		6,134		6,228		7,172		9,63		8,65	
	4		2		4		5		8		54		73	
	(0,00		(0,00		(0,00		(0,00		(0,00		(0,00		(0,00	
	00)		00)		00)		00)		00)		00)		00)	
Arellano- Bond Test for the first-order autocorrel	1,247		0,262		1,460		1,352		0,343		0,56		1,19	
	1		8		5		0		6		65		04	
	(0,21		(0,79		(0,14		(0,17		(0,73		(0,57		(0,23	
	24)		27)		42)		64)		12)		11)		39)	

ation

Arellano- Bond Test for the second- order autocorrel ation	344,2 584 (0,57 65)	157,3 900 (0,98 04)	187,2 700 (0,64 16)	179,3 050 (0,78 32)	197,2 016 (0,44 24)	341, 88 (0,61 17)	344, 51 (0,57 27)
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Advantages and Disadvantages of the Different Types of Working Hours' Organisation

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Efstathios Titopoulos

Abstract

The variety of existing work schedules offers advantages and disadvantages for workers, as well as for their employers. While some flexibility in working hours is oriented to the needs of workers¹ (beyond the minimum standards required for the protection of the employed), another is focused on meeting the needs of businesses (in the literature concerning the working hours, it is often called "variation").

Keywords: Flexibility of working time, Organization of working time, Traumatic occupational injuries, Work and health

1. Introduction

The purpose of the study is to highlight the advantages and disadvantages of different types of working time 'organization for both workers and employers in a working market economy.

The organization of the working time can be beneficial as only for the workers or only for employers, but it might be fruitful to both parties simultaneously. The structure and organization of the working hours affect the extent to which the employment agreement complies with the needs of the workers, of the employer and of both parties together.

2. Materials and Methods

Studying the ways and best practices in which the working hours are organized for a specified period. Summarizing the advantages and disadvantages of different types of working hours arrangements from the perspective of both workers and employers.

3. Results

The advantages and disadvantages of the different types of working time' organization both for employees and employers, such as: overtime, working on shifts, working part-time, floating working time, compressed work week and hourly work are summarized in a tabular form.

It is important to emphasize that the different forms of flexibility can interact with each other: for example, temporary employment can be used by enterprises in combination with temporary flexible working hours. Also, the enterprise may use different forms of flexibility in terms of working hours; employers react to fluctuations in market demand by increasing or decreasing the number of employees or by increasing or reducing the working time of employees. In fact, the last years of

¹ Currently in the EU and beyond there is some confusion about the concept of working time or time flexibility, especially in the context of the ongoing debate in the EU on 'flexicurity'. The focus of our research is solely aimed at flexibility of working hours, which is defined as flexibility in the ways in which work is organized during a specified period of time. This kind of flexibility implies a certain number of workers with variable or flexible working hours and should not be confused with flexibility in terms of number of employees.

global economic crisis clearly showed how the emphasis on flexibility of working hours could promote job stability, since there were significantly fewer job losses in companies and countries (such as Germany and the Netherlands) which due to the reduced market demand preferred to optimize the organization of working time of employees rather to proceed to staff cuts.

Table 1: Advantages and disadvantages of different types of working-time arrangements for employees and employers

Type of working-time arrangement	EMPLOYEES		EMPLOYERS	
	Advantages	Disadvantages	Advantages	Disadvantages
Overtime	<ul style="list-style-type: none"> + Higher earnings + Longer periods of paid leave (if compensatory time off is granted instead) + Greater possibility for the employees to control the organization of working time 	<ul style="list-style-type: none"> - Potential negative impact on health and safety at work and on the balance professional life – private life - Work intensification, especially in certain periods 	<ul style="list-style-type: none"> + Opportunity to better synchronize working hours with the production or services requirements + Increased production in response to the increased demand + Extended working hours + Extended operating (more intensive use of facilities and equipment) + Possible catalysing of more innovative changes at the workplace 	<ul style="list-style-type: none"> - Additional costs for overtime payment - Potential reduction of marginal productivity - Increased risk of work diseases and accidents
Shift work	<ul style="list-style-type: none"> + Higher income in case of premiums for certain types of shifts + Longer periods of paid leave if compensatory time off is granted instead) + Better reconciliation of work and family life 	<ul style="list-style-type: none"> - Potential negative effects on health and safety at work and on the balance work life - family life, especially in the case of night work - Other difficulties, (e.g. lack of transportation and training) 	<ul style="list-style-type: none"> + Extended operating (more intensive use of facilities and equipment, including (semi-) continuous production process + Better coping with FMCG / perishable goods + Better use of increased productivity of human capital and capital resources + Better budget planning, with predictable costs 	<ul style="list-style-type: none"> - Higher labour costs and wages - Greater complexity in terms of work organization - Potential negative effects on health and safety at work, particularly in the case of night work
Part-time arrangements	<ul style="list-style-type: none"> + Better balance between work and personal life, due to the smaller number of working hours + Means of (re) entering the labour 	<ul style="list-style-type: none"> - Lower quality of work in terms of remuneration, job security, training, social protection - Higher risk of poverty among workers 	<ul style="list-style-type: none"> + Improved adaptation to fluctuations in consumer demand + More flexible work planning + In certain cases, tax 	<ul style="list-style-type: none"> - Potentially higher administrative costs - Higher taxes and social contributions in the event that working part-time cover the same hours for full-time

	<p>market for women and youth</p> <p>+ Gradual transition from full-time work to retirement</p>	<p>- Possibility to reduce the payment if overtime is eliminated and basic remuneration is not increased</p>	<p>incentives</p> <p>+ Increased ability to predict future periods of higher workload</p>	
Floating working hours	<p>+ Ability to optimally use worker's time, which therefore has a positive impact on their health and well-being</p> <p>+ Strengthen the stability of employment</p> <p>+ Guaranteed stable income</p> <p>+ Greater possibility for the employees to control the organization of working time</p> <p>+ Easier commuting (less traffic congestion and less overburdening of public transport during peak hours)</p> <p>+ More balanced distribution of time between work, family and private life</p> <p>+ Extra time for training, rest, private life</p>	<p>- Potential inconvenience for some workers, due to new schedules</p> <p>- Potential risk of overload in order to save time (limiting the degree of time sovereignty)</p> <p>- Possibility to reduce the payment if overtime is eliminated and basic remuneration is not increased</p> <p>- Loss of control on actually worked hours (particularly in the case of individual contracts)</p>	<p>+ Better adapt to changes in workload</p> <p>+ Increase productivity and motivation of workers</p> <p>+ Extended operation (more intensive use of facilities and equipment)</p> <p>+ Reduction in the cost of overtime and related compensation thus reducing the labour cost</p> <p>+ Reduction in turnover</p> <p>+ Reduction in absenteeism</p>	<p>- Potential administrative difficulties in keeping and monitoring documentation</p> <p>- Increased complexity of work schedules (creating additional costs)</p> <p>- Possible loss of control over certain aspects of working time</p>
Compressed work weeks	<p>+ Fewer working days</p> <p>+ Reduced commuting time and transport expenses</p> <p>+ Better reconciliation of work and private life</p> <p>+ Larger paid leaves with better planning of leisure</p>	<p>- A longer working day</p> <p>- Increased fatigue and risk of accidents</p> <p>- Labour intensification, especially in certain periods</p>	<p>+ Reduced operating costs (energy, water, etc.).</p>	<p>- Increased fatigue and risk of accidents</p> <p>- Lower productivity</p> <p>- Possible loss of control over certain aspects of working time</p>
Annualized hours arrangements/other	<p>+ Stable income, regardless of</p>	<p>- Unpredictable and irregular working hours</p>	<p>+ Better adaptation to changing production</p>	<p>- Complex administrative</p>

<p>forms of hours averaging</p>	<p>variations in hours worked</p> <p>+ Potentially increased influence (control) of employees on their working time</p> <p>+ Better reconciliation of work and private life</p>	<p>- Workloads with varying severity</p> <p>- Problems with balancing work and personal life</p> <p>- Possibility to reduce the payment if overtime is eliminated and basic remuneration is not increased</p> <p>- More unsocial working hours without compensation (in particular the loss of compensation for overtime)</p> <p>- Loss of control on actually worked hours (particularly in the case of individual contracts)</p>	<p>requirements or services provision</p> <p>+ Increased opportunity to reduce overtime and the related compensation, thus reducing labour costs</p> <p>+ Reduction in labour costs in the event that there is no overtime payment</p> <p>+ Reduction in absenteeism</p> <p>+ Reduction in turnover</p>	<p>procedures and associated costs</p> <p>- Possible loss of control over certain aspects of working time</p>
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4. Discussion

The main advantages of the various types of organization of working hours for workers result in higher income, longer periods of paid leave (in case of admission of compensatory rest), better reconciliation of work and family life, the opportunity for optimal use of workers' time, thus resulting in a positive impact on their health and well-being, etc., and among the disadvantages we would highlight: potential negative effects on health and safety at work and on the balance of work-life, intensification of work, especially at certain times, a longer working day, increased fatigue and risk of accidents at work, intensification of labor, especially at certain times, etc.

With regard to employers as advantages we can highlight the possibilities for better synchronization of working hours with the requirements of production or services, increased production in response to increased demand, more intensive use of facilities and equipment, improved adaptation to fluctuations in consumer demand, more flexible work planning, and as disadvantages the extra costs for payment of overtime, potentially reduced marginal productivity, an increased risk of diseases and accidents at work, complicated administrative procedures and related costs, etc.

5. Conclusion

In order to optimize the working time in XXI century it is necessary to find a reasonable balance between the needs of workers (which require protection in terms of occupational health and safety and personal / family life) and the requirements of enterprises, which also take into account public needs.

Clearly defined rules on the organization of working hours in enterprises in the following posts would largely minimize and eliminate the tension between workers and employers:

- Limits on daily working hours (maximum duration of the work shift and minimum daily rest periods);
- Limits on weekly working hours;
- Breaks during the working day; paid annual leave;
- Protection for night workers;

- Equal treatment of workers with a temporary employment;
- Atypical/ precarious organization of working time;
- Achieving balanced flexibility of working time;
- “Work sharing”;
- Social dialogue and collective bargaining on working time.

The improvements in the work organization by introducing policies and regimes, developed on the basis of physiological, social and health-based requirements, and in accordance with the specifics of the labor process can significantly reduce the health risk and the level of occupational injuries in terms of micro and macro economical aspect.

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Economic, Social and Environmental Aspects for the Promotion of Cultural Heritage in the Balkans

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Abstract

This paper attempts an exploration of economic, social and environmental issues that are related to the promotion of cultural heritage of reference areas in the Balkans. The assessment of the value of cultural heritage contributes to the proper management of cultural identity and hence to the promotion of the image of a region. The enhancement and promotion of cultural identity, focusing on sustainable development, is a key issue in urban planning. In theoretical level it is analyzed the economic, social and environmental aspects of an area that affect the promotion of the cultural reserve and are related to the promotion of the area image. The socio-economic conditions, quality of life, historical traditions and aesthetic values directly affect the cultural environment as an extension of the global environmental system. Contemporary planning policies include practices for the protection and promotion of cultural assets through innovative applications, fulfilling technological requirements. The importance and wealth of cultural reserve in the Balkans is particularly demonstrated by the large number of monuments and sites classified as "World Heritage Sites" by UNESCO, contributing to the promotion of the cultural image of the region, through practical effects. Through specific reference examples, in this paper, we present the new urban policies that enhance the image of the Balkans, highlighting their characteristics. The objective is to evaluate/assess the implementation of economic, social and environmental aspects in planning as an anticipated public benefit in cultural promotion of areas in the Balkans.

Keywords: Balkans, cultural heritage, management, promotion, strategic planning

1. Introduction

According to the General Principles of the Charter in the broad sense of the term heritage is included both natural and cultural environment. They are also included historical sites, places and the built environment, as well as biodiversity, collections, old and continuing cultural practices, knowledge and living experiences. It is the heritage that shapes substantially the identity of each nation, country, region or place as an integral part of contemporary life. The particular heritage and collective memory of each region or community is irreplaceable and an important foundation for current and future growth.

The term cultural reserve includes all forms of cultural expression and artistic creativity of humans over time. The architectural heritage is only part of the cultural reserve of a human whole or a geographical area. It includes monuments,

architectural ensembles and historical sites of archaeological, artistic, social, scientific and technological interest. In this context, the cultural heritage is fundamental in determining the local-national, regional and European identity and can variously affect the spatial planning (Gavra, 2004).

The memory of a place is a concept deeply connected with facts, personal experiences, codes and meanings hidden in time, that are not easily distinguishable and comprehensible. And there lies the mystery in reading a place. The memory, above all is identified with the place itself, constituting its tangible and intangible expression. Therefore, it is of great importance the exploration of the meaning of place, of its residency, its spirit, in order to approach the memory and to associate it with specific reference places. The spirit of a place, its physiognomy is determined historically and culturally. The place is the mirror of its history, its transformations in time, is linked deeply to memory, representing at the same time the same collective memory of its users (Fig. 1).

Southeast Europe, a region with particularly wide variety of cultural reserve, includes urban centers and wider areas -not necessarily only urban- with a multicultural character, rich in residues of cultures of various historical periods, important religious movements, and various architectural influences. These traces of history, scattered in the Balkan countries, do not always show the same degree of density. The prevalence in the region and for a long time of great historical dynasties - empires (Roman, Byzantine, and Ottoman) created the phenomenon of 'relative sites' or 'cultural synergy zones'. The concept of limits (as natural limits) -as it is today- is replaced with the concept of relative places of common cultural characteristics that are recognized over large geographical sections of the reference area (Gavra, 2004).

2. Management policies: cultural planning, economic, social and environmental aspects

In the era of globalization and information society, the protection and promotion of the monumental, architectural, archaeological, ecological heritage needs to be integrated into individual policies for economic, social and cultural development and in conjunction with the objectives of spatial planning is the instrument of achieving these policies.

Today heritage is no longer seen as an obstacle on development but as a means of strengthening the economy and improving quality of life. The historical centers, historical and cultural poles, traditional settlements, monumental ensembles, archaeological sites and nature reserves are a huge resource for Greece and Europe and also a transmission tool of their cultural values (Beriatos, 2007).

The area of the Balkans, despite the differences in levels of institutional framework concerning the treatment methodology of monumental wealth protection issues, displays the image of a unified cultural space, without special monumental identity differences. This homogenous element now offers a series of transnational cooperation opportunities in research-analysis, protection and management of cultural heritage. The protection, restoration and reuse of cultural reserve might be for the countries of the Balkans a significant wealth factor (Fig. 2).

Already in the last decades, the transition to a market economy as well as the pre-accession process for most of these countries offers a range of corresponding possibilities to exploit the cultural inventory, especially architectural, through public and private investments and programs mainly from transnational cooperation.

Cultural planning is a multidisciplinary approach and can be understood best as a strategic process of collaborations between society, the local administration and local production with effects on economic, environmental and social development. It is a strategy for a unified conservation framework and utilization of cultural resources. The cultural planning is related to urban planning with the strategic use of cultural resources for development at local and regional level. It is the cultural approach to urban and regional planning, focusing on the formulation of a social, environmental and economic policy program (Wilks -Heeg and North, 2004).

The integration of cultural planning into wider processes of spatial and urban planning provides the capability to create viable, attractive and competitive cities. In order for the cities to offer new experiences to their guests (Kolb, 2006), cultural characteristics are used as a tool to differentiate them. The urban marketing, according to Defner & Metaxas (2006) complements and does not replace urban planning. The main convergence areas of the processes are: a) urban development in areas such as tourism, sport, arts and the media, fashion, architecture, cultural heritage, e.t.c., b) urban management, c) urban governance, d) cultural planning, e) city branding, g) design events, h) urban regeneration and i) urban policy.

The heritage protection directly depends on the economic development of a region while helping to promote innovation, the efficient management of resources, the development of employment, tourism and the new e-economy. It is also connected to local, regional national and external economies as a result of cultural industries.

Social cohesion is reinforced by cultural participation of individuals and groups, especially vulnerable, through cultural programs and events, recommending the improvement of quality of life and social inclusion.

Therefore, strategies for cultural heritage are essential to give priorities based on the creation of new partnerships and synergies by integrating the local planning consistently to the specificity of each area.

3. Reference areas: similarities, contradictions, evaluation

The area of SE Europe, as a meeting point of different cultures and civilizations, includes cities and regions with a strong multicultural character due to different historical influences, social conditions and architectural heritage. The accumulation of different ethnic and national minorities and the lack of continuity between the historical past and the modern present affected the image of the urban centers of SE and their identification. Specifically, the transition processes in SE countries influenced the economic, political and social space, with effects to spatial planning and urban programming.

The reference examples are examined at country level and were selected based on previous research. The cases concern Greece, Romania and FYROM.

A. In Greece cultural heritage is now considered one of the most economical resource and a key factor in cultural, social and economic development. In addition to that, the promotion and protection of cultural resources, is an investment fund in conjunction with the tourism sector, crucial for the country's development (Parpaïris, 2004).

The urban development policy guidelines for the protection of cultural assets in areas with a strong local identity and characteristic features mainly relate to the establishment of new social economic operators, the creation of new organizational structures and feasible local planning through urban and architectural design. The aim is to institutionalize planning mechanisms and development agencies for the proper management and enhancement of cultural identity and evaluation of cultural heritage (Gavra and Kampouri, 1998).

The particular importance given to the protection of cultural heritage is demonstrated by the fact of its inclusion in the text of the Constitution, expanding the content of the ancient monuments in the surrounding area, the residential complexes and historic landscapes up to intangible cultural goods (Voudouri, 1992-Trova, 2003).

However, systematic survey and registration of cultural and natural monuments, the expansion of the legislative framework in management and protection of cultural and natural heritage, as well as the active role of local authorities remain issues to be addressed (Theodosiou-Drandaki, 2007).

In terms of cooperation, Greece seeks through organizations and institutions interconnection with other European and international actors, aiming to promote Greek language and history, art and culture. The strengthening of cultural relations and ties is a key issue for both public and private cultural institutions in an effort to reformulate the tourism sector, as a powerful national economy product. Moreover, the cultural and educational content programs for the mobility of young people in Europe and abroad are a powerful factor towards this direction (<http://culturalpolicies.net>).

B. The importance, the wealth and diversity of cultural reserve in the territory of Romania today, is demonstrated by the large number of monuments and sites that have been identified as monuments of universal interest by Unesco. This characterization has a double meaning: on one hand contributes to the establishment of the protection of monuments and on the other, it has a positive effect in promoting the cultural image of the area outside the boundaries of the country as well as the potential enhancement and management towards a "healthy" touristic promotion (Delivani, 1992-Nikas, 1992-Gavra, Delivani and Nikas, 2006).

Today, in order for Romania to adapt to the principles of a single, long-term spatial development strategy towards a successful and smooth accession to the European Union, seeks, among others- to adopt a sustainable approach for the management of natural, cultural and residential environment. For this reason, the development of the national territory is based on a series of fundamental principles. According to this approach, in order to harmonize with European territorial

policies, it should aim both at the exploitation of the country's potential, and secondly at the reduction of internal imbalances and disparities at regional and local level.

The main problems registered today in the country in the field of management and promotion of cultural assets can be considered the following:

- the failure of financial service capabilities and, therefore, the utilization and promotion of cultural heritage, in all its width,
- the diversification of priorities towards the direction of management.

As the main tool and framework of spatial development policy in Romania today, is considered the National Urban Development Program, which provides the conceptual framework and strategic perspectives in this direction (Gavra, 2006).

The main objectives of the government are:

- increased accessibility and participation in culture,
- promotion of diversity and protection of cultural identities,
- promoting multiculturalism and protection of minorities cultures,
- protection of cultural, tangible and intangible heritage,
- reinforcement of cultural industry by facilitating and supporting artists and creators, promotion of intercultural dialogue, ideas and creativity
- planning of an appropriate social heritage protection system and strengthening local actors,
- specialization in the cultural sector,
- promoting cultural lifelong education programs.

Regarding partnerships and programs, Romania actively participates in local, European and international level by promoting culture in combination with tourism and education sectors. It is worth to mention measures for the Roma culture as a social cohesion policy and the various plans for interconnectivity and mobility of young artists, ideas and events via electronic communicative platforms (<http://culturalpolicies.net>).

Other actions involve:

- national protection programs based on foreign capital (UNESCO, Council of Europe)
- international programs of local interest in cooperation with neighboring countries
- regeneration of the historic center of Sibiu within the institution of cultural capital for 2007.

Finally, another one is the protection and management program in the Danube Delta region between Romania and Ukraine within the context of awakening public responsibility for protected areas in Romania (<http://www.unesco.org>).

C. FYROM is a small country in size and population with limited financial resources. The strategic geographical position of the country and its history has shaped the multicultural identity and has affected its cultural reserve, which is registered as interesting, withdrawing elements from different historical periods.

Regarding the legislative framework for the protection and management of cultural and ekistics heritage, FYROM has validated several international and European conventions, while some of those that are currently in force in the country from the former federation of Yugoslavia (Gavra, 2008).

The Law for Culture, adopted in 1998, was the first single law in the field of culture. However, an important step was the Law for the Protection of Cultural Heritage, valid from January 2005. The Law has been positively assessed by the competent committee of UNESCO, aligned with the most recent issues of what is included or not in the various definitions of cultural heritage (Ristov, 1997).

Specific instructions by UNESCO refer to:

- the preparation of a comprehensive report of the current situation of architectural, archaeological and environmental heritage
- identification of the main problems in the management and protection of cultural heritage
- finding feasible scenarios for resolving technical issues in areas of interest
- the establishment of long-term actions to improve the quality of interventions in individual regions
- compliance with the guidelines for restoration, protection and management of cultural heritage and the environment posed by the national authorities
- the juxtaposition to UNESCO proposals for potential sponsors, whether governmental or private, measures and initiatives to be used as guides for national authorities in the management of cultural heritage (<http://www.unesco.org>)

FYROM participates in numerous European programs relating to culture, the most important of which was the Plan for Culture 2007-2013, aiming to promote cultural cooperation at transnational level. By participating in similar programs, launched by the Council of Europe, the country achieves both secure financial resources for the implementation of cultural activities, adopts European principles and the expertise to protect the cultural and ekistics heritage and secondly and more importantly promotes intercultural dialogue (<http://culturalpolicies.net>).

In conclusion, in both three reference cases, the European Union, through the Council of Europe and the international organization of UNESCO, has a decisive contribution to the preparation of key policy axes for heritage issues. Actors, such as the European Heritage Network, the European Institute of Cultural Routes and numbers of non-governmental organizations and other international organizations (World Bank, UNDP), whose countries are active members, are involved in the management of cultural heritage and facilitate startup programs, projects and cooperation in the field of culture (Fig. 3).

4. New urban policies suggestions/ evaluations/estimations

The general principles and policy objectives for culture in the Balkans are consistent with the existing international and EU policies such as environmental policy aimed at sustainable development and environmental protection and nature conservation, economic and social cohesion of the region by improving competitiveness of tourism, spatial development through balanced cultural development and equal opportunities for access to cultural goods (Gavra, 2004).

The general principles and policy objectives for culture in the Balkans are consistent with the existing international and EU policies such as environmental policy aimed at sustainable development and protection of the environment and nature, economic and social cohesion of the region by improving competitiveness of tourism, spatial development through balanced cultural development and the provision of equal access to culture

Under the new situation, firstly, there is a rapid change and development of urban policies and urban governance from the traditional administrative schemes to new business management models (Cox, 1993 and 1995) and new radical urban governance models focused on growth (economic and demographic) of cities through offered quality of space (Clark and Rempel, 1997 · Clark and Hoffmann-Martinet, 1998 · Clark et al, 2002). Secondly, urban planning appears to take for all categories and groups of cities an important new role as an economic development tool. A significant relationship between design and the economy of the urban space that was maintained for centuries is reversed nowadays. While in the long history of cities the high quality of the designed space and the design innovations have always been the result of the economic boom of specific cities and regions at a time, in the new era of urban design, innovation and quality of space is used consciously as a means of economic development of cities (Gospodini, 2000 · Gospodini, 2002).

Therefore, measures relating to the natural regeneration of the urban environment are combined with measures for promoting education, economic development, social inclusion and environmental protection. Developing strong partnerships where local citizens are involved, civil society, the local economy and the various levels of government, are a prerequisite. The combination of skills and local knowledge is essential for identifying common solutions and ensuring sustainable and generally acceptable results (Cohesion Policy 2014-2020).

Plus, the new economic environment framed by the phenomenon of globalization, according to Gospodini and Beriatos (2006), sets in local governments as an increasingly main objective the provision of conditions that are sufficiently attractive to new businesses.

As mentioned in the Commission's cohesion policy (2014-2020), the cultivation of integrated urban policies would strengthen sustainable urban development and the adaptability of cities to ensure synergies from the European structural and investment funds (GRNET).

In the above context, the promotions of cultural reserve combined with innovative design tools are dominant in spatial transformations (Gospodini, 2006).

Specifically (Fig. 4):

- the protection and restoration of monuments, buildings and historical sites is facilitated with the use of new technologies and applications making them accessible and keeping intact their identity,
- the reuse of buildings and their integration into the existing urban fabric emerges through modern design programs related to their architectural value,
- the promotion of cultural heritage strengthened by the existence of local and nationwide projects is aimed at establishing the identity of a place,
- the knowledge and research for the richness of cultural reserve is feasible with the use of the internet and the amount of technological applications that are eliminating physical barriers such as distance and time,
- cultural interventions in historical cities centers result in strengthening cultural tourism and local identity,
- the preservation of urban historic fabric is achieved by the integration of environmental protection and sustainability policies to harmonize with the urban set,
- the social participation in the programs and planning ensures active citizen action on synergies issues for culture, tourism and local culture.

4. Conclusions

The Balkans are a melting pot, a node of different cultures, creating their own specific image. The geomorphological relief, economic-social context, their history and architecture rendered them as contemporary cultural epicenters and inexhaustible sources of research and interest. In several regions within the reference area is observed an accumulation of ethnic and national minorities with various cultural expressions, while in others there is a lack of continuity in this modern present with the historical past. This historical continuity of cultural expression and creation or the strong historical sections have also consequences in the degree of cultural heritage preservation of individual areas.

The question arises as to whether the cities and regions of Europe operate competitive or complementary to the normalization of their internal tensions and the extent to which modern urban policies create conditions in the direction of reforming the new European space. In the context of European integration, the development of further cooperation actions of countries with common cultural elements is crucial for the proper management of natural and cultural heritage sites.

The objective is the design and implementation of European and international conventions to be incorporated in the legal framework of each country and region, in agreement with the relevant European one, always taking into account the local needs and particularities. Besides, the promotion of a sustainable development model is a key option in both European and global level (Fig. 5).

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Links

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Figure 1: Views of the Balkans (Source: <http://www.balkantale.com/gr/main.php>)



Figure 2: Views of the Balkans (Source: <http://www.balkantale.com/gr/main.php>)



Figure 3: Views of the Balkans (Source: <http://www.balkantale.com/gr/main.php>)



Figure 4: Views of the Balkans (Source: <http://www.balkantale.com/gr/main.php>)



Figure 5: Views of the Balkans (Source: <http://www.balkantale.com/gr/main.php>)

Building an information system to enhance innovative SMEs in Albania

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Abstract

SMEs play an important role in the national economic development of any country. Now days SMEs are becoming more and more a subject of high attention of policy makers especially to developing countries due to their great potential in contribution of sustainable economic growth and employment generation for the national economy. In Albania, SMEs represent about 98% of the total enterprises in the country with a contribution to national GDP for about 70%. The economic performance and the structure of national economy is depended very much on the performance and the contribution of SMEs. Therefore, building an information system on SMEs performance is very important especially related to the objective for enhancing the innovative SMEs in the country. To measure SMEs' ability to compete on national, regional and international markets requires a lot of information on all aspects, not only insights from SMEs but also contribution from SME experts, policy makers, representatives of associations of private enterprises dealing with SME issues. In addition, survey data analysis, is very useful instrument to establish the set of proper indicators (employment, productivity, adopted technology, access to credit, to market) to measure to what extent these indicators are fulfilled by Albanian SMEs. To achieve this objective, the author have used the data collected through sample survey carried out by regional development agency, to 150 SMEs engaged in industrial production, located in 4 regions of the country. The sample results shows that despite the worldwide economic crisis, SMEs in Albania have contributed in growth of new jobs and investments in new technologies. Nevertheless currently SMEs still lack an adequate level of experience with regards to their functioning in the context of a market economy and open competition. The objective of the article, based on sample survey data is to prepare a set of recommendations both for SMEs and the stakeholders committed to SMEs development.

Keywords: SME's, productivity, new technology, competitiveness, international market

Introduction

Many studies conducted in Albania have been focused on competitiveness, R&D and productivity, but less on innovation. These studies have mainly highlighted how companies gain more advantage or profit and how they can be successful among competitors. Main topics addressed in this research are: (a) innovation (b) technology, (c) R&D and (d) environmental awareness. Further more modern economic growth theories stress the importance of ideas or knowledge as underlying drivers of growth. Four key drivers of productivity can be identified as follows: (a) Skills (b) Investment (c) Innovation (d) Competition. In order to draw a comprehensive profile of the factors affecting SMEs competitiveness in Albania, those indicators related to the topics above are matched with other specific competitiveness dimensions: (a) Access to target markets (b) marketing (c) workforce education and (d) labour skills.

General data on SME's in Albania

The Albanian economy in now-days can be characterized as a market economy with stabilized macro indicators, and as such can be mentioned the growth rate of GDP, the average annual inflation, relatively low unemployment rate. The most important contribution to the economic growth of the country is coming from the private sector, which continuously shows growing trends not only in the traditional sectors of the market economy such as service sector but is increasingly its present in the manufacturing sector. Talking about the private sector of the economy, we naturally make parallelism between it and

¹ GLA Economics' submission to the Treasury and DTI consultation on productivity indicators, London 2004
2. Include existing companies in agriculture sector, registered for the first time in business register

the SMEs sector. There are strong economic reasons why this parallelism is happening and if we look at the figures it can be concluded that SMEs account for about of:

99% of the total number of active enterprises operating in the national economy.

74% of the registered employment, at the national level

55% of sales (turnover) at the country level

60% of the national GDP (excluding agriculture)

Table 1- Number of active enterprises by the economic activity and size class

SMEs by size class	Year					
	2010	2011	2012	2013	2014	2015
Total economy	103,038	109,039	106,837	111,083	112,537	152,288
1-4 employees	92,798	97,836	95,520	99,782	101,025	136,470 ²
5-9 employees	5,018	5,194	5,636	5,235	5,387	8,172
10-49 employees	4,078	4,744	4,439	4,660	4,647	5,994
50+ employees	1,144	1,265	1,242	1,406	1,478	1,652
Producers of goods	16,049	17,099	16,413	16,842	16,989	37,950
1-4 employees	12,198	12,991	12,592	13,071	13,273	33,255
5-9 employees	1,791	1,717	1,718	1,565	1,603	2,080
10-49 employees	1,649	1,923	1,650	1,681	1,562	1,971
50+ employees	411	468	453	525	551	644
Producers of services	86,989	91,940	90,424	94,241	95,548	114,338
1-4 employees	80,600	84,845	82,928	86,711	87,752	103,215
5-9 employees	3,227	3,477	3,918	3,670	3,784	6,092
10-49 employees	2,429	2,821	2,789	2,979	3,085	4,023
50+ employees	733	797	789	881	927	1,008

Source: INSTAT, 2015

Within production of goods sector, manufacturing enterprises represent the main branch for about 61% except the last year, due to the registration for the first time of the existing companies in agriculture sector. In sample survey although the main focus is the manufacturing sector are also included companies operating in agro-industries and processing construction materials.

Table 2- Main economic indicators of SME-s by size class

General Indicators at 2015	Enterprise size class			
	(1-9)	(10-49)	(50+)	Total
Number of enterprises	95%	4%	1%	100%
Annual average number of employees	45%	19%	36%	100%
Total income	25%	31%	45%	100%
Total cost	24%	31%	45%	100%
Net profit/loss	36%	20%	44%	100%
Total investments	11%	26%	63%	100%
Production	22%	26%	52%	100%

Value added	23%	23%	53%	100%
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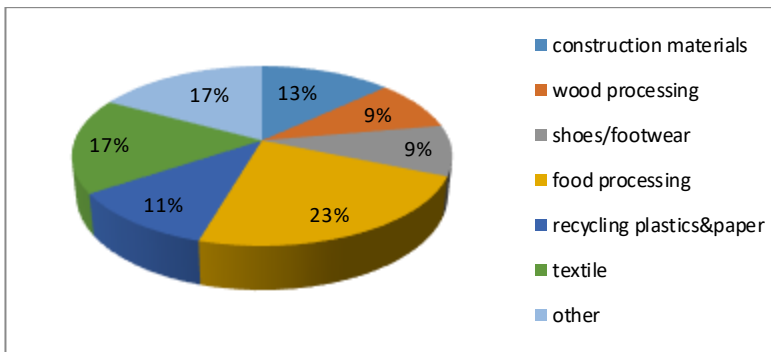
Source: INSTAT, 2015, calculation by author

SMEs play a crucial role in Albania's economy. They represent roughly 98% of registered businesses in Albania and generate a share for about 70% of GDP. About 15% of them are engaged in production of goods and the rest of companies perform service activity. The highest concentration of SME's is in the central area of the country.

Detailed analyzes of sample survey data.

A sample of 150 companies in production sector are interviewed to collect data on their performance. The majority of companies are medium-sized and about 23% of them are conducting their activity in "food processing" and "textile production". The graph below gives more detailed picture on the distribution of companies by industry sectors.

Graph.1 SMEs by economic activities



Source: sample survey data, calculation by author

Most of the interviewed entrepreneurs are men, reflecting the overall Albanian situation of low rate of female entrepreneurship. Young entrepreneurship representation as well is very low, in accordance with national data, whilst the average educational level varies from sector to sector.

Employees by the level of education-From the sample survey data it seems that « wood processing » (70%), « recycling » (65%), and « food processing » (62%) sectors declare employees with secondary and high school education to be the most common one. Meanwhile, « shoes » (54%), « textile » (46%), and « construction » (36%) sectors have the predominance of staff with elementary education and less with secondary school. Textile, shoes, footwear, and recycling sectors have the fewest employees with university education. This is because these companies do not require skilled workers or workers with high education. Company owners of these sectors think that the education level of their staff is not an issue for the performance of their business. *It is interesting to note that new industries that have invested in new technology recruit staff with higher education, while industries that have invested very little in new technologies do not ask for qualified or potential employees with university education.* SMEs should be able to respond quickly and efficiently to regional & international market signals to take advantage of trade and investment opportunities and benefit from the applied trading rules. As result, they need to be competitive and productive to enter to the international market so qualified and educated employees is key element to achieve this objective.

New jobs creation- Interviewed companies operating in industrial sector have declared new job openings during the last two years. This fact does not contradict the recent economic crisis in the region or the official unemployment data. SMEs and large companies are in a tough competition and to be competitive they are seeking to create new jobs. According to sample survey data it results that 18 % of the companies have created (3-10) new jobs,16% of them have created (1- 2) jobs, 11% have created more than 10 new jobs, and the rest about 54% have not created any new jobs during the last two years. Regarding the contribution in job creation by activity it results that « food processing », « other », « textile », and « shoes/footwear » companies have created higher numbers of new jobs compared to other sectors such as « construction processing materials », « wood processing » and

« recycling ». This is due to new contracts signed with foreign partners and great opportunities for exports of those companies. The highest rate of new jobs creation was identified at « foot wear » (77%), « textile » (48%), « food processing » (46%), « wood processing » (43%). One good reason to explain this situation is related with the fact that the demand for employees for those companies is oriented to people with low level of education and qualification that can be found easily in the labor market. The demand for qualified new jobs by sector varies from 26% to 49.7%. This shows the diverse trend of the level of qualification within these enterprises. A more detailed analysis reveals that “food processing” and “other” sectors employ a bigger percentage of highly qualified people than “construction” and “textile” sector.

Business Improvement environment- Surveyed businesses in regard to the improvement of their business performance over the last two years declare that: 65% of them have considerably increased the quality of their products or services over the last two years, 35 % of the responders have increased their production and expanded the range of services provided, 27% declare that have sold in new locations and to new traders, 21 % declare they have bought new machinery & equipment, only 7% declare that they have established a new enterprise (the question foreseen more than 1 choice). The interviewers report that compared to two years ago the wage of employees, the personal income (57%) the number of people employed (45%), the profit (43%), and the sales (38%) have stayed at the same. For other elements such as number of clients and number of people employed, 38% and 37% respectively declare that the situation has been improved too. Nonetheless, in overall average the situation has generally stayed the same.

Certificates or patents- New rules introduced through the EU & regional trade integration system require SMEs to comply with higher technical (e.g. technical barriers to trade, tariffs and non-tariffs), environmental (e.g. ISO14000) and labor standards in domestic and export markets, EUREPGAP, HACCP etc. As such, companies in Albania are aware about the standards and certificates needed to fulfill international rules for export and are making further steps. About 24% of companies that have certificates or patents declare that they also have ISO certificate. 10% of them have other local certificates or patents, 4% companies that belong to the food-processing sector and deal with export are equipped with HACCP certificate. More than 60% of respondents did not declare any certificate. The sector that is best equipped with standard certificates is ‘food processing » (80%). The companies that operate in this sector have invested in fulfilling standards for food safety etc., which has influenced them to invest on standard certification aspects. As for footwear (14%) and textile (46%), the situation is different. These sectors are mostly based on orders from foreign partners their products do not need any strict certification therefore they have not invested in new updated technologies.

Product certification-With regard to the certificates related to any or some certified products by the companies, the situation is that 34% of companies declare they have certified products. 36% of the companies have no certified products and 14% of them are in the process of getting the certificates for their products. Companies offer different responses when asked about practicing certified products. They list local quality certificates or special permission provided by local laboratories for certification of specific products in order to export. However, there are also cases when the tests for quality standards are carried out abroad.

Investments made by companies -The key factors determining business investment decisions are the expected return on the investment, the planning prospect, and the perceived risk of investment. An important segment of the surveyed entrepreneurs reports that they have constantly included investment plans in their business. Thus, 45% of them have made investments in the last 12 months in accordance to prior investment plans, whereas 51 % had not invested in the last 12 months. They declare that their investments according to business plans are strongly connected with factors such as, the credit, a safe market and knowledge of the market. Companies that have made the highest investments are food processing and shoes & footwear companies). Fewer investments are made by sectors such as « wood processing » and « construction processing materials ». Companies that have invested the most are those formed in recent years. They have made new investments in technology and modern lines. Technological lines are mainly imported from EU countries where local companies engage in new experiences in waste recycling, or processing of paper and plastic.

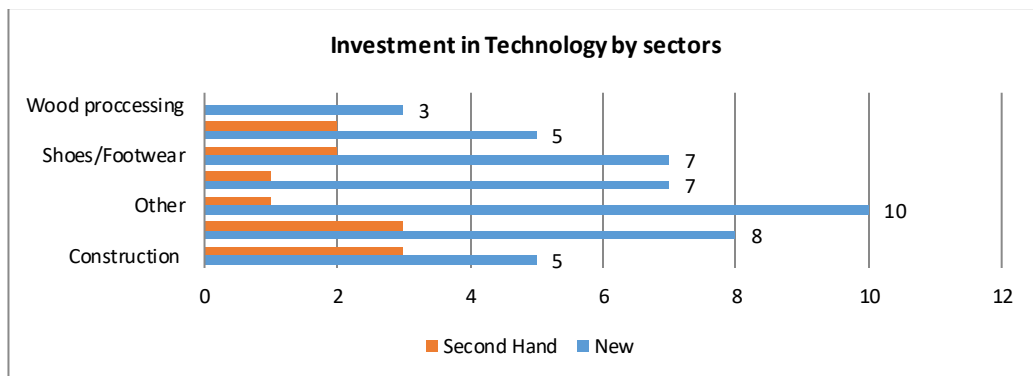
Type of investments-The scale and location of business investment depends on the business strategies adopted by companies. In this context, ambitious firms that aim to grow strongly prefer more to invest and take risk. The level of business investment is also affected by the Albanian business environment, which is affected by the cost of doing business,

the quality of infrastructure, the taxation system and macroeconomic, political and policy stability. Investment is also variable of local and international competition. With regard to the areas targeted by their investment plans, about 28 % of the companies reported they have made investments in new technology or standard compliance, 22 % have made investments related to the increase of the production volume, 19% have invested in marketing and sales, 15% on efficiency, 12% on adding new processes. Only a few companies report on other elements such as investments for certificates on ISO/HACCP, opening of a new business, etc.

Investment in technology- With regard to new technology invested, about 30% of the companies report investments in new technology, 8% of respondents have invested in second hand machineries. About 62 % of the companies did not answer regarding the technology invested in. This low investment rate is explained due to three main reasons: (i) economic crisis in the region, (ii) low rate of crediting of the enterprises (iii) postponed projected investment in another period of time by companies. From the companies who have invested, “Other” sector, “Food processing enterprises”, “recycling” and “shoes/footwear” have invested more in new technology. Because of strict rules related to food standards and safety, “food-processing” companies are conditioned to invest in new technologies. Some other enterprises have invested in second hand technology as well because of the fact that these industries use to work based on orders and cover a part of the value chain product(ref. graph 2).Albanian companies have mainly opted not to invest on new machinery and equipment. However, currently there are many pending plans for investments. Through new funds and programs like IPARD Like grant scheme or Italian Credit line, there are great hopes for these plans to be implemented in the near future.

Business skills- Business skills are very important for productivity as more skills enable individuals to work more effectively within the workplace and help facilitate the introduction of new innovative ideas and practices within the production process.¹ Alongside the supply of skills, the need to match the provision of skills to the requirements of employers and then utilize these skills effectively within the workplace are important factors of Albanian SMEs progress in this area. During growth and expansion phases, SME owners must improve their analytical skills regarding the strong and weak points of their enterprise.

Graph 2 Companies by investments in technology

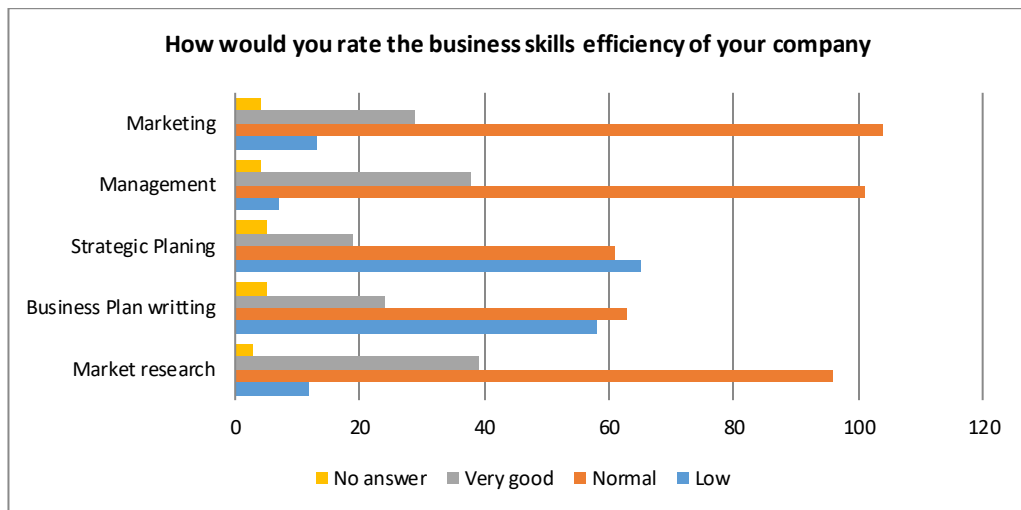


Source: sample survey data, calculation by author

They should also strive to develop a thorough understanding of the threats and opportunities posed by and in the business environment. In order to contribute to the growth and success of the business it is essential to develop capabilities related to strategic corporate planning. Interventions aimed at developing the advanced managerial skills required by the modern businesses such as facilitating, negotiating, team building, and networking are also a very significant element of business growth.

Graph 3 . Companies by Business skills efficiency

¹ BERR 2008, Productivity and Competitiveness Indicators



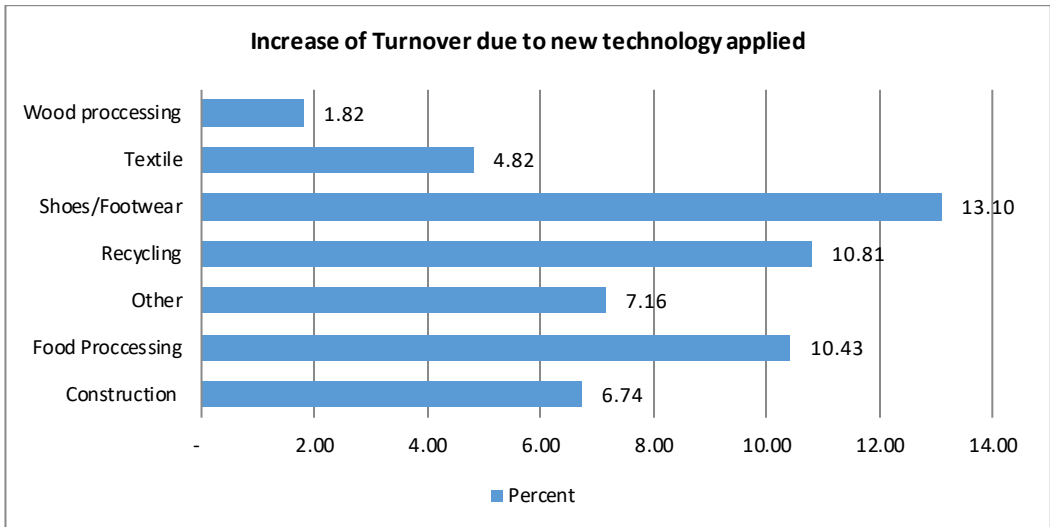
The business skills rated the highest by companies are those of market research, marketing and management. On the other hand, companies feel they are lacking in skills such as business plan writing and strategic planning. This is because enterprises consider the preparation of the business plan documents only when they are applying for credits or entering in business deals with foreign investors

Source: sample survey data, calculation by author

Company level of modernization-There are some interesting results on the company's level of modernization. More than 85% of the companies have computers or business web pages. This exposure makes them regionally and globally known and some of them able to apply E-commerce. About 88 % of the interviewed companies have employed staffs that speak foreign languages. Some 42 % of the companies have a written company profile in web or are represented in some other way (a price translated list, product literature etc.). Throughout the year, 18% of companies planned a special budget on marketing. Hence, compared to a few years ago, the situation has significantly improved. Almost all the interviewed companies were positive regarding current and future levels of modernization.

Productivity, R&D, Innovation -Innovation is the successful exploitation of new ideas, encompassing the implementation of new or significantly improved products, processes, marketing and organizational changes that contribute to increased productivity and competitiveness. When asked about innovation in their businesses in the last twelve months, the majority of respondents declare that they continuously innovate(70% of the sample).However, the answer is very subjective. With innovation, most entrepreneurs understand simple changes performed in production lines or machinery, or even simple management practices. It is difficult for them to perceive innovation as a new concept. Companies that innovate the most belong to these sectors: "food processing" (29 enterprises), "other sector" (16 companies), "textile" (14 companies), and "processing of construction materials".

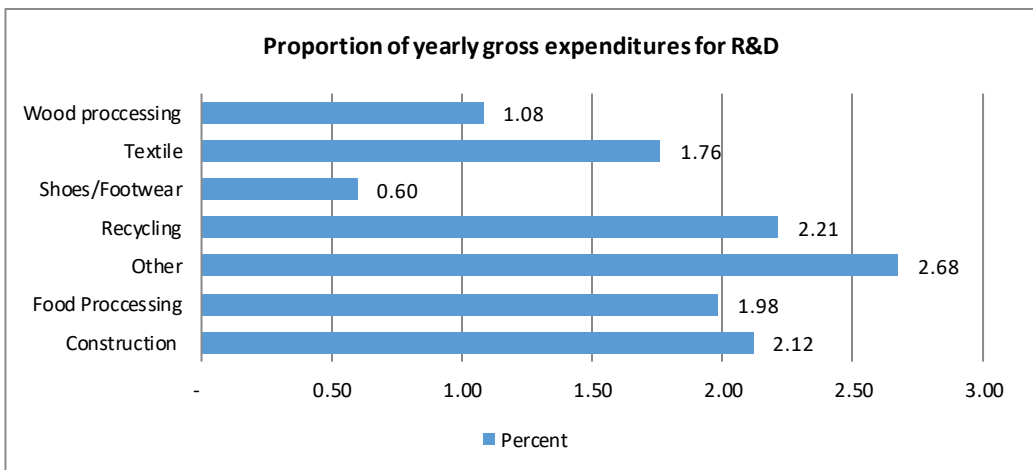
Innovation aspects-For companies that do innovate, when asked about the field of innovation, the survey has shown that 57% of them innovate in product processing, 25% innovate in marketing and distribution channels, and 18 % in business organization, management (HRD), finance etc. Overall average of innovation aspect is estimated for about 8 %.



Graph 4. Increase of turnover due to new technology applied

Source: sample survey data, calculation by author

When asked about the increase of company turnover due to applying new technology, ‘shoes and footwear’ industries report a 13.1 % increase, ‘food processing’ declares a 10.4 % increase, ‘recycling’, paper and plastic sector declare 10.8%. Other sectors have experienced lower increases of turnover. This scenario follows the same trend as the sectors that have made the most investment in technology. They are again the ‘food processing’ and ‘recycling’, paper and plastic industries. Overall average of increase turnover due to new technology is about 8% .



Graph 5. Proportion of yearly gross expenditures for R&D in percentage of turnover

Source: sample survey data, calculation by author

When asked about the proportion of gross expenditures for research and development (in % of yearly turnover), “other” sector declares 2.68% , ‘recycling’ 2.21% , “construction” 2.21% and “food processing” 1.98% . These sectors try to innovate and gain expertise by cooperating with brand name companies or with foreign companies that are specialized in similar

areas. The same argument makes sense for the 'wood processing' sector. The overall average proportion of yearly gross expenditure for R&D into turnover is estimated for about 1.9%.

Regarding the question of what part of the annual gross expenditures goes to environmental protection and safety, 91% of companies responded with 1-3%. These figures given by entrepreneurs are very subjective. This is because environmental protection or safety is meant as anything that happens in their enterprise, but it is not seen in the context of the whole environment. The overall average gross expenditure that goes for environment protection is about 1.6%.

Conclusions:

Albanian manufacturing businesses so far have gained a considerable experience in a market economy. Yet, there is always room for improvement in order to grow and deal in new markets. Different changes concerning production structure have already happened. However, many businesses are still in the process of adjusting to such changes. The market will still offer good opportunities for products from countries that have effective Free Trade Agreements with Albania.

The manufacturing sector should creatively work to find new ways to increase their productivity and competitiveness. Solving the following challenges will be beneficial to such companies:

Strengthening the infrastructure services delivery to facilitate market access and reduce the cost of doing business

Encouraging new SMEs entrepreneurs to learn the modern business language by offering them update and dynamic training courses;

Providing more training and after care services. This includes continuous information on markets, advice about market trends, introduction to new marketing strategies to increase sales and their presence in domestic or foreign markets;

Promoting projects on building a clear framework for the qualification and institutionalized support of manufacturing companies.

Developing economic improvement through adding and using resources in a proper way by shifting from a supply-supporting to a demand-supporting approach;

Establishing relationships with credit institutions, and other types of funds in order to support investments in new technology

Promoting productive industries and establishing connections with foreign partners;

Promoting and assisting the businesses to apply EU standards and create market opportunities

Recommendations

Public institutions working with manufacturing companies remain crucial for guiding and helping SMEs to adjust to new developments. The following actions should be taken in order to stimulate SMEs:

Develop successful business strategies specifically for SME-s.

Support the specialization of manufacturing industries and increase common relations between producers, marketing firms and consumers.

Raise the image of "Made in Albania" products in the eyes of day-to-day consumers, by improving production and marketing processes.

Increase product safety (conforming to international standards),

Support modern and attractive packaging as well as highly informative labels.

Assist the development of domestic suppliers and assign the value chain of products

Adopt new patterns of local organizations, such as manufacturing companies and explore new marketing channels

Suggest where and how to get support from the public sector (infrastructure, specialized training, etc.) and focus energies on things within control (customer learning, product upgrades, investing in human resources etc.)

Ensure and guarantee the convergence between government agencies and corporate along with the provision of good infrastructure for entrepreneurship and businesses, as an important factor in stimulating SMEs' success.

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Introduction of a Systemic Innovation Management Model for Facilitating Process Innovation

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Abstract

Within health care projects for change and innovation, professionals should ambitiously cooperate in order to yield a creative multidisciplinary mindset for guaranteed innovative output. Failure of innovation projects is amongst others due to deterioration and insufficient focus on relational aspects. Aim; an innovative management tool for facilitating process innovation is launched. Methods; Systemic innovation (SI) is a social network management model, subsidiary to actual management models for quality improvement and innovation. The SI management model yields essential tools for stimulation of communication in multidisciplinary teams in order to shape alternative mindsets. Results; The key domains of SI representing socio-dynamics, value of arguments and flexibility for change concern topics for assessment of behavior with regard to psychosocial and organizational characteristics. The key domains yield a format enabling a critical appraisal concerning improvement of socio-technologic aspects in case of process innovation. Conclusion; SI yields a format for stimulation of social awareness with regard to self-assessment, interoperability and mindset generation in multidisciplinary teams of professionals.

Keywords: communication, changeability, socio-technology, systemic innovation, quality management

Introduction

Quality and innovation management has evolved into a broad set of principles, methods and methodologies with a focus on organizations, culture and processes. Initially, quality assurance concerned technological issues in a production process which can be controlled. For assurance purposes tools and quality models focusing on process and product quality were generated. Characteristics of the so-called first generation of quality management systems include statistical process control, product inspection, process manuals (Jonker 2013).

Later on, the second generation of quality management models concerning the integral organization were implemented (1970-1990), including attention to contextual factors which influence processes and products. From this focus the EFQM

Model was generated, which is based on the integration of five key organizational domains and four key stakeholders domains. The EFQM Model revealed that *hard core* aspects and *soft* factors play a complementary role in the performance towards high levels of integral quality management in complex organizations.

From 2008 the so-called IMWR-cycle, an abbreviation of Inspiration, Mobilization, Appreciation and Reflection, has been added to the Dutch INK Management Model. With application of this feedback cycle the HRM aspects for changeability have been implemented in the technical and relational aspects of the operational management (Jonker 2013). Nowadays, it is clear that the input of human resources cannot be assured in this way and that an alternative approach is needed.

Tools and procedures for solving problems between employees and within the context of mutual relationships are needed. Communication and interaction, support and intervention in culture aspects are considered to be key words for quality improvement and innovation.

Process innovations are considered to be key drivers for quality improvement of patient care, wellbeing and quality of life. However, in daily practice process innovation projects frequently exceed the previously established timeframe and project management fails to deliver on outcome targets. In our opinion, delay is amongst others due to insufficient focus on human relational aspects. Implementation of innovation projects and quality improvement systems in health care organizations is a rather complicated, tedious and time consuming challenge (Berwick 2003). With respect to process management and evaluation of innovation projects, an approved methodology to establish return on investment is not available (Brutscher 2008). A basic management model applied for evaluation of strategy and monitoring of performance indicators for innovation is the added value chain model (Porter 1985). The management model just mentioned considers the strength of an integral chain of activities which are required to guide a product from the conceptual phase to several stages of manufacturing, delivery to consumers and final disposal. This third generation of quality management differs from the previous two generations in the sense that it has a perspective on the organization as an actor in the middle of a network of other organizational actors (Jonker 2013).

A review of literature references yields a wide range of change management models which have been applied for quality improvement (Ten Have 2007, Bakker 2013, Cozijnsen 2003). The EFQM/INK Management model, the Balanced Score Card methodology and principles of LEAN and Six Sigma are frequently applied in health care organizations because of the approved additional value with respect to ISO accreditation. These management tools are mainly applied to manage on business performance indicators coupled with soft performance indicators for process improvement, quality assurance and innovation (Table 1).

Table 1: *Fundamental issues of ISO 9001 and EFQM Business Excellence Model.*

ISO 9001	EFQM Excellence Model
Leadership	Leadership with Vision, Inspiration and Integrity
Customer focus	Adding value for Customers
Engagement of People	Succeeding through the Talent of People
Relationship management Process approach Evidence	Developing organizational competences managing with agility
Improvement	Harnessing Creativity and Innovation
	Creating a sustainable future Sustaining outstanding results

For improvement of business performance an alternative mindset is needed for constructive interaction of professionals within a multidisciplinary team. Concerning innovation *state of the art* human resources management is considered to be a critical factor for success. In a multidisciplinary professional setting partners have to cooperate for exploration of a creative mindsetting. However, ready-to-use management models for systematic improvement by means of interventions in the area of behaviour, social infrastructure, business control and communication are not yet available (Bakker 2013).

1.1 Application of a new management model for systemic innovation (SI)

In view of the changing focus of quality system design, we recommend application of an integrated model for consultation and assessment of socio-emotive future perspectives in addition to actual state of the art management models. A strategy in order to demonstrate how sociotechnological principles can be applied as a tool box for integrating process technology and HRM in order to perform a system of communication *in action* is demonstrated in Figure 1. Implementation of a management model for facilitation of innovation yields additional skills with regard to change capability and introduction of prerequisites for social network interaction between employees. Key performance indicators include individual competence of cooperation, exploration of creative power for professionals, application of individual talents and innovative knowledge exchange, pooling of multi-professional innovative expertise. Focussing on key performance indicators concerning socio-emotive dimensions will encourage ambition and social interaction between professionals in case of innovation processes.



Figure 1: Example of a strategy in order to demonstrate how sociotechnology principles can be used as a tool for integrating process technology process and HRM in order to develop a system of communication in action and innovation. Organizational development with inclusion of sociotechnology results in a reliable strategy for valorisation of innovation output.

SI yields a format for coaching of the process of autopoiesis and interoperability in a team of professionals. When guided, autopoiesis and interoperability will yield intrinsic power and nourish relationships within members of a team. Empowerment facilitates individual performance and execution of processes based on constructive innovative ideas. With regard to assessment of team performance, a social network check list is considered to be an essential tool for feed back and exploration of relationships between subjects in a multiprofessional team (Figure 2).

Methodology

The social process concerning exchange of innovative ideas and subsequent action is indicated as interoperability which is mainly based upon communication. Interoperability and communication *in action* are complementary links within the chain of social interactions which are needed for successful performance of an innovation project. Within this respect the *inter* part of the word *interoperability* concerns improvement of relationships within and between several social systems and the *operability* part represents performance of processes on the basis of shared innovative ideas (Figure 2). Luhmann's social system theory yields cornerstones for construction of a theoretical framework with key performance indicators in order to assess, analyze and improve performance (Luhmann 1995). Within Luhmann's social system theory, the social process concerning communication *in action* includes a trias of terms including information, utterance and understanding (Figure 2). The process which generates inspiration and ambition within a team is indicated by the concept of mindset generation (Weick 1995). The concepts of exchange of information and inspiration by means of a common mindset generation have been merged in the model of interoperability (Van Lier 2009).



Figure 2: Systemic innovation yields a system for autopoiesis and interoperability in a multidisciplinary team of professionals. Autopoiesis and interoperability concern intrinsic power and relationships within teams and a performance structure for execution of processes based on shared innovative knowledge.

The process of innovation requires understanding of specific interests of stakeholders and employees. Experience concerning sense of urgency and ability to interact is regarded as a stimulus for action (Kievit 2014). In the SI Management Model indicators for generating communication *in action* are defined. The key domains of SI representing sociodynamics, value of arguments and flexibility for change concern topics for assessment of behavior with regard to psychosocial and organizational characteristics (Table II).

Table II: *Systemic innovation management model: indicators for generation and evaluation of communication in action.*

Interactive communication in innovation processes					
Formal and procedural	I Interaction Sociodynamics <i>encouraging intrinsic motivation and support</i>	Strategic leadership	II Content Value of arguments <i>rating efficacy of arguments</i>	Inspirational leadership	III Context Flexibility for change <i>stimulating innovation capability</i>
	1 Generation and exchange of ideas		1 Prognosis of return on investment		1 Coaching
<hr/>					
	2 Creating consensus on the basis of interaction		2 Added value within the chain		2 Ambition for experiments
	3 Responsibilities and initiative		3 Orientation about origin of arguments		3 Mental Map / Adaptability
	4 Competence and expertise based on experience		4 Decision making		4 Learning organization

Sociodynamics

The process of sociodynamics is framed for assessment by application of critical performance indicators which yield a scope for self assessment. Indicators in the domain for *sociodynamics* reflect stimulation of intrinsic motivation and support. Examples are generation and exchange of ideas, creating consensus and ambition for amongst others taking responsibilities (Table II).

A process of communication and interaction is finished with a decision. The process for making decisions in a team is characteristic and is either achieved by expression of willingness (consensus) or by dominance of a team member. The way in which the role of leadership is fulfilled is essential in the process of decisionmaking.

Value of argumentation

Indicators in the domain of *value of arguments* reflect the efficacy of arguments applied in the 'communication in action' process. Examples are added value, efficacy and the origin of arguments. (Table II).

Communication implicates statements reflecting context and event for embedding of an innovative idea. Statements regarding additional value are selected and supported upon an incentive within general commercial impact. Dynamic and constructive interaction between teams and between members within a team is of essential importance. The yield of inspiration and motivation by means of communication can be supported by perception of putative relationships with other individuals.

A social network configuration yields protection and prevents safety whereas it prevents chaos by application of communication. For optimal protection, critical assessment of investment regarding time, finances, creativity and energy is needed. *Yield* implicates assessment of the value of an incentive in a process of communication. *Participation* implicates a

definite choice between undertaking an action for its own sake or for general purposes because of an expected return of investment.

Leadership facilitates a strategic context for using arguments within the process of decision making.

Flexibility for change

In an innovation oriented social network configuration communication *in action* is a functional tool for strengthening of the alignment from individual mindsets when formulating a concept of shared experiences of the past and challenges for the future. The domain for *flexibility for change*, implicates orientation and a potential scope for dynamic action. Indicators reflect the innovation capability of a team, in particular ambition for experimenting, culture and team development (learning organization). (Table II).

Authority of peers is an added value indicator because of the ability to reflect on past events and anticipate on future targets. Arguments are supported by a superior standard together with personal authority or by evoking values and practices for the future by way of trial and error. Inspirational leadership is of importance for implementation realisation of a learning organization concept.

Perspectives

Sociodynamics

The procedure for initiation and implementation of innovation projects primarily involves intervention in the field of *hard core* aspects, which refer to organization structure and management of processes. In case of monitoring proceedings of change management social aspects of interaction should receive particular attention. Within this respect, the checklist of the SI management model will yield additional value in *high tech* organizations like hospitals. Mostly, a strategy oriented change model implicates a *top down* intervention strategy with a predefined concept for a management program. In particular, it is difficult to manage implementation of a process based innovation project, because the context of co-creation and cooperation does not only regard to individual employees but it also implicates flexibility and changeability of a multiprofessional team, department or organization.

Learning organization

A development oriented change strategy includes creativity and interventions which are performed in a participative management style. Changes are performed more conveniently by focusing on management issues concerning "soft" organizational aspects like behaviour, culture and mode of interaction between employees. Application of the SI management model for culture intervention is focused on the generation of a learning environment which inspires employees in gaining knowledge and innovative insights. Commitment is mainly performed based on a bottom up approach. It is recommended to stimulate participation of employees and to establish in advance which specific targets should be achieved.

Ambition and highly motivated staff for involvement within innovation projects is needed to get employees engaged in innovation and organization development. Facilitation of engagement implicates adoption and promotion of innovations. Rules and attitudes within a system emerge from members' experiences and the feelings of *sensemaking*. (Greenfield 2011). Within the process of interaction creativity and surprise are practiced as an educational factor in order to increase awareness.

A system of personal assessment evolves exploration of individual talents. Social networks of innovative knowledge are going to be explored in response to challenge and opportunity, technology, social and political change. In due time application of an innovative system for multiplication of talent yields an exponential increase in creative capacity and flexibility (Cheese 2008). It is a challenge to utilize human energy dynamics for realization of new ideas thus creating additional power and trust for innovation projects.

Engaged employees exhibit a high level of energy, ambition and emotional investment in a job because it is considered to be meaningful for both the organization and for themselves. Information and knowledge expert systems are difficult to explore and subsequently to share with other teams. Talent multiplication should be considered as a strategic issue and an integral component of business challenge strategy. The strategy for talent exploration is based on a pervasive talent

mindset and an organization culture driven by leadership. Top down understanding in case of a human capital strategy is required to support high tech oriented business strategy and exploration of added value linkages (Cheese 2008). Education programs should explore strategic targets with respect to social and emotional topics. Innovative expertise domains need also to be introduced and discussed in education programs. Competences include a set of individual skills, knowledge and behavior in order to fulfill a job effectively. Skills implicate *what* an individual is able to do, development is based on learning and experience. Behavior and attitude refers to *how* an employee should act to be effective. Behavior incorporates both emotional and social components. Social components include individual characteristics like self awareness, confidence, trust and willingness to collaborate. Business performance is achieved by construction of an additional competency framework (Cheese 2008).

Strategy for implementation

Creative ideas need nourishment for exploration. Inspiring leadership is a key issue in case of inventarisation of essential requirements for an innovation strategy. SI is applicated by means of individual coaching and brainstorming sessions. As mentioned before, application of SI implicates a focus on shared values rather than on opposite forces of attraction and rejection between individuals. We recommend application of a set of performance indicators regarding the SI management model in addition to the *state of the art* management models, such as ISO9001 or EFQM. Performance indicators are assessed within a scope of several dimensions (Table III).

Table III: Characteristics of the EFQM excellence Model and the Systemic Innovation Management Model

Characteristics	EFQM Excellence Model	Systemic Innovation Model
Perspective on quality	Holistic	Multifocus
Focus	Synergy	Change
Type of action	proactive	Selfdefinition
Criteria for succes	Efficiency & efficacy	Innovation
Orientation	Processes	Interaction
Change	Challenge	Mindset
Characteristics of engagement	Negotiate (and/or) community involvement	Values
Conceptual character	Technology, methods & principles	Communication in action

Interoperability as the driving force

Additional care for efficacy of cross junctions between several strategic pathways for involvement of employees is needed for appropriate exchange of information. The so-called *communication in action* generating process is also indicated as a method to yield interoperability of information. A systematic approach for innovative knowledge transfer combined with action oriented communication is recommended as a management target rather than being left to chance by application of a *laisser faire strategy*.

During the implementation stage of an innovation process alternative insights will develop.

Performance

A paradigm-shift is established in management models for business design. Culture intervention including systematic knowledge development implicates establishment of key performance indicators and analysis of results, identification of critical processes and training staff. Ongoing management efforts with regard to innovation capacity in social competences should be performed by a skilled staff working together within a multidisciplinary team coached with inspirational leadership. Individual employees as well as teams play a key role in realization of synergy in case of process innovation. Transformation processes are characterized by creation of additional value and exchange of innovative expertise. Delay in decision making procedures is a rather complicated phenomenon because of the high amount of professional functions and interfaces on the road map for communication. In cultural anthropology patterns of human behavior, mindsetting and individual feelings are considered as main topics in case of transformation processes. The human factor is a relevant issue for stimulation of wellbeing and planning intervention of culture. Within this respect, communication in action is considered to be an essential factor in projects for innovation (Haviland 2011). In the field of scientific studies concerning communication, relevant dimensions for management improvement are considered to be transfer of message, language, objectivity in understanding

and interpretation of information regarding context, sociology and expression of ideas, and feelings for better perception and understanding.

Systemic Innovation in a Nutshell

SI is recommended as an innovative tool for stimulation of interoperability in case of process innovation. The SI management tool reveals a checklist for stimulation of interaction within a social network. It yields criteria for evaluation of interactive communication in order to generate a creative mindset and to yield innovative output within a multidisciplinary setting. Particular focus on communication in addition to actual management models will facilitate action by cross talks on the level of innumerable junctions within the matrix for communication within an organization. Cross talks enable release of energy, compassion and ambition for innovation.

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