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CONTENTS Volume 5 Issue 1

2017 September

FOREWORD. Milda Vainiutė

Karine Oganisjana, Anna Svirina, Svetlana Surikova, Gunta Grīnberga-Zālīte, Konstantins Kozlovskis.	
ENGAGING UNIVERSITIES IN SOCIAL INNOVATION RESEARCH FOR UNDERSTANDING SUSTAINABILITY ISSUES	9
Aneta Sokól, Irena Figurska.	
AS ONE OF THE CORE COMPETENCIES OF STUDYING KNOWLEDGE WORKERS	23
Fahim Akhter.	
UNLOCKING DIGITAL ENTREPRENEURSHIP THROUGH TECHNICAL BUSINESS PROCESS	36
Salvatore Monni, Francesco Palumbo, Manuela Tvaronavičienė.	
CLUSTER PERFORMANCE: AN ATTEMPT TO EVALUATE THE LITHUANIAN CASE	43
Marcus Illmeyer, Dietmar Grosch, Maria Kittler, Pamela Priess.	
THE IMPACT OF FINANCIAL MANAGEMENT ON INNOVATION	58
Vaidas Jurkevičius, Raimonda Bublienė.	
TOWARDS SUSTAINABLE BUSINESS RELATIONSHIPS: RATIFICATION DOCTRINE IN THE CASE OF UNAUTHORISED AGENCY	72
Marcel Lincényi, Michal Fabuš.	
ECONOMIC TRENDS OF BUSINESS ACTORS ON DAILY NEWSPAPER MARKET: CASE OF THE SLOVAK REPUBLIC	91
Elena Petrenko, Nurlan Iskakov, Oleg Metsyk , Tatyana Khassanova.	
ECOSYSTEM OF ENTREPRENEURSHIP: RISKS RELATED TO LOSS OF TRUST IN STABILITY OF ECONOMIC ENVIRONMENT IN KAZAKHSTAN	105
Vladimir Aleksandrovich Davydenko, Jerzy Kaźmierczyk, Gulnara Fatykhovna Romashkina, Elżbieta Żelichowska.	
DIVERSITY OF EMPLOYEE INCENTIVES FROM THE PERSPECTIVE OF BANKS EMPLOYEES IN POLAND - EMPIRICAL APPROACH	116

Michal Fabuš. CURRENT DEVELOPMENT OF BUSINESS ENVIRONMENT IN SLOVAKIA AND CZECH REPUBLIC	127
Natalia Rimashevskaya, Marina Malysheva, Marina Pisklakova-Parker. UTILIZATION OF LABOUR RESOURCES THROUGH MATCHING PROFESSIONAL AND FAMILY ROLES	138
Zhanna Mingaleva, Marina Sheresheva, Matvey Oborin, Tat'yana Gvarliani. NETWORKING OF SMALL CITIES TO GAIN SUSTAINABILITY	140
José Niño-Amézquita, Fedor Legotin, Oleg Barbakov. ECONOMIC SUCCESS AND SUSTAINABILITY IN PHARMACEUTICAL SECTOR: A CASE OF INDIAN SMEs	157



Dear readers,

I want to introduce to your attention a new issue of international scientific peer reviewed multi/interdisciplinary journal devoted to issues of entrepreneurship and sustainable development. This journal publishes papers from world-wide authors and institutions, written by scientists and practitioners indifferent to problems encountered by entrepreneurial ventures. An array of new issues has been raised and novel solutions suggested.

Academia-industry-society-government collaboration will let us all respond to contemporary challenges. Therefore it is very important to have proper platform, where all stakeholders could reveal and contemplate new emerging phenomena, and elaborate variants of solutions. Our turbulent reality needs to be responded by wise solutions born as a result of networking and collaboration.

Let us all innovate, collaborate and discuss in order to contribute to building of more sustainable, safe and secure environment to our families, entrepreneurial ventures and societies.

A handwritten signature in blue ink, which appears to read "M. Vainiutė".

With best regards

Professor MILDA VAINIUTĖ

Minister of

*Ministry of Justice
of the Republic of Lithuania*



Publisher

ENGAGING UNIVERSITIES IN SOCIAL INNOVATION RESEARCH FOR UNDERSTANDING SUSTAINABILITY ISSUES*

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Abstract. The paper presents the analysis of a three-stage research conducted by the authors within a social innovation project in collaboration with international master students of Riga Technical University for determining the factors, which motivate people to be involved in the solution of social problems. The authors not only analyse and use the outcomes of the students' research but also provide feasibility study of using the potential of study research at the university, for implementing serious research projects. Data collection from Africa, Asia, America and Europe was organised jointly by all the students via web-based survey for creating an original data base for the collaborative use. The qualitative and quantitative content analysis of the respondents' texts revealed three groups of factors: intrapersonal, interpersonal and external factors which motivate people to be involved in the solution of social problems. Having conducted content analysis of the same texts and comparing the outcomes of the students' and their own research, the authors concluded that study research is worth being used for research projects.

Keywords: social problems, social innovation, study research, learning research by doing research, qualitative content analysis

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JEL Classifications: O15

Additional disciplines: educology

1. Introduction

Social innovation plays a significant role in the development of social capital, social cohesion, social inclusion, empowerment and democracy (Davies & Simon, 2013a) causing systemic changes and societal transformation (Cajaiba-Santana, 2013; OECD, 2010) and bringing to sustainable development of the society (European Commission, 2013; Phillips, Lee, Ghobadian, O'Regan & James, 2015). Social innovation supports in the creation of better futures via development of new ideas for improving well-being, welfare and quality of life (Bonifacio, 2014; Edwards-Schachter, Matti & Alcántara, 2012; European Commission, 2013; OECD, 2010; Boonyachut, 2016; Pauceanu, 2016; Dobrovolskienė et al., 2017).

Being a promoter of multi-level positive changes in relationships (Klievink & Janssen, 2014; Nichols, Phipps, Provençal & Hewitt, 2013; OECD, 2010), social innovation triggers openness and cross-sectoral partnership (Sanzo-Perez, et al., 2015; Khanagha et al., 2017; Hilkevics & Hilkevics, 2017; Zemlickiene et al., 2017; Ignatavičius et al., 2015).

Going through a complex adaptive system, social innovation leads to evolutionary changes in cycling dynamics like in case of open innovation (Yun, Won & Park, 2016) bringing to new levels of social innovation. In this context a very important role in socio-economic system ~~plays~~ is played by the segment of small and medium sized enterprises (SMEs). SMEs represent the primary moving mechanism for creation of a new jobs and increase of the gross domestic product; their growth and development are the priorities amongst the goals of national economies for developed countries of the world (Kozubikova et al., 2017; Belas & Sopkova, 2016; Kljucnikov et al., 2016). Playing an important role in the formation and development of a market by nurturing social enterprises and social values produced through the creative and newly open combination between technology and society (Yun, 2015), social innovation has major economic impact on the society (Nichols et al., 2013; Phillips et al., 2015; Murray, Caulier-Grice & Mulgan, 2010). Therefore, the promotion of motivation of different clusters in the society to become involved in social innovation processes has become a contemporary task of utmost importance.

The purpose of the paper is to analyse and use the findings of a study research conducted by university students for exploring the factors, which motivate the society to become involved in social innovation processes, carrying out as well feasibility study of using outcomes of university study research for a national research project on social innovation.

The research was conducted in the autumn semester of 2015 in the Faculty of Engineering Economics and Management of Riga Technical University (RTU) in collaboration with forty-five international master students from twenty-five countries within the study course 'Modern research methods: theory and practice' delivered by Karine Oganisjana. In order to make the students understand and learn how to conduct real research, it was decided to 'push' them into the project 'Involvement of the society in social innovation for providing sustainable development of Latvia' which is part of the National Research Program 'Economic Transformation, Smart Growth, Governance and Legal Framework for the State and Society for Sustainable Development – a New Approach to the Creation of a Sustainable Learning Community (EKOSOC-LV)'. This decision was justified by benefits for both the students and the project. The students got an opportunity to learn research by practicing research in groups and individually starting from goal setting, web-based data collecting till the conduct of the qualitative and quantitative content analysis and interpretation of the results, making conclusions and writing the report. On the other hand, this study research provided the project with original data from Europe, Asia, Africa and America collected by the students within short period of time ensuring high response rate and young people's

analysis of the factors which motivate people to be involved in the solution of social problems. The findings were important for a further comparative analysis of the situations in Latvia and other regions of the world related to the involvement of the society in social innovation processes.

Research questions:

1. What motivates people to be involved in the solution of social problems?
2. Is it feasible to use study research for real research projects at a national level?

2. Theoretical framework. Social innovation vs. solution of social problems

The concept of social innovation is defined related to solution of social problems in a more effective, efficient, sustainable or just way than existing solutions; that brings to creation of social value and improvement of the quality of people's lives, causing new social practices and serving more for the public good as a whole rather than for private individuals (Phills, Deiglmeier & Miller, 2008; OECD, 2010; Dover, 2011; Mahmuda, Baskaran & Pancholi, 2014; Howaldt, Butzin, Domanski & Kaletka, 2014). One of the main characteristics of social innovation is specified as detection of real social needs and orientation to solving social problems (Edwards-Schachter et al., 2012), identifying and delivering new services that improve welfare of individuals and communities (OECD, 2010), creating 'new combination or figuration of practices in areas of social action, prompted by certain actors or constellations of actors with the goal of better coping with needs and problems than is possible by use of existing practices' (Howaldt et al., 2014, p. 122). However, there is not a common platform for understanding the matter of social innovation. Some scholars address social innovation as an instrument used for solving social problems, because the contexts in which social innovation is evolved are based on actions aimed at their solution. As argued by other researchers and practitioners, such instrumental definitions lead to a too narrow view of social innovation (Cajaiba-Santana, 2013) while social innovation has to include not only a means in the chain of solution of the social problems but also results of solving social problems which cause social change and bring benefit about (Cajaiba-Santana, 2013; Phills et al., 2008; Davies & Simon, 2013a, etc.).

Despite these disputes, the common thing in all cases is the relation of social innovation to solution of social problems. That is the reason why the research conducted by the RTU master students focused on the involvement of the society in solution of social problems vs. involvement of the society in social innovation processes. This decision was justified by the results of a pilot research conducted by the students which showed that social innovation being a relatively new concept was not understood by the respondents while 'solution of social problems' was clear almost to everybody.

Involvement of people in the solution of social problems

Involvement of people in the solution of social problems makes a crucial aspect of social innovation for: 1) understanding complex needs; 2) uncovering innovative ideas; 3) finding novel solutions to complex problems; 4) increasing the legitimacy of projects by involving citizens in design, implementation and decision making; 5) providing opportunities for participation and co-operation avoiding linear, top down policy responses (Davies & Simon, 2013b). The levels of involvement of people in the solution of social problems can be different: 1) starting with providing information about present states and current experiences which provides essential input throughout the development of social innovation; and 2) coming up with the developing of future solutions which can contribute and shape new ideas to improve existing practices (Davies & Simon, 2012). Also the forms of engagement in the process of social innovation are different: understanding individual needs and problems; understanding larger patterns and trends; crowdsourcing solutions; co-developing solutions (Davies & Simon, 2012, 2013b; Davies, Simon, Patrick & Norman, 2012). Motivation of people to be involved in the solution of social problems is a complicated process which challenges contemporary society. Reznickova and Zepeda (2015) consider self-determination theory as a unifying framework to understand motivation of people to be involved in

volunteer social innovation. Satisfaction of the basic psychological needs for autonomy, competence, and relatedness leads to sustained motivation to invest one's time, energy, and ideas into the social innovation (Reznickova & Zepeda, 2015). Engagement is considered also as a motivational state and a process of positive self-control occurring when people experience a product or service in terms of a personal life goal or value resulting in intrinsic as well as extrinsic motivation (Calder, Malthouse & Maslowska, 2016). It was shown that motivation of people to be involved in public work is conditioned by financial incentives, recognition, opportunities for self-expression, social environment, etc. (Raudeliūnienė & Meidutė-Kavaliauskienė, 2014). In order to gain more insight into factors which promote people's motivation to be involved in the solution of social problems, in this research it was decided to use the potential of RTU international master students for collecting and analysing data from four continents. It provided the students an opportunity to participate in learning research by doing research.

Learning research by doing research

It is argued that the greatest impact on students' learning and understanding research arises from their experiences of doing research in the research-based learning projects (Jiang & Roberts, 2011) introducing students the ways of thinking and acting like researchers (Valter & Akerlind, 2010) instead of mere delivering of knowledge about research (Nho, 2016). Research-based learning is related to a variety of educational objectives such as: conceptual, procedural, metacognitive, affective, epistemic, social and other objectives (Aditomo, Goodyear, Bluc & Ellis, 2013). Research-based learning covers a range of pedagogical learner-centred approaches that empower students to conduct research, integrate theory and practice, and apply knowledge and skills to develop a viable solution to a defined problem (Savery, 2006) enhancing their research competency and critical thinking skills (Wannapiroon, 2014). It is important to create opportunities for students to train and understand research ethics based on the overarching principle of not delivering knowledge but changing the way of students' thinking promoting their learning to deal wisely with ethical aspects of research especially dealing with conflicts derived from cultural differences (Nho, 2016). According to Brew (2006), teaching and research need to be integrated to promote synergy and better education through research-based learning. Research-based learning tasks may be: 1) use-oriented, 2) not use-oriented, 3) focused on content and 4) focused on practice (Aditomo et al., 2013); the research presented in this paper presents the results of students' use-oriented learning.

In recent years, students' role in universities has changed, making the students not only the recipients of existing knowledge, but also active participants in knowledge generation. The students have become essential factors for carrying out academic research in universities, they have been argued to play the most important role in university research output (Salter, D'Este, Pavitt, Scott, Martin, Geuna, Nightingale & Patel, 2000; Kwon, S.H. Kim, Park, E.K. Kim & Jang, 2015).

Organisation of learning research by doing research in Riga Technical University

The study course 'Modern research methods: theory and practice' in the case of RTU was organised to meet two purposes:

- 1) to provide the international master students with an opportunity to learn to conduct research by participating in a real research project 'Involvement of the society in social innovation for providing sustainable development of Latvia';
- 2) to provide the project with an opportunity to get original data from all over the world and the students' young-eyed view while conducting qualitative content analysis.

In the beginning of the course, the students were trained in groups and pairs to carry out different research tasks encompassing:

- analysis of different texts for determining and understanding units of meanings; assigning codes to corresponding text fragments and developing categories depending on the research question;

- conducting closed coding of fragments of texts taken from the scripts of a focus group discussion on social innovation which had previously been organized by the authors within the National research program EKOSOC-LV (Oganisjana & Surikova, 2015; Oganisjana, Surikova & Laizāns, 2015);
- reading and analysing of scientific papers on social innovation and open innovation with a special focus on grasping the interconnection between the matter and theoretical aspects of the concepts under exploration and the ways of empirical data organization, analysis and interpretation of the results.

When the students had gained enough research experience in collaboration with the course mates and the teacher, they were engaged into the research project. After the piloting of the first tentative survey form with the students, in order to make it more easy for understanding, it was decided to elaborate two questionnaires: ‘Involvement of people in the solution of social problems 1 & 2’; the first questionnaire was for respondents with and the second one – without an experience in solving social problems. The students sent the questionnaires via Google Drive electronic forms to representatives of different fields who live in their countries. Each student was to ensure at least ten responses; in the result of this team-based data collection, a joint data base (121 responses to questionnaire 1 and 251 responses for questionnaire 2) was created for collaborative use. Along with giving personal information on their gender, age, education, status, field of activity and the living place, the respondents had to answer questions about: social problems they solved/would solve, the challenges they faced/might face, the way they solved/would solve the problems, people who helped/would help them and their opinion on what motivates people to be involved in the solution of social problems. The response texts were massive and it would be time consuming and tiring to conduct qualitative content analysis of the entire survey. Therefore, it was decided that each student would formulate only one research question and analyse responses to the corresponding question from both questionnaires for further comparative analysis of the views of respondents with and without experience in solving social problems. As in the beginning of the semester the students had plenty of opportunities to train different aspects of scientific research discussing and working in groups, in pairs and in collaboration with the teacher, it was decided that the qualitative content analysis of the texts of this survey had to be conducted by each student individually. That aimed to simplify the assessment procedure, promote the students’ research skills and ability to cope with the task on their own. The qualitative content analysis of the texts was conducted with open coding for developing categories according to the ‘Step model of inductive category development’ (Mayring, 2000) with further creation and quantitative analysis of category frequency tables, interpretation of the results and preparation of the report on the research conducted. The research question ‘What motivates people to be involved in the solution of social problems?’ was analysed by six students; therefore, in the context of this paper the authors will focus only on these six research reports.

3. The research design and methods

The authors conducted the following three-stage research:

Stage 1. Analysis of the outcomes of the students’ research for studying the quality and course of the qualitative content analysis conducted by each student individually with open coding using Excel. The categories developed by each student independently were analysed to reveal the possibility of systemising them into a unified set of categories.

Stage 2. Qualitative content analysis of the same texts for determining the factors which motivate people to be involved in the solution of social problems. This part of the research was conducted with closed coding using software AQUAD 6 (Huber & Gürtler, 2000). As pre-constructed codes in the second stage of analysis, the categories developed by the students and unified by the authors in the first stage of the research were used.

Stage 3. Feasibility study of using the outcomes of students’ study research for research projects at the national level. The authors compared the frequencies of the categories developed in the qualitative content analysis by the students and themselves using Mann-Whitney U test in IBM SPSS Statistics 20 for revealing statistically significant differences between the two samples.

2. The outcomes of the research

Stage 1. The students' individual findings were analysed and systemised into a set of fourteen unified categories based on their meanings (see the last column of Table 1).

Table 1. Factors, which motivate people to be involved in the solution of social problems are determined based on the categories developed by the students and unified by the authors

Nr.	Key categories developed by the students in the qualitative content analysis	Categories unified by the authors
1.	Awareness of social problems; social awareness; understanding of social problems; awareness of the importance and impact of the solution of social problems	Social awareness
2.	Support from: mass media, government, enterprises, NGOs, families, friends and other individuals	Support
3.	First-hand experience; facing the problem directly; personal involvement in the problem via challenges faced by oneself, family, relatives, friends and colleagues	Personal affection
4.	Social responsibility; social conscience; moral values; ethical norms; social thinking; commitment; acting for the benefit of society	Social responsibility
5.	Cooperation; collaboration; teamwork; networking; volunteering; co-thinking; co-deciding; co-creating	Co-creation
6.	Empathy; human compassion; love; sympathy; mercy	Empathy
7.	Recognition of results; acknowledgement; gratitude; appreciation; respect and honour	Appreciation
8.	Financial motivation; bonuses; rewards; benefit; employment opportunity; better quality of life	Personal gain
9.	Communication, active dialogue: with local community, government, enterprises, NGOs, mass media and private sector for sharing experience on the social problems to be solved	Active dialogue
10.	Example of active participation; inspiring examples; role models; success stories; inspiring people	Inspiring examples
11.	Personal experience; own experience in solving social problems	Personal experience
12.	Opportunities and chance for participation in social life and solution of social problems	Participation opportunities
13.	Future orientation; understanding the ultimate goal; understanding the consequences of one's actions; acting towards future outcomes; anticipating future results	Proactivity
14.	Education; educational campaigns and programmes; learning from experience; career guidance; seminars and public events	Education

Source: the authors

The factors which motivate people to be involved in the solution of social problems (see the last column of Table 1) can be divided into three factor groups based on their meanings:

- Intrapersonal factors: empathy, personal gain, personal affection, personal experience and proactivity.
- Interpersonal factors: social awareness, co-creation, active dialogue, education, social responsibility.

– External factors: support, appreciation, inspiring examples, participation opportunities.

Stage 2. The authors conducted their own qualitative content analysis of the same texts using as pre-constructed conceptual codes the unified categories (see the last column of Table 1) which were formed on the basis of the students' qualitative content analysis. Unlike the students who conducted the qualitative content analysis individually, the authors first worked in two virtual groups in the skype environment: group 1 consisting of the first three authors (AU_{1,2,3}) and group 2 – of the fourth and fifth authors together (AU_{4,5}). To finalise the results, one more skype working session was organised with the participation of all the authors (AU_{1,2,3,4,5}). The authors concluded that the students coped with the coding and developing of categories successfully demonstrating appropriate understanding of the meanings of the texts; therefore, the authors agreed with the categories developed by the students. However, the students had a tendency to assign mainly one conceptual code to each text fragment, while, being more experienced in qualitative content analysis and working in group, the authors identified more than one unit of meanings corresponding to some of the text fragments. That means that the authors assigned codes more frequently; in the result, the frequencies of categories in the case of the authors' qualitative content analysis were bigger. This tendency is illustrated with an example of comparative analysis conducted by one of the students and the authors (see Table 2).

Table 2. Comparison of the coding conducted by one of the students and the authors (fragment)

Coding by a student	Coding by the authors
'The important thing to motivate people to become involved is to make them understand that everyone should have the right and also should live together peacefully and solve social problems together as it could influence everyone's life (<i>personal affection</i>). To promote this understanding, I think the agencies or organisations in charge of this issue should educate people (<i>education</i>) and, at the same time, support participatory processes (<i>support</i>) and increase the channels that people can become involved and participate to find out the resolutions together for any social problem.' (<i>participation opportunities</i>).	'The important thing to motivate people to become involved is to make them understand that everyone should have the right and also should live together peacefully (<i>social responsibility</i>) and solve social problems together as it could influence everyone's life (<i>proactivity, personal affection</i>). To promote this understanding, I think the agencies or organisations in charge of this issue should educate people (<i>education</i>) and, at the same time, support participatory processes (<i>support</i>) and increase the channels through which people can become involved and participate to find out the resolutions together for any social problem.' (<i>co-creation, participation opportunities</i>).
Comment: The fragment 'everyone should have the right and also should live together peacefully' has an accent of being socially responsible for peace in the society which was not identified by the student. 'It could influence everyone's life' is not only about being affected personally as shown by the student with the code 'personal affection', but also about view of future coded by the authors as 'proactivity'. The fragment 'people can become involved and participate to find out the resolutions together' is assigned the code 'co-creation' by the authors as finding any joint resolution means co-creating something new regardless of its material or non-material nature.	

Source: the authors

Despite the differences between the frequencies of some categories determined by the students and the authors, the students mainly grasped the meaning of the text fragments correctly. However, the authors developed one more category which wasn't identified by the students. That category was named 'self-awareness' (see Table 3).

Table 3. Identification of the category ‘Self-awareness’ by the authors

Coding by the students	Coding by the authors
‘People will be motivated to solve social problems when they are helped to understand that they are an entire part of the society and they are able to bring great innovations in the world by doing simple things.’ (<i>proactivity</i>)	‘People will be motivated to solve social problems when they are helped to understand that they are an entire part of the society and they are able to bring great innovations in the world by doing simple things.’ (<i>self-awareness, proactivity</i>)
Comment: The student assigned the code ‘proactivity’ to this fragment. But it speaks also about the importance of helping people to discover their own potential and strengths, as well as about the positive impact which they may have on the life of the society. Therefore, the authors assigned it also the conceptual code ‘self-awareness’.	
‘To make them see how even a fraction of work by them can contribute towards overall achievement.’ (<i>proactivity</i>)	‘To make them see how even a fraction of work by them can contribute towards overall achievement.’ (<i>proactivity, self-awareness</i>)
Comment: The student considered that the text fragment is about thinking and acting for future improvement. Therefore, she assigned it the code ‘proactivity’. As for the authors, they assigned also the code ‘self-awareness’ to this text fragment, as the key thought here is about making people see the importance of their own work as of real contribution in the development of the society.	

Source: the authors

The students identified the units of meanings in the text fragments related to other codes rather successfully. However, they did not think through the text fragments where the respondents were saying that in order to motivate people to be involved in the solution of social problems, it is important to make them understand their own selves and become aware of their own strengths and role which they could play in the life of the society. Therefore, the list of fourteen factors presented in the research outcomes of stage 1 was complemented with the fifteenth factor, that is, with ‘self-awareness’.

Stage 3. In order to conduct the quantitative analysis of the feasibility of using the outcomes of the students’ study research for the research project, the frequency table of categories which make the basis of the motivational factors for people to be involved in the solution of social problems was constructed (see Table 4).

Table 4. Frequency table of categories – the basis of the factors which motivate people to be involved in the solution of social problems

Researcher code	Country of student	Social awareness	Support	Personal affection	Social responsibility	Co-creation	Empathy	Appreciation	Personal gain	Active dialogue	Inspiring examples	Personal experience	Participation opportunity	Proactivity	Education	Self-awareness
		Total frequencies of categories summed up from the analysis of both questionnaires														
S1	Ukraine	113	21	20	35	20	32	22	26	25	8	0	0	0	0	0
S2	Ukraine	111	26	28	36	26	24	4	21	12	14	13	6	29	0	0
S3	Thailand	77	13	2	12	5	0	0	14	6	56	12	14	0	43	0
S4	Panama	134	15	10	9	7	33	0	32	11	5	3	28	0	34	0
S5	Russia	46	24	11	60	54	24	0	18	54	14	14	12	42	44	0
S6	Germany	44	16	32	19	33	31	0	45	27	14	32	11	21	36	0
AU _{1,2,3}		63	173	29	41	85	41	62	10	40	31	25	10	27	56	54
AU _{4,5}		52	136	25	40	58	31	63	9	36	18	21	3	25	36	49
AU _{1,2,3,4,5}		63	173	32	45	85	41	67	11	41	31	25	10	28	56	54
The students' total %		26	6	5	8	7	7	1	8	7	5	4	4	5	8	0
The authors' total %		24	4	6	11	6	10	1	6	4	4	1	4	7	8	4

Source: the authors

Table 4 contains: 1) the absolute frequencies of the categories determined by each student independently and by the three groups of the authors while conducting qualitative content analysis of the texts from all the respondents; 2) the weight of each factor in percent determined from the sums of frequencies of each category within the groups of the students (see ‘The students’ total’) and the authors (see ‘The authors’ total’). Based on the last two rows of Table 4, the diagram depicted in Figure 1 was constructed to show the distribution of the weights of the factors.

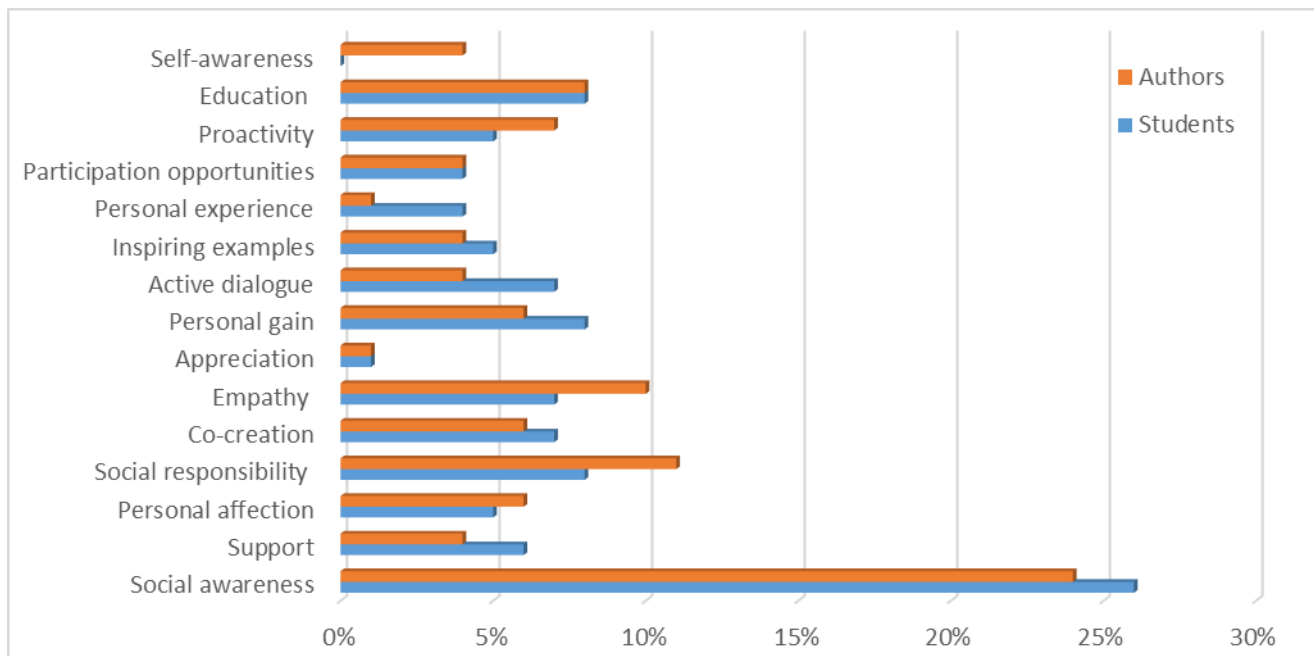


Figure 1. Distribution of the weights of the factors which motivate people to be involved in the solution of social problems: comparison of the students and the authors' findings

Source: the authors

The diagram shows that both in the students and authors' analysis, 'social awareness' (24% - 26%) has the biggest weight among the other factors. Similar weights in the two distributions have 'education' (8%), 'participation opportunities' (4%) and 'appreciation' (1%). The factor 'self-awareness' (4%) naturally appears only in the authors' factor list. As for the rest of the factors, they have mismatch in weights in the two distributions which speaks about differences in the intensity of the perception of meanings of text fragments related to these factors while conducting the coding by the students and the authors.

In order to analyse whether the differences between the results of the students and the authors' coding were statistically significant, two corresponding samples: 1) category frequencies determined by the students (see the six rows S1-S6 of Table 4); and 2) category frequencies determined by the authors' groups (see the three corresponding rows AU_{1,2,3}, AU_{4,5} and AU_{1,2,3,4,5} of Table 4) were compared. One-sample Kolmogorov-Smirnov test in IBM SPSS Statistics 20 showed that both samples had non-normal distribution. Taking into account the small sizes of the samples (six students and three authors' groups) these two samples were compared using Mann-Whitney U non-parametric test based on the requirements for small samples: critical values for the Mann-Whitney U Test (Billiet, 2003) and Exact Test statistics - Exact sig. (2-tailed) (Nachar, 2008; Mehta & Patel, 2012).

This analysis revealed that the two samples do not have statistically significant differences ($p > .05$) related to the following factors: 'co-creation', 'appreciation', 'personal gain', 'active dialogue', 'inspiring examples', 'personal experience' and 'participation opportunities'. Statistically significant differences were identified for: 'social awareness' ($p = .024$); 'support' ($p = .048$); 'personal affection' ($p = .024$); 'social responsibility' ($p = .048$); 'empathy' ($p = .024$); 'proactivity' ($p = .036$); 'education' ($p = .024$); 'self-awareness' ($p = .012$). These results can be explained by:

– the differences in the approaches to coding; while the students assigned mainly one code to a text fragment, the authors assigned more than one code depending on the meaning of the text fragments (see Tables 2 & 3);

– the fact that the authors worked in groups and could notice more units of meanings than the students who worked individually. The students didn't work in groups as it was important to be sure that they had learned to conduct all the stages of research on their own. It also eased the process of assessment.

However, despite these statistically significant differences between the coding conducted by the students and the authors, there is no doubt that the students coped with the main challenge of the qualitative content analysis as a whole. Even having worked individually they developed their categories correctly which afterwards were united into the set of fourteen categories by the authors. These unified categories made the basis of factors which motivate people to be involved in the solution of social problems.

Conclusions

1. The research revealed fifteen factors which motivate people to be involved in the solution of social problems which makes the basis of social innovation as a crucial condition for achieving sustainable development of the society. Based on their matter, these factors are divided into three groups.

– Intrapersonal factors: self-awareness, empathy, personal gain, personal affection, personal experience and proactivity.

– Interpersonal factors: social awareness, co-creation, active dialogue, education; social responsibility.

– External factors: support, appreciation, inspiring examples, participation opportunities.

2. Fourteen of these factors were determined owing to the study research conducted by the international master students of Riga Technical University. One factor – 'self-awareness' was added by the authors in the course of their own qualitative content analysis of the same qualitative data using as pre-constructed codes the categories developed by the students. The research conducted by the authors showed that the students had developed the categories correctly though there were differences in frequencies of categories; that can be explained by the fact that the students worked individually but not in small groups which is more recommended in the case of qualitative content analysis. Therefore, it is feasible to use the potential of university students' study research for real research projects providing that they would work in small groups of two or three students and collaborate with the teacher. This practice would require elaboration of a new approach to the assessment of students' final work keeping to the main logic of the organisation of learning research by doing research as realised in RTU.

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CREATIVITY AS ONE OF THE CORE COMPETENCIES OF STUDYING KNOWLEDGE WORKERS*

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Abstract. The article discusses the importance of creativity as one of the core competencies of knowledge workers in universities functioning in the knowledge-based economy. In the theoretical part of this article the essence of knowledge management (KM) is characterized. In particular, definition, objectives and processes of knowledge management are described, as well as benefits from KM and barriers to KM are presented. The attention is also paid to the knowledge workers, their definition, characteristics as well as roles they perform in organizations in which they work. Further part of this article focuses mainly on results of the research on knowledge workers creativity and competences. The main objective of the study was to determine whether competences characteristic of knowledge workers are correlated with the level and the style of creativity. An additional objective was to make a comparative analysis between humanistic, technical and agricultural fields of study. The questionnaire survey conducted among working students was the main source of primary data used in the process of qualitative and quantitative analysis. The method of documents' examination as well as descriptive, analog and heuristic methods were used in this article. On the basis of obtained data the level of creativity and creative style of creative workers were studied, as well as correlations between competences characteristic of knowledge workers, and both the style and the level of creativity were calculated. The Drawing Test of Creative Thinking by Urban and Jellen was used to measure the level of creativity among respondents, and the KAI questionnaire by Kirton was used to measure the style of creativity. The final part of the article includes conclusions resulting from the results of the research and theoretical considerations.

Keywords: creative sector, creative, knowledge management, knowledge workers

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1. Introduction

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Employees of an organization who make up and use new, creative ideas, products or services, are called *creative knowledge workers*. Thanks to this group of employees, organizations create innovations enabling them to achieve competitive advantage on today's turbulent and unpredictable markets.

The primary objective of knowledge workers is active participation in knowledge management processes, with their creative activity constituting a strategic value for virtually every organization. This resource is a key competence, both in terms of its nature and individual dimension, as its effective use increases value for the customers and brings significant benefits. This type of competence, next to other significant intangible factors such as knowledge, health, motivation and experience, is a very important determinant of individuals' development. Hence the decision that creativity of studying knowledge workers is worth the research effort.

Certain questions arise at this point. Do working students possess the competencies typical of knowledge workers? Are these competencies mutually inclusive? Are the competencies typical of knowledge workers significantly related to creativity? Is it possible to logically group knowledge workers according to their competencies that distinguish them from other employees? In order to verify the theoretical considerations related to knowledge workers' competencies and creativity and, thus, to find answers to these questions, a questionnaire survey was carried out among persons who both studied (humanities or technical or agricultural science) and performed creative work in creative industry organizations.

2. The essence of knowledge management

Today, in the knowledge-based economy, the most important organizations' resource is knowledge, therefore their competitiveness to a large extent depends on the effectiveness of knowledge management, determined by various internal and external factors. However, there is no one definition of knowledge management which would be generally accepted by both theoreticians and practitioners of management. In the literature one can find many definitions, reflecting specificity of scientific interests of their authors (see: Murray & Myers 1997; Armstrong 2006; Serrat, 2009; Girard & Girard 2015). However, for the purpose of this article knowledge management is defined as *a set of systematic, organized, thoughtful and flexible actions aimed at knowledge resources (individual, collective and organizational; explicit and tacit) of the organization, taken and performed with the intention of achieving the objectives of the organization efficiently and effectively. These actions enable the organization to realize knowledge management processes (localization, acquiring, developing, sharing, preservation, use) as well as shape the environment (human, technical, cultural) conducive to KM, using for this purpose appropriate methods and tools* (Figurska 2012).

The knowledge management (KM) objectives complement the organization's general goals at all levels of organizational structure, that is normative (mission and vision), strategic (strategic plans) and operative (assignments) (Probst, Raub & Romhardt 2002). According to different authors the major knowledge management goal is to: enable the organization to act intelligently, learn and adjust to a changing environment with the help of knowledge resources engagement and a company's organizational structure (Auster & Choo 1996) or ensure the environment that creates optimal conditions for the creation, transfer and use of knowledge (Fazlagić 2014). Detailed KM objectives can be related to knowledge management processes (e.g. knowledge development, sharing it and using it in practice) as well as people (knowledge workers), procedures, organizational culture, methods, tools, products etc. (Figurska 2012).

The viability of the knowledge management implementation is confirmed by benefits that effectively managed knowledge brings to all interested parties: individuals, teams and organizations (Dalkir 2005). Knowledge management helps *individuals* do their jobs and save time through better decision making and problem solving,

builds a sense of community bonds in the organization, helps people to keep up to date, provides challenges and opportunities to contribute. In reference to *teams* KM develops professional skills, promotes peer-to-peer mentoring, facilitates more effective networking and collaboration, develops a professional code of ethics and common language (Dlugoborskytė et al. 2015; Menshikov et al. 2017)

For the *organization*, KM helps to: drive strategy, solve problems quickly, diffuse best practices, improve knowledge embedded in products and services, create ideas, increase opportunities for innovation, achieve better competitive position, build organizational memory (e.g. Kiškis et al., 2016; Khanagha et al., 2017; Korsakienė et al., 2017; Bendaravičienė, 2017) Awareness of the benefits that effective knowledge management brings (or may bring) to the organization and its employees is essential to win knowledge workers engagement in KM activities.

Generally, two basic approaches to knowledge management are observed in practice: technology-oriented and people-oriented (see: Hlupic, Pouloudi & Rzevski 2002; Rutheford & Tai 2004; Figurska 2012; Teletov et al., 2017). The first one treats knowledge as objects, which can be easily identified, codified and stored in information systems. This approach is focused on development of information and communication technologies. People-oriented approach treats knowledge as constantly changing processes and is related to knowledge sharing, organizational culture and learning. This approach is focused on people – their evaluation as well as improvement of their skills and behaviour.

Knowledge management is often perceived as a set of processes, which are classified in different ways by different authors. However, the classification put forward by Probst, Raub and Romhardt (2002) is the most frequently cited in the literature. Mentioned above authors distinguish: *knowledge localization* (concentrated on discovering and presenting knowledge sources), *knowledge acquisition* (aimed at obtaining knowledge from external sources), *knowledge development* (focused on specialized knowledge creation), *knowledge sharing and distributing* (aimed at making knowledge accessible to people who need it), *knowledge use* (focused on the productive use of an organization's knowledge sources) and *knowledge preservation* (aimed at preventing the organization from losing valuable intellectual sources). Mentioned above processes are closely interconnected and the success of KM in the organization depends on the effectiveness of each of them. Thanks to effective realization of these processes people who need knowledge can use it in practice and solve problems easier, better and more quickly, or can simply avoid them.

There are many obstacles of knowledge management, which can stem from the existing organizational structure, used methods and tools of management, and above all from people. According to the most important barriers to knowledge management are: insufficient knowledge resources within the organization, lack of (or insufficient, or lack of knowledge on) benefits connected with the realization of KM processes, perceiving knowledge as property or/and as a source of power, unfavourable organizational conditions for knowledge management, lack of (or insufficient) superiors' support in the realization of KM processes, lack of purpose understanding for which knowledge management serves, lack of (or insufficient) access to knowledge sources, lack of (or insufficient) skills at knowledge management, as well as lack of knowledge what knowledge should be managed. The identification of knowledge management obstacles enables their elimination, positively influencing effectiveness of KM.

One of the basic knowledge management success factors is the construction of a KM strategy by the organization, which is defined as a formula that is a combination of KM goals, rules, relations and resources. This formula defines how organization is going to acquire and use knowledge for the realization of its competitive strategy (Mikuła, 2006; Volchik, Maslyukova, 2017). Knowledge management strategy should give answers to three fundamental questions (Bennett & Jessani 2011): Where the organization is now? Where the organization wants to be in the future? How does the organization get there? Organizations may use different strategies depending on:

the industry in which they operate, their size, the kind of knowledge which is most important to them in the context of building competitiveness in the market, and many other factors. Depending on the adopted criteria, different types of strategies can be distinguished, such as: codification and personalization strategy (Hansen, Nohria & Tierney 1999), leveraging, expanding, appropriating and probing strategy (Von Krogh, Nonaka & Aben 2001), knowledge creation, knowledge transfer or knowledge protection strategy (Bloodgood & Salisbury, 2001), knowledge protection and knowledge sharing strategy (Mikula, 2006). It must be emphasized, however, that there is no universal solution for a good knowledge management strategy. This strategy must reflect specificity of the organization, therefore coping a strategy used in other organization may do more harm than good.

3. Knowledge workers

Knowledge, which is a strategic resource of organizations, is created and utilized by people, thus the importance of employees performing work based on knowledge, called knowledge workers, is growing systematically in organization functioning in the knowledge-based economy.

Definitions of knowledge workers are usually related to knowledge management and/or human resources management (see: Davenport 2005; Serrat 2008). Generally they emphasize the importance of education and/or their personal traits and/or actions taken by them and/or attitudes presented by them and/or their core values. Observed differences stem from different approaches presented by different authors (Figurska 2015). Thorough analysis of various definitions and characteristics of the knowledge worker allowed to define such an employee as a person whose passion, work and professional career are associated with active participation in the knowledge management processes (Figurska 2015). Knowledge worker: *has* (knowledge, experience, social competences, values, etc.), *wants to* (develop, share and use knowledge, experience, social competences, as well as use resources, methods, tools etc.), *is able to* (use knowledge, experiences, tools, resources, methods etc. thanks to his skills), *can* (is provided by the organization the opportunity to actively participate in the realization of KM processes), and *is needed* (his knowledge, experience, social competencies, engagement etc. are important for achieving the objectives of the organization). On the one hand, knowledge worker is under influence of the specificity of the organization in which he works, as well the external environment, which provides the organization and its employees with resources. On the other hand, taking wise decisions and actions, knowledge worker can influence both the organization in which he works and its external environment (Figurska 2015).

To be able to participate in the KM processes, knowledge workers should possess such knowledge (both general and specialist), skills and social competences that allow them to localize, acquire, develop, share, use and preserve knowledge. They are expected to be (Mikula 2006; Figurska 2012; Figurska 2015): educated, skilled, experienced, creative, innovative, focused on lifelong learning, open to changes, responsible, focused on cooperation, communicative, focus on self-development, self-motivated, demanding, engaged, self-aware, well-informed, active, independent, flexible, trustworthy and ethical.

In the knowledge based economy knowledge workers create the greatest added value and considerably affect the value of their organizations. They are paid for efficiency of thinking, and their minds are regarded as the primary work tools. They work not only with knowledge and information, but also on them (Nickols 2012). They “*understand, identify with, and see how their own contribution can be enhanced*” (Serrat 2008). They are not the labor force, they are capital.

According to Morello and Caldwell (2001), knowledge workers understand their domain of influence, knowledge, activity and responsibility, as well as define, influence and help shape that domain. They understand the people, information and potential resources within that domain, and finally - have the authority to act within that domain.

Some authors of publications devoted to personal aspects of KM list occupations, whose performance is attributed to knowledge workers. It seems, however, that such classifications can be good for today, but not necessarily for tomorrow, as in the knowledge-based economy it is difficult to unequivocally predict occupations which will appear and disappear on the labor market in the future. Therefore classification by T. Davenport (2005), who list specific categories of widely understood economic activities seems to be particularly interesting. Mentioned author put the following categories into *"the knowledge worker camp"*: management, business and financial operations, computer and mathematical, architecture and engineering, life, physical and social scientists, legal, healthcare practitioners, community and social services, education, training and library, arts, design, entertainment, sports and media.

Knowledge workers play different roles in organizations, which is confirmed by Reinhardt, Schmidt, Sloep and Drachsler (2011), who propose a classification of knowledge workers roles and describe knowledge actions they are expected to perform during their daily work (Table1).

It is worth noting that these roles played by knowledge workers are interrelated, and they usually perform more than one role in the organization.

Table 1. Typology of knowledge worker roles

Roles	Description: people who..	Expected knowledge actions
controller	monitor the organizational performance based on raw information	analyze, dissemination, information organization, monitoring
helper	transfer information to teach others, once they passed a problem	authoring, analyze, dissemination, learning, feedback, information search, networking
learner	use information and practices to improve personal skills and competence	acquisition, analyze, expert search, information search, learning, service search
linker	associate and mash up information from different sources	analyze, dissemination, information search, information organization, networking
networker	create connections with people involved in the same kind of work	analyze, dissemination, expert search, monitoring, networking, service search
organizer	are involved in personal or organizational planning of activities,	analyze, information organization, monitoring, networking
retriever	search and collect information on a given topic	acquisition, analyze, expert search, search and organization of information, monitoring
sharer	disseminate information in a community	authoring, co-authoring, dissemination, networking
solver	find or provide a way to deal with a problem	acquisition, analyze, dissemination, information search, learning, service search
tracker	monitor and react on actions (personal and organizational) that may become problems	analyze, information search, monitoring, networking

Source: on the basis on: (Reinhardt, Schmidt, Sloep & Drachsler 2011).

Knowledge workers perform knowledge work consisting in taking actions in the area of knowledge management processes. Reinhardt and others (2011) state that *"the main feature differentiating knowledge work from other conventional work is that the basic task of knowledge work is thinking. Although all types of jobs entail a mix of physical, social, and mental work, it is the perennial processing of non-routine problems that require non-linear and creative thinking that characterizes knowledge work"*.

Based on the above description, the ability of *"non-linear and creative thinking"* are especially important for knowledge workers. Therefore it can be stated that the most important group of knowledge workers are those characterized by possession of intrinsic creativity, performing creative work. Their knowledge, interests and engagement are internal driving force for effective creative work. Knowledge workers are responsible for

developing and implementing new ideas, enabling organizations in which they work better and/or faster adaptation to the rapid and often unpredictable environmental changes. In today's knowledge-based economy this particular group of employees is becoming more and more numerous.

Creativity may result from the so-called inspiration - breath of the spirit, creative anxiety etc. However, in the literature one can find a considerable number of supporters of the idea that creativity is the result of hard work. In other words, hard work and intense interests in a specific field can lead to creative achievement. Interests, thinking about them and monitoring of processes related to them often become an inspiration for creative activities (Sokół 2015; Sokół 2015a).

Knowledge workers present different levels of creativity, which means that some of them are more creative, some less. They also present different styles of creativity. Generally it is assumed that all people are capable of taking creative activities, and the difference between them lies in the style of dealing with the tasks. These styles are determined by features possessed by people - at one end there are human qualities characteristic for adaptability, while on the other end - for innovativeness. Adaptability is focused on "*improvement*" while innovativeness is focused on performing tasks "*differently*." Therefore, two basic styles of creativity can be distinguished: innovative and adaptive. People with a predominance of adaptive qualities function better when they have possibility to improve existing state of affairs or to its systematic, slow change. They are characterized by: precision, reliability, efficiency, methodical acting, prudence, discipline and conformity. They are more focused on solving problems than on their discovering, and they usually choose proven ways when troubleshooting. Innovators (people with a predominance of innovative traits) prefer revolutionary changes, the total reorganization of reality. They are seen as undisciplined people, thinking "*outside the box*" and undertaking a variety of tasks.

4. Empirical verification of correlations between competencies typical of knowledge workers and creativity

4.1. Material and methods

As already stated, the aim of this study was to examine whether working students in Poland have the competencies typical of knowledge workers, whether these competencies are mutually inclusive and show significant relations with creativity, and whether the respondents can be logically grouped according to their competencies that distinguish them from other employees. An additional objective of the research was to carry out a comparative analysis at faculties of humanities and at technical and agricultural faculties. On the basis of the objectives defined above, the following hypotheses were formulated:

- H1: there are differences in demonstrated competencies typical of knowledge workers and in the style and level of creativity among working students,
- H2: the differences in demonstrated competencies and the style and level of creativity among working students are determined by the number of creative works produced thereby.

The study was based on qualitative and quantitative analysis of statistical data collected through a questionnaire method. The respondents completed a questionnaire with 30 questions. The first 5 questions were general in nature, while the remaining ones were related to competencies of the employees. The analysis was carried out based on examination of documents, and with the use of descriptive, analog and heuristic prediction methods. The level of creative skills and creative style of creative workers were studied first, followed by calculations of correlations between competencies typical of knowledge workers and the style and level of their creativity. For this purpose, the Pearson correlation coefficient was used. With the results of empirical study, it was possible to achieve the objectives set in the article and verify the hypotheses formulated.

The study was conducted in the Masovian and West Pomeranian voivodships in Poland. The selection of the research sample was intentional. 980 respondents were selected from among the students of the University of Szczecin (US - 98 students, including 3 PhD students), West Pomeranian University of Technology (WPUT - 102 students, including 5 PhD students), Academy of Fine Arts (AS - 9 students), the Warsaw University of Life Sciences (WULS - 398 students, including 6 PhD students) and the Warsaw School of Economics (WES - 373 students, including 7 PhD students), from among whom a group of 554 knowledge workers was subsequently selected (Sokoł 2013, 2015, 2016).

The methodology adopted ensures fulfillment of the requirements of a *knowledge worker's* definition, i.e. possession of formally documented specialized education (Bachelor's degree, engineer degree, and Master's degree for PhD students) and employment in creative industries (within the last 2 years or currently), which include: advertising, architecture, design and fashion design, computer software, cultural institutions, art-trade and antiques-trade, media and higher education.

The Drawing Test of Creative Thinking by Urban and Jellen, which consists in drawing production, was used to show operationalization of the level of creativity among respondents. When evaluating the level of creativity with the TCT-DP test, four evaluation criteria were adopted as the key characteristics of the respondents. These criteria include (Sokoł 2016):

- high level of general skills, often equated with general intelligence,
- high level of specific expertise, manifested in a specific area,
- high achievements or potential of high achievements,
- creative predispositions and achievements.

When it comes to the TCT-DP test, there are no set norms for the age groups which participated in the research, wherefore the classification was made with the use of descriptive statistics (division of test results into 10 groups). On this basis, results classified into three categories of results, i.e., low (1), medium (2) and high (3), were prepared. Results coming within the range between 0 and 25 points were classified as low, the ones in the range from 26 to 35 points were considered medium, while results higher than 35 points were assessed as high. It should be noted that this division, made for the purpose of the research, is arbitrary and, therefore, should be treated with due care.

The style of creativity was measured as an overall result in the KAI questionnaire by Kirton (Karwowski 2009), in which a high result denotes innovation (1) while a low result denotes adaptability (2).

4.2. Results and discussion

The results of research show that the biggest percentage of working students with the highest level of creativity (level 3 in the TCT-DP test) was observed in technical fields of study (56%), followed by agricultural studies (48%) and humanities (44%). In the case of technical fields of study and humanities, it was observed that the lower the level of creativity, the smaller the percentage of students representing such a level. Nevertheless, it needs to be noted that, among working students in agricultural fields of study, the lowest level of creativity was demonstrated by more than twice as many persons as the medium level of creativity.

When analyzing the results of the KAI test by Kirton, it should be noted that the majority of students, in all fields of study, demonstrated innovative style of creativity. What is interesting, students in agricultural fields of study presented innovative style of creativity more often than students in other fields of study covered by the analysis (Table 2). On the other hand, adaptive style of creativity was most frequently represented by respondents of technical study fields (49%) and, least frequently, by respondents representing agricultural fields of study (39%).

Table 2. The number and structure of respondents

Fields of study								
agricultural			humanistic			technical		
980 students – 100%								
375			480			125		
38%			49%			13%		
Knowledge worker (number of students and in %)								
206			287			61		
21%			29%			6%		
TCT-DP by Urban & Jellen 1-2-3 (in %)								
1	2	3	1	2	3	1	2	3
36	16	48	17	39	44	14	30	56
KAI Kirton 1-2 (in %)								
1	2	1	2	1	2	1	2	
61	39	57	43	51	49			

Level of creativity -TCT-DP by Urban & Jellen - low (1), medium (2), high (3).
Style of creativity - KAI Kirton - innovative (1), adaptive (2)

Source: own elaboration

Subsequently, correlation between the level and style of creativity presented by the respondents and the number of creative projects performed thereby in the creative sector in which they were (or are) employed, was analyzed. The analysis enabled both the assessment whether the variables are inter-dependent and determination of the nature and strength of this correlation. The assumption that medium (2) and high (3) levels of creativity are in a direct, positive relationship with the number of creative works, is put forward in hypothesis 2. The survey results confirm a positive correlation between the variables. The Pearson correlation coefficient stood at 0.759 (for medium level of creativity) and 0.815 (for high level of creativity), and the significance level was 0.05.

Positive correlations are also found between the style of creativity and the number of creative products. The values are as follows: 0.724 for innovative style and 0.265 for adaptive style of creativity. Therefore, hypothesis 2 has been confirmed.

As shown by the results of the research, medium and high level of creativity as well as innovative style of creativity are very important factors enhancing creative work. Therefore, correlations between the level and the style of creativity and competencies typical of knowledge workers who study humanities or technical or agricultural science, are verified further in the text (hypothesis 1).

It was assumed that there is a positive and strong correlation between certain competencies and the level and style of creativity when the correlation index is within the range from 0.6 to 1. A positive sign of the correlation coefficient indicates that the level of selected competencies typical of knowledge workers grows with the increase of creativity level. These correlations are presented in Table 3.

The results of the study were used to determine correlation between the level of creativity and individual competencies typical of knowledge workers. For agricultural fields of study, the strongest correlation occurs between:

- the highest level (3) of creativity and the organization of work, technical skills, negotiating skills, experience, assertiveness, teamwork skills,

- medium level (2) of creativity and decision-making,
- the lowest level (1) of creativity and motivation and willingness to learn, self-reliance, professionalism.

In the case of humanities, the strongest correlation is reported between:

- the highest level (3) of creativity and work organization, motivation and willingness to learn, resistance to stress, teamwork skills,
- medium level (2) of creativity and resistance to stress, experience, decision-making, assertiveness,
- the lowest level (1) of creativity and motivation and willingness to learn, professionalism.

For technical fields of study, the strongest correlation is observed between:

- the highest level (3) of creativity and analytical skills, work organization, conflict management, experience,
- medium level (2) of creativity and analytical skills, resistance to stress, teamwork skills,
- the lowest level (1) of creativity and analytical skills, teamwork skills.

The survey results indicate that competencies such as work organization, experience and teamwork skills were strongly correlated with the level of creativity for all three fields of study. Knowledge of foreign languages, personal etiquette, general knowledge and specific expertise, responsibility as well as ethical behavior, in turn, did not demonstrate strong correlation with the level of creativity for any field of study.

The analysis of correlation between the style of creativity and competencies typical of knowledge workers has shown strong positive correlation between the following in agricultural fields of study:

- adaptive style (2) of creativity and conflict management, experience,
- innovative style (1) of creativity and motivation and willingness to learn, resistance to stress, teamwork skills.

For humanities, the strongest positive correlation occurs between:

- adaptive style (2) of creativity and teamwork skills,
- innovative style (1) of creativity and analytical skills, conflict management.

In technical fields of study, the strongest positive correlation is between:

- adaptive style (2) of creativity and work organization, technical skills, negotiating, experience,
- innovative style (1) of creativity and analytical skills.

As shown, students at technical and agricultural faculties and at faculties of humanities combine innovative style of creativity with analytical skills. The competencies that are closely related to innovative style of creativity include conflict management, for students in humanities, and motivation and willingness to learn, resistance to stress and teamwork skills, for students in agricultural fields of study.

None of competencies listed in Table 3 showed a strong correlation with the style of creativity for representatives of all fields of study. Analytical skills, conflict management, experience and teamwork skills demonstrated strong correlation with the style of creativity for two of the three fields of study. On the other hand, competencies such as knowledge of foreign languages, personal etiquette, general knowledge and specific expertise, responsibility, self-reliance, professionalism, decision-making, assertiveness as well as ethical behavior did not show strong correlation with the style of creativity for any field of study.

Table 3. Examination of the correlation between creativity and competencies characteristic of knowledge workers

Competences of students predestining them to work as knowledge workers		Fields of study															
		agricultural						humanistic					technical				
		Level of creativity			Style of creativity			Level of creativity			Style of creativity		Level of creativity			Style of creativity	
		1	2	3	1	2	1	2	3	1	2	1	2	3	1	2	
1	knowledge of foreign languages	0,317	-0,012	0,231	0,321	0,280*	-0,012	0,274	0,521	0,028	0,110	0,387*	0,312	0,429*	0,391	0,002*	
2	organization of work	0,043	0,024	0,832	0,582*	-0,029	0,024	0,319*	0,842	0,127*	0,391*	0,388	0,239*	0,716	0,592*	0,832*	
3	analytical skills	0,345	0,142	0,551*	0,187	0,003	-0,821	0,102	0,003	0,782*	-0,901	0,812*	0,871*	0,610*	0,742	0,551*	
4	technical skills	0,212	-0,012	0,684*	0,541*	0,280	-0,014	0,114	0,421	0,284*	0,052*	0,004	0,041	0,020	-0,018	0,682*	
5	motivation & willingness to learn	0,673*	0,239	0,482	0,826*	0,193*	0,944*	0,499*	0,726*	0,018	0,439	0,182	0,126	0,048	0,039*	0,482*	
6	conflict management	-0,057	0,142	0,014	0,487	0,619	0,142	0,014	0,487*	0,629	0,144	0,011	0,001	0,629*	0,187*	0,011	
7	negotiating	0,043	0,013	0,832*	0,253	-0,021	0,007	0,571*	0,223	-0,017	0,009*	0,329*	0,172	-0,029	0,010	0,842*	
8	personal culture	0,248	0,388	0,256	0,285*	0,322	0,228*	0,276	0,005	0,120	0,218	0,256*	0,115	0,120	0,298*	0,159	
9	resistance to stress	0,128	0,589	0,023	0,862*	0,011	0,589*	0,723	0,862*	0,095	0,511	0,011	0,721	0,095	0,109	0,129	
10	general and specialist knowledge	0,245	-0,023	0,291	0,286	0,029	0,002	0,201	0,212	0,028	-0,129	0,312	0,125	0,197	-0,720	0,288*	
11	experience	0,181	0,341	0,642*	0,481	0,798*	0,541*	0,631	0,429*	0,006	0,321	0,523*	0,409*	0,623*	0,491*	0,632*	
12	self-reliance	0,845*	0,118	0,363	0,121	0,171	0,228	0,322	0,009	0,091*	0,101	0,331	0,401*	0,189	0,101	0,197	
13	responsibility	0,265	0,347	0,578*	0,231*	0,007	0,417*	0,529	0,198	0,125	0,109	0,312	0,198	0,459*	0,201	0,120	
14	professionalism	0,712*	0,163	0,237	0,107	0,559	0,813*	0,221	0,113	0,509	0,431	0,103	0,199	0,007	0,163	0,079*	
15	decision-making	0,234	0,698*	0,354	0,180	0,199	0,118	0,613	0,008	0,202	0,129	0,067	0,178	0,202	0,008	0,003	
16	assertiveness	-0,003	-0,003	0,851*	0,312	-0,118	-0,013	0,601	0,322*	-0,098	-0,021	0,119	0,359*	-0,059	-0,012	0,032	
17	ethical behavior	0,000	0,214	0,485	0,128	0,461*	0,144	0,004	0,119	0,310*	0,319*	0,148*	0,469*	0,474*	0,239*	0,489*	
18	ability to cooperate	0,034	0,028	0,757*	0,612*	0,131	0,138	0,072	0,872*	0,098	0,918*	0,968	0,629*	0,109	0,027	0,007	

Level of creativity - TCT-DP by Urban & Jellen - low (1), medium (2), high (3).

Style of creativity – KAI by Kirton - innovative (1), adaptive (2).

* $p < 0.01$.

Source: own elaboration

On the basis of the results of research, it can be stated that work organization, analytical skills, motivation and willingness to learn, resistance to stress, experience and teamwork skills are the most important competencies of creative knowledge workers, which determine their capability to produce creative works. It needs to be mentioned that competencies corresponding to creative skills are similar regardless of the field of study.

It should be noted that skills demonstrated by creative employees are compatible with those of knowledge workers. This is a positive remark because, these days, knowledge workers with creative potential (the level and style of creativity) are highly desirable. The competencies mentioned above increase the prospects of succeeding on the market. Having the necessary knowledge and the appropriate analytical and processing skills, an employee can create and select processes and actions that will ensure competitiveness and innovativeness of his/her organization.

There is one more remark to be made. It is surprising that in a knowledge-based economy, the knowledge of studying knowledge workers does not show strong correlation with either the style or the level of creativity for any field of study, especially that knowledge is the basis for their decisions and actions. To some extent, the above can be explained by the fact that experience, which can be called the practical dimension of knowledge, is strongly correlated with both the level and the style of creativity. As the research conducted did not allow for

unambiguous identification of the causes thereof, it seems to be an interesting subject of future scientific considerations.

To sum up, it is best when knowledge workers maximize their competencies by presenting creative style and demonstrating high creativity. Unfortunately, it is not always like this. Some knowledgeable employees do not have the creative potential that would allow them to use their knowledge in a specific creative activity. Despite their knowledge, they do not have the necessary skills to translate the creative ideas into effective actions, which would give them competitive advantage on the market. This is why it seems that universities should not only provide students with knowledge, but also develop competencies needed by knowledge workers to boost their creativity.

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UNLOCKING DIGITAL ENTREPRENEURSHIP THROUGH TECHNICAL BUSINESS PROCESS*

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Abstract. The objective of this study is to explore the level of reliance of business processes on technologies for growth and sustainability of Saudi entrepreneurship. The technological business environment has pressed the entrepreneurs to adopt the information systems to overcome operating deficiencies, including high costs, small production cycles, dormant business process and scarce financial resources. *The future growth and sustainability of the Saudi entrepreneurship are depending on the adoption and integration of information systems* allowing to facilitate the trade processes across functional units, use of a standatized database and information sahring. Obtained data support the technological reform that claims that business technology will enable the decision-making process to be timely, consistent and reliable across organizational units and geographical locations. The data collected through online surveys with thirty-one Saudi entrepreneurs revealed the barriers faced by the entrepreneurship, and allowed to summarize provided recommendations. The analysis indicated that the growth and sustainability of the enterprise are subject to adoption of technology oriented business process lead by information systems in the organizations. The outcome of the study is further recommendation to educate and spread the awareness about the implementation of information systems to address the electronic business process. The study will help to organize, assess and improve business processes in order to meet the new requirements set by competition among entrepreneurial companies.

Keywords: entrepreneurship, information systems, electronic commerce, sustainability

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1. Introduction

The word entrepreneur comes from the French word “entreprendre” which means to “undertake”. The work of Hernandez (2016) addressed the process of initiating and continuing the expansion of new businesses; entrepreneurship is credited the creation of new businesses. The business world has been transformed during the last few decades due to the advancements in technology. The research by Hernandez has suggested that there is evidence that creation of entrepreneurship based on technology and innovation has a positive impact on the economic development of the country. Information Systems are transforming every aspect of Entrepreneurship from employee recruitment to the production process, from the start-up of the business till becoming the giant, and how to interconnect with all the stakeholders. Many start-up companies are remodelling their business models and adopting information systems with the electronic commerce approach in mind. It has become more important than ever for entrepreneurs understand not just how the technology works, but also how current and future advances affect the sustainability and growth of their business. Many entry level managers give high priority to manage finances, equipment, materials, and human capital but do not consider information systems as a must have resource.

Technological oriented business process lead by information systems are the foundation for the building and running a successful business today. It is impossible to survive and even exist without the implementation of information systems regardless of the industry. The new entrepreneurship requires information systems to execute the business processes. The entrepreneurs could compete with the established business by capturing a niche market being carried out through the use of e-mail, online conferencing, and international teleconferencing. Internet technologies have become essential business tools.

1. Literature Review

This research has referred literature and conducted online surveys to address the challenges and potential opportunities faced by the Saudi entrepreneurs during the establishment of small business. The study examines the barriers that caused the small businesses in Saudi Arabia lack to transform into the digital firms. The business processes are carried out manually instead of executing by information systems by most of the local entrepreneurs. The automation of technology based business process allows small businesses to developed organization's business partnerships with customers, suppliers, and employees and manage business assets through digital means (Shmailan 2016; Prause, Atari 2017; Hilkevics, Hilkevics 2017; Pauceanu 2016; Samašonok et al. 2016; Raudeliūnienė et al. 2016; Teletov et al. 2017). The study by Business Group has addressed the issues that arise due to the resistance of integrating information systems to perform and achieve the core business process by entrepreneurs. The business assets, including intellectual property, core competencies, and financial and human asset could have managed through the electronic means.

The Saudi government recognizes the benefit from growth in the small business segment as a major contributor to GDP and employment. Therefore, the government has initiated and introduced many programs and tools for the entrepreneurship to adapt the information systems to avoid a failure. The government has planned many technical reforms and programs by emphasizing the contribution of small business to the country's 2030 development plan. The research by Tvaronavičienė (2009) also supported the initiative of the government that better institutional performance, the better performance of organizations-market players, and the faster sustainable development processes.

The Ministry of Commerce is providing the assistance required to bring the entrepreneurs contribution to the gross domestic product as compared to the US, 50%, France 56%, Spain 57%, and Japan 64%. The government has instructed the banks to accommodate small businesses, financial request to become digital firm, including

purchasing technology solutions. The financial intuitions and relevant stakeholders have offered expertise and logistics to training small businesses on how to transform their manual conducted business process into a digital one. Similarly, Samba Financial Group is hosting workshops for SMEs through its Business Edge program. The initiatives are educating the entrepreneurship to understand the technological way of conducting modern business that allows them to sustain and grow.

2. Materials and Methods

The thirty-one entrepreneurs were asked to express the extent of their experiences in adopting the technology oriented business process, especially with information systems, including enterprise resource planning and customer relations. The subjects were allowed to share their knowledge against survey statements on electronic business infrastructure in Saudi Arabia. The aim of collecting the data is to generalize Saudi entrepreneur's attitudes and expectations about being digital firm and what actions are required at different levels of transforming manual business process into digital automation.

The survey, conducted through online between December 19, 2016, and January 20, 2017. The researcher used the SPSS statistical package to analyze the responses to the twenty-five open-ended questionnaires. The respondents were asked about their opinions, investigating the importance of being digital firm, the know-how of Internet functionality and cultural influence in setting up a new venture in Saudi Arabia.

A pilot test was conducted to verify the tools before collecting data. The purpose of the pilot test was to access whether the instruments were capturing the phenomena desired. The researcher used simple random sampling because of the process of random selection of the sample, which removes the possibility of biases. Any differences that do occur are then the results of chance rather than bias on the part of the researcher. The key to obtaining a random sample is to ensure that every member of the population has an equal and independent chance of being selected. The researcher, achieved this objective by using a table of random numbers.

3. Results and Discussion

It is observed from the responses that many entrepreneurs are familiar with the rationales of managing business resources such as equipment and people, and claimed that these aspects are important. Although, they are not certain that there is interdependence between a firm's ability to use information technology and its ability to implement strategies and achieve business goals. The research has extracted the following five themes from the responses regarding introducing technology in small firms. The respondents agree that businesses could improve the efficiency and operations through automation and allow to achieve higher profitability. The entrepreneurs believe that information systems could streamline the business process to boost the effectiveness and productivity of the services. The automation could come with changes in business practices and management behavior.

The respondents suggested creation or remodification of business models in order enabling adopt information systems, and empower entrepreneurs. The modified models will produce new business process, products, and services. The implementation of technological solutions will allow entrepreneurs to build, deliver, and sell a product or service to cater the demands of the customers. The work by Akhter (2017) explained that a technology oriented business process through enterprise resource planning (ERP) system fosters a satisfied customer and enhances the supplier intimacy. An ERP systems have numerous benefits to support business processes, including the elimination of redundant processes, reduce inventory, minimize production cost, address customer and suppliers and enhance response time. An ERP addresses the needs of the clients and vendors to serve them well. The survey suggested that entrepreneurs like to implement the system to allow the suppliers to have access to

entrepreneurship inventories for just-in-time supplies to avoid delays. The procurement process could be executed through the information systems with the minimal human interference to increased revenues and profits. The high level of automation with business stakeholders allow them to position themselves early to address the needs of the entrepreneurs. It also lowers the cost of conducting business for all stakeholders.

The respondents express the concern of not having access to accurate and current data, and therefore feel to be forced to rely on forecasts, best guesses, and luck while make strategic decisions. They preferred to install an affordable information system to access to real-time data from the different databases to make business decisions. The information systems will allow entrepreneurs to make informed and accurate decisions resulting in lowered costs and earned customers' trust.

The survey emphasizes the reliance on information systems to enable entrepreneurs to perform better than competitors, offer low-cost quality products and respond to stakeholder's inquiries in real time. The entrepreneurs believe that support from information systems will result in repeating business, satisfaction, higher sales, and trusted reputation that competitors cannot match. The Walmart was the first mover to adapt the information systems in retail business and pass the competitive advantage to the customers to beat the retail market competition. The survey outcome is supported by Bharthvajan's work in 2014 that access to the latest and most efficient technology and techniques will bring competitive advantage to the major players. The respondents agreed that in the technological base business environment, it is necessary for them to equip with information systems to conduct business. Otherwise, competition will catch up the real competitive advantage by taking corrective actions and strategies. The Saudi government did understand the importance of information systems for business sustainability and assisted the entrepreneurship to acquire information systems and modern technologies.

The government's assistance in the process of to the enterprise business models' transformation would bring greater returns as increased productivity, increased revenues and superior long-term strategic positioning. The reliance on information systems would offer value added to entrepreneurship processes, including helping managers to make sound decisions, business processes become efficient, allowing to escalate profitability. The respondents believe that access to multiple technological solutions can assist them to identify processes that may need to be changed or deleted. The technical solutions could trigger a quality audit on business process to verify the status of expected performance. The decision support systems or expert systems could enhance the effectiveness of existing business processes by extracting reports from other systems. The entrepreneurship expressed that they need systems that keep track of their business activities and transactions, such as sales, receipts, cash deposits, payroll, credit decisions, and the flow of information in business. The entrepreneurs also expressed the interest in cloud computing to use the computing resources as per their needs instead of buying them exclusively.

Some small companies are shifting their business process to conduct through cloud computing. There are some respondents, who mentioned using Google online tools and services, and some are suitable for cloud collaboration. They are using most of the free services, including Google Drive, Google Docs, Google Apps, Google Sites, and Google+. The revolutionary commercial potential of the Internet allows the companies to minimize the turnaround time and keep the potential customer engage in the buying process. The access to the Internet option is available to entrepreneurs to serve the customers as big giants, including Airbnb or Uber. The CRM and ERP could design or modified business process and allow for transparent communication between all stakeholders of activity. It will give entrepreneurs a competitive advantage for managing stakeholder interactions, dealing with potential customers, optimizing and systematizing relationships at a lower cost. For example, the systems could enhance and streamline the checkout process of the entrepreneurship. The checkout process could become quick and straightforward to prevent checkout abandonment.

Conclusions

It is determined from the responses that now the entrepreneurship can sustain the growth of the business with the increasing benefits of the Internet and the emergence of the advanced information systems, such as the Web3.0, mobile commerce, business intelligence, cloud computing and others. The respondents believe that cloud computing is changing the way organization activities performed finance, accounting and supply chain management. Saudi entrepreneurs must look for the initiatives to be supported by the advantages of benefits the information technology offers. They must regularly review their business process, adopt the options technology offers that can help to reach new markets and global customers. The technologically innovative business process will allow them to reinvent business models to capture productivity and performance, unlocked by the information technology.

Information Technology is the lifeline for the business to sustain. Almost 87 percent of the entrepreneurs believe that the information systems will have the greatest impact on lowering entrepreneurship operating costs over the next ten years. The survey outcome argues that it is necessary to invest in information systems to sustain the growth of the enterprise. It is an ethical and business responsibility of the financial institutes, non-profit microfinance organizations, and venture capitalists seek out initiatives and step up their efforts to serve the small business in Saudi Arabia.

The entrepreneurs are required to have an awareness that absence of information system is causing little revenue per client, high risk of losing the customers, and the dormant and obsolete business process. The Saudi government has taken initiatives to support entrepreneurs to acquiring technological tools. It is observed from the responses that when adopting an information system, entrepreneurship should involve top management in the process and also consider the internal culture. The research by Ghodbane (2016), Abunar (2016), and Akhter (2017) agreed that age, gender, and social networks positively influence technology entrepreneurship with the shift of information communication technology jobs.

It is advised to acquire vendor support from the beginning of the transition to address training, business process re-engineering, and maintenance. The information systems will allow the businesses to have access real-time data. This option will allow the business intelligence tools to perform a high level of forecasting and analysis to generate the most accurate information. The information systems work in conjunction with the Internet, extranets, and intranets to create new opportunities to conduct business online. Information Systems makes entrepreneurship more feasible, cheaper, and easier to set up than before as it allows a small group of employees from a different area of the company to collaborate on a project without leaving their premises. The costs of trading across borders and barriers to entrepreneurship could significantly be reduced by the adoption of information systems across the organization.

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CLUSTER PERFORMANCE: AN ATTEMPT TO EVALUATE THE LITHUANIAN CASE*

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Abstract. The article takes place in the research area of the ongoing European project 'Cluster Development Med' (Horizon 2020) regarding the innovation and technology in the sustainable development field. Authors suggest a model, which allows to identify the most successful clusters and make comparisons between and within them. The analysis defines where they perform a positive or negative trend in the area examined. The model embraces three dimensions of cluster activity, so called, "Resources, Activities, Processes". They have been determined on the work of the Lithuanian association "Knowledge Economy Forum", called "Cluster Analysis". Data for practical evaluation purposes were obtained through two stage process. First, an interview on site with the coordinators of the Lithuanian clusters for data collection was done through a questionnaire survey, developed in collaboration with the Science and Innovation Agency of the Lithuanian Government. Secondly, the data have been aggregated by applying one of multi-criteria methods, specifically, Simple Additive Weighting method. Finally, the multi-criteria analysis results were used to estimate the efficiency of the clusters. The results were compared through suggested benchmarking. Suggested model can be used for evaluation of performance of different clusters.

Keywords: cluster; firm performance; cluster performance; performance measurement; Lithuania

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1. Introduction

According to Nuur (2005) clusters have long been part of the industrial framework, with geographic agglomerations of business and enterprises in specific industries existing since centuries. Agglomeration economies had been first developed by Marshall (1920) and further by Arrow (1962), Romer (1986) and many other scholars (OECD, 2007). Over the last decades, cluster policy has been widely analyzed by Porter (1990, 1998), who claims that clusters are composed by firms and industries linked through vertical (buyer/supplier) and/or horizontal (common customers, technology, etc.) relationships with the main players located in a single nation/state. This definition was further analyzed by several scholars (Rosenthal and Strange, 2004; Delgado, Porter, and Stern, 2014; Ellison and Glaeser, 1997; Kerr and Kominers, 2015; Krugman, 1991).

Several governments and industry organizations all over the world have made use of this concept in recent years as a mean to encourage urban and rural economic growth. As a result, a high level of cluster initiative organizations started during the 1990s, and the trend continues (Bevilacqua, 2011). An analysis of cluster initiatives around the globe, covered more than 1400 cluster initiative organizations, was carried out in the "[Cluster Initiative](#) Greenbook" published by [Orjan Solvell](#), [Christian Ketels](#) and [Goran Lindqvist](#), with a foreword by [Michael Porter](#) (Andersson, 2004). The attempt of the work is to use benchmarking to measure the cluster performance of the clusters. Benchmarking is a good practice in business among organizations to improve performance and competitiveness, but it is rarely used to check cluster parameters in Lithuania (Tvaronavičienė, 2015). Some scholars as Rodríguez-Pose (2017) claim about cluster performance that firms in small regions may suffer because of shortages of skills and limited externalities. These limitations can be partially overcome by potentially higher levels of social capital and interpersonal trust (Maskell and Malmberg, 1999), although greater collaboration and embeddedness may both facilitate the generation and transformation of skills and knowledge into industrial performance (Fitjar and Rodríguez-Pose, 2017) or, conversely, lead to lock-in and stifle the capacity of local firms to remain competitive and productive (Boschma, 2005; Rodríguez-Pose and Crescenzi, 2008).

2. Approaches towards cluster perception

Clusters and their literature to study them are various and multidimensional. They require a wide variety of tools to be deeply understood and appreciated. Even though there are several studies carried out in different countries, there is not a common compromise of the cluster concept has not been generally accepted yet. "Clusters are geographic concentrations of interconnected companies and institutions in a particular field. Clusters encompass an array of linked industries and other entities important to competition. They include, for example, suppliers of specialized inputs such as components, machinery, and services, and providers of specialized infrastructure" (Porter, 1998, pp.11). One of the main characteristics of clusters is to support the economic growth of enterprises in specific working sectors or create new businesses in larger industries of a geographic area. Industrial clusters perform as instruments in strengthening the innovative capabilities of firms, industries and even nations. "The phenomenon of cluster appears as an evolution of the traditional industrial districts. It reveals factors in common such as cultural approach, knowledge transfer, social capital and institutions" (Monni and Spaventa, 2007, pp.175). According to Porter, "clusters also often extend downstream to channels and customers and laterally to manufacturers of complementary products and to companies in industries related by skills, technologies, or

common inputs” (Porter, 1998, pp.78). Moreover, most of the clusters embrace governmental and other institution supporting for specialized training, education, technical aid, research and information. Clusters involve a disposition of interconnected industries and other entities important to competition (Porter, 1998). However, talking about clusters does not concern only geographic and physical relation, but it specially focus on the social and human relation between a wide array of members such as institutions, universities, research centers and enterprises, where the synergy gets even more importance between public and private sector (Monni and Spaventa 2007, 2009; Zemlickiene et al. 2017; Fuschi, Tvatonavičienė 2016; Ahmed et al. 2017; Razminienė et al. 2016).

We aim at claiming that clusters develop and therefore strengthen their competitiveness, through the “combination of inter-firm rivalry and collaboration (so called “co-opetition”), innovation and the rapid transmission and adoption of ideas, and the generation of important local externalities, such as a skilled labour pool, the availability of specialized inputs” (FAO, 2010, pp.3). Cluster are in continuous evolution, facing the challenge of the stakeholders and the only solution is the cooperation between companies within and between clusters. Reduced input costs of the manufacturers, development of common suppliers, training of professional labor and a technical knowledge spillover effect can be achieved through the formation of clustering (Hsu, 2014; Morrison et al., 2013; Prause, Atari 2017; Hilkevics, Hilkevics, 2017).

The strategic role of Small and Medium Enterprises

According to Karaev (2007), clusters are identifiable as an essential mean for improving SMEs productivity, innovativeness and overall competitiveness through overcoming their size limitations (Kljucnikov and Popesko, 2017). The knowledge of clusters represents an opportunity for small and medium enterprises to improve their market position. The purpose is to encourage the cooperation as well the competition between them, in such a way to accelerate the processes of innovation. “Numerous examples, in both industrialized and developing countries, demonstrate that SME cluster have established themselves as important and dynamic players within the international market responding to global competition challenges by capitalizing on local opportunities and collective competitive advantage” (UNIDO Programme, 2001, pp. 10).

Cluster competitiveness aims at enhancing SMEs’ size, performance, innovation and employment; therefore it is used to assessing their outcomes in terms of capital invested and equity returns. The findings from a difference-in-differences analysis reveal that sales, employment, R&D investments, and value added all increase in relative terms, but financial returns exhibit significant relative decreases for the smallest companies, whereas larger firms record strong increases (Broekel et al., 2015; Kozubikova et al., 2017). The ineptitude of the least modest SMEs to take advantage from their cluster membership should be more discussed for both companies and policy-makers (Braune et al., 2016).

“It is characteristic to clusters to sustain productivity growth of firms in specific regions or create new businesses in larger sectors of a particular nation. Industrial clusters perform as instruments in strengthening the innovative capabilities of firms, industries and even nations. The main feature of the cluster, which exposes itself in the long run is that companies within cluster increase their competence of an organization and achieve a competitive advantage in global markets” (Tvatonavičienė et al., 2015b pp.120). Therefore, identifying the dominant problem groups facing the company can enable an estimate of the level of knowledge available in the enterprise. Classifying micro, small and medium enterprises (M-SME) based on their available levels of knowledge, specific problems that dominate a company's operations are considered. “About half of the M-SME shows a lower level of available knowledge, and only 10% are categorized with the highest level. There should be not wide differences between the size and the level of available knowledge of the company. Thus, employment and sales’ level of M-SMEs is not followed as a logical consequence by an accumulation of knowledge which firms can benefit to improve their operations” (Lopez-Ortega et al., 2016, pp 1). SMEs have an essential role in the cluster framework.

By funds they get, they can invest in R&D, enhance knowledge, increase innovation and improve quality of life (Rodríguez-Pose and Crescenzi, 2008). Here it is also aimed at examining “how technology transfer is being approached in the latest scientific literature, and whether interrelations of technology transfer and sustainable development are being elaborated. Clusters in this context are perceived as networks (not necessarily proximate in geographic terms), which serve as technology transmitters” (Tvaronaviciene, 2015b, pp. 87).

ClusDevMed: a Horizon 2020 project for cluster

The ‘Cluster Development Med’ (ClusdevMED) is a project funded by the European Union, MarieSkłodowska-Curie Actions under the Research and Innovation Staff Exchange scheme (RISE) -Horizon 2020 Programme. CusdevMed Project’s areas of interest are those that concern the implementation of research and innovation about the sustainable development field: e-learning, educational technology, green technology, affordable and healthy food, energy efficiency and renewable energy, water reuse and wastewater treatment. It aims at improving the sustainable development through the secure access to food and energy worldwide, relying on win-win share of sectoral use of constrained natural resources, such as land and water, taking also in account the crucial role of ecosystems and their services (Karabulut, 2017).

The project lies within priority research and innovation topics in EU cooperation, as highlighted in several past projects and policies recommendations, i.e. within the MOCO - Monitoring Committee for European Cooperation in RTD. International Cluster Cooperation offers opportunities to scale up research and technological potential, enhance competitiveness, support the regional socio-economic development and reinforce the market placement of new, innovative products. These cooperation approaches often fail due to constraints on resources, capabilities, instruments and funding. On the other hand, over two-thousands clusters only in the European Union covering all sectors and able to realize an inter-sectoral framework, as well as related clusters and networks in the southern Mediterranean countries, form a great potential for transnational clustering (European Commission, 2014)[†].

3. Metodology

Below we provide object, approach to data collection and methods used, what is embraced by methodology of research.

Object. Concerning the research and innovation about the sustainable development field for the ClusDevMed project, it is interesting to focus on the Baltic regions’ experience and to analyse in depth the Lithuanian case. Recently there are less than fifty clusters initiatives in Lithuania. Some of them are still at the initial formation, or is a group of companies that gathered together seeking only for EU SF aid. From all the identified clusters in Lithuania only a forth is formed naturally, by common work aiming at bigger part of market and increasing competitiveness of cluster companies, in a long-term co-operation perspective to develop of new products or services (Tvaronaviciene, 2015b). Seven successful clusters have been selected according to the following criteria: “they have been operating for longer than two years, receive funding either from EU funds or private institutions and the results of cluster activity are satisfactory” (Tvaronaviciene, 2015a, 122). Because of the strong partnership and trade connections, of the similar characteristics showed and, specially, because of the same working business area, that is food and agriculture, it was decided to include even the cluster from Latvia (Food Products Quality Cluster), also for the reason why it produces a wide contribution to the analysis. The research concerns different fields of cluster: the aim is to compare clusters through every kind of field and then focus on cluster of the Lithuanian agricultural sector. The following clusters are the one being interviewed: the Latvian

[†] For further information about ‘ClusDevMed’ Project, please refer to the European Commission webpage, http://cordis.europa.eu/project/rcn/196630_en.html

'Food Products Quality Cluster' (Cluster A), of which the main target is to promote cooperation between Latvian food enterprises and increase their export potential; the *'Smart Food Cluster' (Cluster B)* aims at helping companies from Lithuanian Food Exporters Association to increase competitiveness in foreign markets by uniting the capabilities, expertise and contacts; the *'Uzupis Creative Cluster' (Cluster C)*, that wants to establish and build a strong, international simulation game development community, to develop educational simulation games cluster, which in the design of products and competence would be able to compete in international markets, create and implement innovative new technologies and solutions in the field of educational simulation games, combining and developing the potential of Lithuania; the *'iVita Wellness Cluster' (Cluster D)* purpose is to develop high quality and added value wellness products and services which increase people's safety, their performance efficiency, contribute to prevention, education of society and development of healthy lifestyle habits; the *'Vilnius Film Cluster' (Cluster E)* not only provides top-quality services, but also actively cooperates with Lithuanian and foreign partners, supports young creators, organizes professional development events and mastery courses for film industry specialists; the *'Baltic Automotive Components Cluster' (Cluster F)*, aims at uniting the Lithuanian (Baltic) companies involved in the manufacturing of automotive and farm equipment; the *'Laser and Engineering Technology Cluster' (Cluster G)*, of which the first goal is to create a dynamic activity center with a fully integrated supply chain of suppliers, manufacturers, and sellers, which would enhance the international competitive ability of the sector of laser and related technologies as well as knowledge and material well-being of its individual members[‡].

Clusters' performance in Lithuania: approach to data collection. Studies related to performance of clusters are widely discussed in scientific literature: scholars debate such aspects as measuring of innovations (Rezk at al. 2015), approaches and methods (Maffioli, Pietrobelli, Stucchi, 2016) of cluster analysis, technology transfer processes and driving forces; composition and governance specifics; participation of start-ups. Hence, spectrum of questions related to clustering phenomena is wide (Razminiene, 2016). At the initial stage an interview with the coordinators of the seven clusters selected in Lithuania was arranged (Appendix, part A). The main aim of the meeting was to get information from a person who has been participating in the life of cluster from the beginning of it about the successful clusters in Lithuania. "As it is complicated to measure how successful cluster is some features were named as obligatory which characterize cluster and show how good it is at accomplishing goals, if the companies are working together for a common purpose. Measurements such as cluster activity, resources and processes must be taken into account" (Tvaronaviciene, 2015a). Successively, the managers were asked to give evaluations for indicators of cluster efficiency according to their importance so that a multi-criteria analysis could be carried out. A multi-criteria analysis was chosen for it serves in making a comparative assessment among heterogeneous measures. At the last stage the data was structured and a multi-criteria analysis carried out to prove the efficiency of the clusters. The results were compared through benchmarking.

Multicriteria SAW method. Multi-criteria methods are used for both theoretical and practical tasks since they are universal and enable to carry out a quantitative study for any complex phenomenon with many indices (Ginevičius, 2008). The multicriteria SAW (Simple Additive Weighting) method was applied to process the results. The adopted model embraces three dimensions of cluster activity, so called, "Resources, Activities, Processes" (Ziniu Ekonomikos Forumas, 2012). The work suggests an approach for cluster performance assessment, based on the multi-evaluation, which covers a wide range of indicators. We assume, that cluster effectiveness should be evaluated according to the suggested indicators showed in the Appendix (part B). Let us explain the steps through which it was possible to get these values. First, as mentioned above, a questionnaire survey was delivered to clusters' managers that decided to participate at the analysis. The questionnaire has been developed in collaboration with the 'Science, Innovation and Technology Agency' (MITA) of the Lithuanian

[‡] For further information about the clusters analysed, please refer to the European Cluster Collaboration Platform webpage, <https://www.clustercollaboration.eu/cluster-list>

Government. It is composed by two principal parts: in the first one, the managers were asked to give some data (for each indicator of Resources and Processes dimension) and an evaluation from 1 to 10 (for each indicator of Activities); while in the second one they were asked to attribute a number of Importance to these indicators, still from 1 to 10 (Ziniu Ekonomikos Forumas, 2012). The next step was to sum the seven different evaluations up (since the interviewed managers were seven) of each indicator of the first part (Table 1). For logistic reasons, it is only showed the 'Resources' dimension, but it is possible to consult the whole questionnaire in the appendix B.

Table 1. Data and respective Sum

	<i>cluster A</i>	<i>cluster B</i>	<i>cluster C</i>	<i>cluster D</i>	<i>cluster E</i>	<i>cluster F</i>	<i>cluster G</i>	<i>Sum</i>
units	1	1	1	3	2	1	10	19
units	52	18	13	11	22	17	13	146
units	0	2	18	0	3	0	8	31
units	0	20	9	0	0	0	0	29
units	25	14	20	20	1	9	2	91
units	25	7	12	2	0	0	2	48
Eur	212000	200000	1000000	96319	1000000	0	1448100	3956419
Eur	38000	400000	1000000	192637.9	1000000	60000	2896200	5586838

Source: Authors' elaboration

Later on, we passed to the normalization: it was obtained dividing each number of the evaluations by the value of the indicator that refers to the evaluation. These values are included between 0 and 1 (Table 2).

Table 2. Normalization

	cluster A	cluster B	cluster C	cluster D	cluster E	cluster F	cluster G
units	0.052632	0.052632	0.052632	0.157895	0.105263	0.052632	0.526316
units	0.356164	0.123288	0.089041	0.075342	0.150685	0.116438	0.089041
units	0	0.064516	0.580645	0	0.096774	0	0.258065
units	0	0.689655	0.310345	0	0	0	0
units	0.274725	0.153846	0.21978	0.21978	0.010989	0.098901	0.021978
units	0.520833	0.145833	0.25	0.041667	0	0	0.041667
Eur	0.053584	0.050551	0.252754	0.024345	0.252754	0	0.366013
Eur	0.006802	0.071597	0.178992	0.034481	0.178992	0.01074	0.518397

Source: Authors' elaboration

Then, the same process was carried out for the second part: first, the levels of satisfaction (from one to ten) attributed by the managers (still seven, because of the seven different managers) of the same indicators were summed. Therefore, to get the final weight, each of these numbers (numbers of importance) was divided by the respective sum that refers to the indicator (Table 3).

Table 3. Level of satisfaction and respective weight

cluster A	cluster B	cluster C	cluster D	cluster E	cluster F	cluster G	Sum	Weight
7	8	8	8	7	7	7	52	0.138298
5	7	6	8	6	8	8	48	0.12766
5	7	6	6	6	7	6	43	0.114362
6	6	7	6	5	7	6	43	0.114362
8	6	6	7	6	7	7	47	0.125
7	6	7	7	6	7	7	47	0.125
6	6	7	7	7	5	7	45	0.119681
7	7	8	8	7	7	7	51	0.135638
							376	1

Source: Authors' elaboration

Finally, the last step was to multiply this weight by the respective final value (always seven final values for each indicator) obtained in the first part (Table 4). The values that refer to each cluster, obtained by this last multiplication, were summed up to get seven final results of each category (Table 5).

Table 4. Results of each indicator

cluster A	cluster B	cluster C	cluster D	cluster E	cluster F	cluster G
0.007221	0.007221	0.007221	0.021664	0.014442	0.007221	0.072212
0.047927	0.01659	0.011982	0.010138	0.020277	0.015668	0.011982
0	0.00732	0.065878	0	0.01098	0	0.029279
0	0.078246	0.035211	0	0	0	0
0.034069	0.019079	0.027255	0.027255	0.001363	0.012265	0.002726
0.064589	0.018085	0.031003	0.005167	0	0	0.005167
0.006362	0.006002	0.03001	0.002891	0.03001	0	0.043458
0.000915	0.009634	0.024086	0.00464	0.024086	0.001445	0.069758

Source: Authors' elaboration

Table 5. Final results given by the sum of each indicator of each dimension

	A	B	C	D	E	F	G
<i>Resources</i>	0.161083	0.162177	0.232646	0.071755	0.101158	0.0366	0.234582
<i>Activities</i>	0.115136	0.17156	0.185494	0.172831	0.107213	0.13342	0.114345
<i>Processes</i>	0.110547	0.123034	0.169496	0.154892	0.252739	0.056116	0.133176
Total	0.386767	0.45677	0.587636	0.399478	0.461111	0.226136	0.482103

Source: Authors' elaboration

Benchmarking was chosen as the most reasonable method of data analysis to serve the purpose of this article. As a process benchmarking, this method serves to compare the three main dimensions which reveal cluster efficiency: activity, resources and processes (Carpinetti, 2008). Based on this methodology, there must be a continuous monitoring performance of clusters. These indicators must be assessed at least once every two years, to verify the collection of relevant data clusters and interview survey methods. In order to increase cluster performance, it should be based on cluster performance assessment results, establishing appropriate incentive measures to ensure the changes in values and simultaneously ensuring the efficiency of the whole cluster.

4. Between and within analysis: empirical results

Looking at 'Final results' table (Table 5), it is possible to compare clusters between them. Concerning the 'Resources' dimension, Cluster C and G perform high values specially for the reason why they have been receiving lots of financings and making wide investments. As it concerns 'Activities' dimension, Cluster C stands out again because it shows a clear satisfaction in the organization and logistic of the cluster. Then, with reference to the 'Processes' dimension, Cluster E demonstrates the highest value because it especially invests in training for developing the personnel. The aim of the research is to focus on Cluster B, Smart Food Cluster. We aim at analyzing Smart Food Cluster because it takes place in the agribusiness and agricultural sector and it is the most relevant to the ClusdevMed topic that is Sustainable Development. It is positioned in the middle cluster group with the E and G ones. By taking a look at each value of B, it is still in the middle level for 'Resources' and 'Processes', while it gets a relative higher value for Activities, taking part to the top of performance cluster ranking. What does it need to do to improve its performance? For instance, to develop the resources, it has to increase the skilled personnel (having a highest education) and raise the financing level, while to improve the activities it needs to focus on the visual identification (i.e. logo, brand, image) and specially on the cooperation and technology transfer; then to show a better performance in processes, there must be an increase of the expenses in Research and Development and of the level of internalization of the cluster, that means a launch to import and export business.

Cluster resources include all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness. Thus, in the language of traditional strategic analysis firm resources are strengths that firms can use to conceive of and implement their strategies. Here resources regard human resources and know-how, financial resources, infrastructure resources (Barney, 1991). Cluster activities regard the value chain that a firm operating in a specific industry performs in order to deliver a valuable product or service for the market. The idea of the value chain is based on the process view of organizations, the idea of seeing a manufacturing (or service) organization as a system, made up of subsystems each with inputs, transformation processes and outputs. Inputs, transformation processes, and outputs involve the acquisition and consumption of resources – money, labour, materials, equipment, buildings, land, administration and management. How value chain activities are carried out determines costs and affects profits human resources development, Cluster competitive situation changes, cluster innovation changes, Cluster internationality level (Jurevicius, 2013). Cluster processes are a collection of related, structured activities or tasks that produce a specific service or product (serve a particular goal) for a particular customer or customers. It may often be visualized as a flowchart of a sequence of activities with interleaving decision points or as a process matrix of a sequence of activities with relevance rules based on data in the process. They include Market activity, Marketing and public relations communications, internal communication, External communication (Competitiveness and Innovation Framework Programme, 2011). The clusters were selected paying attention to their performance regardless of the industry sector as for generic benchmarking. "As to agree with the principles for benchmarking (Carpinetti 2008), some restrictions were applied to this article". In order to verify legal aspects of the study, statistical data are given in the normalized. All the benchmarking partners will receive the same type of information for perceiving mutual benefits. Benchmarking data will be communicated outside for study purpose as it was prior agreed with benchmarking partners. To sum up, after comprising all the steps that have been taken moving towards the results of this study, generic benchmarking process has been followed. At first cluster efficiency was determined as a subject of this benchmarking study. Then a coordinator of cluster development in Lithuania as a consultant for choosing the partners was approached. Later seven clusters were identified as the partners of the study four of which participated in the process of benchmarking. Further step was to collect and analyze data using

questionnaire survey and multi-criteria analysis methods to serve the purpose. Finally, the results were implemented and monitored.

Conclusions

This article aims at comparing the most successful clusters, in the given conditions, in Lithuania. After comprising all the steps that have been taken moving towards the results of this study, generic process has been followed. Cooperation and competition are factors that encourage the growth of clusters, both within and between them. Thus, Smart Food Cluster, that regards ‘Agriculture products’ and ‘Processed Food’, mainly arises in the Activities category where it has one of the highest values while in the Resources category shows medium-high values. By analyzing the cluster framework, we can say most of the clusters could perform better learning from some areas such as the Agriculture and Food one. They can adopt the same strategies or start a collaboration with it. For instance, they can improve in Resources on hiring more graduated people or increasing investments for cluster initiatives. While for Activities, they can show a better performance focusing on the image of the cluster in mass media or, even, sharing more knowledge and experience. On the other hand, Smart Food Cluster and the respective Agriculture and Food sector needs to improve in the Processes category: their values are between the medium-lowest of the analysis, for instance they can increase the R&D expense or the number of official agreements with foreign entities.

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Appendix

Part A. Interview to Smart Food Cluster Manager: Mr. Giedrius Bagusinskas, Vilnius, 21 September 2016

Clusters have been an added value for both economic growth and society itself. "Cluster members are linked by common economic interests, by selling the products and (or) services of the value chain activities" - emphasizes Kestutis Šetkus, Lithuanian Innovation Centre (LIC) Director, of which the main goal is to provide the innovation support services by implementing Lithuanian innovation policy and is the increasing of Lithuanian international competitiveness by stimulating innovations in business. Productivity, competitive advantage both in local and international markets, innovative products, improving the competence of personnel and partners and corporate customers may be some of a number of results that may be achieved by acting together cluster members.

According to Giedrius Bagusinskas, Smart Food Cluster coordinator and Lithuanian Food Exporters Association Manager, the cluster is the development of a form that enables innovation and exports and makes it a powerful force with a strong breakthrough in business. "Our Exclusivity was primarily in the fact that we have started cooperating because of the need to increase competitive advantage and improve business performance in foreign markets". First of all, it was born in informal exporters club, was followed by Lithuanian food exporters association establishment. Then three years later he founded Smartfood Cluster. An important aspect of this cluster development - the first in Lithuania, where the organization has enabled companies not only to compete.

"Like every business, sometimes you get one or other market conjuncture factors and internal communication problems between the cluster members, but all this is only a temporary difficulty, which helps to overcome and make strong corporate agreements on common and measurable economic objectives" notes G. Bagusinskas.

Businesses find common cross-sectoral cooperation between cluster members and actively initiate implementation of joint initiatives that focus on new products and / or services development and export increase (international cooperation) that helps the Science, Innovation and Technology Agency (MITA), Lithuanian Innovation Centre (LIC) and "Enterprise Lithuania (VL), the project initiative " Business and science Partnership internationality promotion "- all of which give measurable results, notes LIC Director K. Šetkus. It is important not only to communicate the coming problems, but also to consult with the Lithuanian Innovation Centre observes the cluster Smartfood coordinator.

"In a relatively short period of time, our company participated in 14 international exhibitions and 8 target food sector business missions to establish contacts with suppliers and retail networks, initiated and successfully developed three innovative co-production projects. All this enabled the emergence of 20 new and returning customers in foreign markets. Giedrius Bagusinskas notes: "We are the first in our sector organization during Lithuania's independence history, have a clear and focused long-term strategy, and launched several of our regular export companies".

Value added of "Smartfood" is to operate together helps to connect minds and optimize performance, then to go out in international waters, to achieve global competitiveness.

Part B. Set of indicators

Resources

Number of cluster coordinating members
Number of cluster members - companies, R&D subjects, supporting organizations
Number of R&D personnel
University graduates working at cluster companies
Common cluster projects in two years
Financed common cluster projects in two years with cluster initiatives co-financing
External financing for cluster initiatives in two years
Total sum of cluster members' investments for cluster initiatives in two years

Activities

Common supply and order scheme
Common distribution channels
Common cluster members' proposals for external clients
Exchange of common market information between cluster members
Cluster advertisement (leaflets, media)
Common participation in exhibitions and trade show
Lobbying
Common internet site
Visual identification (common logo, brand)
Contacts and image of cluster in mass media
Regular meetings of cluster members
Cluster integration events
Common communication platform
Common cluster publications (booklets, newsletters, etc.)
Co-operation while creating new products or technologies
Co-operation while creating innovations (organizational, marketing, etc.)
Common training, workshops, conferences, internships
Common data base
Informal sharing of knowledge and experience
Transference of technologies

Processes

Increase of cluster members' employees in two years
Number of internal cluster training participants in two years
Number of cluster organized common training in two years
Number of qualification upgraded employees in two years
Increase of direct employment in cluster innovative activities
Part of R&D expenses in common expenses in two years
Number of common submitted/funded EU SF projects in two years

Number of common international R&D projects, funded not from EU SF, in two years

Products/goods of cluster, sold in internal market

Products/goods of cluster, sold in external market

New cluster members in two years

Start-up in cluster

Foreign markets where members of cluster work

Part of export in total cluster sales

Number of official co-operation agreements with foreign entities

Participation in international exhibitions and sales offices in two years

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THE IMPACT OF FINANCIAL MANAGEMENT ON INNOVATION

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Abstract. In the current competitive market, innovation has become a crucial element for organizations, willing to grow. Financial management in this regard is playing a significant role in improving firms' innovation capacity. This research paper evaluates the impact of financial management components on innovativeness of Austrian SMEs. Using data of 118 employees from 41 SMEs operating in Austria, the research finds a significant impact of the financial management model on firms' innovation. The three components: liquidity, controlling, and financial literacy are statistically significant in explaining innovativeness at 1% level. The study suggests focus on the three financial management constructs in order to improve their innovation capability and capacity.

Keywords: Financial Management, Financial Controlling, Liquidity, Financial Literacy, Innovativeness, Innovation Capacity

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1. Introduction

Organisations are anticipated to act promptly and appropriately towards the high market pressures to meet the customers' changing demands due to the increasing competition in the dynamically growing market. In this regard, the basic but the most critical aspect is of adequate financial controlling, in terms of planning the finances and managing the liquidity aspects as well (Kozubikova, Homolka, & Kristalas, 2017; Belas & Sopková, 2016; Ključnikov, Kozubiková, & Sopková, 2017). Meanwhile, it has also been contended that the organisations these days are more concerned towards turnover and profit margins, rather than keeping the financial aims and liquidity as the prime objectives (Upadhaya, Munir, & Blount, 2014; Frame, & White, 2014). Besides, there is another notable aspect of the increasingly competitive market that demands the organisations to be considerate enough, in order to gain the maximum level of competitive advantage within the respective industry (Hristov, & Reynolds, 2015). Innovation management is the most crucial element that has acquired potential magnitude in an integrated manner with the management of finances if the firm intends to be a leading entity even in the incessantly increasing competitive marketplace (Hausman, & Johnston, 2014; Schrage, 2013; Laužikas et al., 2017).

With respect to the element of managing the innovation within an organisational framework, it has been stated that these innovations are employed to mitigate the likely adversities within the technical areas. If managed appropriately, the resulting outcomes are ultimately beneficial both in terms of economic and ecological achievements. Considering the increasing trend of technological integrations across the business domain, the implications of innovation management are undeniable. However, financing of these innovations has been a challenging situation for the business entities, regardless of being a potential driver of firms' competitive advantage in the long run (Botric, & Bozic, 2017). Accordingly, this particular element of managing the finances of the organisations with respect to the innovations' deployment has been a debatable issue of the current literature. Primarily, the reason of financing constraints towards integration innovations has been the uncertainty prevailing across the domain towards the asymmetric information regarding the innovation activities (Hall & Lerner, 2010; Botric, & Bozic, 2017).

In order to sustain competitiveness in the market, the firms must be continuous in innovating their business processes, which requires the firms to manage sustained investment in both the tangible and intangible aspects of business innovations (Fang, Tian, & Tice, 2014). Lee, Sameen and Cowling (2015) have documented that mainly Small and Medium-sized Enterprises (SMEs) or Entrepreneurial start-ups having potential innovation opportunities face financial constraints that eventually limits the adoption of technological innovations. Sufficient financial resources are essential for the successful exploitation of innovatively diverging growth patterns, particularly in terms of advancing the Research & Development (henceforth; R & D) areas. In this regard, it has been established that the option of external capital (preferably stock market) is significantly favourable for such firms since it tends to reduce the asymmetry in the information regarding the innovation activities (Agénor, Canuto, & Jelenic, 2014; Agénor, & Canuto, 2017). However, multiple other perspectives regarding managing the financials and liquidity of the organization in relation to the deployment of innovations have also been presented in the literature; yet, the studies are observed to be deficient in facilitating credible outcomes.

Problems have been there due to the inefficient identification of valued patterns in the data, along with the use of inappropriate controls, and sampling inadequacies as the main reasons. Consequently, this particular study intends to fill the typical gap in the literature, by means of being vigilant in adopting the research method and all other associated elements of the research design. Besides, it has been recognized at first that all the competitive outcomes of innovation element are second to the assurance of the most proficient financial controls within the organizational activities. It leads to the assertion that innovation is dependent on the finances; thus, financial controlling and management turns out to be significantly critical for the competitiveness of the organisations.

2. Literature Review

In the current competitive market, innovation has become a crucial element for organizations, willing to grow. In fact, in some industries like technology, an entity cannot survive without innovation. This is the reason why global giants like Volkswagen, Samsung, Intel, and Microsoft spent a material ratio of their earnings (5.2%, 6.4%, 20.1% & 13.4% respectively) in research and development. Hence the need to bring up new ideas for supporting industry growth through fulfilling the expectation of the consumer is always a concerned factor. It is important to know that no matter how important the innovation element is, it always comes after the primary objectives of business, which are profitability and survival. Therefore, it is crucial to lead the research only if appropriate financial controls are present. Thus, the innovation is in a sense dependent on finance.

2.1. Relationship between Finance and Innovation

The nature of finance is often dependent on the purpose of funding and nature of the project. Research and development is a risky business and does not always comes with a favourable outcome, there is no certainty of the

outcome, the collective nature requires finance from a different source, and the cumulativeness indicates that innovation may lead to a merger of different research results (Lazonick and Mazzucato, 2013). All these characters direct us to the facts that Innovation demands finance from various sources, of patient nature and with acceptability of high-risk. Thus, the nature of investment is dependent on the type of finance.

From the perspective of investors (specifically private investors) funding research and development is not the best investment (Turner, 2015), due to its' long-term nature. Instead, they believe that investing in short-term projects, for example, share trading is considered more profitable. This is caused by the modern corporate governance structure that prefers earning short-term returns (Kay, 2012) and reinvesting in companies existing activities or support expansion, plus the uncertainty of achievement is a scary concept for investors. On the contrary, many technological revolutions are resulted through high-risk investment, even though those experiments are more task-based in nature. These sorts of investments are made with the aim of the betterment of some target industrial landscape, for achieving some heights that have never been met before (Mowery, 2010; Foray *et al.*, 2012). Such investments are put in motion to accommodate two kinds of purposes, for meeting the expectations and demand in the market or for developing a new product that will be desired by the market (Climate Policy Initiative, 2013; Mazzucato & Semieniuk, 2017).

As mentioned above, most of the research projects are cumulative and require multiple investments throughout the process. Even in the mission-oriented innovation projects, where the objective and the deadline is set, the risk of financing, and so the innovation is high. This is because the investor has to rely on the hope that the funding will keep flowing in as long as the project requires it, but if for any reason, funding is not available at any time, the whole previous investment will probably turn to a waste, with no return. Thus the financing risk in innovative projects exists, therefore the estimated Net Present Value of any such project may be lower than its actual worth, due to the high-risk element of financing. This risk can be eliminated if the investor commits, to provide more investment until the end of the project, however, in any case, the risk of uncertainty will remain to impact the financial risk in equilibrium. As a result, the investor keeps a close track on his investments, and require regular updates about the potential of the project, possibility of the achievement and time required for completion, in order to preserve his investments and exclude the option of terminating the research (see Bergemann & Hege, 2005). Thus, low financing risk leads to more interest of investors into funding experiments (Nanda & Rhodes-Kropf, 2016).

As much important an innovation is for the growth of any business for the purpose of competitive advantage and strategic gain, finding and maintaining finance stream is still a difficult and considerable part. One of the useful external sources of funding is the stock market. Sometimes a firm does not have the ability to conduct a quality research, and other times the capable firm holds itself back due to the unavailability of funds required for experiments. Listed firms can easily access Stock market, to raise funds for investing in their research activities, unlike private entities which do not have any access to the stock exchange, unless under the capacity of a trader. Public listed companies that are externally financed dependent (EFD) are known for being more efficient in their research programs than other private or non-listed companies. However, the internal finance dependent (IFD) types of both public and private companies have no material difference while supporting their research and development divisions. The extent that listed companies can reach to for the development of their operations or their brand name. It is considered as the best option for public companies to go for EFD, and due to unavailability of this option to private investors, the suggestion is to go for other sources, like private investors or more likely for internal development of fund, so the innovation, experiment or research programs continue for the sake of company's future. There are many ways to evaluate the results, but the most common one is the comparison between cost and benefit of the research that is in the case of achievement of required results. In the case of absence of a proper cost-benefit analysis, a private company may not be able to survive the aftermath of research,

if the expected results are not achieved, a public or large company, on the other hand, can bear the after results and go on to the proceeding operations.

2.2. Financial Dependence of Innovation

Firstly, in comparing public and private companies, it is observed that public firms with dependency on external finance are more sensitive to quality, quantity, and novelty of their patents (for research projects), but ones which rely on internal financial sources are not that concerned about these factors. In fact, when it comes to internal financial sources private firms are better in preserving the researchers than public companies. Hence it can be considered that including outside finance (through public listing), is a good for the innovation factor.

This element can further be proved through observing the benefit of listing on the stock exchange, and the ultimate effect of this listing on company's research and development division. Another important factor is the pressure of investors for early returns. With the excess of the low cost of capital, the public listing also puts the firm under pressure of investors who require the entity to lower the risk approaches and generate returns in short intervals, which is against the nature of innovation (which requires long-term trust and patience) (Stein, 1989).

Another observed difference is the ability of the firm for carrying its R&D, and affordability of allocating time and money on something other than its core business activity. But the better presentation of patent profile could merely the cause of acquisition of patents outside firm's own R&D division, these are mostly one of the benefits of mergers, and acquisitions of firms (Bena & Li, 2014; Seru, 2013).

A more accurate outcome can be observed through measurement of spending on innovations including the acquisition of patents in comparison to the returns of the entity after the spending. The factors of concern here are the number of patents acquired after a successful innovation, and these must be further divided into categories and planned future usage, the franchising of the patent (to evaluate the actual worth and demand of the developed research in the market), the intensity of these citations vary industry to industry, therefore, it is better to compare each patent with average number of patents yearly issued in relevant industry. Hence a mere count of developments or patents for innovations in a year is not a sufficient measure (Hall et al, 2001; Hall et al, 2005; Acharya & Xu, 2017).

Firms in the innovation business are more exposed to the financial implications as compared to the companies which carry R&D in addition to their primary business activities. Therefore, the R&D firms are more at risk and are challenged in seeking external finance to keep fueling the innovation process. The main reason being the majority assets of being intangible natures (Patents), which are too volatile in trading markets and lose value as soon as a more relevant and updates innovation arrives in the market. Possessing intangible assets does not relieve a R&D firm from regular expenses for instance, wages and salaries for the staff, patent application fees, research expenses (if outsources), and maintenance of equipment to keep them on up-to-date with current technologies, and out of all these wages of scientist are the most crucial and therefore the most expensive part.

Studies from an early age are intact with the idea that financial management has no adverse effect on innovation activities of the firm, but as the researchers developed more theories, this concept began to revert. In the most current studies, researchers have agreed to the concept of the relationship between financial management and the innovation, and have evident that financial frictions have its adverse effects on innovation (Hall & Lerner, 2010). As Discussed earlier, innovation is not a very attractive sector for short time investors and this hazard further grows due to the fact that the investor may not be able to understand the real value of the income. In other words, only the firm engaged in innovation knows for real, whether the innovation truly serves the purpose or not, hence the idea of being in the dark is not appreciated by the investors. However, this hesitance can be eliminated by building up extra monitoring measures, for timely checks of investments, innovations and the returns in monitory terms, encouraging the investors to further involve in the investing activities.

The relationship between financiers and innovation is modeled by many theorist, and researchers, giving their own view for measuring the correlation between the two. One of the theories is given in Morales 2003, in which

the theorist mentioned the monitoring technologies which enable lenders to keep a close eye on his investment, through regular updates and expected returns, this technique, in addition, allows the financier to force the firm to maintain a fast running cycle, creating outcomes within lesser intervals than they would in absence of his/her investment. (Morales, 2003; Agénor & Canuto, 2017).

2.3. The Role of Financial Management in Innovation

A relevant example of the effect of financial management on innovation industry could be China, which has successfully turned the living style of its locals, increased GDP and has maintained a reputable and leading rank in world's top most business countries and all this was done within a span of few decades. There is more than one reason behind the sudden growth of China, and the incline in financial literacy of local investors is one of the major reasons. China realized that one does not need a 4-year degree to read the profit figures, and in order to operate successfully the person must at least have sufficient knowledge or literacy of the finance, to understand the ups and downs of business and the causes of the volatility. And so the Chinese government provided the tool to its inhabitants leading to the growth in business sectors in various industries. Coming to our main topic, the innovation industry in China before the growth in the financial sector was too low, but with the increasing trend in financing sector and availability of more investors, the innovation industry also followed the rise-up. A detailed analysis, including figure based assessments, are presented in a recent article “Financial Literacy in China as an Innovation Opportunity” (Brejcha, Wang & Zhang, 2016 July). Another example of the rapid growth of innovation industry is of Germany in 1930s and 40s when German government gave its scientist a free hand and unlimited access to finance for conducting researches and innovation products. Thus, it has been proved by many scholars, theorists and researchers that for firms engaged in innovation activities and dependent on external finance to maintain the flow of their operations, effective financial management policies and potential willing financiers are vital elements.

Overview of the relationship between Financial Management and Innovation.

Author	Description
Lazonick and Mazzucato	Research and Development are risky business and have three critical elements. The uncertainty of outcome, collective and cumulative nature and requirement of the long-term commitment, through patience.
Turner	From the perspective of investors (specifically private investors) funding research and development is not the best investment, due to its' long-term nature
Kay	Modern corporate governance structure, prefer earning short-term returns to keep the up with the market competition.
Mowery; Foray et al	Investments are made with the aim of the betterment of some target industrial landscape, for achieving some heights that have never been met before.
Climate Policy Initiative	Investments are put in motion to accommodate two kinds of purposes, for meeting the expectations and demand in the market or for developing a new product that will be desired by the market.
Bergemann & Hege	The investor keeps a close track on his investments, and require regular updates about the potential of the project, possibility of the achievement and time required for completion, in order to preserve his investments and exclude the option of terminating the research.
Nanda & Rhodes-Kropf	Low financing risk leads to more interest of investors into funding experiments.
Stein	With the excess of the low cost of capital, the public listing also puts the firm under pressure of investors who require the entity to lower the risk approaches and generate returns in short intervals.

Bena & Li; Seru	A better presentation of patent profile could merely the cause of acquisition of patents outside firm's own R&D division, these are mostly one of the benefits of mergers and acquisitions of firms.
Hall et al; Acharya & Xu	The factors of concern are the number of patents acquired after a successful innovation, and these must be further divided into categories and planned future usage, the franchising of the patent.
Hall & Lerner	In the most current studies, researchers have agreed to the concept of relationship between financial management and the innovation, and have evident that financial frictions have its adverse effects on innovation
Morales; Agénor & Canuto	The monitoring technologies which enable lenders to keep a close eye on their investment, through regular updates and expected returns.
Brejcha, Wang & Zhang	The innovation industry in China before the growth in the financial sector was too low, but with the increasing trend in financing sector and availability of more investors, the innovation industry also followed the rise-up.

3. Methodology

The successful execution of a research process demands the collected data to be credible and authentic. It brings in the undeniable importance of selecting the most appropriate method of collecting and analysing the data (Feilzer 2010; Flick 2011). Accordingly, Bryman (2015) has affirmed that needs of being selective towards the research method, as the accomplishment of the study objectives are greatly dependent on the adopted method. In this regard, research approach is identified at first due to its feasibilities of categorising the data collection and analysis methods to be easily selected (Fowler Jr, 2013). Taylor Bogdan & DeVault (2015) have documented three types of research approaches as being *Quantitative*, *Qualitative*, and the combination of both as a *Mixed* research approach. Reviewing both the qualitative and quantitative approaches within the study context, the researcher has selected *Quantitative* approach as the most preferred one. It has been preferred over the *Qualitative* approach based on the fact that the study objectives of assessing the relation in between the management of financial aspects of the organisation and the investments in the innovation deployment for being competitive. Recognising the notable gap in the literature, qualitative and thus, mixed research approach has been disregarded. The significance of *Quantitative* research approach is validated from the study of Creswell (2013), which asserts that this particular approach facilitates the researcher by means of its unique aspect of "*cause and effect thinking*". Rovai, Baker, & Ponton, (2014) have affirmed this unique thinking pattern leads to the accurate and logical interpretation of the problem focus. Consequently, the selected approach has been remarkable in helping the attainment of cohesive results pertaining to the relationship in between the identified variables. Subsequently, there comes the selection of research purpose that depicts the strict abidance of the devised aim of the study. The study context could be either a new idea or analysis of the already identified variables within the extensive research scope. Therefore, the purpose of the study needs to be clearly articulated prior to the initiation of the study. Davies & Hughes (2014) have presented three main purposes of the research, as Exploratory, Descriptive, and Explanatory, depending on the study context. This particular study is explanatory in nature since the objectives are related to the assessment of relationship in between the identified variables of financial controlling aspects and the innovation management at the organisational level. In addition to this, another important element is the consideration of research design, for its potential contribution to addressing the research problem (Bryman & Bell 2015). Research design has its multiple forms, including review-based design, meta-analytic design, experimental and semi-experimental design, descriptive design, correlational design and others (Davies & Hughes, 2014; Lampard & Pole, 2015). Depending on the nature of the study objectives, the researcher adopts the most appropriate design of these all on the basis of their unique aspects. The current study has employed

descriptive and correlational designs for their respective contribution towards the accomplishment of study objectives. The descriptive design has facilitated the analysis of the identified variables in terms of percentages, frequencies, and others. On the other side, the correlational design has assisted in recognising the relationship in between the identified variables under consideration. Even though, the researcher is expected to be considerate towards the selection of the most appropriate approach, purpose and the design of the study, the importance of data sources remains undeniable. It has been asserted based on the fact that the overall authenticity and reliability of the study is reliant over the feasibility of accessing the required data (Matthews & Ross, 2014).

The sources of data are of importance since these sources direct the collection of evidence, in order to answer the formulated research questions that eventually lead towards the accomplishment of the study aim and objectives. Two types of data sources are prevalent across the research domain, entailing a distinct level of significance towards a study; primary sources of data and secondary sources of data (Zikmund et al, 2013; Mertens, 2014). In this particular study, the primary source of data has been used to collect the evidence regarding the objectives of analysing the relationship in between the identified variables. Primarily, this data source has its unique aspect of providing first-hand or direct information accessibility that eventually validates its reason of being selected. The study context already observes a notable research gap that reflects the preference of direct sources of data for mitigating this particular gap; thus, cohesive and coherent concluding remarks have been drawn. It is noteworthy to mention here that the primary or the direct data has been collected by means of Five-point Likert *Survey Questionnaire*. For exploring innovativeness at country level, the study relies on secondary data sources, including World Banks Database and Global Competitiveness Report 2016-17.

The distribution of the survey questionnaire incorporates the researchers' credibility of targeting the most appropriate population in this regard. It has been established from the study outcomes of Weiss & Weiss (2012) that the population of the study is also an essential aspect of the entire research plan, which needs to be carried out vigilantly. In the case of targeting incompetent or irrelevant population, the integrity and credibility of the study outcomes are at risk. Therefore, the researcher has been considerate in this regard, by means of targeting the SMEs at Austria on the basis of the fact that the challenges of financial controls in relation to the innovation management are mostly prevalent across the SMEs. Therefore, the employees from accounting and finance departments of 41 SMEs at Austria have been targeted, based on random sampling strategy. Random sampling has facilitated the collection of evidences across different sectors of businesses, along with entailing the prospects of flexibility and accessibility for the researcher as well. Accordingly, the research proceeded with the sample size of 148 employees, from finance and accounting departments, across the targeted SMEs. However, only 125 questionnaires were completely filled, with only 118 to be regarded as valuable and usable with respect to the research objectives. Aarons et al., (2001) defined questionnaire as a documented form of a number of questions related to the study context. The design of the questionnaire could be open-ended or close-ended, based on the nature of the study. In this particular study, the designed survey questionnaire comprised of close-ended questions, demanding the responders to select the respective answers based on five-point Likert scale. It has been selected due to the anticipated collection of the most relevant evidence that is not instilled within the open-ended questionnaires since open-ended questionnaire incorporates the concerns of irrelevant answers that would eventually be challenging towards the expected success of the study. Here it brings an important consideration of validating the quality of the collected data, and the abidance of ethical aspects of valuing the human participation. The participants were provided with a consent form, having clearly articulated objectives of the study to abide by their right-to-information. Besides, the participants were also ensured in terms of their right-to-privacy as well, since the consent form included the assurance of confidentiality of their private information. Additionally, the participants were also given the right-to-withdraw, in the case on any concern or problem.

After the collection of information through a questionnaire, statistical analysis techniques were employed for generating the results. Among the credible techniques of statistical analysis, the study has employed descriptive statistics, factor analysis, reliability test, and regression analysis. Descriptive analysis techniques highlight the

basic trends or patterns that might foster the forecasting regarding the potential impacts on the study context (Davies & Hughes, 2014). Once the patterns within the collected data have been comprehended, factor analysis and reliability tests have facilitated the researcher in determining the hidden unpredictability within the identified and correlated variables (Kline, 2014). Consequently, regression analysis led to the identification of the relationship in between the dependent and independent variables; thus, fostering the success of the study (Punch & Oancea, 2014). As a result, the overall research process has been conducted in the most vigilant manner, since the credibility, objectivity, and integrity of the study could not be compromised at any cost.

4. Research Objectives and Hypotheses

4.1. Research Objectives

The current research paper aims to determine the relationship between financial management and firm innovation. For this purpose, it focuses on small and medium enterprises (SMEs) operating in various business sectors in Austria (see Figure 1). Financial management, in this study, is represented by financial liquidity, financial controlling, and financial literacy. Following are the objectives of the study:

1. To examine the relationship between financial management components and innovativeness of Austrian SMEs.
2. The develop a financial management-innovation model based on the data from Austrian SMEs

4.2. Research Questions

The research question of the current research paper is:

What is the impact of financial management components on innovativeness of Austrian SMEs?

Based on the above question, following sub-questions are proposed:

1. What is impact of financial liquidity on innovativeness?
2. What is impact of financial literacy on innovativeness?
3. What is impact of financial controlling on innovativeness?

4.3. Research Hypotheses

The statistical relationships between financial management constructs and innovativeness of the Austrian SMEs is based on the following hypotheses:

H₁: The impact of financial liquidity is significant on innovativeness of the Austrian SMEs.

H₂: The impact of financial controlling is significant on innovativeness of the Austrian SMEs.

H₃: The impact of financial literacy is significant on innovativeness of the Austrian SMEs.

5. Research Results

5.1. Innovation in Austria

For overall competitiveness, the factor of innovation plays a significant role not only at organizational level but also at the country level. According to Global Competitiveness Report 2016, Austria ranks 11th in the overall innovation and sophistication factors; 8th in business sophistication; and 14th in innovation in the world (Schwab, 2016). Moreover, Austria ranks high in the capacity for innovation (7th), PCT patent applications (11th) and company spending on research and development (19th) (Schwab, 2016). It suggests that the country and its businesses considers the significance of innovation, research and development.

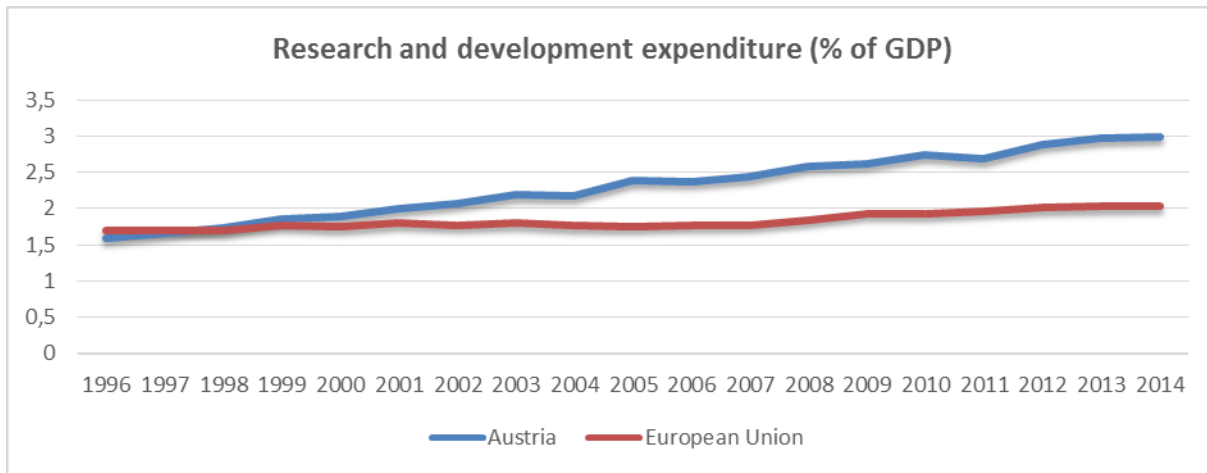


Figure 1. R&D Expenditure
Source: World Bank (2017)

According to the Figure 1, in Austria, the expenditures for R&D on creative work (for increasing knowledge) as a percentage of GDP is constantly increasing. The R&D expenditure in Austria is also higher than average R&D expenditure in the European Union as % of the GDP.

5.2. Demographic analysis

Table 1. Respondents' business sector

<i>Business Sector</i>	<i>Frequency</i>	<i>Percent</i>
Food and Drink	20	16.9
Chemical and Automotive	10	8.5
Mechanical and Steel Engineering	16	13.6
Wood, Pulp and Paper	9	7.6
Financial Services	18	15.3
Electrics and Electronics	9	7.6
Textiles, clothing	15	12.7
Tourism	14	11.9
Others	7	5.9
Total	118	100.0

Source: Authors' own estimation

In the context of the current research study, which examines the impact of financial management on innovation in Austrian SMEs, majority of research participants (16.9%) are working in the Food and Drink sector, followed by Financial services (15.3%), and Mechanical and Steel Engineering sector (13.6%) (Table 1, Fig. 2).

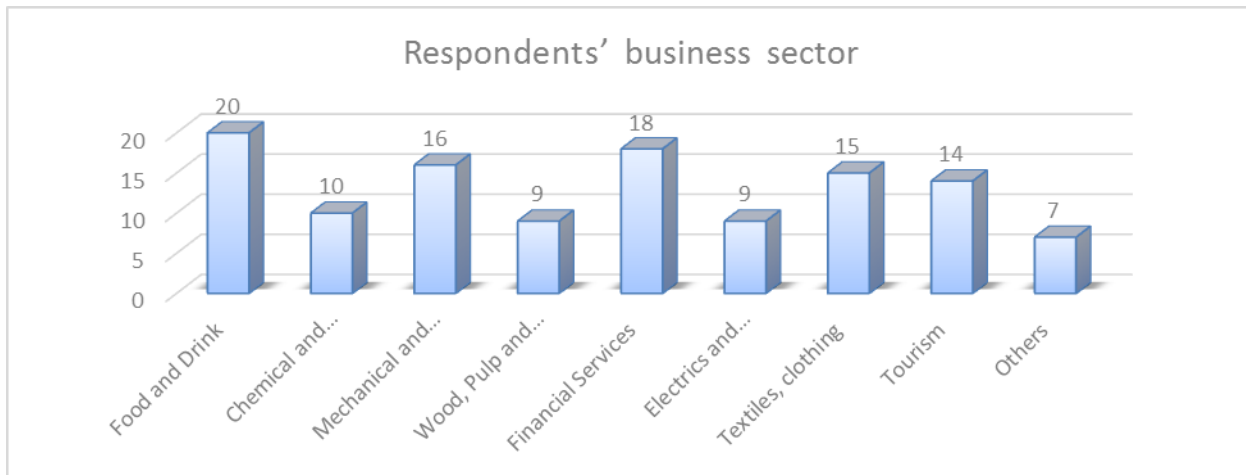


Figure 2. Respondents' business sector
Source: Authors' own estimation

5.3. Validity and Reliability

For inferential testing, the researcher ensured validity and examined reliability of the test instrument i.e. the 5-point Likert Scale questionnaire. The validity of the questionnaire is tested through an expert review. Moreover, the validity of the innovativeness construct is ensured by adopting items from previous literature. The internal consistency reliability of the test items is examined via Cronbach's alpha statistic, which reveal relatively high degree of internal consistency (greater than 0.7) of each construct (liquidity, controlling, financial literacy, and innovativeness).

5.4. Factor Analysis

In order to summarise the questionnaire items, principal component analysis (PCA) technique is used, which applies varimax rotation method. The KMO value and Bartlett's test suggests that the sample is adequate and appropriate for running factor analysis

Table 2. Rotated Matrix

Rotated Component Matrix	Component			
	1	2	3	4
Your firm consider establishing and executing internal controls over financial and accounting procedures	.958			
It is important for your organisation to conduct appropriate financial planning and reporting	.919			
Your organisation performs in-depth financial analysis	.898			
Your organisation has sufficient free cash flows available		.943		
Your organisation has the ability to pay its short-term debts		.903		
Your organisation has a reasonable cash conversion cycle		.841		
Your organisation invests in research and development			.835	
Technical innovation is supported and readily			.730	

accepted	
Management actively seeks innovative ideas	.683
You are appreciated for innovative and new ideas.	.764
You are aware of current financial needs of you company	.758
There is appropriate expenditure and income management.	.877
Your organisation focuses on long term financial goals	.805
Extraction Method: PCA	
Rotation Method: Varimax	

Source: Authors' own estimation

The Table 2 extracts four components (factors) from the total of 13 items (liquidity = 3; controlling = 3; literacy = 3; and innovativeness = 4). These factor loadings combined correlated items into unobservable (latent) constructs, which are used in regression analysis.

5.5. Regression Analysis

The statistical relationship between the components of financial management and the construct of innovation is tested using multiple regression analysis. The association between the variables can be mathematically represented as:

$$I = \alpha + \beta 1L + \beta 2C + \beta 3FL + e \dots\dots\dots (1)$$

Where I, L, C, and FL represent innovativeness, liquidity, controlling, and financial literacy. In this section, the research hypotheses of the study are tested.

Table 3. Multiple Regression Analysis

Dependent Variable: Innovativeness	<i>B</i>	<i>t</i>	<i>Sig.</i>
(Constant)	.035	.097	.923
Liquidity	.332	4.459	.000
Financial Literacy	.222	4.034	.000
Controlling	.435	9.953	.000
F Statistic			64.78
P Value			0.000
R Square			0.630
Adjusted R Square			0.621

Source: Authors' own estimation

The Table 3 reveals that the overall multiple regression model is statistically significant at 0.01 level, which suggests that financial management significantly affects innovativeness or innovation capacity of the Austrian SMEs. The financial management components of this study, that are financial liquidity, financial literacy, and financial controlling, are all statistically significant at 1%, with positive beta values. It means that liquidity, literacy, and controlling with respect to finance improve innovativeness or innovation capacity of the Austrian SMEs operating in diverse business sectors. Following model is established on the basis of the above results:

$$I = 0.332(L) + 0.435(C) + 0.222(FL) + e \dots\dots\dots (2)$$

The constant term is removed from the model due to its insignificant relationship with the dependent variable.

Discussion and Recommendations

The research paper aims to evaluate the impact of financial management components on firms' innovation. These components include financial literacy, controlling, and liquidity. Based on the quantitative analysis (regression analysis), the study finds a significant impact of the overall financial management model on innovation capacity of the Austrian firms. The analysis of each component within the financial management model is based on their respective research hypotheses:

H₁: The impact of financial liquidity is significant on innovativeness of the Austrian SMEs – H₁ is confirmed, which means that higher liquidity in terms of free cash flows, ability to pay short-term debts, and cash conversion cycle enhance innovation capacity of the firms.

H₂: The impact of financial controlling is significant on innovativeness of the Austrian SMEs. – H₂ is accepted, which suggests that internal controls over financial and accounting procedures, financial planning and reporting, and in-depth financial analysis increases innovation capacity of the SMEs in Austria.

H₃: The impact of financial literacy is significant on innovativeness of the Austrian SMEs – the third hypothesis is also confirmed, showing higher awareness, appropriate expenditure and income management, and focus on long-term financial goals increases firms' innovativeness.

Based on the above findings, the Austrian SMEs are suggested to increase their focus on the three financial management constructs in order to improve their innovation capability and capacity. Future studies on the problem may consider a qualitative analysis (based on in-depth interviews), or a quantitative analysis based on secondary data. Moreover, future primary studies should increase the sample size (firms and respondents) for more representative and reliable results.

Conclusions

Financial management and controlling plays a significant role in the overall performance of businesses. In this paper, the significance financial management is assessed with respect to innovation. Based on the primary data of 118 respondents from 41 SMEs operating in Austria, the research finds a significant impact of financial management components on firms' innovation. Individually, financial liquidity, literacy, and controlling are statistically significant in explaining firms' innovation capacity. It suggests that Austrian firms are required to focus on these financial constructs for enhancing innovative capabilities and capacities.

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TOWARDS SUSTAINABLE BUSINESS RELATIONSHIPS: RATIFICATION DOCTRINE IN THE CASE OF UNAUTHORISED AGENCY

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Abstract. Each contemporary economic system is based on the principle of work sharing in creation and distribution of goods and services, the legal reflection of which is the institution of agency. In business, unauthorised agency, i.e. cases when an agent acts without having authority or exceeding it, is particularly often. Though the principal usually is not legally bound by actions of such an unauthorised agent, but in fact legal acts of each country provide for exceptions from this rule. One of them is the ratification doctrine, which means that the principal can ratify the agent's unauthorised actions. This article analyses, by applying the comparative method, in what cases and under what procedure the ratification rule can be applied and what legal consequences it creates. A conclusion is made that the ratification doctrine is an efficient means of implementation of interests and defence of infringed rights not only of the principal, but also of other persons involved in the agency relationship, which should not be subject to any form requirements, especially in business relationships.

Keywords: ratification doctrine, unauthorised agency, apparent authority, agent, falsus procurator, sustainable business

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1. Introduction

If we follow the studies monitoring the acceptance and integration of sustainability by big companies, there is a strong consensus emerging that sustainability is having and will continue to have a significant material impact on company strategies and operations (Dyllick, Muff 2016; Rajnoha, Lesníková, 2016). In the past decade, research on sustainable innovations has expanded rapidly to increase our understanding of the ways in which new technologies and social practices enable societies to become more sustainable (Boons, Lüdeke-Freund 2013).

A possibility to participate in civil circulation through an agent is a guarantee of exercise of a person's right to the freedom and initiative of economic activities, therefore in essence no country can do without legal regulation of this relationship (Smits 2007). Without questioning the significance of the institution of agency, it is important to

pay attention to problems faced by parties to this legal relationship. Probably most problems arise when transactions are conducted or other actions of legal significance are performed on behalf of the principal by a person who exceeds the authority given to him or who does not have any authority at all. Such cases are to be qualified as *unauthorised agency*.

Sustainable business models incorporate a triple bottom line approach and consider a wide range of stakeholder interests, including environment and society and are important in driving and implementing corporate innovation for sustainability, can help embed sustainability into business purpose and processes, and serve as a key driver of competitive advantage (Bocken et al. 2014; Čirjevskis 2017; Monni et al. 2017; Hilkevics, Hilkevics 2017; Teletov et al., 2017). Sukhdev (2012) introduces “Corporation 2020” as a new model of business and a kind of corporate agent that society would need to forge a sustainable economy. Financial capital accretion is one key objective for Corporation 2020, but there are other objectives as well. Important goals for the corporation are not only defined by its shareholders but also by its stakeholders - those who are impacted by the corporation.

Actions by an unauthorised agent are unavoidable and occur for different reasons. In some cases persons fraudulently act as agents, clearly understanding that they do not have any right to conduct transactions or perform any other actions of legal significance on behalf of another person. Besides, unauthorised agency is often identified when agency services are the agent’s professional activity and remuneration for them depends on specific results – transactions entered into. The agent, especially in the situation of economic downturn, seeking to get the agreed percentage of the transaction amount (the commission fee) can ignore limits of authority granted to him, expecting that later the principal will ratify the transactions that he did not have the right to enter into (Busch, Macgregor 2009c). In its own turn, the terms and conditions of such a transaction can be unacceptable to the principal, besides in the period from the conduction of the transaction until the principal is informed about it, prices of goods and services can drop, which will also result in the refusal to ratify the agent’s actions.

In solving problems arising out of unauthorised agency relationship, in many legal systems priority in fact is given to interests of third parties. It is to be considered that these persons are the weak party to legal relationship of agency, who cannot access precise information about the scope of powers given to the agent. A third party is kind of an “outsider” in respect of the agreements between the principal and the agent and often has limited possibilities to check the agent’s authority (Busch, Macgregor 2009b). Such asymmetry of information and the circumstance that third parties usually have no choice as to whom to enter into contracts with (in business relationships, acting through an agent is often the only practically used way of implementation of civil rights) determined the need to ensure greater protection for third parties. However, their interests should not be unconditionally defended at the expense of other participants in agency relationship. The principal, as a financially stronger party, is often forced to unconditionally assume risks of actions of the unauthorised agent. Such interpretation of the principal’s liability based on the “deep pocket” principle can cause undesired economic consequences (Bisso, Choi 2008). Business entities, seeking to avoid negative consequences of unauthorised agency, are forced to maintain too strict control over agents and that causes additional costs in their activities, which are ultimately included into the final price of goods or services. In their own turn, agents too, due to the threat of their own liability, must act much more carefully, therefore, agency, as a way of implementation of civil rights, becomes not so efficient and expeditious.

According to the general principle of agency in civil law, legal actions performed by one person (agent) on behalf of another person (principal) directly create, modify and cancel the principal’s rights and obligations. These consequences do not arise for the principal if actions of legal significance are performed on his behalf by a person exceeding the authority given to him or having no authority at all. Still, in fact all modern legal systems admit that usual legal consequences of agency can arise even if a person does not express his will to be represented or the agent deviates from instructions given to him.

One of such cases when it is considered that the transaction is valid from the date of its conduction, though the agent acts under conditions of unauthorised agency, is when the principal ratifies actions of the unauthorised agent. Though this possibility is provided for in many legal systems, however the procedure and conditions of its implementation are usually not regulated. Besides, there is no uniform interpretation of the right of third parties to withdraw a request to ratify unauthorised actions of the agent before the principal does that. Also, problems arise when a good faith principal assigns property as the object of the transaction made by an unauthorised agent to other persons, the so-called fourth parties. Therefore, a question arises whether ratification of actions of the unauthorised agent, causing retrospective consequences, can affect the legal situation of these persons.

The aim of this article is to analyse sustainable business relationships, conditions and limitations of the principal's right to ratify actions of the unauthorised agent, evaluating possibilities of third parties to rely on this remedy for defence of their infringed rights.

This study is based on the *qualitative* methodology approach and principles. The paper is also based on methodological regulations of studies of law, matching ideas of theories of *normative* and *sociological* law. The main data collection method used during the study was the *document analysis method* and, taking into account the character of the study, the most important data analysis method in this paper is *comparative*. The reference point of this study is legal regulation of the ratification doctrine in the Civil Code of the Republic of Lithuania (2000), (hereinafter, the "Civil Code"), which is one of the latest examples of codification of private law in Europe and the whole world. Regulation in an article established in this legal act is compared to provisions of international instruments of unification of private law (the so-called *soft law*) and law of foreign countries.

2. Concept of ratification of actions of the unauthorised agent

Usual legal consequences of unauthorised agency do not arise not only when apparent authority is determined, but also in cases when the principal ratifies actions of the unauthorised agent (*ratification*).

Ratification of actions of the unauthorised agent is, first of all, understood as a remedy for defence of third party's infringed rights, on which he can rely, when it is established that the agent exceeded the authority given to him or operates without any authority. It is true that differently than in case of apparent authority, the third party cannot exercise this right under the enforced procedure. Ratification of a transaction that the agent did not have the right to enter into is the principal's right that he may exercise when a relevant unauthorised transaction is useful for him. Thus, ratification of the agent's actions at the same time is a method of implementation of the principal's interests in legal relationship of unauthorised agency. The case law also emphasizes that it is the right of the principal to ratify a transaction that the agent did not have the right or was not authorised to enter into (E. D. v. A. D., A. G., V. J., and Association "Sahadža joga Lietuva" 2015).

It is noteworthy that ratification of actions of the unauthorised agent can be also described as a certain type of the agent's powers. It is indicated that in addition to expressly stated and apparent authority, one can also distinguish the agent's powers that he acquires retrospectively because the principal ratified his unauthorised actions (Bennett 2006).

Irrespective of whether the principal expresses his will on his own initiative or taking into account a request of a third party, ratification of actions of the unauthorised agent most often is understood as a unilateral transaction of the principal (Tan 2009). This legal qualification is not affected by the form of ratification: both an expressly stated approval and the one implied from the principal's behaviour is deemed a unilateral transaction. The most important thing is that the principal, approving of the actions of the unauthorised agent, would express his true

will, and for this to happen, he must know all factual circumstances in connection with a specific unauthorised agency situation. Taking that into account, in legal doctrine evaluation of ratification of the unauthorised agent's actions is performed in two stages: first, it is analysed what information the principal acquired, then it is established what will he really expressed (Busch, Macgregor 2009a).

It is important to pay attention that the general rule is that for usual legal consequences of agency to arise, the principal must ratify actions of the unauthorised agent without any reservations. Meanwhile, partial or conditional ratification is recognised only in exceptional cases (DeMott 2009a). As it is stated in the commentary on the UNIDROIT Principles of International Commercial Contracts (2010) (hereinafter, the UNIDROIT Principles (2010)), if a principal ratifies a transaction made by an unauthorised agent only in part, it can be treated as an offer to a third party to modify terms and conditions of the initial transaction entered into through an agent. If the third party refuses to accept it, legal relationship between the principal and the third party will not appear just based on conditional ratification by the principal. Article 15(3) of the Geneva Convention on Agency in the International Sale of Goods (1983) directly provides that a third party may refuse partial ratification.

Speaking about the scope of application of the ratification of the unauthorised agent's actions, it is important to emphasize that it can be referred to both in those cases when the agent acts exceeding his authority and in case of situations of absolutely unauthorised agency. Similarly as in case of apparent authority, the principal can ratify not only transactions made by the unauthorised agent, but also other actions of legal significance. Transactions made by the unauthorised agent, which are admitted to be invalid, can also be ratified – however, the principal does not have such a right, when the agent entered into an absolutely invalid (null and void transaction). Besides, the principal can also use ratification if the transaction, by which it granted authority to the agent, is admitted to be invalid *ab initio* (from the moment it was made), for example, due to defects of will. Though relevance of the principal's ratification usually emerges when agency is under a contract, but it can also be referred to when the agent acts or should act based on an administrative act, court judgement or law. The doctrine discusses whether the rules regarding ratification can also be applied in case of undisclosed agency. Taking into account that in case of unauthorised agency it cannot be deemed that an implied transaction was made between the principal and the third party (it is namely the concept of an implied transaction, on which undisclosed agency is most often based), therefore, ratification should not be possible, either. However, the Agency Digest provides for a possibility of an undisclosed principal to ratify actions of the unauthorised agent (DeMott 2009b).

Ratification of actions of the unauthorised agent is regulated in two rules of the Civil Code (2000): paragraphs 6 and 7 of Article 2.133 and paragraphs 1 and 2 of Article 2.136. As in many other legal systems, the Civil Code (2000) describes ratification of actions of the unauthorised agent in the context of legal consequences of unauthorised agency: if a transaction is entered into on behalf of the principal by a person who does not have such a right, the transaction creates, modifies and cancels rights and obligations for the principal only in case the principal afterwards approves of this transaction and ratifies it. In the Lithuanian case law, ratification by the principal is also linked to the exception from the rule that actions of an unauthorised agent do not bind the principal. It is noteworthy that solely the circumstance that the agent exceeded his authority does not make his actions unlawful or null and void as the principal may ratify the agent's authority and consent to legal consequences caused by the agent's actions, and such ratification has retrospective effect (G. K. v. DNSB "Upė" 2011).

Attention should be paid to the fact that it ensues from the concept of ratification of actions of the unauthorised agent that such ratification should be referred to when it is established that the agent acted without having the necessary authority. Therefore, after stating that the agent acted within the limits of his powers, it is not expedient to analyse additionally whether the principal ratified specific actions of the agent. As the principal's ratification causes the same legal consequences as actions performed by a properly authorised person, no one should seek to

find out whether the principal later expressed his will regarding relevant actions performed by the agent, i.e. whether he approved of them or not. Lithuanian courts did not manage to avoid this mistake. It was established in civil case (UAB “Tristana” v. D. R. 2016) examined by the Supreme Court of Lithuania (hereinafter, the SCL) that the deputy manager of a company had powers to enter into the car lease agreement on behalf of the company and signing this contract did not exceed his powers. In spite of this circumstance, the court still evaluated whether the company admitted the contested lease agreement. Data collected in the case file confirmed that the company was paying rent monthly, referring to which the court made a conclusion that in case of this dispute paragraph 2 of Article 2.136 of the Civil Code (2000) can be applied, which provides that subsequent approval by the principal makes a transaction valid from the moment of its entry. The result of this decision is unquestionable, but, as it has been mentioned, in determining whether the agent acted without exceeding his powers, one should not take into account whether the principal later approved of such actions of the agent or not.

Ratification of actions of the unauthorised agent should not be confused with such cases when the principal expands the content of the agent's rights. A situation may occur when the agent is yet intending to make a transaction for the benefit of the principal and if it is clear already then that the powers granted to the agent are too narrow, the principal, seeking appearance of desired legal relationship, can grant additional rights. These actions of his will create legal consequences from this point forward and later such a transaction will not need to be additionally ratified. The essential difference between these two legal situations is that the need for ratification of the unauthorised agent's actions arises when the agent already enters into a transaction without having powers for this, whereas expansion of the agent's rights is possible yet before conduction of a relevant unauthorised transaction. Besides, attention should be paid to the fact that the principal can ratify actions of the unauthorised agent both on his own initiative and after he was addressed by a third party, whereas expansion of the agent's powers is usually linked to internal legal relationship of agency, i.e. the principal himself, seeing that rights granted to the agent are too narrow, can expand them or he can do that at the agent's request.

A dispute was also settled in the Lithuanian case law whether the principal's behaviour in a specific situation must be qualified as ratification of actions of the unauthorised agent or as expansion of the content of his powers. In civil case K. J. v. UAB “Bendra idėja” and R. J. (2016) examined by the SCL there was a dispute regarding the situation in which the claimant together with his spouse issued a power of attorney, by which they authorised their son to represent them in the matter of obtaining a credit and mortgage the land plot and a residential house owned by them to any lending bank. As it later turned out, the claimant's son mortgaged the property to secure obligations of a third party arising out of a credit agreement concluded with the bank. A claimant stated that according to the power of attorney the son did not have the right to mortgage the property in question to secure obligations of third parties – he was authorised to mortgage property only for the spouses' and his own obligations. For this reason, the transaction made by the defendant with the bank cannot create any rights and obligations for them. The claimant stated that the transaction did not have any legal consequences for them as upon learning of the conduction of the contested transaction, they did not approve of it. In solving the dispute, the court noted that it may happen that the agent intends to enter into or enters into a transaction for the benefit of the principal and, though the principal has a positive opinion on the transaction, powers granted to the agent by the power of attorney are too narrow. In this case, the problem of validity of the concluded transaction or transaction intended to be concluded arises, that civil laws allow to solve in two ways, depending on legal consequences of what transaction – concluded or intended to be concluded – are sought to be created: i.e. the principal can ratify the transaction made by the unauthorised agent or, if it is not made yet, can expand powers of the agent. The court established that the spouses had signed a notarised consent, in which they indicated their consent that their property would be mortgaged to the bank for a loan obtained by third parties. This action ratified the mortgage establishment transaction, which was already concluded but did not come into effect yet. It is to be presumed that referring to these factual circumstances, the court arrived at the reasonable conclusion that there was a basis for

stating not the expansion of rights granted to the agent, but ratification by the principals, i.e. their purposeful will to mortgage real property to secure obligations namely of third parties.

But one cannot agree to the law interpretation rule formulated by the SCL in another civil case that granting of new powers after performance of actions of the unauthorised agent means that the principal approved of such actions (UAB “Mularda” v. UAB “Kauno Platanas” 2006). As it has been mentioned, the principal, authorising another person to act on his behalf, expresses a will regarding performance of future actions, meanwhile when the principal ratifies actions of the unauthorised agent, retrospective legal consequences arise. The principal in general may be ignorant about earlier transactions made by the same agent, besides, the latter may abuse the trust by asking that the principal would give him relevant rights already after performance of unauthorised actions. For this reason, in all cases when it is established that the agent acted under the conditions of unauthorised agency, the desired legal consequences may arise for the principal not by giving new powers to the agent, but by ratifying its unauthorised actions.

3. Conditions and procedure of ratification of actions of the unauthorised agent

Actions of the unauthorised agent can be ratified in various ways. First of all, the principal can clearly indicate that he approves of such actions (both on his own initiative and upon request of a third party). In addition to an express ratification, actions of the unauthorised agent can also be approved of indirectly, i.e. a conclusion may be made on the basis of the actual behaviour of the principal that he has a positive opinion about the transactions made by the agent without having authority for this. That is called implied ratification of the unauthorised agent's actions, which is established taking into account specific circumstances in connection with the principal's conduct. It should be noted that in practice implied ratification is much more often than the express one (Vogenauer, Kleinheisterkamp 2009; Jefimovs 2017).

In Lithuania, implied or indirect ratification of the unauthorised agent's actions is linked to Article 1.79 of the Civil Code (2000). Its paragraph 2 establishes four cases when it is presumed that a transaction is ratified by the party – if, after it became possible to do that, any of the following events have taken place: 1) he has performed the transaction partly or in whole; 2) he has made a demand against the other party for the performance of the transaction; 3) he has granted a security for the performance of his obligations to the other party; 4) he has transferred the rights acquired according to that transaction to another person partly or in whole. Please note that not only circumstances indicated in this legal rule, but also other circumstances can prove that the principal approves of actions of the unauthorised agent. One could, for example, reasonably refer to the provision provided for in Article 2153 of the Civil Code of Quebec (1991) that the mandator is presumed to have ratified an act which exceeds the limits of the mandate where the act has been performed in a manner more advantageous to him than the one he had indicated. In case law attention is paid to the fact that ways of ratification are various, it is important that such ratification would be understandable to another person engaged in legal relationship (S. A. v. 159th Association of Apartment Owners of the City of Kaunas 2002). Still, in certain cases legal acts set requirements for the form of ratification of actions of the unauthorised agent. For example, paragraph 2 of Article 3:69 of the Civil Code of the Netherlands establishes that where a procuration has to be granted in a specific form, this formal requirement applies as well to a ratification of actions of the unauthorised agent. Besides, some legal systems maintain a position that if law establishes certain form requirements for a transaction that the principal seeks to ratify, they must also be followed in case of ratification (Busch 2009). It is debatable whether this rule must be applicable in all cases, especially when the principal's ratification is not express but implied. Presumably, taking into account needs for protection of third parties' interests, solely the circumstance that the principal expresses his will regarding actions of the unauthorised agent (no matter how, directly or indirectly) must be treated as a sufficient basis for usual legal consequences of agency to appear. Otherwise, a situation can occur when circumstances related to the principal will allow to state existence of ratification, but the principal, being not

interested in ratification of the unauthorised transaction, may abuse the fact that he did not express his will in the form set by law. Besides, an opposite situation is possible, where a third party, not seeking to be bound by a transaction made by the unauthorised agent, can attempt to refer to breaches of form, though the principal has expressed his will about ratification. Therefore, the fact that the Civil Code (2000) does not establish any form requirements for ratification of actions of the unauthorised agent is to be evaluated positively. Article 15(8) of the Geneva Convention (1983) confirms that ratification can be of any form. It is noteworthy that ratification by the principal should not cause any legal consequences only when the initial transaction made through the unauthorised agent is not of the form prescribed by legal acts.

Please note that Lithuanian courts usually properly qualify factual circumstances when deciding whether the principal ratified actions of the unauthorised agent. For example, in a civil case examined by the SCL (AB “Pamūšio linai” v. A. V. 2003) it was reasonably admitted that the principal ratified a contract concluded by the unauthorised agent, as he personally took the advance payment indicated in the contract, used it according to the conditions provided for in the contract and fulfilled other contractual obligations. In another civil case (G. A. v. AB “Alytaus tekstilė” 2004), it was stated that the principal ratified the employment contract concluded by the unauthorised agent by its behaviour: it paid the third party the work remuneration agreed in the employment contract, consented to accrual of default interest for work remuneration not paid in time, to the severance pay for two months and the compensation for unused vacation and fulfilled other obligations provided for in the employment contract.

Still, cases can be found in the Lithuanian case law in which certain circumstances are linked to ratification of actions of the unauthorised agent not very precisely. For example, it is noted in the ruling passed by the SCL UAB “Oriola Vilnius” v. PĮ “Rasmutės Manelienės stomatologinė klinika” (2001) that the fact that the owner of the sole proprietorship admitted the contested contracts is confirmed by the circumstance that in solving the dispute in court she sought to enter into an amicable settlement agreement. To be true, agency ratification in this case is proved by the fact that the defendant paid the claimant a part of the debt under agreements in dispute. Presumably, initiation of an amicable settlement agreement should not in all cases be treated as the circumstance confirming ratification by the principal. One can take a decision on ratification of actions of the unauthorised agent only after a specific analysis of terms and conditions of such a contract and other related circumstances. There are also doubts regarding the fact that the court, when solving this dispute, linked the ratification by the principal to the circumstance that the defendant (the principal in agency relationship) did not file an appeal with an appellate court against the amount of the debt awarded on the basis of the contracts. It is noteworthy that the defendant had made a claim to admit these contracts to be invalid on the basis that they were concluded by an unauthorised person. Taking that into account, one cannot agree with the court’s conclusion that absence of objections to the debt amount, though the very basis of debt is challenged, implies that the principal ratified actions of the unauthorised agent.

It is analysed in the doctrine whether it can be regarded that the principal ratified unauthorised actions of the agent without performing any specific actions, i.e. tacitly. It is stated that the principal’s behaviour after the agent was granted powers can in a certain sense mean that the scope of initial rights has changed: the principal, being aware that the agent acts exceeding his powers and without taking any active actions about it, indirectly confirms that the agent has more rights than he was actually granted. Presumably, solely the principal’s inaction should not be treated as a sufficient basis for stating ratification of actions of the unauthorised agent by the principal. If the principal does not perform any actions, which would indicate that he approves of unauthorised actions of the agent, usual legal consequences of agency most probably should not appear. But if the principal gets certain benefit out of actions of the unauthorised agent, such passive behaviour of his could be qualified as expressing a relevant approval. For example, the French Court of Cassation in case *George Blanche v. Boutonnet et autres* (1931) was solving a dispute of this nature. The claimant and the defendant were co-owners of a house. None of

them lived in the house, but the defendant was responsible for its maintenance. Taking that into account, the defendant concluded a contract with Ms Dufour for lease of the house, and later also for its sale. Ms Dufour was paying rent each month, making such payments to the claimant's bank account. Then she decided to implement the purchase and sale contract made with the defendant but the claimant indicated that he was not bound by the contract as he did not know anything about its conclusion, besides, he had not ratified that transaction. The court established that the claimant's silence can mean his implied ratification because, though he did not directly express his will regarding actions of the other co-owner, but the fact that he used to get rent each month, without stating any objections to this, indicates that he knew about unauthorised actions and approved of them. It is noteworthy that in deciding whether the principal's silence regarding ratification of actions of the unauthorised agent can cause usual legal consequences of agency, one must analyse in detail all factual circumstances, as only referring to them one can state whether in a specific case the principal did not act as he was expected (Sainter 2009).

Please note that it has been established in many legal systems in case of legal relationship of commercial agency, i.e. when the agent is a professional intermediary and the principal is a person engaged in economic commercial activities, that failure by the principal to notify about non-ratification of a transaction conducted by the unauthorised agent means that such a transaction is deemed valid. Such a rule is set in the Civil Code (2000), too. Paragraph 1 of Article 2.163 of the Civil Code (2000) contains a provision that where a commercial agent concludes a contract on behalf of the principal without having authority to do so and where the other party was not aware and was not able to be aware thereof, it is recognised that the principal has ratified the contract in the case, where he, upon notification about the said contract by the commercial agent or the third person, failed to inform, without delay, the third person of his disapproval thereof. Taking into account specifics of commercial agency relationship, this reservation can be treated as reasonable, but presumably in other cases the general provision should apply saying that the principal must express his will about ratification of the unauthorised transaction by his active actions. If he fails to do that, the transaction, in conduction of which the agent exceeded the authority given to him or acted without any authority, should not bind the principal. Analysing foreign case law, it is evident that even in case when commercial transactions are entered into not through a professional intermediary, the principal's inaction can be treated as a sufficient basis for stating ratification of actions of the unauthorised agent, especially if in a specific case business entities can reasonably expect that the principal, understanding that his interests are infringed upon, would have expressed his clear disapproval of this (Schmidt-Kessel, Baide 2009).

In Lithuanian case law the principal's behaviour after conduction of an unauthorised transaction is qualified differently. In the ruling of the SCL of UAB "Dausa" v. AB "Turto bankas" and UAB "Rožinis flamingas" (2004) it is stated that the claimant's letter to the defendant, which mentioned the contested transaction of mortgage for a loan of a third party, makes it possible to consider application of consequences provided for in Article 66 of the Civil Code of 1964, which are related to ratification of actions of the unauthorised agent. Referring to this ruling of the SCL, one can arrive at the conclusion that the fact that the claimant, being aware of the transaction made by the unauthorised agent, did not immediately address the court for defence of his infringed rights, means that he approved of the transaction. Though it has been mentioned that in the general case the principal's silence is not a sufficient basis for stating ratification of actions of the unauthorised agent, but in the context of this specific dispute the principal's inaction (it addressed the court for admitting the transaction to be invalid more than seven years later) and other circumstances established in the case could be evaluated as the principal's abuse of the institution of unauthorised agency. A similar evaluation was given of a circumstance established in another civil case settled by the SCL (S. D. v. A. K. Č. "Turizmo firma" and A. M. B. 2005) where the firm owner, being aware that his deputy entered into credit agreements with the claimant, did not contest them throughout the whole period the case was pending, which lasted over nine years. In another civil case S. A. v. 159th Association of Apartment Owners of the City of Kaunas (2002) the SCL stated that owners of premises in the association ratified

the fact that some members of the association were represented without powers of attorney, as they did not challenge the resolution of the meeting, in favour of which these agents without powers of attorney voted (it is interesting that in this civil case it was not the ratification by the principals that was taken into account, but whether third parties both the association itself and its members ratified actions of unauthorised agents). Meanwhile, it is already pronounced in the latest case law of the SCL that the principal's inaction should not be treated as ratification of actions of the unauthorised agent (Ministry of Health of the Republic of Lithuania v. UAB "Kraujo donorystės centras", Notary Public R. S. of Office No. 1 of Notary Public of the Kaunas District 2012). Facts of the case: the claimant addressed the court and requested to cancel the resolution of the general meeting of shareholders of the defendant UAB "Kraujo donorystės centras" of 30 April 2008 regarding amendments to the Articles of Association. It indicated that the Ministry of Health was the holder of 49 percent of shares in UAB "Kraujo donorystės centras" owned by the state, the remaining 51 percent of shares were owned by the Manager of the company A. J. V. According to the claimant, as the agenda of the meeting held on 30 April 2008 did not contain the matter regarding amendments to the Articles of Association and the person who represented the state did not have a proper power of attorney, the general meeting of shareholders held on 30 April 2008 could not pass a resolution regarding amendments to the Articles of Association, as approval of the shareholder holding 49 percent of the shares (i.e. of the state) was necessary for this but was not obtained. In solving the dispute whether a resolution of the general meeting of shareholders can be treated as valid, the SCL did not agree with arguments of the appellate court that the fact that the claimant did not challenge the resolution of the general meeting of shareholders after its adoption means that it ratified this resolution. The court additionally noted that there was no evidence proving the circumstance that the principal by any active actions gave its approval for this resolution. One should agree with such interpretation by court due to the reasons mentioned above.

As it has been mentioned, the principal can make ratification of actions of the unauthorised agent both on his own initiative and when he is addressed by a third party with such a request. In both these cases, the time limit, within which actions of the unauthorised agent can be ratified, is important. In some states (for example, in the Netherlands), it is established that the principal can ratify behaviour of the unauthorised agent within the general period of limitation (Busch 2009). In other legal systems (for example, in common law countries) ratification by the principal must occur within a reasonable time limit (Tan 2009). Such a position probably is reflected in *soft law*, too – for example, the UNIDROIT Principles (2010) and the Principles of European Contract Law (2000) (hereinafter, PECL) (Lando, Beale 2000). Finally, in some other jurisdictions as, for example, in Belgium (Samoy 2009) no time limits are set at all, but it is emphasized that if the principal does not express any will regarding an unauthorised transaction for a long time, it can be treated as his implied ratification.

Meanwhile, in those cases when a third party addresses the principal for ratification of actions of the unauthorised agent, the time limit for ratification is defined either in legal acts or is set by that third party. Let's say, in Germany, a time limit of two weeks is set for the principal to express his will regarding ratification of the transaction. In the Netherlands and the UNIDROIT Principles (2010) a third party is not bound by any specific time limits, however it is noted that the time limit set by a third party must be reasonable. A similar situation exists in Lithuania, where paragraph 6 of Article 2.133 of the Civil Code (2000) establishes a rule that a third party can request in writing to ratify or refuse to ratify a transaction within a time limit set by him, which cannot be shorter than fourteen days. In essence, all legal systems establish that if the principal does not respond within a time limit set by a third party, it is to be regarded that the principal refused to ratify the transaction, and any later approval by the principal does not have any legal effect. One should agree that only in case the principal replies to the third party's enquiry, it can be regarded that he expressed his relevant will, but it is doubtful whether one can agree that if the principal does not ratify actions of the unauthorised agent within a set time limit, he cannot do that later. Presumably, if a third party is interested and if time limits meeting reasonability criteria are honoured, the principal should be allowed to approve of actions of the unauthorised agent in the future, too.

Please note that different legal systems also do not have uniform interpretation as to whether the principal has a duty to notify that he ratified actions of the unauthorised agent. Such a requirement is provided for in the Netherlands, meanwhile in other jurisdictions (for example, in France or common law countries) the principal is not subject to this obligation. Since, as it has been mentioned, ratification only rarely is stated expressly, it is not clear how really the principal's duty in connection with making his will public must and can be implemented in cases of implied ratification. Besides, an issue arises which parties to the legal relationship of agency must be informed about it. In the Netherlands, the principal must inform third parties about ratification, whereas in Germany both third parties and the agent can be informed. Presumably, the practice when the principal has the right but not the duty to inform third parties and/or the agent about ratification would be most reasonable. It is obvious that if the principal is interested in fulfilment of an unauthorised transaction, he will himself initiate a relevant notification to third parties. Meanwhile, if a third party has doubts whether the principal ratified actions of the unauthorised agent, they can be dispersed by addressing the principal directly (both asking to indicate if he approves of a relevant transaction and making a specific claim according to the conducted transaction). As it has been mentioned, taking into account that in private law it is presumed that transactions are valid as long as the opposite is not proven, both the principal and a third party can claim from each other fulfilment of obligations assumed according to the conducted transaction. Application of the institution of ratification of actions of the unauthorised agent and other related institutions becomes relevant only when one of the parties indicates that a specific transaction was made by a person who did not have such a right. Until then, the unauthorised agency problem is mostly theoretical.

It is also important to note that some legal systems (for example, of Germany, the Netherlands) provide for a right of a third party to refuse a conducted transaction before it is ratified by the principal. Paragraph 7 of Article 2.133 of the Civil Code (2000) also establishes that the other party to a transaction, that entered into a contract with a person who did not have such a right, can refuse the transaction before it is ratified by the principal, except for cases when at the time of entering into the transaction he knew or should have known that he was entering into the transaction with an unauthorised person. A possibility for a third party to refuse an unauthorised transaction is also provided for in *soft law*. For example, paragraph 3 of Article 2.210 of the UNIDROIT Principles (2010) contains a provision that if a third party did not know or should not have known that the agent acted without necessary powers, he may, at any time before the principal ratifies actions of the unauthorised agent, declare to the principal that he does not wish to be bound by this ratification. This right of a third party is similarly regulated in the Agency Digest, just here it is not related to good faith of a third party, i.e. a third party can cancel a relevant transaction even if he knew or should have known that the agent that made it acted without the necessary powers. It is noteworthy that common law does not admit the right of a third party to refuse an unauthorised transaction before it is ratified by the principal. Such a position was formed in the case *Bolton Partner Ltd v. Lanbert* (1889), in which the court indicated that after the principal ratifies actions of the unauthorised agent, retrospective legal consequences arise, which cannot be cancelled by the third party's refusal of the unauthorised transaction even if it was expressed before the principal expressed his will. It is admitted in this case that the third party is bound by the unauthorised transaction already from the moment when the unauthorised agent sought to make it.

In legal doctrine, it is also debated intensively about this right of a third party. Please note that a possibility to refuse a conducted transaction makes it possible for a third party to play the market (Reynolds 2009). Therefore, one can agree with the position formed in the case law of the Dutch courts that in those cases when a third party refuses a transaction conducted by the unauthorised agent because he seeks to enter into another transaction of similar character, however at more favourable terms, such a conduct is to be treated as unfair, therefore a relevant refusal by a third party should not cause unfavourable legal consequences for the principal (Busch 2002). In general, it is to be presumed that if a third party, when negotiating with the agent, was interested in conduction of a relevant transaction, he should not be later allowed to change his position referring to the circumstance that the

agent did not have necessary powers. Attention should also be paid to the fact that if possibilities are created for a third party to refuse a transaction conducted by the unauthorised agent, he would unreasonably find himself in a more favourable position than the person who enters into the transaction with another party not through an agent but directly. Therefore, it is to be proposed that in those cases when the principal seeks to implement the transaction, which was entered into by the unauthorised agent, the third party should not be allowed to refuse such a transaction, in spite of the fact whether he expressed such intentions yet before the ratification or after it.

4. Legal consequences of ratification of actions of the unauthorised agent

4.1. Legal consequences arising in external relationship of agency

It is considered that after the principal ratifies actions of the unauthorised agent, usual legal consequences of agency arise, i.e. it results in the same legal relationship as in case when the agent acts with necessary powers. Such legal consequences in external legal relationship of agency are also defined in the Lithuanian case law. It is noted in the SCL ruling of 27 July 2012 (K. J. v. UAB “Bendra idėja”, R. J. 2012) that ratification of the transaction conducted by the unauthorised agent directs the principal’s will towards the past events and that determines changes in already formed legal relationship, to be specific – it eliminates agency related faults of the transaction, which would otherwise make it possible to challenge and prove such transaction to be invalid.

In essence in all legal systems ratification of actions of the unauthorised agent causes retrospective circumstances: subsequent approval by the principal makes the transaction effective from the moment it was entered into, in spite of the fact that the agent entered into the transaction on behalf of the principal exceeding his powers or having no right to do that. This power of retrospective effect is also provided for in paragraph 6 of Article 2.133 and in paragraph 2 of Article 2.136 of the Civil Code.

It is important to note that after ratification of actions of the unauthorised agent not only a third party can make any claims to the principal arising out of a relevant transaction, but the principal can also do that in respect of the third party. In other words, the consequence of ratification of actions of the unauthorised agent is that mutual rights and obligations appear between the principal and the third party. The SCL also supports this opinion, noting that after ratification of the unauthorised transaction, the possibility of the principal to take part in civil legal relationship is implemented, that means that by this action he acquires rights and related obligations (K. J. v. UAB “Bendra idėja”, R. J. 2012).

In many legal systems, there is a rule that if third parties do not address the principal for ratification of the agent’s actions, it means they did not have doubts that the will of the principal was not properly expressed, i.e. that the agent performed unauthorised actions. It means that it is only when the principal indicates that a relevant transaction was concluded by an unauthorised agent, can third parties address him asking to ratify the transaction. Usually that becomes obvious when third parties make a claim arising out of a relevant transaction that the principal refuses to perform, indicating that the agent did not have the right to enter into it. In the Lithuanian case law, it is admitted that the fact that third parties did not ask the principals to ratify a transaction, means that they had no doubts about the will of the principals (J. G. v. L. S. 2010).

It is also important to pay attention to legal consequences, which ratification causes for fourth parties. In many jurisdictions it is admitted that interests of these persons, who most often are not aware of violations in agency relationship, should not suffer by reason of ratification. Therefore, in spite of the fact that, as it has been mentioned, ratification acts retrospectively, rights that fourth parties acquired yet before ratification remain with them (especially the right of ownership and other rights in rem). Besides, if fourth parties have interest in relevant

legal consequences, they can also address the principal themselves with a request to ratify actions of the unauthorised agent.

4.2. Legal consequences arising in internal relationship of agency

Legal doctrine almost fails to analyse what legal consequences arise in internal legal relationship of agency after the principal authorises actions of the unauthorised agent. Presumably that after the principal expresses approval of such actions of the agent, it should not be regarded that his rights are infringed and he can defend them by making a relevant claim against *falsus procurator*. Though, according to the general rule, after the agent exceeds his powers or acts without any powers at all, it is considered that he violated his duties arising out of the assignment or another agreement, on which the internal legal relationship of agency is based, but after the principal legitimises his unauthorised actions, the agent should not be held liable. Ratification of actions of the unauthorised agent also means that the principal has to perform his duties to the agent, one of which is payment of remuneration for fulfilment of an assignment.

One of the exceptions when the above-indicated legal consequences would not arise is legal relationship of commercial agency, where slightly different principles pertaining to ratification of actions of the unauthorised agent are formed. As it has been mentioned, if the principal did not immediately notify a third party that he disapproved of the transaction that a commercial agent entered into without having necessary powers for this, it is regarded that the principal ratifies such a transaction. It is debatable whether these legal consequences, which are significant in external relationship of agency, are to be analogously qualified in the relationship between the principal and the agent, i.e. whether it is to be admitted that the agent did not act as *falsus procurator*. Taking into account that the principal's action or inaction are evaluated only after he objectively learns of conclusion of the unauthorised transaction, it is to be considered that in such cases the principal usually has all possibilities to defend his infringed rights. Therefore, in case the principal does not object to validity of a specific transaction, it can be regarded that in this way he expresses his position that the unauthorised agent did not act in a manner contrary to his interests. Still, in exceptional cases (for example, when the principal takes a wrong decision concerning a concluded unauthorised transaction relying on information presented by the agent) active failure to express the principal's will can imply the commercial agent's liability if all conditions for its application are proven. It is to be presumed that also in those legal systems where it is admitted that the principal can also express his approval of actions of the unauthorised agent tacitly, the agent's liability to the principal should be discussed, too.

It is interesting to note that in common law, where usually legal consequences in internal and external legal relationship of agency coincide, there is a possibility that the principal, when ratifying actions of the unauthorised agent, can make a reservation about the agent's liability (Tan 2009). However, as case law reveals, such cases are rather rare and are to be treated as violating the agent's interests. In fact, it should be admitted that if the principal were not interested in legal consequences caused by actions of the unauthorised agent, he would simply refuse to ratify them. If the principal, making ratification, derives a certain benefit from it, it would be unreasonable for him to also get the right to make certain claims against the agent.

4.3. Relationship of ratification of actions of the unauthorised agent with apparent authority

Apparent authority is described as one of the main problems of the agency institution (Stoljar 1961). It should be noted that differently than in Lithuanian jurisprudence, sources of foreign law do not use the concept "apparent agency" but rather "apparent (ostensible) authority" (in French *mandat apparent*, in German *Anscheinsvollmacht*). Taking into account the terminology established in the Lithuanian legal doctrine, in this paper the concept of apparent authority, as a type of agency, is also mostly used. These are cases when, taking

certain circumstances into account, for which the principal is usually held responsible, an impression is created that actions causing legal consequences are performed by the agent authorised to do that.

In many jurisdictions the relationship of ratification of actions of the unauthorised agent and apparent authority is such that after the principal ratifies actions of the unauthorised agent, rules on apparent authority usually are not referred to. It is considered that only in case when the principal does not express his relevant approval, the application of the apparent authority doctrine can be discussed. In other words, priority of ratification of actions of the unauthorised agent over apparent authority is established. As it has been mentioned, in those legal systems where apparent authority is understood exclusively as a manner of defence of third party's infringed rights, the principal does not have the right to refer to this doctrine when cases of unauthorised agency are established. In order that the principal could make claims arising out of an unauthorised transaction against a third party, it is necessary to ratify such a transaction. Therefore, in certain cases ratification of actions of the unauthorised agent is the only way of implementation of the principal's interests and defence of his infringed rights when the agent exceeds powers granted to him or acts without them.

It should be noted that in some jurisdictions it is admitted that a third party can apply both apparent authority doctrine and doctrine of ratification of actions of the unauthorised agent referring to the same facts. Such a possibility exists in those legal systems (for example, in the Netherlands, also in case of application of the UNIDROIT Principles (2010) and PECL (2000), where, in establishing whether a specific situation of unauthorised agency meets conditions for apparent authority, in addition to other things, the principal's behaviour after the conclusion of the disputed transaction is also taken into account (Busch, Macgregor 2009). Still, it is admitted that if facts of the dispute prove ratification of actions of the unauthorised agent, it is not expedient to analyse conditions for application of apparent authority.

The relationship of apparent authority and ratification of actions of the unauthorised agent has been analysed in the Lithuanian case law indirectly, too. The SCL in its case law in the ruling UAB "Kreivė" v. UAB "Orgreitos transportas" (2011) and in the ruling R. Z. v. BUAB "Metoil" (2016) noted that in deciding about validity of a transaction concluded by an agent who exceeded his powers, the circumstance provided for in paragraph 6 of Article 2.133 of the Civil Code (2000), i.e. subsequent will of the principal either to ratify such a transaction or not, is decisive only in case when the other party to the transaction does not refer to paragraph 9 of Article 2.133 of the Civil Code (2000). When the counterparty to the transaction requires validity of the transaction and seeks to prove that he had a serious reason to think that he was entering into the transaction with an agent having such a right, the principal has to challenge validity of the transaction seeking to prove that the counterparty to the transaction knew or should have known that the agent was exceeding his powers. Taking this interpretation into account, a conclusion can be made that if a third party seeks to refer to the apparent authority doctrine, it does not have to prove that the principal has ratified a relevant transaction or not. Another logical conclusion follows from this ruling that having established the circumstance that the principal ratified actions of the unauthorised agent, the apparent authority rules, provided for in paragraph 9 of Article 2.133 of the Civil Code (2000), can no longer be applied. In other words, ratification of actions of the unauthorised agent eliminates application of apparent authority. It is noted in the ruling of 12 April 2011 (UAB "Kreivė" v. UAB "Orgreitos transportas" 2011) that analogous provisions on interpretation and application of law are set out in the ruling of passed in civil case T. Ž. v. sole proprietorship of J. V. V. (2007). Though this ruling, as well as the ruling of 12 April 2011 (UAB "Kreivė" v. UAB "Orgreitos transportas" 2011), analyses certain aspects in connection with unauthorised agency to be specific, whether the agent's actions meet conditions established in Article 2.133 of the Civil Code (2000), but the court does not pronounce on the relationship of paragraphs 6 and 9 of Article 2.133 of the Civil Code (2000). This position in essence corresponds to tendencies of legal regulation and case law in other countries.

In spite of the fact that apparent authority and ratification of actions of the unauthorised agent are understood as two independent ways of defence of infringed rights of a third party, analysis of related case law shows that courts regard facts both in the context of apparent authority and in the context of ratification of actions of the unauthorised agent, though in fact it would be enough to refer to just one of them. For example, the Vilnius Regional Court was solving a dispute regarding award of rental debt (*Ramirent Baltic AS v. UAB "Nekilnojamojo turto valdymas"* 2012). The claimant filed a statement of claim with the court and indicated that it entered into the lease agreement with the defendant, where the defendant undertook to pay rent to the claimant for transferred construction equipment. The construction equipment was transferred to the defendant under deeds of transfer and acceptance of the equipment and VAT invoices were issued for provided services, which the defendant did not pay in full. The defendant did not agree with the statement of claim, indicating that the deeds of transfer and acceptance of the equipment were signed by persons who did not work for the defendant company, therefore it thought that it did not have the obligation to pay for lease of the equipment. In settling this dispute, the court, first of all, referred to paragraph 2 of Article 2.133 of the Civil Code (2000), establishing that if a person by his behaviour created a serious reason for third parties to think that he appointed another person as his agent, transactions made by such a person are binding on the principal. In the court's opinion, this rule of law should be applied to the relationship in dispute, as delivering the equipment to a specific object of the defendant, where persons present thereat used to confirm in writing (by signing a deed) receipt of this equipment, the claimant could reasonably believe that those persons and the defendant were linked by legal relationship of agency (assignment). These reasons allow arriving at the conclusion that the court established the fact of apparent authority without specifying it directly. In spite of that, the court noted that the claimant's belief that the equipment was transferred to a proper agent could be supported not only by the presence of the persons who accepted the equipment in the specific object, for which the equipment was ordered, but also by payment of invoices according to equipment acceptance deeds signed both by a person having a written power of attorney of the defendant and by other persons having no such power of attorney. The circumstance that the defendant, referring to the equipment acceptance deeds, paid some of the claimant's invoices, can already be qualified as ratification of actions of the unauthorised agent. For this reason, when settling the dispute between the parties, it would have been enough to refer to this fact only and not to analyse additionally whether there are grounds for application of the rules on apparent authority. And it is only in case if the principal had negated that it ratified actions of the unauthorised agent, could the court take a decision on application of apparent authority. This delimitation of apparent authority and ratification of actions of the unauthorised agent is important not only for proper qualification of the relationship in dispute, but also practically, as it is much simpler to prove ratification of actions of the unauthorised agent than meeting of conditions for apparent authority. Another important thing is that having established ratification by the principal, he loses the right to make claims against the agent that performed unauthorised actions. Meanwhile, establishment of apparent authority, as it has been mentioned, means presumption of unlawfulness, as one of the conditions for the agent's liability to the principal. For this reason, the agent in fact is interested that, if possible, not apparent authority but ratification of actions of the unauthorised agent would be established.

In another civil case *I. T. (G.) v. ŽŪB "Pavasaris"* (2014), in spite of the fact that it was possible to state apparent authority in it, infringed rights of a third party could be defended on that basis that the principal ratified the transaction in dispute. The court ignored the circumstance that the principal accepted money from the third party according to the transaction in dispute, which could prove the fact of indirect ratification of actions of the unauthorised agent.

It is important to note that in certain cases the agent's request to the principal asking for ratification can eliminate the possibility of application of apparent authority. A third party, asking the principal to ratify a relevant transaction, admits that the agent made it without having the necessary authority. As one of the conditions for application of apparent authority is that at the time of conclusion of the transaction the third party must be

reasonably convinced of the presence of the agent's powers. In this way, the third party, addressing the principal for ratification, kind of negates reasonability of its belief and, probably, that may be taken into account when establishing apparent authority. For this reason, third parties, before addressing the principal, should evaluate the risk, which could arise if the principal refused to ratify actions of the unauthorised agent and later it were sought to rely on the apparent authority doctrine. As an example, civil case Tauragė District Board v. V. B., G. B (2001), settled by the SCL can be mentioned. Though the dispute between the parties was settled referring to provisions of the Civil Code of 1964, which, as it has been mentioned, did not yet provide for the institution of apparent authority, but the interpretation by the court allows to make a conclusion that as a third party made a request to the principal to ratify a transaction entered into through an agent, such request implies the third party's understanding that an unauthorised transaction was made, by reason of which his interests should not be defended in case the principal refuses to ratify such a transaction. The essence of the dispute: the Tauragė District Board requested to invalidate the agreement for purchase and sale of real property, which was signed by the defendants, who had only the power of attorney issued by the Tauragė State Board of Apartments Sector. As the Tauragė District Board had not taken a decision to sell the said structures, there was no power of attorney issued by the Board to sell the structures. The court established that the Tauragė State Board of Apartments Sector, not being authorised itself and having no right to solve issues of sale and purchase of apartments, did not have any legal basis, in the absence of a relevant decree of the Tauragė District Board, to authorise Chief Engineer A. B. of the Tauragė State Service of Apartments Sector to enter into the agreement for purchase and sale of structures in dispute with the defendant V. B. Thus, in the absence of the expression of the will of the Tauragė District Board to sell the structures in dispute, the agreement for purchase and sale was made on behalf of the Tauragė District Board by a person not authorised to do that. The material in the case file does not show that the Board later approved of the transactions at its own will. The case file contains a copy of the defendants' request to the Board, by which the latter asked to acknowledge the contested transaction, but there was no positive reply to it. It is to be presumed that if this dispute were settled by applying the Civil Code (2000), the defendant (the third party in the agency relationship) could reasonably refer to the apparent authority rule, taking into account that he, probably, had a serious reason to believe that the agent acted having real powers.

Presumably, the court should not make an application by a third party to the principal so absolute and should not treat it as a circumstance that would negate the possibility of application of apparent authority. As it has been mentioned, presence of apparent authority does not eliminate the fact that the agent acted without having necessary powers, therefore application of third parties to the principal, first of all, should be linked to disclosure of relevant information to him and the aim of the third party that the principal would express his will about the concluded transaction as soon as possible. If the principal states his disapproval, the third party should not lose a possibility to defend his infringed rights if it has a serious reason to believe the fact of the agent's powers.

In this context, it is noteworthy that courts do not always manage to properly delimit ratification of actions of the unauthorised agent from another basis for agency relationship related to apparent authority – implied authority. The general rule is that determination that the agent acted having implied rights should not result in the decision on whether the principal ratified actions of the unauthorised agent. A dispute was settled by the Vilnius Regional Court in civil case A. U. v. UAB "Druskininkų autobusų parkas" (2011) regarding lawfulness of an employee's dismissal from work. In addition to some other arguments, the claimant based unlawfulness of his dismissal from work on the circumstance that the defendant's authorised person V. V., when issuing an order on imposition of the disciplinary penalty on the claimant – dismissal from work, exceeded his powers. The court indicated that V. V. exceeded his powers, as according to the power of attorney issued to him he was given the right only to conclude employment contracts but not to terminate them. As it has been mentioned previously when analysing this case, such a court conclusion is too formal, made only on the basis of the literal text of the power of attorney. The court did not pay attention to the fact that the disputed right of the agent can be treated as integrally related to the assignment he must carry out. Therefore, instead of relying on implied authority rules in settlement of the

dispute, the institution of ratification of actions of the unauthorised agent was applied. The court established that solely the circumstance that A. D., as the head of the company, later ratified actions of V. V. who signed the order on the claimant's dismissal from work, allowed to make a conclusion that the will of the head of the company concerning the dismissal of the claimant from work was implemented properly. Thus, the court stated ratification of actions of the unauthorised agent by the principal, though for analogous legal consequences to appear, it would have been enough to state implied actions of the agent.

Conclusions

Ratification of actions of the unauthorised agent is a method of implementation of interests and defence of infringed rights not only of third parties but also of the principal in those cases when the agent exceeds powers granted to him or acts without them.

Ratification of actions of the unauthorised agent is most often established on the basis of the actual behaviour of the principal and other circumstances related to him, therefore ratification should not be subject to any requirements of form.

A third party should not be allowed to refuse a transaction entered into through the unauthorised agent, if the principal seeks to implement it. Interests of fourth parties should not in any case suffer due to the right of a third party to cancel such a transaction.

After the principal ratifies actions of the unauthorised agent, usual legal consequences of agency arise both in internal and external relationship of agency.

Apparent authority and ratification of actions of the unauthorised agent are two independent ways of defence of third parties' infringed rights. In cases when the principal ratifies actions of the unauthorised agent, rules on apparent authority should not be referred to.

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Publisher

ECONOMIC TRENDS OF BUSINESS ACTORS ON DAILY NEWSPAPER MARKET: CASE OF THE SLOVAK REPUBLIC*

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Abstract. Since 1989, daily press in Slovakia has been characterised by dynamic development, reflected, besides others, in a number of systemic changes, ownership relationships, typology, contents, circulations, readership, prices, advertising volumes or the number of dailies. Over the last years, the development of daily newspapers has been affected not only by legislation and economic impact (business environment, effects of the financial crisis, purchasing power of population, etc.) but also revolution in social habits of people resulting from the development of information and communications technology. The main objective of the research study is to analyse trends on the Slovak daily newspaper market between 2000 and 2014, focusing on analysing the development of the number of national dailies, their average price and advertising volume as independent variables and their overall single average circulation as a dependent variable and finding relationships between selected variables.

Keywords: periodicals, Slovakia, daily, terminology, history, typology, legislation, market, circulation, price, advertising

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1. Introduction

In spite of significant popularity of audiovisual media in the 20th century and an enormously increasing use of information and communications technology at the beginning of the 21st century, which has resulted in network media development, print media still have their significance and irreplaceable role in society at the beginning of

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the third millennium. Dailies currently represent a smaller part of print media, however they are a necessary subsystem of periodicals, as they address hundreds of thousands of readers everyday and considerably affect the formation of public opinion, especially concerning political opinions and approaches.

The fall of the totalitarian regime and subsequent political and social changes after November 1989 brought about conditions for a dynamic breakthrough in the system of periodicals, which implied not only ownership changes in press but also changes at both the content and printing levels of periodicals. Free enterprise and subsequent privatisation of former state publishing houses reflected in changes in the number of both national and regional dailies. Many new newspapers appeared and several newspapers stopped being issued in Slovakia over ten years, while the successful dailies got in the ownership of multinational media corporations, which gradually stabilised them.

Daily press has been challenged by the economic factor as well as the already mentioned more and more popular network media over the last years. The global financial and economic crises has also affected Slovak print media, which has resulted in lower profit from advertising and lower purchasing power of readers, which has subsequently reflected in decreased average circulation. The decrease of circulation is more and more influenced also by the boom of information and communications technology, as readers gradually stop paying for press due to the fact that information is almost free at news portals.

In addition, some of the national media have got under control of financial groups, which control them through media companies, which causes well-founded concerns of the public for further misuse of media for personal and political interests of groups and individuals. On the grounds of the aforementioned, we believe that the given issue is still topical and has significance for all society.

According to A. Aliaksandrau (2013, p. 34 - 38), both the effects of the financial recession and popularity of digital media result in the decline of the newspaper market by 17 % in European countries and North American countries. An exception is growth of newspapers on Asian markets such as India or China, where Internet access is still insufficient. As P. Wilby states, not only the circulations of newspapers but also the number of employees is decreasing. (2010, p. 26). In Finland, for instance, the number of newspaper chains in 2010 had decreased from 24 to 19 since 2000, while the number of dailies dropped from 44 to 42 in this period. (J. Jyrkiäinen, 2012, p. 7 - 25).

Based on the aforementioned, we decided to conduct a social science research of market trends concerning daily press in Slovakia between 2000 and 2014. In order to fulfil this objective, a quantitative research strategy based on recommendations of, besides others, K. F. Punch, a professor of the University of Western Australia, was selected. (Punch, K., F. 2008b, p. 12 - 15).

Research model was divided into the pre-empirical stage (field of study, topic, objectives of examination, research questions) and empirical stage (collection of data, analysis of data, answers to questions).

2. Methods

The main objective of the research stage, which was conducted adopting predominantly a quantitative approach, was to examine a relationship between the number of nationally distributed dailies, average price of periodicals and advertising volume as independent variables and overall single average circulation of selected nationally distributed dailies as a dependent variable over the continuous period of 2000 - 2014. Secondary objective of the empirical stage was to analyse development of the size of readership of selected national dailies over the last fifteen years from the perspective of audited sold copies.

In the research stage of the work, we formulated three general research questions and eight specific research questions. Firstly, we were examining distribution of the variables (number of national dailies, average price of periodicals, advertising volumes, overall single average circulation of selected national dailies). Subsequently, we were examining the relationship between independent variables and the dependent variable. The third research question was why the variables are so distributed and mutually interdependent.

We used a number of research methods in order to examine the issue. The data on circulation were obtained from viewership analysis, and the data on the number and price of dailies were obtained by studying archived documents. The data were further analysed by statistical methods (statistical average, multiple linear regression analysis) and comparative method.

3. Analysis of development of audited sales of national dailies during 2000 - 2014

It is almost necessary for the owners of private media (including dailies) to know the size of their audiences for several reasons. As J. Jiráček and B. Köpplová (2007, p. 85) opine, it is important for media institutions not only because behaviour of the audiences is a useful instrument of feedback and evaluation of performance but also because audiences themselves are a business item offered to advertisers by media or their representatives.

The study of media audiences commenced in the 1940s and 1950s and is associated with the name of a renowned sociologist dealing with communication Paul Lazarsfeld as well as other representatives of the Frankfurt School. An increased interest in receivers, their role in media communication and their share in the functioning of media systems was recorded especially in the 1970s and 1980s, when a whole range of workplaces focused on the active role of receivers. Commercial study of media consumers represents an independent field of study of receivers, as it deals with size measurements (readership and viewership of media - quantitative research) and structure of audiences as well as analysis of habits, approaches and preferences of their members. (Burton, G., Jiráček, J. 2001, p. 313) We will hereinafter focus on readers.

Readers are the principal characters in relation to press, since the existence of a particular newspaper is dependent on their interest and favour. According to E. Hradiská (Hradiská et. al, 2009, p. 257), approach to press can be characterised as expressly active, beginning with the choice of a particular newspaper whether in the form of a subscription, purchase or on-line reading. In terms of audience, Denis McQuail (2007, p. 331) defines paying audience as an alternative term having several forms, especially including those purchasing printed newspapers, books, recordings, etc.

The size of print media audiences can be evaluated by means of the parameters of press readership, audit of circulations of periodicals and advertising volumes. We will further work with the data on audited circulations of periodicals, as already justified in the methods of the research.

Analysing the development of audited sales of dailies, we first examined average audited circulations of national dailies between 2000 and 2014. In order to obtain such figures, we summed up the data published by the Audit Bureau of Circulations - ABC SR on average sold circulations of selected national dailies in individual months of the given year and subsequently divided such calculated figure by the number of analysed months. These data were elaborated for every analysed daily in the period 2000 - 2014.

We remind the aforementioned limitation of research material to ten dailies owing to the fact that the auditor of ABC SR only provided audited sold circulations for these dailies. However, data on the given dailies were not provided for all months of the whole monitored period, while the Audit Bureau of Circulations justified the

missing data by the fact that a particular publisher had not sent the data within the required timeframe, or cooperation with them had been terminated

The missing data on the daily Pravda for 2013 and 2014 were added from the data on average printed and sold circulations published by the publisher on the website of the daily. The data on the dailies Práca (2001), Hospodárske noviny (2003, 2004) and Národná obroda (2000) were added on a best estimate basis, as the data for other years were available. The missing data on the daily Práca for 2001 were supplemented by the average audited sold circulations for 2000 and 2002, as well as the average audited sold circulations for 2002 and 2005 were considered as the basis of calculations of the data on the daily Hospodárske noviny for 2003 and 2004. Average circulation in 2001 was applied for the daily Národná obroda for 2000. The determined best estimate is increased due to the fact that average sold circulations of these dailies in the monitored period of 2000 - 2014 had a decreasing trend without any recorded fluctuations. The best estimate was not made for the daily Šport, as the data provided on audited average circulations were insufficient to make such estimate. The daily Šport was therefore excluded from further analysis (more details in Table 1).

Based on the statistics of average audited sold circulations of the selected national dailies for individual years including added estimates, we were able to initiate the analysis of trends of overall single circulations and average single circulations of the selected national dailies. Analysing the overall single average circulation, we summed up average sold circulations of all analysed national dailies for a particular year. The overall single circulation in the given year divided by the number of analysed national dailies was thus considered as average single circulation.

Table 1. Analysis of development of audited sold circulations of national dailies including estimated missing data (2000 - 2014)

Name/ Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Práca	27,997	*22,148	16,298	/	/	/	/	/	/	/	/	/	/	/	/
Hospodárske noviny			23,775	22,757	21,670	*21,093	*21,093	20,517	17,702	18,182	18,442	18,442	17,319	16,991	15,389
13,428	11,885														
Národná obroda		*26,215	26,215	24,275	17,087	13,077	/	/	/	/	/	/	/	/	/
/															
NOVÝ ČAS		169,426	144,762	146,442	156,576	166,681	185,570	188,548	179,447	172,027	150,302	143,191	135,609	121,041	
109,983	101,172														
Pravda	73,598	61,797	59,165	76,889	77,326	76,423	75,366	66,786	62,632	51,121	52,079	53,646	51,236	49,516	48,492
Roľnícke noviny		6,807	6,607	6,243	3,852	/	/	/	/	/	/	/	/	/	/
/															
SME	48,383	53,471	60,124	72,780	76,693	76,352	70,995	65,064	59,730	59,378	56,596	53,294	48,893	43,604	39,917
Šport	N/A	N/A	61,500	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Új Szó	29,610	28,767	28,232	26,521	25,827	25,141	24,993	24,793	24,561	23,766	23,252	22,217	21,288	19,964	19,266
Plus JEDEN DEŇ	/	/	/	/	/	/	/	57,155	58,850	64,234	58,277	56,794	54,648	52,190	48,646
45,972															

Source: Own processing based on the data provided by ABC SR on average printed and sold circulations of newspapers registered in the system of press circulation auditing for 2000 - 2014. Circulations of the daily Pravda for 2013 and 2014 were obtained from the data provided by the publisher. The data are rounded to the nearest whole number.

* - additional estimated data

N/A - not available data

/ - the newspaper is not issued anymore

4. Analysis of Development of the Number of National Dailies (2000 – 2014)

The analysis of development of the number of national dailies was based on official documents of the Ministry of Culture of the Slovak Republic. Analysing the development of the number of national dailies, a question arose whether to include a daily which stopped being issued at the beginning of the given year, or started to be issued at the end of the given year. Eventually, we decided to include each daily issued in a particular year even for a month in the analysis. If we had decided to include dailies issued for more than six months in the statistics, the daily Plus JEDEN DEŇ would have been excluded in 2006, as it was issued from September and is among relevant national dailies today. The statistics of the Ministry of Culture of the Slovak Republic were expanded by the daily Hospodársky denník, which, based on the data, was issued from 17th February 1999 to 30th January 2004. We also included the daily Ranný rýchlik, which was issued from 15th November 2004 to January 2005. In addition, we included the daily Avízo in 2013, as the change of periodicity was made on 30th May 2013 and the daily was issued for five months in 2013. Likewise, we included the daily Verejnosc' in 2014, even though it was not registered in the system of the Ministry of Culture of the Slovak Republic although it stopped being issued on 15th February 2014 (more details in Table 2).

Table 2. Analysis of development of the number of national dailies (2000 - 2014)

Name/ Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Pravda	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Új Szó	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Práca	I	I	I	/	/	/	/	/	/	/	/	/	/	/	/
Roľnícke noviny	I	I	I	I	/	/	/	/	/	/	/	/	/	/	/
Šport	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Národná obroda	I	I	I	I	I	I	/	/	/	/	/	/	/	/	/
NOVÝ ČAS	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Hospodárske noviny	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
SME	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Hospodársky denník	I	I	I	I	I	/	/	/	/	/	/	/	/	/	/
Nový deň	I	I	I	I	I	/	/	/	/	/	/	/	/	/	/
Plus JEDEN DEŇ	/	/	/	/	/	/	I	I	I	I	I	I	I	I	I
Ranný rýchlik	/	/	/	/	I	I	/	/	/	/	/	/	/	/	/
VEREJNOST'	/	/	/	/	/	/	/	/	/	/	/	/	/	I	I
BUONGIORNO SLOVACCHIA	/	/	/	/	/	/	/	/	/	I	I	I	I	I	I
Avízo - celoslovenské inzertné noviny	I	I	I	I	I	I	I	I	I	I	I	I	I	I	/
Dailies total	12	12	12	11	11	9	8	8	8	9	9	9	9	10	9

Source: Own processing based on the data of the Registry of Periodicals of the Ministry of Culture of the Slovak Republic

I - the newspaper is still issued

/ - the newspaper is not issued anymore

5. Analysis of Development of Prices of National Dailies (2000 – 2014)

The analysis of development of the prices of national dailies over 2000 - 2014 was preceded by data collection during a library survey in the University Library Bratislava. The analysed material was again limited to ten dailies, namely the following: Hospodárske noviny, Národná obroda, NOVÝ ČAS, Pravda, Práca, Plus JEDEN DEŇ, Šport, Roľnícke noviny, SME and Új Szó.

The prices of the monitored national dailies were first analysed within individual months. In the majority of cases, publishers adjusted prices from the beginning of the given month. Otherwise, we took into account the price prevailing over the monitored month. In this analysis, we distinguished between the price of an issue on working days and price of an issue, respectively an issue with a supplement, during weekends. The prices were provided in SKK from 2000 to 2008, and in EUR from 2009.

The comparative analysis of price development over the period 2000 - 2014 could be conducted following the month-based statistics of the prices of selected national dailies. Such average price for each analysed year and each monitored national daily was first statistically evaluated. Such average value was the result of a simple average of all the units of the statistical set. The analysis includes average prices for an issue on a working day. On the contrary, the analysis does not include average prices for weekend issues or issues with supplements. The data from the period 2000 - 2008 were first provided in the valid currency (SKK), which is converted in EUR using the conversion rate EUR 1 = SKK 30.126 and provided in brackets. Average prices in SKK are rounded to two decimal places, while the conversions of SKK to EUR are calculated to three decimal places.

The analysis of development of the average annual price (EUR) of all national dailies over 2000 - 2014 could be conducted following the analysis of average annual prices (SKK, EUR) of individual national dailies for individual years. Such statistics concerning the annual price development was the result of a simple average of all the units of the statistical set. It means that we summed up the prices of all dailies and divided them by the number of monitored periodicals in a particular year. (more details below in Fig. 1).

The conducted analysis of average annual prices of individual national dailies was further used to conduct an analysis of increases of average annual prices.

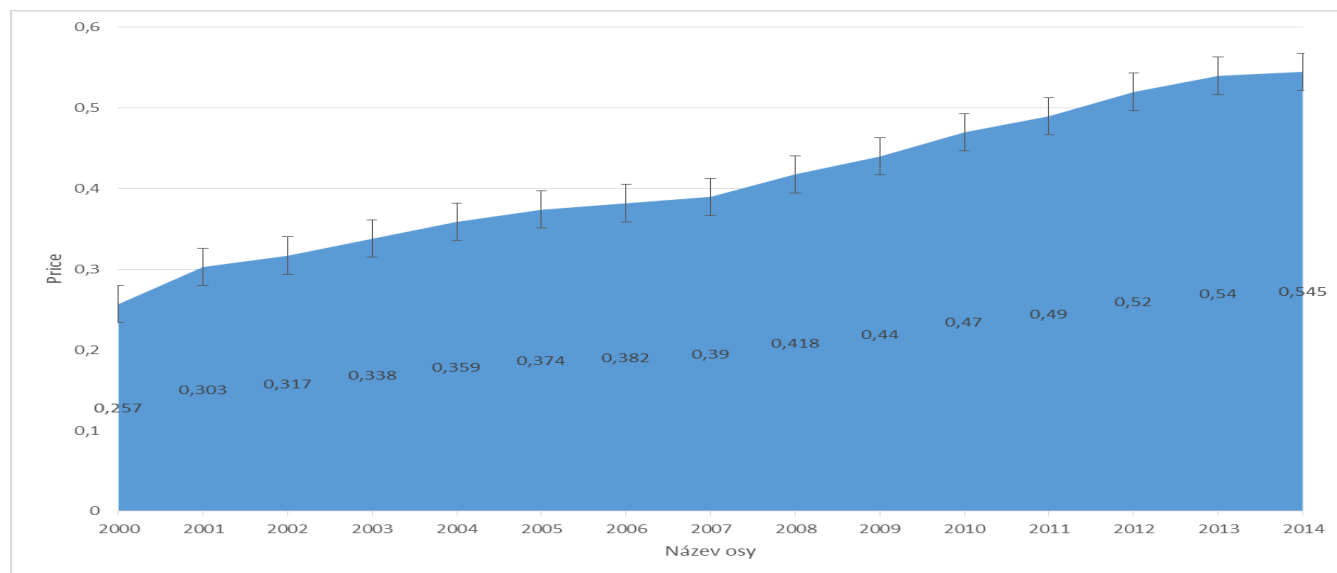


Figure 1. Analysis of development of the average annual price (in EUR) of all national dailies (2000 - 2014)

Source: Processed on the basis of own research results

5. Analysis of development of advertising volumes of national dailies during 2000 - 2014

Advertising is considered to be one of the most noticeable tools of marketing communication by a number of authors (Koprda, T., Košková, 2015, Polakevičová, I., 2015), while “print advertising is developing along with the new marketing instruments and is characterised by considerable creativity, variability and inventiveness”. (Szabo, P., 2013, p. 25).

The analysis of development of the overall advertising volumes of national dailies was based on the data provided by the TNS Slovakia, s. r. o. agency. The data concerning years 2000 - 2009 were obtained from a specialised monthly “Stratégie”, and the data concerning years 2010 - 2014 were obtained directly from the agency. According to the data provided by Rastislav Kušnier (2005) from the TNS Slovakia, s. r. o. agency, monitoring of advertising expenses applies official list prices and does not take into account barter, bonuses and agency commissions. The agency TNS Slovakia, s. r. o. is currently monitoring 140 print publications, both national and regional, 9 national television stations and 6 national radio stations, 350 second-level and third-level domains, as well as it receives advertising data from 10 marketing agencies, 2 cinema operators and one media representative covering 27 specialised television stations.

The data from the period 2000 - 2008 were first provided in the valid currency (SKK), which is converted in EUR using the conversion rate EUR 1 = SKK 30.126 and provided in brackets. Conversions of SKK to EUR are calculated to three decimal places. The analysis of development of the overall advertising volumes of all national dailies over 2000 - 2014 could be conducted following the analysis of annual advertising volumes (SKK, EUR) of individual national dailies. Analysing the overall advertising volumes, we summed up annual advertising volumes of all analysed national dailies for a particular year (more details below in Fig. 2).

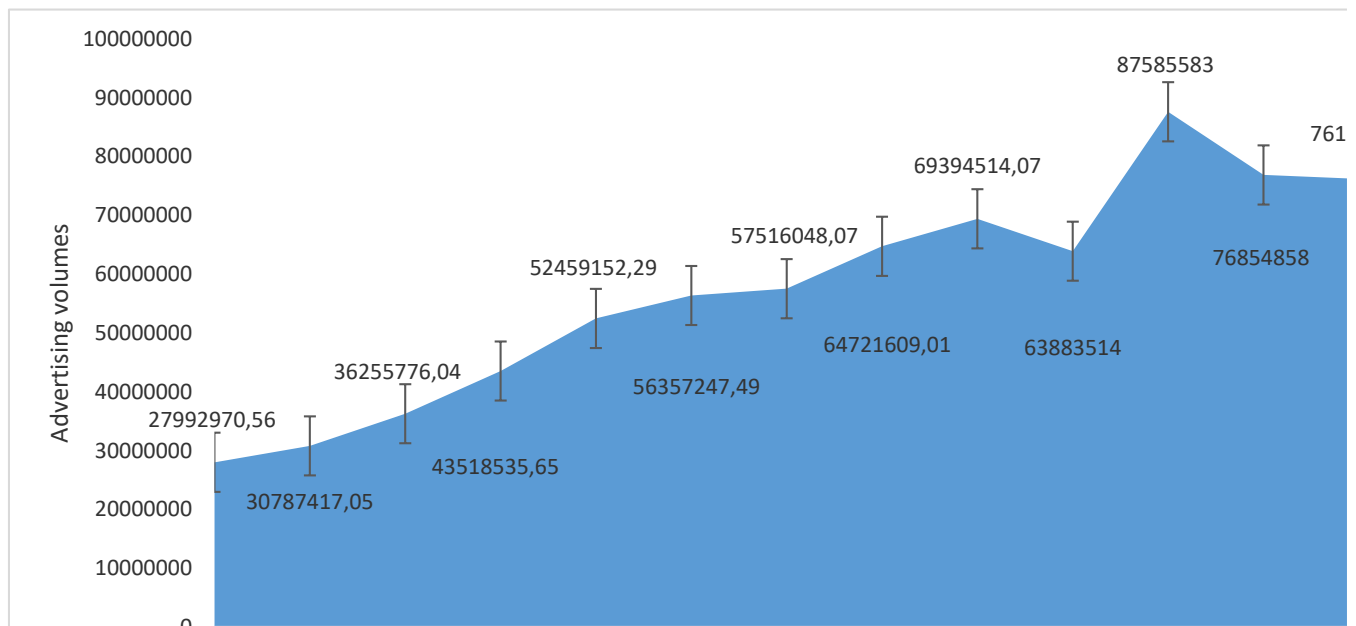


Figure. 2. Analysis of development of overall advertising volumes of national dailies in EUR during 2000 – 2014

Source: Processed on the basis of the data provided in Tables 4 and 5

Comparative analysis of the development of relationships between the number of national dailies and overall single circulations of selected periodicals over 2000 - 2014 was processed on the basis of statistical data on the number of national dailies in the monitored period as well as data on the overall single circulations of selected national dailies. In this case, the risk of comparative analysis of relationships results from discrepant research material, as in the monitored period, the actual number of national dailies was compared with the aforementioned data concerning audited sold circulations limited to ten dailies. Notwithstanding this fact, we conducted the comparative analysis and provide its results in. In order to ensure a more thorough comparison, results of the analysis of development of the number of national dailies was processed individually in Graph 3. (Lincényi, Petrušová, 2015).

The analysis of the development of relationships between the number of national dailies and their average price for the period 2000 - 2014 was based on processed data on both the average annual price (EUR), and the number of national dailies between 2000 and 2014. The risk of discrepancy of the analysed material was also included in this case (more details in Fig. 3).

Comparative analysis of the development of relationships between the overall single circulations and overall advertising volumes of these national dailies for the period 2000 - 2014 was based on both statistical data on the overall single circulations, and data on the overall advertising volumes. The results can be affected by the discrepancy of the analysed material also in this case (more details in Fig. 4). With regard to the development of individual variables, we decided, following consultations with statisticians, to further focus on the analysis of relationships between average prices of national dailies and their average single sold circulations.

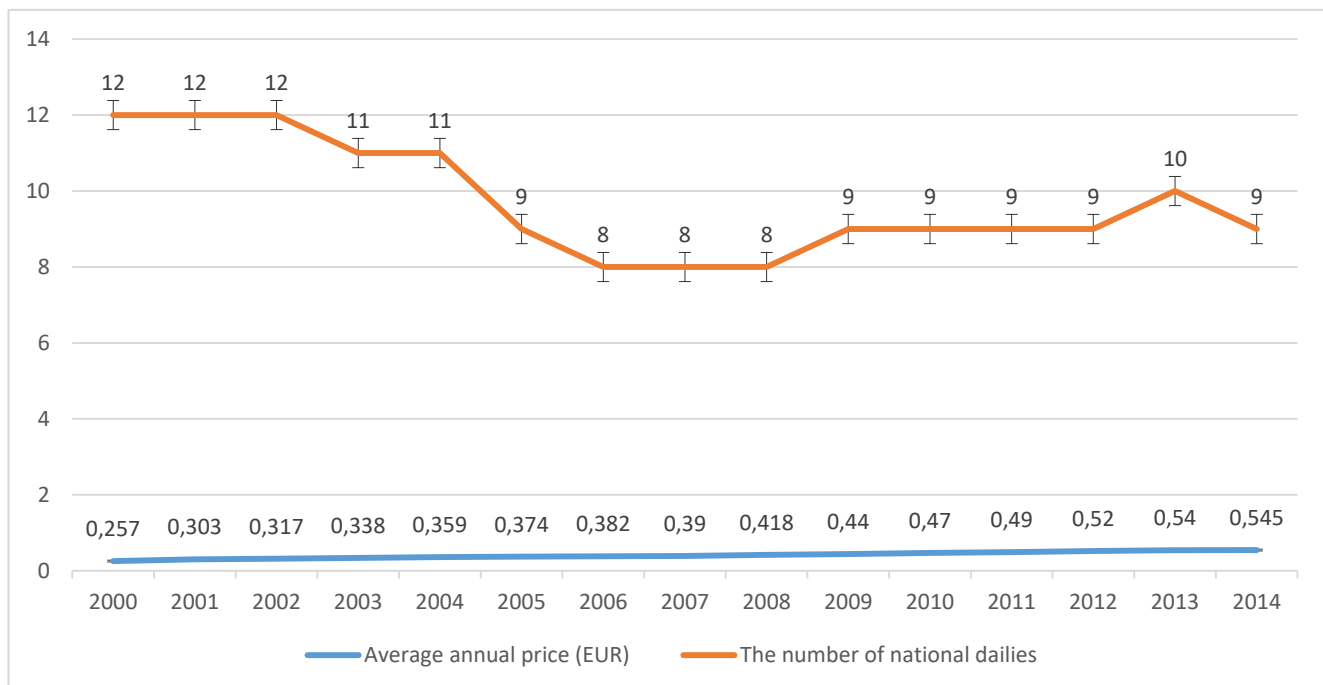


Figure 3. Analysis of development of relationships between the number of national dailies and their average prices during 2000 – 2014
Source: Processed on the basis of own research results

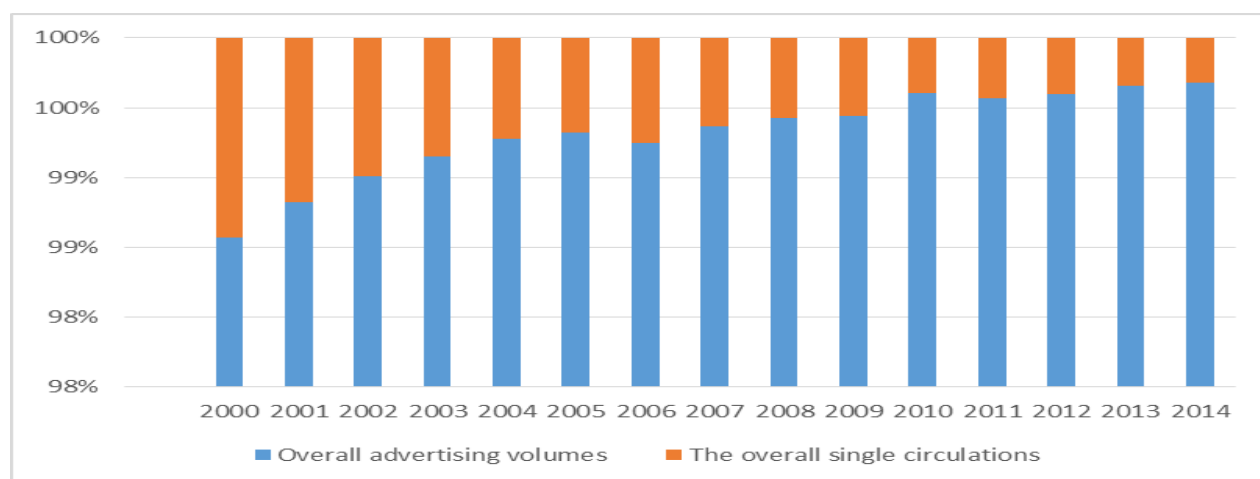


Figure 4. Analysis of development of relationships between the overall advertising volumes and overall single circulations of the selected periodicals during 2000 – 2014
Source: Processed on the basis of own research results

Initially, we conducted a statistical analysis of average daily sold circulations (in pieces) and average prices (in EUR/piece) of selected national dailies over 2000 - 2013, which was conducted as a simple correlation analysis, time series analysis and subsequent prediction of selected values. Six dailies were selected as research material for the purpose of this analysis (Hospodárske noviny, NOVÝ ČAS, Pravda, Sme, Új Szó and Plus JEDEN DEŇ), as these were issued over the whole monitored period, respectively Plus JEDEN DEŇ was issued sufficiently long in order to be included in such analysis.

Simple correlation analysis is especially based on the calculation of a correlation coefficient, which quantifies a tightness of dependence between examined quantitative parameters. The correlation coefficient (r) is a dimensionless number in the interval $-1, 1$, i.e. $|r| \leq 1$, implying that the closer to number 1, the greater dependence. The following values, provided in Table 3, were calculated for the selected publications.

Table 3. Correlation coefficient values

NAME	Hospodárske noviny	NOVÝ ČAS	Pravda	SME	Új Szó	Plus JEDEN DEŇ
R	-0.925	-0.760	-0.737	-0.386	-0.923	-0.812

Source: Processed in the STATISTICA programme on the basis of own research results

The calculations show that negative values of the correlation coefficient, i.e. indirect dependence between the examined parameters, were recorded in all cases in relation to the selected publications. The greatest absolute values, i.e. very high values of negative correlation dependence (statistically significant), are recorded for the dailies Hospodárske noviny, Új Szó and Plus JEDEN DEŇ. In other words, a decrease of daily sold circulations of these dailies is significantly dependent on the growth of their prices. Interesting data were recorded concerning the daily SME, for which medium dependence between the measured parameters was determined, i.e. a decrease of sales is not significantly affected by the price of this daily.

Time series analysis, analysis of daily sold circulations and prices of the given dailies were further conducted for Hospodárske noviny, Új Szó and PLUS JEDEN DEŇ. The main objective of time series analysis is to determine the basic tendency in their development, i.e. their trend. Mathematical function best describing the time series progression can be used in order to even it. In order to make predictions (prognoses), for instance the simple method of extrapolation of time series values from the observation period to future can be applied. It is based on the logical connection between the past and future.

In relation to the aforementioned dailies, we can state that in all cases, the time series of daily sold circulation values had a decreasing trend (e.g. for Hospodárske noviny, on the basis of function $y = 1368200 - 672.367.x$, where y = sales in pieces, x = year), and all time series of the prices of the given dailies had an increasing trend (e.g. for Hosodárske noviny $y = -73.6053 + 0.0369.x$, y = price, x = year).

Using the STATISTICA programme and on the grounds of trends determination, we made a prediction of development of sales in pieces (Table 4) and prices in EUR (Table 5) for the period 2015 - 2020.

Table 4. Prediction of development of average daily sales (in pieces) of selected dailies for 2015 – 2020

NAME	YEAR					
	2015	2016	2017	2018	2019	2020
Hospodárske Noviny	13,366	12,694	12,021	11,349	10,677	10,004
Új Szó	19,377	18,724	18,071	17,417	16,766	16,114
Plus JEDEN DEŇ	48,289	46,823	45,358	43,892	42,427	40,961

Source: *Processed in the STATISTICA programme on the basis of own research results*

Table 5. Prediction of development of average prices (in EUR) of selected dailies during 2015 – 2020

NAME	YEAR					
	2015	2016	2017	2018	2019	2020
Hospodárske noviny	0.830	0.867	0.904	0.941	0.978	1.015
Új Szó	0.543	0.562	0.582	0.602	0.621	0.641
Plus JEDEN DEŇ	0.475	0.493	0.510	0.528	0.546	0.564

Source: *Processed in the STATISTICA programme on the basis of own research results*

Tables 4 and 5 include values resulting from the extrapolation, which clearly demonstrate that if sales and prices of the selected dailies followed the current trends, decrease of sales and growth of their prices would continue. For

instance in 2020, projected average daily sales of Hospodárske noviny would be at the level of 10,004 pieces at an average price of EUR 1.015. Similar projections are also provided for the other dailies.

Discussion

The following conclusions can be derived from the analysis of market trends concerning daily press in Slovakia between 2000 and 2014:

1. The period 2000 - 2014 is characterised by gradual decrease of the number of national dailies from twelve in 2000 to nine in 2014. It is worth noticing that over the last years, the number of national dailies has approached the number of national dailies before November 1989, when seven dailies were distributed nationally in Slovakia. We believe that there is no room for launching a new daily on the newspaper market, and it is unlikely under the current conditions that a new nationally distributed printed daily is going to be launched in Slovakia in the near future. The results of development of the number of national dailies during 2000 - 2014 imply that the overall number of national dailies in Slovakia is going to decrease by a minimum of one or two newspapers during the upcoming ten years. The continual decrease of circulations of the dailies since 2007 confirms the saturation of newspaper market, determined by unfavourable deterioration of economic conditions concerning publishing activities.
2. Decrease of both the overall and average single circulations of national dailies continued in the period 2000 - 2014, slowing down, respectively stopping between 2003 and 2006 owing to the end of several nationwide-distributed dailies, circulations of which had not been available before. Over the 14 years, the overall single circulation decreased by almost 30 % (29.74 %) and average single circulation by more than 6 %. While the single circulations of national dailies have been decreasing in the 21st century, more significant decrease has been currently recorded concerning the overall single circulation. Over the last twenty years, the overall single circulations of national dailies on the media market have decreased by almost a third (27.40 %). While average daily sold circulation of all dailies amounted to 1,040,500 in 1993, it was 310,037 in 2012. This decrease is even more significant in the period 1993 - 2014 (- 74.37 %), when the average sold circulation decreased from 1,040,500 to 266,704, representing almost three quarters of daily press circulation in the years before the foundation of the Slovak Republic.
3. A clear increasing trend of average annual price of national dailies can be observed during the period 2000 - 2014. Moreover, average price of none of the dailies decreased between the years. Overall, average annual price of all national dailies over fifteen years rose from average EUR 0.257 in 2000 to EUR 0.545 in 2014, i.e. by more than 100 %. The major increase of the prices of daily press in the monitored period 2000 - 2014 was recorded for the daily Hospodárske noviny (131.93 %), while the slowest increase was recorded for the daily Šport (50.68 %).
4. A clear increasing trend of the overall advertising volumes in national dailies was recorded in the monitored period 2000 - 2014, almost tripling from EUR 27,992,970.557 in 2000 to EUR 83,184,567 in 2014. The effects of the global economic recession reflected in the Slovak newspaper market not sooner than in 2009, when the overall advertising volumes were lower than in the previous year for the first time. Mild stagnation in the overall development of advertising volumes has been observed since 2009 with slight increases in 2010 and 2013.
5. It can be stated that the analysis proved a statistically significant dependence between the development of average daily sold circulations and average prices of selected national dailies. The comparative analysis of variables further implied a certain mutual relationship between the development of the number of national dailies and overall single sold circulations. On the contrary, development of the number of national dailies has no impact

on the development of their prices. No relationship between the development of advertising volumes of national dailies and the overall single sold circulations of selected periodicals was proved.

6. Provided that the current decreasing trend of daily average sold circulations continues along with the growth of average prices of national dailies, it can be assumed, for instance, that in 2020, prices of the dailies will approach 1 Euro (Hospodárske noviny - EUR 1.015, Új Szó EUR 0.641, Plus JEDEN DEŇ - EUR 0.564).

7. In conclusion, we can state that besides unfavourable economic conditions affecting publishing activities, growth in prices or lower purchasing power of population, development of average sold circulations is also affected by the increasing popularity of digital.

Conclusion

The conducted analysis implied that the period 2000 - 2014 is characterised by gradual decrease of the number of national dailies from twelve in 2000 to nine in 2014, while the period of the last six years can be characterised as more-less stable from the perspective of the number of newspapers. Gradual decrease of both the overall and average sold single circulations of national dailies continued in the monitored period, stopping, respectively slowing down for a short period between 2003 and 2006. The overall single circulation of daily press decreased from 1,040,500 in 1993 by almost three quarters (- 74.37 %) to 266,704 in 2014.

A clear increasing trend of average annual prices of national dailies was further recorded in the monitored period, as average price of none of the dailies decreased between the years. Overall, average annual prices of all national dailies over fifteen years rose from average EUR 0.257 in 2000 to EUR 0.545 in 2014, i.e. by more than 100 %.

A clear increasing trend of the overall advertising volumes of national dailies was recorded in the monitored period (2000 - 2014), which has almost tripled over fifteen years from EUR 27,992,970.557 in 2000 to EUR 83,184,567 in 2014, however has been more-less stagnating over the last four years.

The aforementioned market trends concerning daily press prove the saturation of newspaper market in Slovakia, determined by unfavourable deterioration of economic conditions concerning publishing activities (price of paper, value added tax, compulsory charges, etc.), lower purchasing power of readers and new social habits of population occurring in relation to the development of digital technologies. Decreasing interest of people in print media will also be related to decreasing advertising volumes in the sector. The still visible effects of the global financial and economic recession also need to be taken into account.

The comparative analysis of variables further implied a statistically significant dependence between the development of average daily sold circulations and average prices of selected national dailies, and a certain mutual relationship between the overall single average sold circulations of national dailies and the number of daily periodicals. On the contrary, the research showed that development of the number of national dailies has no impact on the development of their prices. No direct relationship between the development of overall advertising volumes and overall single sold circulations of selected national dailies was proved, which, however, does not exclude the occurrence of such relationship.

No relationship between the development of advertising volumes of national dailies and their overall single sold circulations was proved.

We can assume based on the analysis of development of the number of national dailies and overall single average sold circulations over the last fifteen years that there is no sufficient room for launching a new daily on the

newspaper market, while it is unlikely under the current conditions that a new nationally distributed printed daily is going to be launched in Slovakia.

Provided that the current decreasing trend of average sold circulations continues and average price of national dailies grows, it can be assumed that by 2020, prices of the dailies will approach 1 Euro, while it is probable that at least one or two of the Slovak dailies will stop being issued in this period.

In spite of the aforementioned results of the analysis of relationships between variables, it appears that the greatest threat to the existence of daily press in Slovakia is not the almost uncontrolled launching of new periodicals, as was the case in the past, but the increasing popularity of digital media, related to the development of communications and information technologies.

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ECOSYSTEM OF ENTREPRENEURSHIP: RISKS RELATED TO LOSS OF TRUST IN STABILITY OF ECONOMIC ENVIRONMENT IN KAZAKHSTAN

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Abstract. Favorable ecosystem of entrepreneurship plays crucial role for successful development of small and medium enterprises (SMEs) and their sustainability. One of preconditions of encouraging business environment is its' stability, and trust in long-term stability. Meanwhile the global economic crisis has created a state of economic and political instability, what consequently affected trust of business entities, and therefore contributed to increase of social and economic risks. The article discusses the decline of trust in the entrepreneurship of Kazakhstan, examines the causes and consequences of loss of confidence as an important institutional resource.

Keywords: entrepreneurship ecosystem, trust, business risks, economics, Kazakhstan, SMEs, corruption, state

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JEL Classifications: O15, O5, O53; P4; P47

1. Introduction

Economic and social safety of the republic depends on a condition and development of small and medium business in the current conditions of economic instability and geopolitical turbulence in which Kazakhstan is involved. Mobility and flexibility of small and medium business allows to smooth negative consequences of crisis in which there were extracting republic industries. The domestic entrepreneurship absorbs the released labor power, provides social adaptation, and creates new market niches and points of economic growth.

The conditions of a business environment, or ecosystem of entrepreneurship, is a key factor of economic safety of the state. Business climate estimates a level of credibility as economic and social category. Therefore various

facets of entrepreneurship ecosystem is widely discussed in scientific literature (e.g. Šttilis et al 2016; Tvaronavičienė et al. 2016; Laužikas et al. 2015; Sun, Fuschi 2015; Grubicka, Matuska 2015; Tumulavičius et al. 2017; Gavurova et al. 2017; Bilan et al. 2017; Rajnoha, Lesníková, 2016).

Kazakhstan on the commonly accepted practice carries out monitoring of the entrepreneurial environment for determination of priorities of policy in the field of development and support of subjects of small and medium entrepreneurship. Authors of the article suggest to consider business environment by putting especial emphasis on risks of instability and decrease in social and economic safety of the country.

The world community has faced loss of understanding of a global trajectory of development of economy. The processes proceeding in various markets and in regions are characterized by such level of instability and turbulence that it is possible to speak about loss of basic model of the economic relations. Creation of a new order and new model is prevented by not deficit of theoretical designs, but by loss of one of the main criteria of mutual understanding and trust.

The phenomenon of trust is a basis practically of all economic and social processes, and therefore various implications of this factors is widely discussed both in classic (e.g. Williamson 1993; Barney, Hansen 1994; Gulati 1995; Fukuyama 2004) and contemporary literature (Sultan et al. 2002; Guo et al. 2017; Tang et al. 2017; Park et al. 2017; Yonk et al. 2017; McKnight et al. 2017; Rego et al. 2017; Zaefarian et al. 2017; Kim et al. 2017; Fiedler et al. 2017; Meqdadi et al. 2017; Valentim et al. 2017).

In fact the main problem - whether world (any) economy will be able to win at a scale having reduced at the same time transactional expenses. Certain mechanisms are urged to reduce these expenses, but availability of a necessary and sufficient level of credibility is always the cornerstone of their functioning. The trust is also a factor of fight against asymmetry of information between agents. Prevalence of “mistrust in society is equivalent to entering of the additional tax on all forms of economic activities of which societies with a high income level are relieved” (Fukuyama 2004, p.55).

2. Methodology

Authors determine that trust as fundamental economic category without which the market relations is impossible. At the same time the trust cannot be created artificially, it is result of influence of social and economic conditions. In modern society "the trust radius" is narrowed - a circle of people and the social groups entering into single system of trusting relationships. F.Fukuyama notes that any society possesses a certain inventory of a social capital, considerable distinctions between them are caused by the radius of trust (Fukuyama 2004). A task of article authors' is to asses risks of the Kazakhstan economy caused by reducing radius of trust.

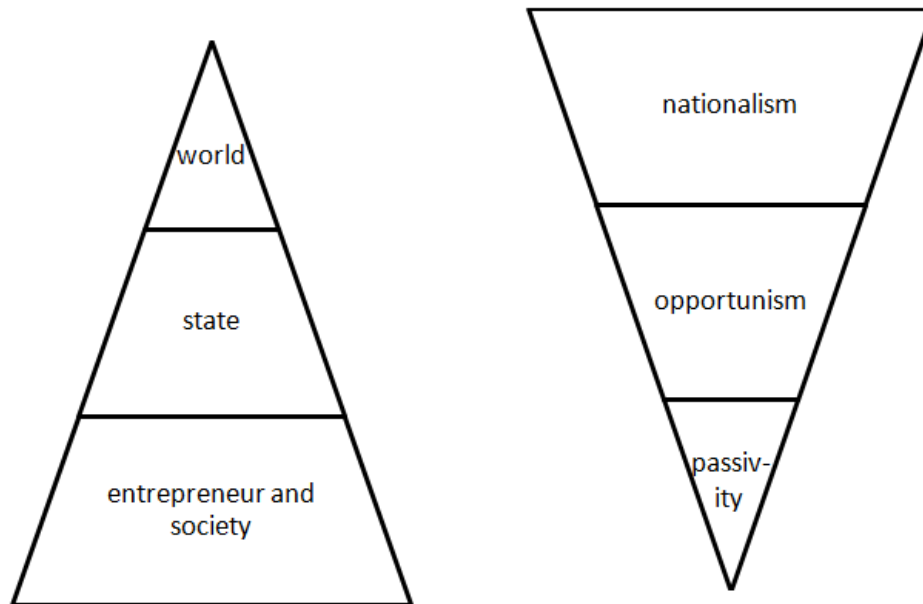


Figure 1. Levels of trust and risks

Authors consider trust as the institutional economic category determining behavior of the economic actors in system of economic activity of various levels (Fig. 1). Certain content of concept "Trust" included in a wide value system and determining behavior of the subject at the hierarchical level corresponds to each level of globalization of economic systems. Depending on the level of hierarchy increases importance of trust as basic category and increases danger of level of loss. Loss of trust of the top level can lead to strengthening of trust of basic levels, however, can be followed also by crash of all valuable and confidential system of relations in entrepreneurship.

Basic level of values for the entrepreneur, as well as any person, am its own "I" and the society surrounding it - the family, relatives, friends. The level of trust shall be maximum here. Even the slightest loss of trust to itself leads to destruction of the person as persons, reduces his social activity. For entrepreneurship as special type of activity, the availability of a personal initiative based on confidence in own opportunities - is the dominating factor. Trust to the entrepreneur - the first and most important investment into business, especially in small. A family support, an inner circle and compatriots - important levels of ensuring trust which importance weakens in process of removal from the entrepreneur.

Loss of trust of the first basic level creates threat of apathy, failure act of the specific entrepreneur. In case of mass manifestation of loss of trust at a basic level there is a danger of reducing entrepreneurship as bases of forming of market society. The level of trust to the state and its institutes creates loyalty of economic behavior of entrepreneurs. In case of decrease in trust to the state business begins to pass from legal to shadow forms of economy, to show economic and political opportunism and to support criminal schemes of economic behavior. However business can continue at the expense of a support on own resources and the immediate environment. The trust to the outside world creates readiness to take part in processes of the international level. The entrepreneurial communities trusting to foreign countries and associations are open to innovations, do business, invest the capitals out of the country and the region. Loss of trust to an external environment, recognition of his

hostility leads to isolation of country business, origin of nationalism. Mistrust of domestic business to processes of world integration creates self-isolation threats. During a certain period it can lead to growth of local business, but in the strategic period the isolated development reduces competitiveness of regions and countries. The Kazakhstan economy is now in the difficult economic period which duration generates new threats and risks. According to authors, noted negative tendencies of the Kazakhstan entrepreneurship have system character and the greatest problem is the loss of trust creating destructive business models. In the provided article is considered the interrelation of problems of development of the Kazakhstan business with loss of entrepreneurial trust and generation of threats of economic safety of the country.

3. Analysis

Empiric basis of the article is made of researches conducted by the National Chamber of Entrepreneurs that were published in the National report on entrepreneurship activity condition, Doing Business in Kazakhstan 2017 (National report on entrepreneurship activity condition, Doing Business in Kazakhstan 2017). The bureaucracy, corruption and big terms of consideration of documents constitute three main barriers to effective interaction of the state and business according to National Chamber of Entrepreneurs.

The first part of article is devoted to studying of major factors of interrelation of loss of trust and emergence of threats of the Kazakhstan entrepreneurship.

The bureaucracy and corruption as the most dangerous and system threats will be considered in separate, *second part* of the publication.

Bureaucracy, corruption and long term of documents processing are three main barriers for effective state-business interaction. The article is dedicated to studying main factors of correlation between losses of trust and forming of threats to Kazakhstani entrepreneurship. Ecosystem of entrepreneurship of business in Kazakhstan is in a difficult state. Kazakhstan made it up to the 35th place in the rating Doing Business-2017 that is annually issued by one of the departments of the World Bank from the 41st place in 2015. By global comparison, Doing Business remains procedurally complex across Kazakhstan, in all areas measured except registering property (Fig. 2).

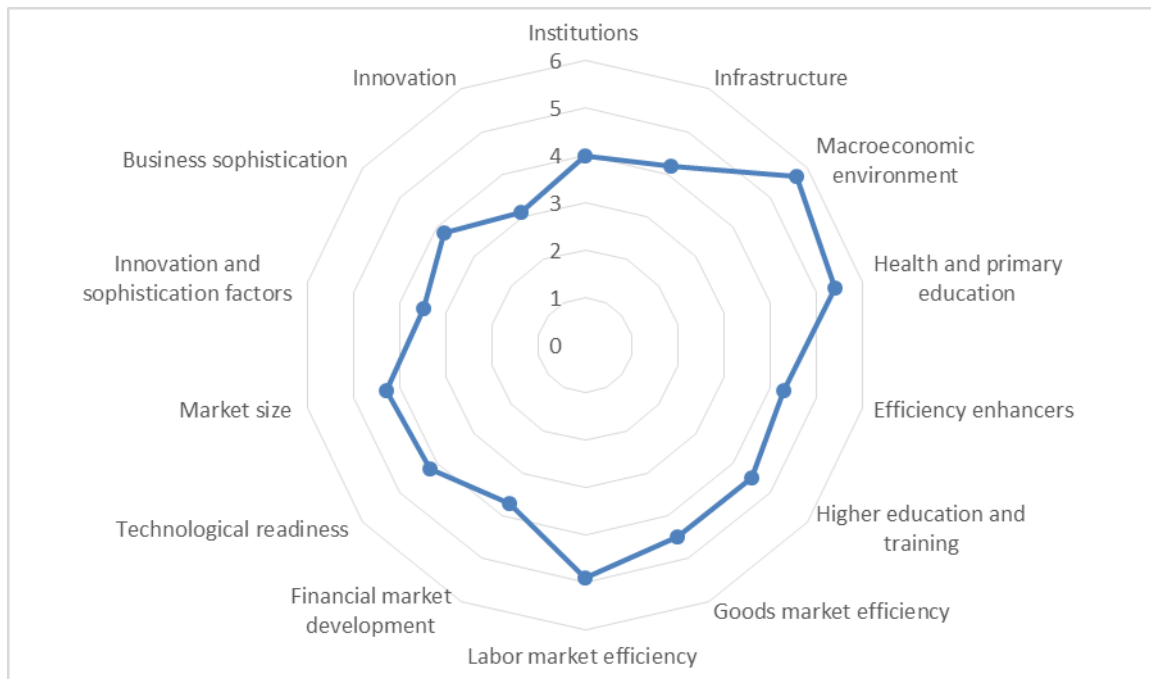


Figure 2. Global Competitiveness Index.
Source: Doing Business in Kazakhstan (2017)

Doing Business in Kazakhstan 2017 is the first report of the subnational Doing Business series in Kazakhstan. It measures business regulations and their enforcement in four Doing Business areas. It goes beyond Almaty city to benchmark seven additional Kazakhstani locations—Aktobe, Astana, East Kazakhstan (Oskemen), Karagandy, Kostanay, Pavlodar and South Kazakhstan (Shymkent). This report's regional data is current as of December 2016 and includes comparisons with Almaty city and other economies based on data from Doing Business 2017: Equal Opportunity for All, the 14th in a series of annual reports published by the World Bank Group. The indicators in Doing Business in Kazakhstan 2017 are also comparable with more than 400 locations from 65 economies benchmarked in other subnational Doing Business studies (National report on entrepreneurship activity condition).

By Doing Business in Kazakhstan 2017 the most problematic factors for doing business are: corruption, access to financing, inefficient government bureaucracy, tax regulations, inadequate supply of infrastructure, inflation inadequately educated workforce, insufficient capacity to innovate, tax rates foreign currency regulations crime and theft, restrictive labor regulations, poor work ethic in national labor force, government instability/coups. The National report on entrepreneurship activity condition underlines and rates five key factors of entrepreneurship development in 4 rate scale. These factors are: administrative regulation, real estate and infrastructure, human resources, financial resources and state support (Fig. 3).

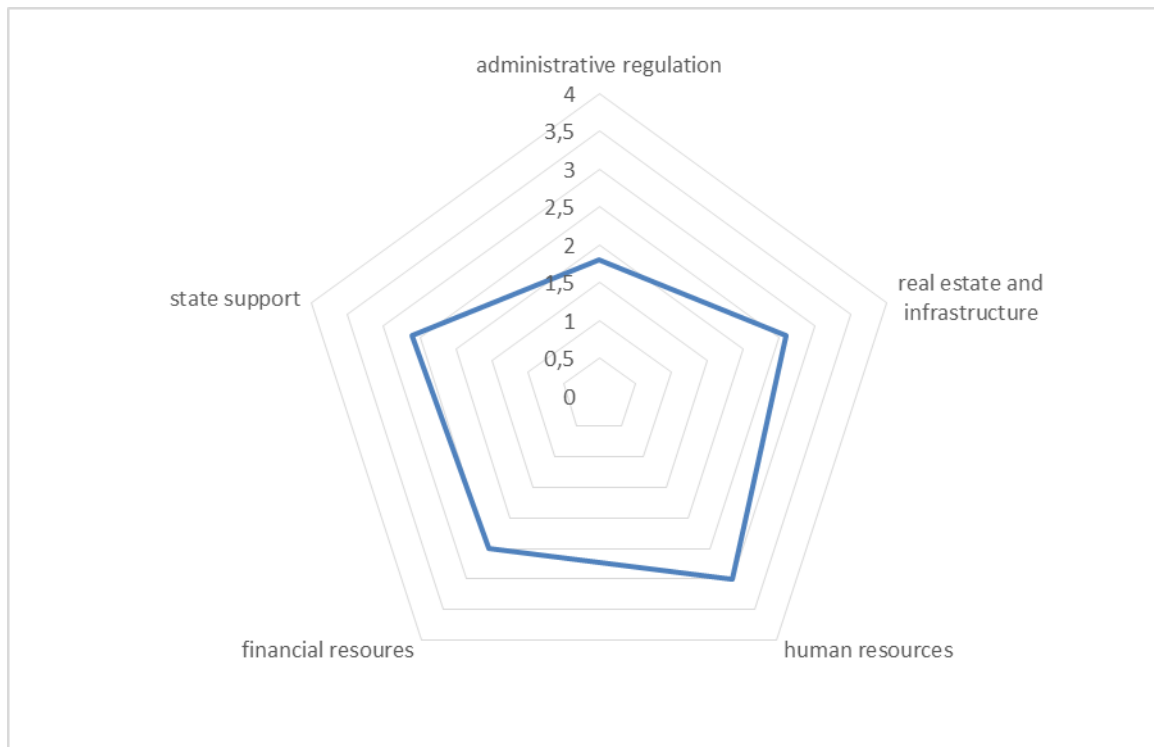


Figure 3. Business conditions in Kazakhstan

Source: Done by the author, based on the materials of the National report (2017)

The survey of 4600 entrepreneurs showed that the biggest problems and risks in entrepreneurship are provoked by administrative regulation. Annual research Business climate in 2016 makes the evaluation of business situation in Kazakhstan based on the survey of 4107 respondents, 47% of which were small business, 45% were middle business and 8% were agriculture (Business Climate, 2016). The biggest problems for the respondents were long terms of documents processing (15%) as well uncompetent civil servants (15%), in common bureaucratic consideration of the documents makes 30% of the score.

State support programs do not perform planned effect. State program “Business Road Map-2020” provides involvement of only 12% of informed audience (Business Climate, 2016). Citizens of the country evaluate the ability to do their own business as low. Only 15% of population are ready to consider the possibility to become entrepreneurs that first of all is due to the high barriers to business activity in the country. As a result the share of the entrepreneurs “out of necessity” who have to do business as they do not have any other income is 26,4%. (National report on entrepreneurship activity condition, 2017).

Authors have revealed ten most burning issues of development of the Kazakhstan entrepreneurship on the basis of the analysis of the current situation:

- lack of interest in business activity;
- a dissatisfaction with business conditions in the country;
- dependence on informal communications;
- not innovation of entrepreneurship;
- low professional competence of entrepreneurs;
- conservatism of business;

- low competitiveness of domestic entrepreneurship;
- fear of financial instability;
- corruption;
- shadow economy.

Interrelation of loss of trust and emergence of threats of the Kazakhstan entrepreneurship is provided in Figure 4.

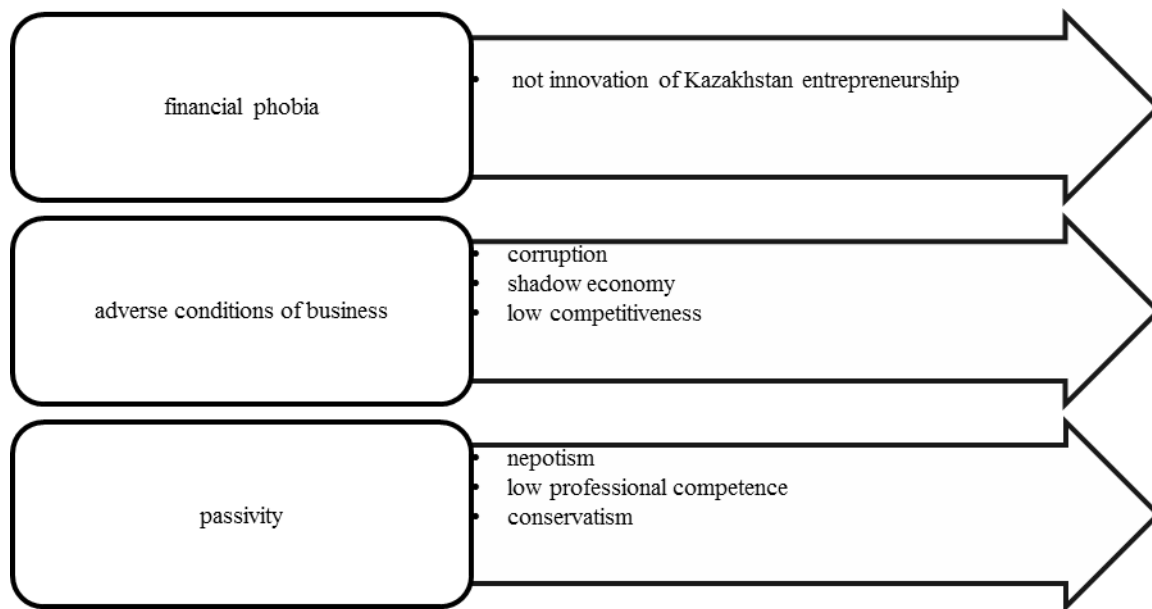


Figure 4. Interrelation of loss of trust and emergence of threats of the Kazakhstan entrepreneurship

1. The brightest loss of trust as economic category is shown in loss of trust of entrepreneurs to a domestic financial system. According to National bank of Kazakhstan deposits of physical persons and legal entities in foreign currency constituted 70% from the total amount of deposits. Mistrust to a domestic financial system in Kazakhstan develops into a steady phobia and generates fear of innovations. Instability and uncontrollability of a rate of tenge makes impossible planning of investments in national currency and creates the steady pattern of entrepreneurial behavior avoiding innovations as uncontrollable costs. Out of 4107 respondents of the survey Business Climate 45% of the entrepreneurs have difficulties with getting bank loans, at the same time 15% of the entrepreneurs say about great difficulties in obtaining bank loan (National Bank of Kazakhstan, 2016). Innovations in business management and production processes are implemented by only one third of entrepreneurs. It should be noted that domestic entrepreneurs do not differ in innovation not only at the practical level, but even at the level of intentions and a plan. Innovative technologies choose no more than 2 entrepreneurs from 10. These results confirm low mental competitiveness of the Kazakhstan entrepreneurs. It is noted not only low actual innovation, but also low level of understanding of a subject of an innovation that enters it and as to develop it. At the same time in the conditions of global fight for the market and the client the competition cannot sustain without implementation of innovations in the production technology and business. Low innovation of the Kazakhstan business creates risks of loss of the international competitiveness and creates losses of the international economic safety.

2. Adverse conditions for business undermine confidence of entrepreneurs to the commitment to the market relations declared by the state and democracy. Only one third of the interrogated respondents considers that in Kazakhstan are created favorable conditions to start the business. This indicator reflects a low level of trust to the entrepreneurial environment as parts of country community. The youth of Kazakhstan has no desire to become entrepreneurs, the main contingent of potential entrepreneurs constitutes the population about 40 years. By estimates of authors, the desire to be engaged in business is stated by about 15% of youth. Loss of trust to the state support of business gives rise to three types of risk: low competitiveness of domestic business, leaving of entrepreneurship in a shadow economy and corruption. Corruption and a shadow economy are the most dangerous systemic risks for economy of Kazakhstan. Their manifestation, development and consequences will be researched separately in the second part of our article. We will consider risk of low competitiveness of the Kazakhstan entrepreneurship as generation of mistrust to a possibility of business development. The policy of support of business realized by the state stimulates only about 2% of respondents. Entrepreneurship lack of work in the labor market is a basic reason of occupation. The entrepreneurship realized not as the personal initiative and the voluntary choice, and as uncontested employment bears in themselves stability threat. Such entities initially are characterized by low competitiveness and profitability of business, and also high level of volatility to external risks and instability. The Kazakhstan entrepreneurship develops in regions where there is rather strong enterprising competition, big density of population that allows to expect to entrepreneurs the market in the region. This phenomenon confutes a hypothesis according to which, potential entrepreneurs appear in regions with the low competition, according to great opportunities for entry into the market. This tendency increases distinction between the backward and developed regions of the country and creates threat of internal instability.

Kazakhstan as the state living on a raw rent and disposing of the main part of the income from exploitation of natural resources is the chief employer and does not stimulate business activity. Annual average number occupied in Kazakhstan has constituted 8,5 million people, from them:

- 39 the % occupied at the entities of a private sector;
- 28% employees of the entities with state participation;
- 4% employees of overseas enterprises;
- 28% self-employed workers.

The state spheres – education, health care and a state administration - have provided the main contribution to an employment surplus since 2010. The private sector practically does not generate creation of new fixed workplaces in recent years. The work market situation in 2016 will depend in many respects on actions of the state and quasi-public sectors which, in addition to direct employment, provide a considerable share of demand for products made in the country.

3. Entrepreneurial passivity as reaction to domination of the state in economy, is the most important institutional sign of loss of trust of citizens to the declaration of economic equality and independence of each subject. Characteristic of business in Kazakhstan is its related focus. Without trusting the state as to the partner, the entrepreneur limits trust to a circle of the next society. For the organization and development of own business Kazakhstan citizens are guided by resources of the family and relatives. The nepotism as basic social model constitutes threat of development not only business, but also all management system and is the cornerstone of the Kazakhstan model of corruption. The Kazakhstan owners of business in the choice of entrepreneurship as main activity are guided first of all by desire of finding of independence (41,4%), including financial (16%). At the same time availability of necessary knowledge and skills in implementable activities mark out about 16% of respondents. Incompetence is one of the main risks of the Kazakhstan entrepreneurship. It is directly connected with risk of a nepotism as business models and as a result generates the most dangerous forms of corruption about

what it will be in detail researched in the second part of article. Creation of the strong, competent organizations in the future is under the threat because of low competence entering small business. Only 1% of potential entrepreneurs have necessary skills of competitiveness: knowledge of the case, absence of fear, ability to plan. Considering that the Kazakhstan entrepreneurs concentrate business in the developed, competitive markets, they do not plan creation of offers of new goods or services, thereby creations of a new niche for the activities. Commitment to implementation of traditional types of activity which will bring in certain stable incomes; amplifies high average age of the beginning entrepreneurs, not persons interested to create new goods and services. Conservatism creates threat of stagnation of a business sector and decrease economic safety of the country.

4. Conclusions

The trust becomes a contemporary problem. The modern situation is characterized by high degree of uncertainty. Preserving economic activity is a question of the attitude of entrepreneurs towards the increasing risks. The market system does not work without expectation of accomplishment of liabilities and trust to reliability of partners. All participants of the market relations in the conditions of dynamically changing external environment and high instability of the financial markets shall make economic decisions quickly. Level of instability of the world market and, the market of Kazakhstan as its parts, creates a situation in which the most part of information does not give in to sure forecasting. In these conditions decision making process is based on trust. The market as system of economic and social exchanges requires basic trust to the system of institutes. Without it the exchange will not be general. In Kazakhstan is broken generality of trust and systems of business entrepreneurial activity. Loss of trust, deficit of trust does not give the chance of long-term planning, promotes increase of institutional barriers, inevitably increases uncertainty and instability of the institutional environment, all this does the existing institutes are inefficient. And without effective institutes those purposes which are set before the Kazakhstan economy — upgrade, innovations, sustainable economic development are impossible.

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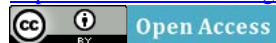
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DIVERSITY OF EMPLOYEE INCENTIVES FROM THE PERSPECTIVE OF BANKS EMPLOYEES IN POLAND - EMPIRICAL APPROACH*

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Abstract. This paper examines the diversity of employee incentives from the perspective of banks employees in Poland. According to the theory, employee motivation is a very significant factor which leads to the success of the entire organization and it is closely related to the motivation system in a workplace. It is important to underline the fact that motivation system is not always well-chosen which means that it is also not efficient in each organization. What is more, it is possible to observe differentiation in used motivation incentives in banks among different groups of employees. The purpose of this study was to investigate this segmentation according to the type of bank, gender and job position. Firstly, grounded in the literature, this article explains the importance of employee motivation tools. The research among bank employees let to verify propounded in this article theses. The results revealed the diversity in using employee incentives in banks in Poland. Furthermore, showed that commercial banks use more diverse employee incentives than cooperative ones, female employees in banks are motivated less diversely than males and managerial staff are motivated more diversely than employees in non-managerial positions.

Keywords: HRM, motivation, incentives, employee, banks, Poland

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JEL Classifications: J2, M5, M54

1. Introduction

According to M.W. Kopertyńska, '...those who do not understand what motivates a good employee will sooner or later lose him. It is, therefore, worth learning what factors influence subordinates' motivation' (Kopertyńska 2009, p. 64). There is increasing awareness among employers and managers of the close relationship between their

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employees' motivation and the results of the entire organization. It also affects the atmosphere in the workplace and relationships between employees. There are a lot of incentive tools available and many diverse people's needs.

In this paper are analyzed employee incentives in banks in Poland. From many sectors which have a big impact on the Polish economy, the banking sector has been chosen to be analyzed as the one which has been causing its dynamic growth. As one of the characteristics of this sector can be mentioned its complexity. Banks employ a variety of staff. Banks employees occupy many different positions associated with diverse tasks. The banking sector in the world is also a subject to a number of dynamic changes. Many solutions used in foreign banks is implemented in Poland. Also, those related to human resource management. As the motivation has been considered as an important issue not for a very long time, there are not so many studies on incentives used in banks.

Employee incentives are being assessed by many researchers (Abernethy, Dekker and Schulz 2015, p. 633; Barska and Łychmus 2007, pp. 39-40; Davydenko 2004, pp. 88-90; Drake, Wong and Salter 2007, p. 71; Andrianova and Davydenko 2011, pp. 96-98; Erbas and Erbas 2004, p. 91; Andrianova and Romashkina 2011, pp. 104-105; Fulghieri and Sevilir 2011, p. 2207; Park, Appelbaum and Kruse 2010, p. 227; Rehu, Lusk and Wolff 2005, p. 81; Andrianova, Davydenko and Romashkina 2011; Wang and Lim 2008, p. 701; Wang and Barney 2006, p. 466; Rosha, Lace 2015; Kaźmierczyk, Aptacy, 2016; Korauš et al. 2017; Ngo, Nguyen, 2016; Burianová, Paulík, 2014). Motivation is also of interest to practice (Cal-Chrobak and Kaźmierczyk 2017, p. 299; Chernomorchenko 2016, pp. 54-56; Dirzytė et al. 2016; Starineca, Voronchuk 2015). Nevertheless, incentives are not simply stable factors, influencing many processes in the company. There is a lack of research devoted to incentives taking into account the changing economic and social conditions (Voronov, Lavrinenko and Stashane 2014, pp. 29-30; Kaźmierczyk 2015, p. 87; Romashkina and Andrianova, 2007, p. 50; Wyrwa 2015, p. 127). There is also a lack of in-depth research into motivation factors employed in banks in Poland.

The main aim of this paper is to analyse the diversity of various incentives in banks in Poland among different groups of banks and employees. This paper propounds the following three theses:

- commercial banks use more diverse employee incentives than cooperative ones,
- female employees in banks are motivated less diversely than males,
- managerial staff in banks are motivated more diversely than employees in non-managerial positions.

We used specialist literature in English, Polish and Russian on human resource management, economics, industrial and organizational psychology, and banking (EBSCO, Emerald, BazEkon, ProQuest, The ACM Digital Library). A survey of nearly 2,000 Polish bank employees was also carried out. As the beginning of this article, the meaning of work motivation incentives has been mentioned. It also presents the adopted theses and describes the research method. The further part contains the characterization of the survey sample and the research results.

2. Employee incentives and theses

It arouses in the subordinates the feeling of belonging to an organization that takes interest in them and cares for them (Armstrong 1994, p. 66). In practise, a variety of incentives is used to motivate workers. Their range has been expanding over the last 25 years. The increasing diversity of motivational tools resulted not only from the know-how acquired f.ex. from the West but also from the new technologies that facilitated motivation. There are various classifications of employee incentives in the specialist literature. The most popular one postulates a division into wage and non-wage motivators.

This paper propounds the following three theses:

- commercial banks use more diverse employee incentives than cooperative ones,
- female employees in banks are motivated less diversely than males,
- managerial staff in banks are motivated more diversely than employees in non-managerial positions.

The first thesis is substantiated by the fact that commercial banks possess know-how, which means that they have more knowledge of HR management than cooperative banks (Kaźmierczyk 2011, p. 60). Most commercial banks in Poland have been taken over by foreign capital investors, who provided not only capital but also know-how. In contrast, no cooperative bank in Poland has been taken over by foreign capital. Thanks to the acquired know-how commercial banks are able to manage their workers better and exert more effective influence on their motivation. On the other hand, some studies indicate that the acquisition by foreign capital caused a decline in creativity acquired businesses (Soniewicki 2015, p. 79). Economies of scale are also of importance in this context as some incentives are easier to apply in large organizations such as most commercial banks in Poland. There is a probability that these banks use more employee incentives motivators than cooperative banks. They have the knowledge to do so.

The second thesis which argues that female employees are motivated less diversely than males is based on the main assumptions of the dual labour market theory. In specialist literature, females were classified as one of the groups belonging to the secondary sector[†] (Kryńska 1997, p. 29; Doeringer and Piore 1970; Reich, Gordon and Edwards 1973; Wachter 1974]. It can be presumed that secondary (worse) sector employees take up worse positions, their employers do not care about their motivation level and therefore do not use many employee incentives.

The third thesis was propounded because the manager plays an important role in strengthening employees' engagement. Managers are responsible for their employees' enthusiasm for work and efficiency. It is their task to understand the factors motivating employees and use them to maximize the efficiency of their subordinates (Pierścieniak, Krenti and Jakięła 2013, p. 45; Kaźmierczyk and Świt 2011, pp. 299-302). For this reason, the manager himself must be a highly motivated person. It ensures his effectiveness in carrying out managerial functions. If managers are adequately motivated, they can influence their non-managerial employees' engagement more effectively. This gives grounds for presuming that managers are motivated more diversely than their subordinates because, from the point of view of an organization, managers' motivation is more important than the motivation of non-managerial employees. A manager with a low level of motivation is not an effective employee and as a result, the whole subordinate team cannot be adequately motivated. Moreover, it is the managers who make decisions concerning the allocation of the limited pool of money that the bank has at its disposal. It is up to them to decide what proportion of money will be allocated for possible bonuses for employees. It may be assumed that they will tend to allocate funds for their own benefit, thus more incentives will be channelled to the managerial staff.

[†] The secondary sector is characterized by lower wages, poorer access to trainings, higher risk of layoffs, less chance of promotion.

3. Method[‡]

The data from the survey, which was conducted from January 2016 to April 2016, were used to test the research thesis. The “snowball” technique was used in order to collect the data[§]. The survey participants were invited by existing subjects. Personal contacts and individual visits to banks were used to collect the data. More than 20.000 queries were sent with a request to fill in the questionnaire via e-mail, social networking websites (such as Facebook, GoldenLine and LinkedIn) and thematic forums. Both an electronic version (<https://docs.google.com/forms/d/1fq9ZKdr8zXA7zjp8wFowBqJ6ciT4nSmjer598pGWbG0/viewform>) and hard copy one of the questionnaire were used in the survey.

The main survey was preceded by a two-staged pilot survey. First, the survey was conducted on a small group of target participants (180 students). The aim was to reveal any inconsistencies and to examine whether the questions were understandable. Thanks to the pilot study, the questionnaire was modified and improved. In the second stage, the target group consisted of 100 employees from the banking sector.

The questionnaires have been completed by 1.949 respondents. 29 questionnaires were rejected due to low credibility and reliability (for example, some respondents selected “0” in response to all of the closed-ended questions). As a result, the final research sample consists of 1.920 respondents (152 electronic version and 1768 hard copy). Table 1 provides more details regarding the sample structure.

Table 1. Sample structure

Criterion		Number of individuals	Percentage
Gender	Female	1312	68.33%
	Male	473	24.64%
	No answer	135	7.03%
Education	University (major in economics)	883	45.99%
	University (other)	515	26.82%
	High school (major in economics)	270	14.06%
	High school (other)	189	9.84%
	Vocational	2	0.1%
	Elementary	2	0.1%
	No answer	59	3.1%
Occupied position	Senior managerial position	43	2.24%
	Middle-level managerial position	129	6.72%
	Lower-level managerial position	153	7.97%
	Non-managerial position	1485	77.34%
	No answer	110	5.73%
Organizational unit	Headquarters	409	21.3%
	Regional branch	416	21.66%
	Operational branch	1020	53.13%
	No answer	75	3.91%
Type of bank	Commercial bank	1342	69.90%
	Cooperative bank	481	25.05%

[‡] The research results presented are part of a broader study (about: recruitment, forms of employment, motivation, professional education, e-learning, loyalty, stress, work efficiency, MBO, perks, mobbing, professional career, derecruitment, dismissals and outplacement), which was based on the same research method. Thus, the description of the research method is applicable also to the results of research on other aspects of HRM and other papers by Jerzy Kaźmierczyk, e.g. (Aptacy and Kaźmierczyk 2016, pp. 146-158).

[§] This method does not generate high research cost. Another advantage is that it allows to reach a wider population and is relatively simple.

	No answer	97	5.05%
The equity	National	919	47.86%
	Foreign	863	44.95%
	No answer	138	7.19%
Workplace	Front office	1118	58.23%
	Back office	460	23.96%
	No answer	342	17.81%
Disability	Lack	1820	94.79%
	Slight level	12	0.63%
	Moderate level	8	0.42%
	Significant level	2	0.1%
	No answer	78	4.06%

Source: own computations based on the survey data

The composition of the research sample according to gender, type of education and type of bank corresponds to the structure of employment in the banking sector in Poland (Każmierczyk 2011, pp. 115-124). The mean age of respondents was 36.612 years. The mean work experience in banking was 12.065 years, ranging from 1 to 43 years. The mean total work experience of respondents was 14.976 years (Table 2).

Table 2. Summary statistics on age and work experience

Criterion	Minimum	Maximum	Mean	Median	Standard deviation
Age	19	64	36.612	35	9.7496
Work experience in banking	1	43	12.065	10.000	9.5799
Work experience with current employer	1	43	9.835	7.000	9.3882
Total work experience	1	45	14.976	12.000	10.2416

Source: own computations based on the survey data

The locality size criterion demonstrates that the largest group of respondents came from the localities inhabited by 50 thousand people, the fewest surveyed people coming from localities with 200-500 thousand inhabitants (Table 3).

Table 3. Summary statistics on place of residence

Size of locality	to 50 thous people	658	34.27%
	50-100 thous people	251	13.07%
	100-200 thous people	245	12.76%
	200-500 thous people	124	6.46%
	More than 500 thous people	541	28.18%
	No answer	101	5.26%

Source: own computations based on the survey data

The questionnaire consists of an introduction followed by 23 closed-ended questions and several demographic and work-related questions. The main part of the questionnaire contains questions which refer to seven important human resource management areas (recruitment, forms of employment, motivation, professional education, e-learning, loyalty, stress, work efficiency, MBO, perks, mobbing, professional career, derecruitment, dismissals and outplacement). Some of the questions were used to test the research thesis.

4. Motivating bank employees diversity in light of the empirical research

The respondents were given a list of motivating factors and asked to mark those that are used at the position they hold. The list of incentives was based on the following sources: (Gick and Tarczyńska 1999, pp. 270-279; Przepiórka 2012; Kopertyńska 2009, pp. 209-215). The incentives are: bonuses, private healthcare, praise, co-financing of sports and recreation activities, pay rises, holiday subsidy, duty allowance, additional trainings, integration trips, promotions, additional insurance, reprimands, co-financing of education, participation in goal and objective planning, housing assistance, food coupons, co-financing of kindergarten or nursery, subsidized meals and others.

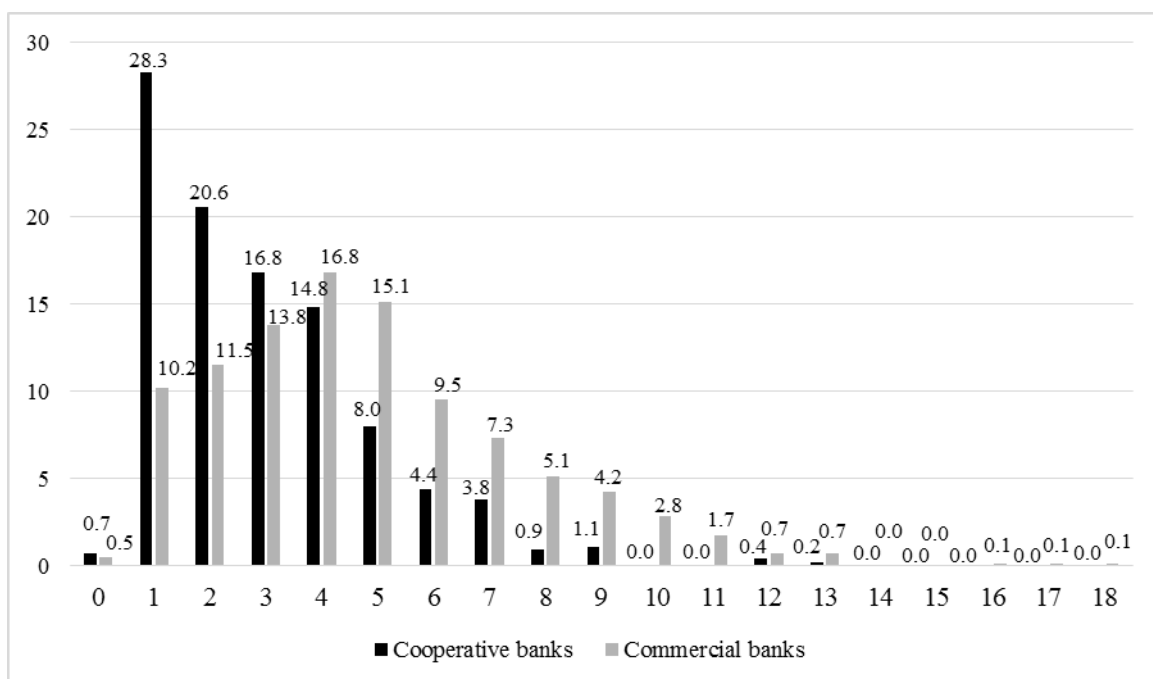


Chart 1. The number of incentives depending on the type of bank (in %)

Note: The results were obtained at 0.000 significance level, Cramer V = 0.314, Chi-square = 174.666, df = 16.

Source: own computations based on the survey data

Commercial banks use more diverse employee incentives than cooperative banks (Chart 1), which confirms the first of the propounded theses. The research has shown that the majority of respondents working in cooperative banks are motivated with one incentive. Employees motivated with several incentives constitute a relatively large group, however those motivated with eight or more incentives are rare. As regards the staff of commercial banks, the research results have shown a slightly different tendency: with the increasing diversity of incentives, the number of employees increases and then decreases. Among employees motivated with a number of incentives (more than three), the predominance of commercial bank employees was observed in all of the studied groups. It means that there is a comparatively small group of employees who receive only one or two incentives, in comparison to cooperative banks.

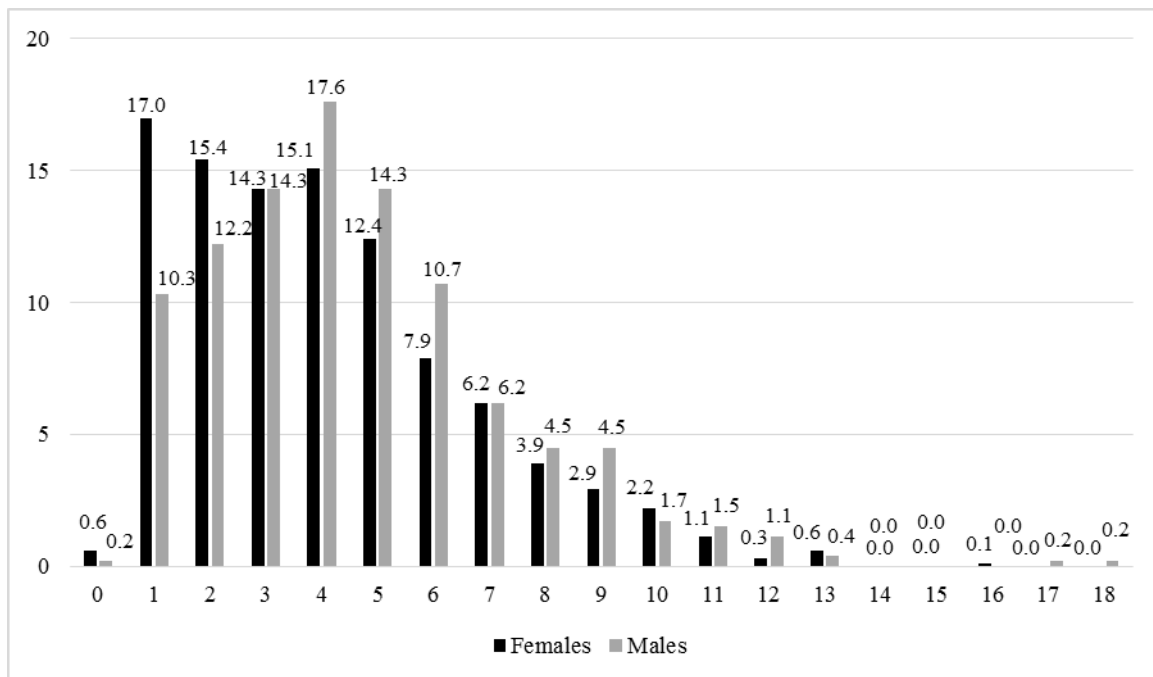


Chart 2. The number of incentives depending on gender (in %)

Note: The results were obtained at 0.008 significance level, Cramer V = 0.137, Chi-square = 32.714, df = 16.

Source: own computations based on the survey data

The analysis of the research results with reference to the relationship between the number of incentives and the employees' gender of workers, has shown that (Chart 2):

- the most numerous group among female respondents were those receiving only one incentive (17% of the surveyed females),
- the most numerous group among male respondents were those receiving four incentives (17.6 % of the surveyed males),
- the more incentives are used in a workplace, the smaller is the percentage of females receiving them,
- with the increasing number of incentives used in a workplace, the number of male employees increases up to a point and then decreases,
- among employees motivated with a number of incentives (more than three), the predominance of male staff was observed in almost all of the studied groups.

These findings confirm the second of the posed theses. Female employees in banks are motivated less diversely than males.

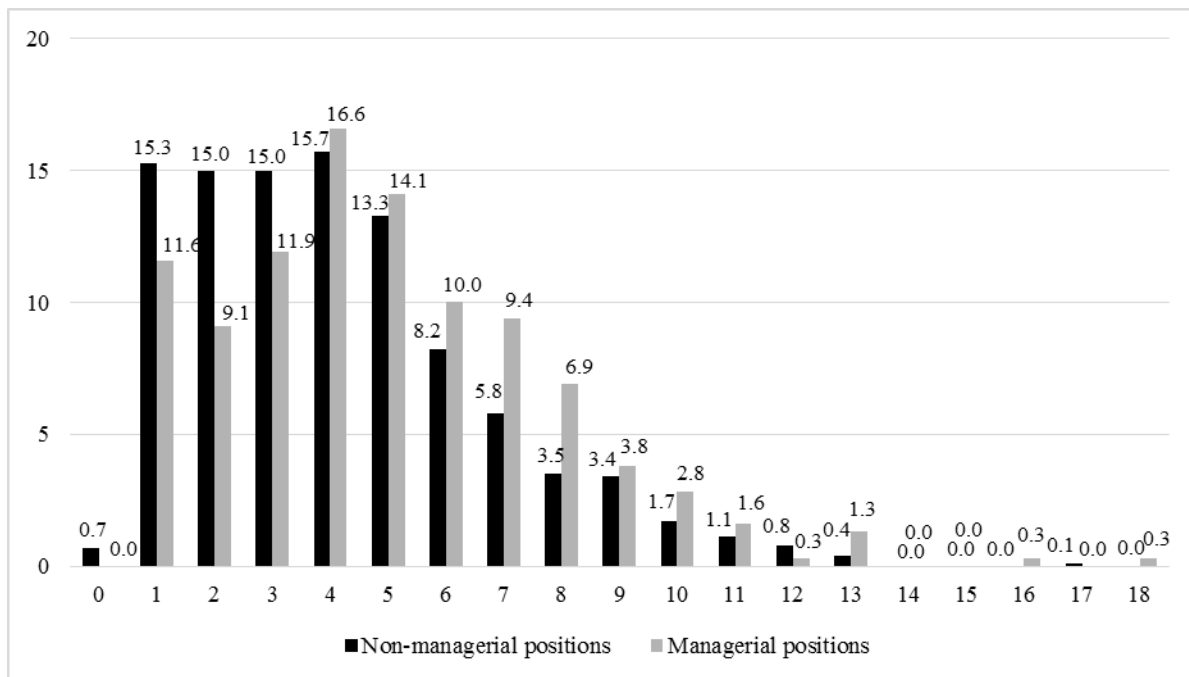


Chart 3. The number of incentives depending on the occupied position (in %)

Note: The results were obtained at 0,000 significance level, Cramer V = 0.154, Chi-square = 41.969, df = 16.

Source: own computations based on the survey data

The respondents surveyed in this research were divided into two groups: those in managerial and those in non-managerial positions. On this basis, the number of incentives used in both groups was examined. The research has shown that in both groups the majority of employees are motivated with four incentives (Chart 3). It also follows from the chart that in the range from 0 to 3 incentives the non-managerial staff are the more numerous group. This testifies to the occurrence of greater disparities between the two studied groups in the range including a larger number of incentives. It has been found that with the rising number of incentives, the number of recipient employees decreases; however, in the range from 4 to 18 incentives, the managerial staff are the more numerous group. In conclusion, the above chart verifies the third thesis. Managerial staff are motivated more diversely than employees in non-managerial positions.

Conclusions

The empirical research has allowed for the verification of the propounded theses. It has been proved that commercial banks use more diverse employee incentives than cooperative banks. According to the specialist literature, the main reason for this phenomenon lies the fact that commercial banks have the know-how related to conducting banking activities. It includes, among others, the knowledge of personnel management and the understanding of its importance for the efficiency of the entire enterprise, which leads to greater care for the staff and therefore to the use of a larger number of employee incentives.

On the basis of the research results, it has been found that female employees in banks are motivated less diversely than males. The reason for this may be that male employees assume managerial positions more

frequently than females. The examination of the next thesis has shown that employees holding managerial positions are motivated more diversely than those in non-managerial positions.

As regards the thesis concerning the correlation between the occupied position and the diversity of used employee incentives, it has been indicated that this may be due to the managers' greater importance in the organization's hierarchy. It has also been noted that managers play an important role in strengthening the motivation of other employees. The relationship between a manager's level of motivation and the performance of the entire enterprise has been stressed. It has been indicated that another reason for the fact that managerial staff are motivated more diversely may be their management powers and their possible inclination to shape the incentive system for their own benefit.

An analysis presented in this article and research results showed that there is still a big area of banks employees' motivation that should be studied in depth. Certainly the perspective of employers' requires more attention due to the possibility of their different opinion compared with the opinion of employees. The issues that need to be more examined are the causes of the current situation.

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CURRENT DEVELOPMENT OF BUSINESS ENVIRONMENT IN SLOVAKIA AND CZECH REPUBLIC*

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Abstract. At the time of globalisation business environment of a country is significantly affect success of domestic businesses, respectively their products, on foreign markets. Also, conditions for business of a state have an influence on its attractiveness for potential foreign investments. The paper provides results of the analysis and subsequent comparison of business environments of Slovakia and Czech Republic and other selected countries over 2014 - 2015 on the basis of data provided by organisations dealing with business environment surveys such as the World Bank, World Economic Forum and Heritage Foundation. Critical insights, which could be instrumental for economic policy implications are formulated.

Keywords: business environment, doing business, global competitiveness report, index of economic freedom, Slovakia and Czech Republic

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JEL Classifications: E22, F21, F43

1. Introduction

Doing business also involves so called business risk, which can be characterised as likelihood of taking a negative direction from reaching identified goals. In their business activities, entrepreneurs are also exposed to influences preventing them from achieving anticipated success. A set of influences affecting the existence and development of all business activities is generally denoted as business environment. The results of business activities are considerably dependent on the business environment a company operates in. Conditions under which companies

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operate, or develop their activities, have a significant impact on their performance, competitiveness and growth potential, as well as they determine the attractiveness of a particular state for foreign investors.

Within interstate comparison, the term business environment can also be defined on the basis of definitions used by international organisations. English term business environment is used by e.g. UNCTAD and World Bank's Department for Small and Medium Enterprises, while the term business climate is used by e.g. Danish and Dutch governments. The term investment climate can be found in the documents of the World Bank and UNIDO, and the term enabling environment is used by the OECD.

Canadian International Development Agency characterises business environment as the existence of a competitive domestic market linked with the global economy, managed by a well-defined legal and regulatory environment and equipped with a strong and growing human capital base and sufficiently developed infrastructure. The issue of determinants of business environment is up-to-date and dealt with in a number of publications by both Slovak and foreign authors. The significance of factors affecting business environment is dealt with by e.g. T. Guay (2014), K. Hallberg (2006), L. Hamilton and P. Webster (2015), A. Harrison (2014) and P. Wetherly, and D. Otter (2014), S. M. Wagner (2016). Hallberg explains that business rules are laid down by governments through adopted decisions. Positive principles such as transparency, responsibility, encouragement of competition, enforceability of rights and safeguarding of assets should be applied upon the formation, respectively improvement of conditions for business. (Hallberg, 2006).

Wetherly opines that mutual interaction occurs between business entities and business environment. Businesses are influenced by the environment they operate in as well as they have an influence on their environment. It is in the interest of businesses to participate in the formation of business environment in order to enforce their own measures with resulting benefits for them. (Wetherly; Otter, 2014). According to Harrison, a particular business environment can be characterised on the basis of identifying and detailing its key factors and perspectives. In some cases, individual perspectives are denoted as environments themselves with regard to the fact that they frame business environment as a whole (Harrison, 2014).

Business, respectively business environment are also dealt with in domestic publications by authors such as K. Belanová (2014), J. Táncosová (2007, 2013, 2014) and Š. Majtán (2012), who develops knowledge on the personal qualities of an entrepreneur, which are based on their professional, practical as well as business experience (Majtán, 2012); D. Martinovičová (2014), who partially focuses on the issues of business risk (Martinovičová, 2014); or V. Juričková (2006), who characterises three levels of business environment and their analyses (Juričková, 2006). New trends in business and startup communities' among young people are focusing on creativity, new ideas and innovations (Hudáková; Papula, 2016). Numerous publications are devoted to elaboration of various business ecosystem facets (e.g. Tunčikienė, Drejeris, 2015; Štītis et al., 2016; Laužikas et al., 2015; Apsītis et al., 2016; Petrenko et al., 2017).

2. Methodology

The purpose of this paper is to analyse and subsequently compare the levels of business environment of Slovakia and Czech Republic based on evaluations of internationally respected organisations.

Analysis and comparison of business environments are applied in order to find out identical and differing qualities of the monitored entities, comparing data obtained by organisations specialising in business environment surveys. Data related to business environments obtained by internationally respected organisations specialising in the analysis of conditions for business in the majority of countries are compared. Such organisations most frequently

publish the results of their analyses as evaluations in the form of numerical indices, rankings and summary reports.

Every state has a business environment whose characteristics and quality are analysed in published international yearbooks, indices and rankings, which can be recognised in broader relations, since the published values include a lower or higher degree of subjectivity. The degree of objectivity is dependent on the ratio between statistical data and data obtained from questionnaires, the choice of analysed parameters as well as on the perspective of effects of the observed indicators on the quality of business environments. Due to this fact, the order of particular countries in individual rankings differs slightly. Hence, there is no universal approach to indicators and measures evaluating the quality of business environment.

Business environment in Slovakia and Czech Republic are compared on the basis of evaluations of the World Bank, World Economic Forum and Heritage Foundation, which are regularly provided in the following publications:

- Doing Business (The World Bank) – is focused on difficulties in business, it evaluates a group of particular processes taking place in business, and is especially grounded on case studies, i.e. actual situations;
- Global Competitiveness Report (The World Economic Forum) – evaluates so called pillars of competitiveness in a country, respectively specific areas affecting business activities and national economic growth;
- Index of Economic Freedom (The Heritage Foundation) – covers economic freedom in countries, defined as a degree of restricting the freedom of market on which both companies and individuals operate.

3. Results and Discussion

For Doing Business, results of the research of the quality of business environments are published as an index, final report and ranking in which states are ordered based on the favourableness of conditions for business, respectively difficulty in carrying out business activities. The highest positions in the Doing Business ranking of business environment were occupied by: Singapore, New Zealand and Denmark.

The Slovak Republic ranked 29th and no change of position was recorded compared to the preceding period. However, it achieved an increase of the evaluation index by 0.88 to 75.62. The Czech Republic similarly recorded an increase of the evaluation index compared to the preceding period by 0.09 to 73.95. However, the country has dropped by three positions in the ranking, currently occupying the 36th place.

According to the countries' rankings, doing business in the Slovak Republic is less difficult than in the Czech Republic. Based on Table 1, however, differences in the rankings and evaluation indices of both states are only insignificant.

Table 1. Positions and evaluation indices of selected countries in Doing Business Ranking

Country	Position in 2015	Index in 2015	Position in 2016	Index in 2016	Change of index
Singapore	1	87.34	1	87.34	-
New Zealand	2	86.75	2	86.79	+ 0.04
Denmark	3	84.26	3	84.40	+ 0.14
Slovak Republic	29	74.74	29	75.62	+ 0.88
Czech Republic	33	73.86	36	73.95	+ 0.09

Source: Own proceeding

The resulting position of the countries in the Doing Business ranking is based on evaluation of ten areas affecting business activities. The evaluations of individual areas of Slovakia and Czech Republic are provided in Table 2. In spite of the positive ranking of the Slovak Republic, the Czech Republic has achieved better evaluation in some areas of business environment. However, both countries are poorly evaluated in the areas of protecting minority investors and enforceability of contracts.

Table 2. Positions and evaluations of Slovakia and Czech Republic in the areas determining the final Doing Business Ranking of countries

Evaluated areas	Position of the Slovak Republic in 2016	Index of the Slovak Republic in 2016	Position of the Czech Republic in 2016	Index of the Czech Republic in 2016
Setting up a business	68	88.54	93	85.23
Obtaining building permits	84	69.48	127	62.73
Granting connection to electricity networks	48	80.30	42	81.58
Registering property	5	90.99	37	76.40
Obtaining financing	42	65.00	28	70.00
Protection of minority investors	88	53.33	57	58.33
Tax obligations	73	76.79	122	67.09
Cross-border trade	1	100.00	1	100.00
Enforceability of contracts	63	61.69	72	60.36
Solving insolvency	33	70.04	22	77.73

Source: Own proceeding

Comparisons of individual business environment areas

Based on Table 3, setting up a business entity with limited liability in the Czech Republic is demanding from the viewpoint of both finances and time and requires a higher number of procedures. Overall, Slovakia is higher rated also due to the fact that higher capital needs to be paid up upon setting up a company in Slovakia.

Table 3. Evaluation of indicators related to the area of setting up a business

Indicators	Slovak Republic	Czech Republic
Number of procedures	6	8
Number of days	11.5	15
Costs of setting up a business (% of AAIC [†])	1.5	6.7
Minimum called-up capital (% of AAIC)	18.5	0

Source: Own proceeding

Based on Table 4, obtaining permits and documents related to building in the Czech Republic is more costly and requires a higher number of procedures. Slovakia is higher rated in this area also with regard to the fact that

[†] AAIC - average annual income per capita

obtaining permits and documents related to building lasts longer under Slovak conditions. The case study concerns construction of a warehouse in the value of fifty times the average annual income per capita.

Table 4. Evaluation of indicators related to the area of obtaining permits in building

Indicators	Slovak Republic	Czech Republic
Number of procedures	10	21
Number of days (necessary for building the property)	286	247
Costs of carrying out procedures (% of the overall value of the building)	0.1	0.3
Quality index of regulation and implementation in building	11	12

Source: Own proceeding

Based on Table 5, connection of a particular object to electricity network lasts slightly longer and is more costly in the Slovak Republic. The Czech Republic is higher rated in the given area.

Table 5. Evaluation of indicators related to the area of connection to electricity network

Indicators	Slovak Republic	Czech Republic
Number of procedures	5	5
Number of days	121	110
Costs of connection (% of AAIC)	54.8	27.6
Index of reliability of electricity supplies and affordability of its prices	8	8

Source: Own proceeding

Based on Table 6, registering immovable property in an event of ownership changes lasts longer and is more costly in the Czech Republic. Slovakia is higher rated in the given area even in spite of the lower quality of regional management. The case study concerns registration of plot and building in the value of fifty times the average annual income per capita.

Table 6. Evaluation of indicators related to the area of registering property

Indicators	Slovak Republic	Czech Republic
Number of procedures	3	4
Number of days	16.5	31
Costs of registration (% of the property value)	0	4
Quality index of regional management	26.5	21.5

Source: Own proceeding

Based on Table 7, the quality of protection of the rights of both debtors and creditors upon obtaining financial means is evaluated equally for both countries. Overall, the Czech Republic is higher rated in this area, as it has better coverage of credit registers. Through credit registers, future creditors are able to obtain data on the financial history of potential debtors, which can have a positive or negative impact on credit granting.

Table 7. Evaluation of indicators related to the area of obtaining financing

Indicators	Slovak Republic	Czech Republic
Quality index of security rights	7	7
Quality index of information on credits	6	7
Coverage of public credit registers (% of adult persons)	3.2	6.7
Coverage of private credit registers (% of adult persons)	67.3	78.7

Source: Own proceeding

Based on Table 8, the area of protecting rights of investors - minority shareholders is slightly higher rated in the Czech Republic. Unless potential minority investors are ensured sufficient rights, their decision regarding investment might be negatively affected.

Table 8. Evaluation of indicators related to the area of protecting minority investors

Indicator	Slovak Republic	Czech Republic
Quality index of protection of minority investors	5.3	5.8

Source: Own proceeding

The area of paying taxes is higher rated in Slovakia in spite of slightly higher tax and contribution burden and a higher number of executed payments. Based on Table 9, administrative burdens, related to the calculation, recording and payment of taxes are considerably higher in the Czech Republic. The case study concerns a company with 60 employees and annual turnover amounting to 1,050 times the average annual income per capita.

Table 9. Evaluation of indicators related to the area of tax obligations

Indicators	Slovak Republic	Czech Republic
Number of payments (yearly)	10	8
Time necessary for the calculation, recording and payment of taxes (hours/year)	188	405
Tax and contribution burden (% of profit)	51.2	50.4

Source: Own proceeding

Based on Table 10, enforcing performance of contractual terms and conditions at court requires higher costs in the Czech Republic. Slovakia is higher rated in the given area also with regard to a significantly longer time of enforcing performance of contract. The case study concerns the value of recovered amount representing two times the average annual income per capita.

Table 10. Evaluation of indicators related to the area of enforcement of performance of contracts

Indicators	Slovak Republic	Czech Republic
Number of days necessary for judicial enforcement of performance of contract	705	611
Costs related to trials (% of requested amount)	30	33
Quality index of trials	12	10.5

Source: Own proceeding

Based on Table 11, recovery of a debt from an insolvent company is better rated in the Czech Republic with regard to a higher level of satisfying creditors and considerably shorter time and lower costs related to the compensation procedure. The case study concerns the market value of insolvent company representing 100 times the average annual income per capita. In case of sale of property, the value of such company amounts to 70 % of its market value. The company bears a secured loan burden, has 201 employees and 50 suppliers representing creditors.

Table 11. Evaluation of indicators related to the area of insolvency solution

Indicators	Slovak Republic	Czech Republic
The number of years necessary for recovering a debt	4	2.1
Costs related to recovering a debt (% of debtor's estate)	18	17
Rate of compensation of creditors (cents/dollar)	54.7	66.0
Quality index of insolvency-related legislation	13	13.5

Source: Own proceeding

In its annual publication Global Competitiveness Report, The World Economic Forum ranks countries based on the Global Competitiveness Index - GCI. The GCI reflects competitiveness of states, i.e. their ability to ensure prosperity for their citizens on the grounds of sustainable economic growth, which is also affected by the quality of business environment. Out of 140 countries, the highest rated in 2015 were Switzerland, Singapore and the USA.

The Slovak Republic ranked 67th and a year-over-year improvement of its position by eight places was recorded. The Czech Republic ranked 31st and its position improved by six places compared to the preceding period. Based on the ranking, a higher level of competitiveness was recorded in the Czech Republic than in Slovakia. The GCI and ranking of selected states are provided in Table 12.

Table 12. Positions and Global Competitiveness Indices of selected countries in the ranking published in Global Competitiveness Report

Country	GCI in 2014	Position in 2014	GCI in 2015	Position in 2015	Change of GCI
Switzerland	5.70	1	5.76	1	+ 0.06
Singapore	5.65	2	5.68	2	+ 0.03
USA	5.54	3	5.61	3	+ 0.07
Czech Republic	4.53	37	4.69	31	+ 0.16
Slovak Republic	4.15	75	4.22	67	+ 0.07

Source: Own proceeding

The Global Competitiveness Index of a country is dependent on the evaluation of twelve areas, so called pillars of competitiveness. The highest score a state can obtain within individual pillars is seven points.

Based on the data provided in Table 13, the Czech Republic is higher rated than Slovakia in each pillar of competitiveness. The lowest rated area in both countries is the pillar of innovation, research and development. Based on the results of the survey of the World Economic Forum, the low ranking is mainly due to a low volume of private investments in research and development and a low level of cooperation of educational institutions with the private sector in research and development.

Table 13. Evaluation of the pillars of competitiveness based on which the resulting GCI for Slovakia and Czech Republic in 2015 is stipulated

Pillars of competitiveness	Evaluation in the Slovak Republic	Evaluation in the Czech Republic	Difference in evaluations
Efficiency of institutions	3.43	4.09	- 0.66
Quality of infrastructure	4.28	4.69	- 0.41
Development of macroeconomic indicators	5.21	5.97	- 0.76
Health and basic education of population	6.01	6.31	- 0.30
Accessibility and quality of higher education	4.62	5.10	- 0.48
Efficiency of market for goods	4.43	4.63	- 0.20
Efficiency of labour market	3.90	4.44	- 0.54
Maturity of financial market	4.41	4.62	- 0.21
Technology maturity	4.64	5.43	- 0.79
Size of domestic and foreign markets	4.03	4.47	- 0.44
Maturity of business processes	4.07	4.49	- 0.42
Innovation, research and development	3.29	3.79	- 0.50

Source: Own proceeding

The Heritage Foundation evaluates annually so called economic freedom of countries, defined as a degree of restricting the freedom of market, having an impact on the overall national prosperity. The evaluated areas also have an impact on carrying out business activities. Out of 178 countries, the highest rated in 2016 were Hong Kong, Singapore and New Zealand.

The Slovak Republic ranked 56th and a year-over-year deterioration of its position by six places was recorded. The position of the Czech Republic has improved by three positions, currently occupying the 21st place. Based on the evaluation and position of states in the given ranking, provided in Table 14, the freedom of market is less restricted in the Czech Republic than in Slovakia.

Table 14. Positions and evaluations of selected states in the Economic Freedom Ranking

Country	Score in 2015	Position in 2015	Score in 2016	Position in 2016	Change of score
Hong Kong	89.6	1	88.6	1	- 1.0
Singapore	89.4	2	87.8	2	- 1.6
New Zealand	82.1	3	81.6	3	- 0.5
Czech Republic	72.5	24	73.2	21	+ 0.7
Slovak Republic	67.2	50	66.6	56	- 0.6

Source: Own proceeding

The resulting score of economic freedom of a country is based on evaluation of ten items provided in Table 15. The best possible score achievable for a particular item is 100 points.

Table 15. Evaluations of areas constituting the resulting score of economic freedom in Slovakia and Czech Republic

Indicators	Evaluation in the Slovak Republic	Evaluation in the Czech Republic	Difference in evaluations
Property rights	50.0	75.0	- 25.0
Level of corruption	50.0	51.0	- 1.0
State expenditure	49.5	47.3	+ 2.2
Tax burden	80.1	82.5	- 2.4
Restrictions in business	68.4	66.6	+ 1.8
Labour market	55.0	77.7	- 22.7
Monetary stability	79.5	84.1	- 4.6
International trade	88.0	88.0	-
Conditions for investment	75.0	80.0	- 5.0
Financial sector	70.0	80.0	- 10.0

Source: Own proceeding

The Czech Republic received better evaluation in the majority of the given items.

Areas having received low evaluations in both states include corruption and state expenditure, which exceeds state revenues, resulting in budget deficit. Budget imbalances represent a precondition of increased indebtedness of a country, which, in a certain stage, leads to adopting consolidation measures.

Conclusions

Using evaluations of the World Bank, World Economic Forum and Heritage Foundation, we compared two countries which used to create a common state. The following conclusion was adopted based on analysis and subsequent comparison.

Based on the analysed data, the components of business environment with low evaluations in both Slovakia and Czech Republic include enforcement of performance of contracts, protection of minority shareholders, research and development, innovation and level of corruption. Based on mutual comparison, the Czech Republic is higher rated especially in the area of recovery of debt from an insolvent company. Slovakia has achieved a significantly higher ranking in paying taxes, to which extensive administrative burden is connected in the Czech Republic.

In order to improve conditions for business activities, accelerating the processes of judicial enforcement of performance of contracts and compensation of the creditors of insolvent companies is also recommended. In Slovakia, low evaluations were granted to both given processes within individual components of business environment analysed in the Doing Business project. Judicial enforcement of performance of contracts or recovery of debts from insolvent companies lasts too long. Claimants thus receive respective performance after a long time, which can have a negative impact on their solvency. In addition, the value of a claim can be considerably decreased by a possible impact of inflation over the long time.

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UTILIZATION OF LABOUR RESOURCES THROUGH MATCHING PROFESSIONAL AND FAMILY ROLES

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Abstract. The article presents the issues of optimum utilization of labour resources in terms of sharing professional and family responsibilities caused by changing gender roles in the society and emerging of the new fathering phenomenon. The authors proceed from the assumption that promotion of business initiatives and innovations are not valuable as such but as far as they are to satisfaction of needs of the different families in view of their cultural and social priorities. The authors argue that the conduct of business should be reasonable, so that parents could successfully fulfil their family responsibilities without violation of parental rights. Otherwise, sustainability of society may be threatened. This problem is emphasized as the main one within the framework of the project on fatherhood studies in contemporary Russia. This article includes the basic results of the project.

Keywords: balance of professional and family roles, new fathering models, employees' policy, gender roles

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JEL Classifications: M5

1. Introduction

Acceleration in rates of development of business innovations is encouraging modern civilization to resolve the problem of overemployment in regard with the increasing intensification of labour when non-controllable time investments to chief company business produce strain among the employees and lead to conflicts in families and sometimes to family breakdown. The issue of reaching balance between employment and household responsibilities is becoming the top priority on the agenda, particularly due to emerging of the phenomenon of new fathering (Doherty et al. 1998; Wall, Arnold 2007; Finley, Schwartz 2004; Gilles 2009) and these are the intensive care practices on the part of young men, as well as their involvement in household and family duties. While women used to be expected to keep a balance between family and work, today it is also up to men to take care of this issue. Struggle for gender equality that was particularly active in the last fifty years encouraged the review of employment modes of married men. As educational and professional backgrounds of men and women is becoming equal there are less opportunities for preserving traditional division of gender roles (Khitruk 2013; Vinokurova 2015; Åberg 2015, Jankalová, Jankal 2017; Dirzytė et al. 2017; Tvaronavičienė 2016).

The expectations regarding traditional sacrifices for the sake of family on the part of women and men's professional achievements at the expense of switching women's time and energy resources to household needs are perceived as immoral and anachronistic in the society.

Along with the achievements in the area of gender equality, another circumstances demand reviewing of balance between professional and family roles of fathers. The discoveries in the area of health care and psychology show that the role of fathers in child rearing particularly in the early development phase (up to 3 years) is dramatically underestimated. Close communication with fathers is also significant for mental and physical development of children in the school time (Mott 1993; Rohner 2004). However, the first three years of life are determining. In the last 30-40 years in some regions, particularly in the Nordic countries there were many efforts focused on making business friendly to employees with the family obligations. Many European countries followed their lead and obtained a range of state guarantees. In Russia the government also provides a range of guarantees but Russian private companies are still at the outset of development of pro-family policy with due regard to parental responsibilities of fathers. Below we will highlight some of the crucial issues of pro-family policy in Russia.

1. Methodology

The study was carried out in the Republic of Karelia in 2015 – 2016. Two representative samples were developed. 789 men aged 18-49 years were included in the first sample; 54 per cent of them did not have children. They were interviewed on the basis of the tool developed by Institute Promundo (USA) within the framework of the project "International Men and Gender Equality Survey" (IMAGES), which was adjusted to national conditions by a group of scholars of the ISESP RAS. The second sample included solely the fathers aged from 18 to 49 that lived in the same households with their children. Total number of respondents is 1000. The interviewers used the Russian questionnaire including additional sections of questions that were absent in the IMAGES questionnaire. The qualitative study was carried out as well. Ten respondents took part in in-depth interviews the fragments of which are included in this article.

2. Paternity leave: analysis

Paternity leave is crucial in terms of fathering functions. Law of the Russian Federation includes the provision on unpaid parental leave for new fathers after the birth of a child. The leave of up to five calendar days granted upon a written request and provided for by Article 128 of the Labour Code of the Russian Federation. The duration of a leave without pay can also be determined under the agreement between the employee and an employer. The employer can grant a new father a paid leave in the cases provided for by the collective agreement. The employer may not refuse granting such a leave in case of submitting a written request by the employee.

According to our survey, after birth of the youngest child only the fourth part of fathers applied for paternity leave (80 fathers) (Figure 1); another 2,5 per cent of fathers did not work at the time and therefore they did not need a leave. 17 per cent of respondents (33 persons) out of 195 fathers who did not apply for a leave were refused the leave, and that is a law violation. 106 fathers (54.4 per cent) who could not afford to take a leave constituted a majority of this group of respondents. 23 per cent of fathers did not want to take a leave (45 persons) and 5,6 per cent of respondents did not indicate a reason due to which they did not take a paternity leave (see Figure 2). Thus, it is obvious that employers are not simply indifferent but hostile to the new fathers.

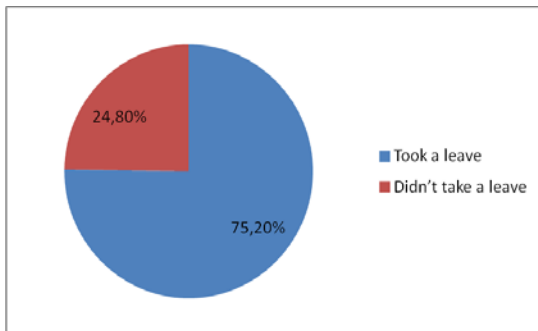


Figure 1. Proportion of fathers who took a paternity leave

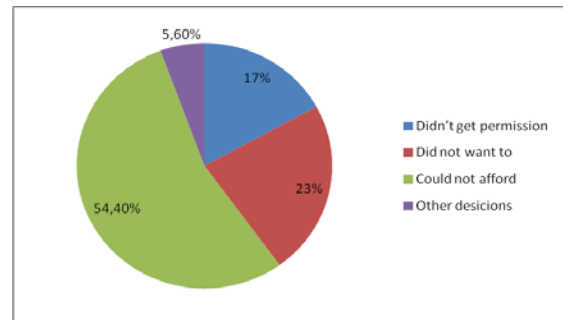


Figure 2. Reasons of refusal to take a leave

The category of respondents who took a paternity leave consists of two sub-categories: (1) men who took paid leaves and (2) men who took non-paid leaves. In both sub-categories of respondents, most fathers took leaves for the period up to one week. However, there are 72 percent of such fathers in sub-category 1 and 28 per cent in sub-category 2. Thus, most men take a part of annual paid vacation in consideration for a paternity leave. Only 24 persons could afford to take an unpaid leave. In sum, one in four women could receive help from their husbands after a childbirth within a week. Husbands of every seventh woman decided not to provide any help to them.

Awareness of men on family and legal issues. According to the survey, 52.5 per cent of respondents are not aware of legal provisions on paternity leave in Russia. Another 17.8 per cent of men think that this provision was not adopted despite the fact of its adoption in 2001. Only 29.7 per cent of men are aware of this legal provision. (See Figure 3).

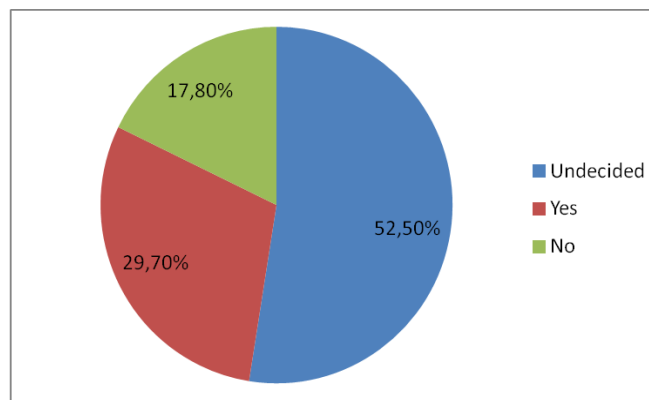


Figure 3. Proportion of men who are aware of paternity leave provisions

Along with that, respondents neither clearly distinguish between paternity/maternity leave and childcare and parental leave, nor know about the duration of leave. While giving their answers to the question on duration of paternity/maternity leave men were confusing two types of the leave and provided various periods, from a week to three years. Results of the survey showed that 19.5 per cent of respondents believe that the length of paternity leave is less than two weeks, one fourth of respondents (26.4 per cent) think that it is from one year to 18 months, and about one third of men (32.9 per cent) reported the leave duration up to three years (see Figure 4).

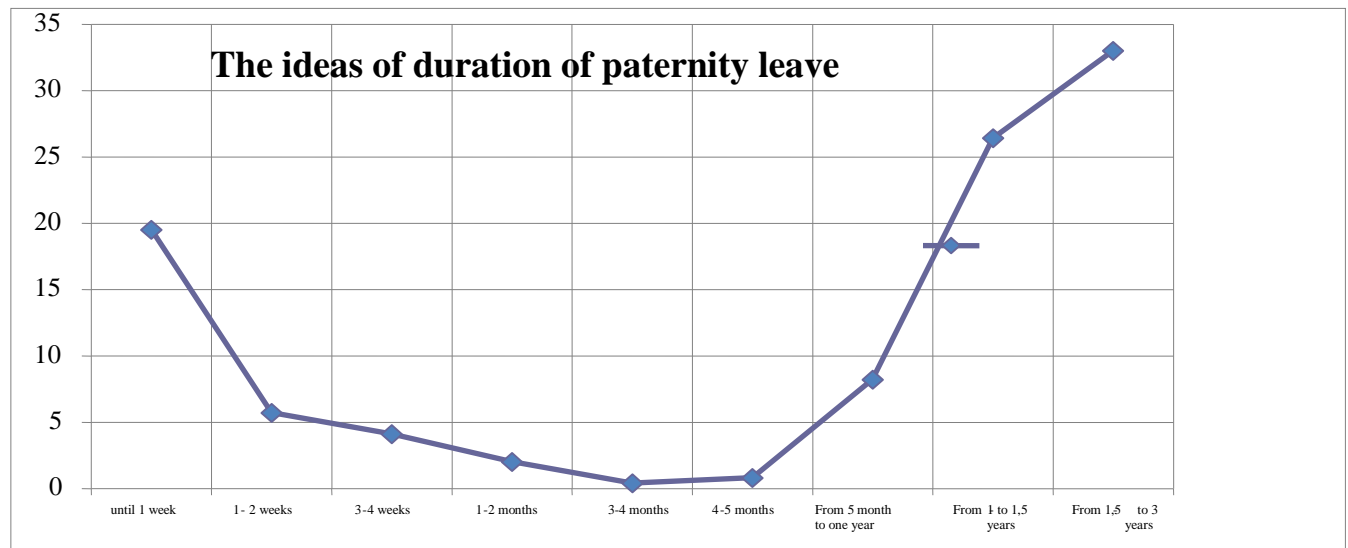


Figure 4. Men's ideas of duration of paternity leave

Below is a fragment of the in-depth interview on paternity leave:

Filmmaker, 29:

«Do we need a paternity leave? Why not? Such practice might help. However, I don't mean that this leave is necessary right after the birth... let the women care of children after they are born. Why don't they provide fathers with such opportunity when a child turns four? If fathers take care of children at this age a child could see that both parents influence her or him and contribute to her or his development. If a state supports both women and men it would encourage them; I am not sure how it would influence the country on the whole... It should be checked or tested in the future.»

According to Article 256 of Russia Labour Code, maternity/paternity leave may be granted to either of the parents. The problem is that the benefit that is equal to 40 per cent of an average wage shall be paid to the insured parent in the first 18 months, and no benefits shall be provided for in the following 18 months. Maternity leave is also payable out of the Russian State Social Insurance Fund at place of employment (Article 11.1 of Federal Law No. 255-FZ "On the Provision of Sick Leave and Maternity Leave Compensation to Citizens Eligible for Mandatory Social Insurance" dated 29 December 2006). It is clear that such low payments would lead families to a significant financial loss. While women's wages in Russia are 30 per cent lower than men's salaries, it is women who usually take maternity leave.

Over fifteen years of its existence men have never applied Article 256 of Labour Code. Therefore, the provision brought discredit upon itself. The law does not contribute to fathers' involvement in child rearing nor secure the fathers' right to care of a child in the first year after her or his birth. Thus, it is still a leave for mothers and therefore there is no logic in defining it as a parental leave. Most men in Russia do not give a thought to taking advantage of this opportunity. This question is taken up in very rare circumstances, for instance in cases of a wife's higher wage. However, so far there are just a few of such cases. In our sample two per cent of respondents

said that the bulk of family income consists of woman's wages and another 23.6 per cent of men reported similar salaries in their couples.

Below is another extract of the interview:

Economist, 29:

As for a maternity leave, it is natural for a woman to use it in order to take care of a child and to rear her or him due to her biological proclivity. However, today the practice of paternity leave has emerged as well but it is not as popular here as in Europe. To be honest, I would not take such a leave. I think that a man can involve when a child is a little older and it will be possible to explain things to her or him, and when she or he will be able to understand things...

In this context, and due to prevailing patriarchal attitudes, most men in Russia consider care of children aged up to three years to be a mother's duty. As few as 58.8 per cent of men in our sample believe that law shall guarantee paternity leave, 30.1 per cent of respondents are not sure of that, and 11.1 per cent of men think that it is not necessary for the state to grant paternity leave to men. One should note that the dispersed opinions remain under the existing law. Proportion of men that support a guaranteed leave is equal to the proportion of men (59.3 per cent) that are aware of the existing law including a provision on leave with children up to 3 years old. Another 40 per cent of men are not interested in provision of paternity leave and therefore they are unaware of this provision and of a leave duration.

Ignorance of the family law on the part of majority of men in Russia proves that role and meaning of fatherhood in the earliest phase of child development is underestimated in the society due to patriarchal culture and restoration of traditional values as well as lack of economic guarantees of fathers' rights. We have already mentioned that 40 per cent out of the wage is the very low amount for covering family expenses in the period of dramatic growth of family's material needs. *It results in the vicious circle: men do not take a leave due to insufficient amount of benefits, and insufficient amount remains a reality due to adherence to patriarchal attitudes.*

The irony is that Russia introduced parental leave before some European countries did it and that ensured the right of fathers to stay at home and to involve in child rearing after her or his birth. For instance, in UK this provision was adopted two years later. However, the situation in the UK dramatically changed since then while in Russia paternity leave provision is rather declarative. Today British fathers can take two weeks of a paternity leave and that is covered by 90 per cent of an average wage (the amount is 136,78 GBP per week) (Dermott, Miller 2015). According to exchange rate for August 2016, one GBP was equal to 83 roubles (the survey was conducted in June-July 2016), and this is equal to 11, 35 roubles per week and over 45 thousand roubles per month. While comparing these figures to the amounts calculated in the course of the survey conducted in Karelia, for July 2016 the data is the following: a net salary of 59 per cent of respondents is 30 thousand roubles per month (about 500 USD). 33.5 per cent of respondents earn from 30 to 60 thousand roubles (500 – 1,000 USD), and 60 – 90 thousand roubles is the net salary of 5.7 per cent of respondents. The net salary over 90,000 roubles is earned by 1.6 per cent of respondents. Thus, over a half of the men in this sample in active employment earn 280 USD less than British fathers that took a paternity leave. The earnings of one-third of respondents are the same or 15 thousand roubles more. The group with high income is very small in numbers (7.3 per cent). Therefore, we will not take this group into consideration. Today 40 per cent of average wages comes to 12,000 roubles per month which would amount to 24 000 roubles per month in the population group with middle incomes. A decision to agree on receiving such amount would bring an average Russian family below the poverty line.

As a result, Russian fathers do not use a paternity leave while 91 per cent of British fathers take a paternity leave right after the birth of a child, and 74 per cent of the UK fathers take a paternity leave. The leave duration can be up to 18 weeks and at any period until a child turns five. The British law adopted in 2015 is even more flexible.

Mothers can pass a part of their leave to fathers or both parents can take a leave simultaneously. Along with that, fathers have a new right to take two unpaid half-days for prenatal visits (Brien et al. 2016). Today governments in 92 countries offer paternity leave to new fathers. The leave is non-transferable, i.e. that is available only to fathers, and cannot be taken by a partner or any other relative. As many as 90 per cent of the fathers take paternity leave in Nordic countries, UK and Australia. In Germany, 30 per cent of men use paternity leave so far. The increased insurance coverage of paternity leave proves the changed attitude towards fatherhood in these countries.

Conduct of fathers in daily life. Men and society in general in Russia believe that the main responsibility of fathers is financial provision of family, and helping a partner in childcare and household work when necessary. In other words, they consider their function complementary. It is possible to make this conclusion on the ground of some statements offered for consideration to respondents. Please, see Table 1.

Table 1. Statements providing self-assessment of fathers' role in the family

	Yes	No	Don't know	NA
I spend too little time with my children on account of my job	54,2	34,6	7,2	4,0
I would work less if it meant that I could spend more time with my children	33,8	38,4	19,1	8,8
I have the main responsibility in providing for the family	81,6	10,9	3,8	3,8
My role in caring for my children is mostly as a helper for my wife when necessary	48,9	37,7	5,3	8,1

81.6 per cent of the fathers believe that their main responsibility is providing for the family. Such attitudes work in the employers' favour as they comply with business philosophy of primacy of work over family responsibilities in the life of men. Along with that, 54.2 per cent of the fathers think that they spend little time with their children due to their work, and only one third of fathers (33.8 per cent) said that they would agree to work less if it meant that they could spend more time with their children. It is also important to bear in mind that another 19 per cent of respondents chose the answer "Do not know" in regard to the question on their willingness to work less if they could spend more time with their children. Perhaps, this group of men was unable to provide a precise answer due to their strained circumstances. In case of part-time employment and guaranteed full wages, their answer would have been "yes." In this case the proportion of men that would spend more time with their children would increase up to 53 per cent and this would mean one in two fathers or even a little more.

48.9% of men believe that their role in caring for their children and household is mostly as a helper for their wives when necessary. This opinion proves a fragmentary involvement in daily care of a family. Proportion of men that consider their care of children equal to that of their partners/wives is a little over one third of the sample or 37.7 per cent so far.

One can observe a similar situation in the previous generation of parents. The main burden of household responsibilities lay on women. 43 per cent of respondents said that their mothers took the main decisions regarding children when they and their brothers/sisters were young. 9 per cent of respondents mentioned that their fathers made decisions. Another 42 respondents said that their parents made decisions together. Time division between fathers and mothers in terms of childcare is presented in Table 2.

Table 2. Assessment of the time spent by respondents' fathers on care of respondents

	Always me	Usually me	Equally	Usually partner/wife	Always partner/wife	NA
Who cares of a child on a regular basis?	0,6	1,6	35,2	48,1	12,9	1,6
Who stays at home with a child when he/she is sick?	0,6	1,3	7,2	55,7	32,7	2,5
Who collects a child from school/day care centre?	3,2	10,0	34,7	33,8	9,8	8,6
Who drives or takes the child to leisure-time activities?	1,6	10,2	34,5	31,6	10,9	11,2

Table 2 shows that mostly mothers care of a child on a regular basis, as 61 per cent of respondents mentioned. One can observe regular division of these duties between the spouses only in one third of families (35.2. per cent). Care of children "face-to-face" is an exception for men and their proportion is equal to only 2.2. per cent of respondents. As few as 2 per cent of fathers stayed with a sick child and 7.2 per cent of men shared this duty with their partner/wife. This behaviour reflects a patriarchal tradition according to which mothers take a childcare sick list. Employers' attitude toward men staying at home with sick children is still negative. These cultural imbalances can take place both in Russia and Western countries. Empirical observations show that when a child gets sick, managers of day care centres call mothers but not fathers in the first instance.

Regarding care of a sick child, the situation among respondents got even a little worse in recent years. Today as few as 1.3 per cent of fathers stay with sick children, compared to 2 per cent in the previous period. 7.2 per cent of fathers used to take care of a sick child together with partner compared to today's 6.4 per cent. Thus, the fathers' care in hard periods for a child's health is slightly decreasing. It would be wrong to say that the reason is the irresponsibility of modern fathers as they show their responsibility in the other aspects of child's life. It is hard to escape the conclusion that the employment situation in terms of employers' attitude to male workers with family obligations is unfavourable. If a child gets sick, fathers can neither leave their workplace, nor take a sick leave. Conservative attitudes of employers and unfriendly labour laws are obstacles preventing fathers from combining professional and family responsibilities in the situations of a child's sickness. Meanwhile, it is the situation of illness when children are in critical need of close contacts with parents in order to overcome physical pain or low spirits.

Conformity of fathers to the lack of law providing for the right to take care of a sick child or the lack of respective provisions in labour contracts is a matter of a major concern. Perhaps this situation is favourable for employers but the state should review this matter in terms of preserving health potential of a younger generation.

While majority of Russian women are traditionally employed and today it is 49 per cent of the entire employed population in the country (labour force participation rate in working age is 77 per cent), the shifting the burden of childcare and household duties on women's shoulders mean the reinforcement of social inequality. When men

avoid performing family obligations referring to the traditions of the past century they defend patriarchal privileges that represent their dominant attitudes. But the most serious problem is that communicative contacts in such families are based on subordination. As a result, for a child family becomes a model of relations in society mostly built on the subordination, and to the least extent on partnership. While observing the division of household duties between parents, boys and girls apply this model to their role division in society. Authoritarian style in a family is a highway to autocracy in the society, on the labour market and in business management.

Sharp business practices in Russia, overtime exempt work schedule, weak trade unions incapable of protecting the employees' rights frequently come into conflict with models of family relationships that one may define as egalitarian. Below is a fragment of the interview with 18-year-old student living in unregistered union, without children:

I think that parenting depends mostly on human factor but not on a country. There are people with various attitudes and characters. For instance, some people do not plan to have their own family. They prefer to focus their efforts on career and on the hobbies like gambling. I think that it is not because of the country. It is due to a person. Perhaps the country influences the fathering in a way because we all live in a post-Soviet state where racketeering and illegal business bankruptcy are common. Sometimes it is obvious that people just gave up ... I don't think that there are any positive perspectives in the future, I see just negative things ahead. There are no conditions for a real fathering in the country. I am convinced though that there are people who are able to create favourable conditions for themselves in spite of the different obstacles.

According to the historical experience of different countries, commitment of governments to principles of family-friendly policies in business and the labour market can cause involved fatherhood. The question of employees with family responsibilities has been on the agenda on various levels in our society but *they placed special emphasis on the mothers so that parenthood was equalized to motherhood*. As for fathers, the society still considers the issue of balance between family and work to be a personal problem.

Meanwhile, Russian fathers passed through the course of shocking therapy due to the process of family nuclearization during the latter half of the twentieth century, and retreat of governments from a range of social programs that resulted in dramatic decrease in number of child care centres. The fathers had to get adjusted to completely new circumstances of child rearing with a scarce assistance of relatives and the state. Along with that, men were supposed to continue performing their obligations of a breadwinner and provide economic support to family. In addition, men's partners/wives expected that men would become involved fathers and invest their leisure time to the family (quantitative aspect), as well as add up a new content to their family relations and express their care and emotional attachment to partner and children (qualitative aspect).

In order to reach the balance, fathers with low and middle incomes try to reach informal agreement with their employers for obtaining flexible working schedule (starting a working day later or leaving workplace earlier, taking a day off, etc.). Fathers with higher incomes struggle for higher wages in order to hire a baby-sitter or to have an opportunity of paying for a private childcare centre. However, so far Russian employers view measures of the pro-family policies as the sources of extra expenses but not as the ways of recruiting young employees and holding of a highly skilled professional in the company.

What is most notably for Russia, policy makers do not realize specific nature of the situation in Russia that forces fathers to be more active. This specific nature implies two points: *the first point* is a higher educational level of women in Russia in comparison with men. There are 55 per cent of women among employed university-educated population. *The second point* is the rapid health deterioration of expectant mothers and children. Studies show that today the health potential of younger children is much worse than that of previous generations. According to

corresponding member of the Russian Academy of Sciences Natalia Rimashevskaya, "over one third of children are born unhealthy or they become ill immediately after birth without undertaking treatment." (Rimashevskaya 2010). Proportion of children with disabilities is growing rapidly, as well as number of highly allergic children. Along with that, health of expectant and nursing mothers is deteriorating. Today their health is worse than that of expectant mothers of previous generations. Thus, there is an urgent need in the qualitative and quantitative increase in fathers' involvement in care of children and partners/wives. The problem should be resolved via the implementation of multi-agency approach. The health care system by itself is insufficient. A need in intensification of factors beyond the health care field makes inevitable flexibilization of working hours for *both parents* and the recognition of critical importance of involved fatherhood in reproductive labour with adequate compensation for loss of earnings in the early postnatal period (80 – 100 per cent of a principal monthly salary).

The Roadmap of "The Concept of State Demographic Policy of the Russian Federation for the Period Until 2025" includes a range of key measures aimed at combining professional and child care obligations by parents, among them availability of pre-school education (Measure 4) and formation of the environment that is friendly to the employees with family obligation (Measure 6). In the latter case, we are referring to recommendations developed for a draft of a general agreement between national trade union associations, national employers' unions and the Russian Government for 2017-2019. However, there is a need in the *laws* to be adopted by the Ministry of Labour and Social Protection which would establish flexible forms of employment for parents with small children, for instance part-time work, split working day, shortened working day, flexible schedule, etc., as well as other benefits in the labour field in view of gender differences of employees.

Thus, in Russia the need in encouraging fathers' involvement in the first days of a child's life is not just an issue of gender equality or expanding new parental patterns but also a question of preserving population health and resolving pressing population problems in terms of improvement of genetic resources.

Transition to involved fatherhood will demand generating a new interpretation of the former concepts. For instance, recognition of father and fathering would demand the definition of a far wider range of obligations in terms of child care. This is due to the idea that fathers should involve in child birth from the period of partner's pregnancy and delivery, and fathers should respond to a child's needs from the first days of her or his life.

So far, the society is too far from realizing necessary vector of development. The comments made by the member of the Russian Civic Chamber and the "Federal Fathers' Union" Vladimir Slepak prove that. He said the following: "In the current situation, Russian families with children have become social outcasts and most of them live below the poverty line. Child abandonment is caused by this intolerable situation. For instance, in Russia in the 2011 – 2015 timeframe a number of homeless orphans increased from 70 thousand to 128 thousand people. Annually in Russia 50,000 fathers and mothers are deprived of parental rights and 44,000 parents lose their children due to the substance abuse." Slepak also makes a special emphasis on the problems of disabled children and inaction of the institutions of social and medical expert examination due to which thousands of children were deprived of their benefits required by law. Lastly, he mentioned problems of divorced spouses. For instance, the highest divorce rate was indicated in 2015 when the separation factor was 540 divorces came for 1,000 marriages ("Union of Fathers").

A problem of institutional ensuring of fathers' opportunity of being involved 'here and now', engaged in household duties and child rearing is becoming critical in Russian society today. A solution may be assuming pro-family attitudes by the government and top managements of business structures otherwise the quality of new labor resources will fall dramatically. At least two emergency measures are necessary to implement. The first above mentioned measure is establishing of the system of benefits for fathers with family responsibilities. The second measure is quite sensitive and it might demand dramatic political changes. This is the culture of employment.

The culture of employment. The culture of employment makes a serious impact on the fathers' ability to reach a balance between professional and family roles. This is something more than family-friendly policy on the part of employers. It implies fathers' psychological comfort when it is necessary to discuss family obligations with heads of companies and colleagues in order to leave the workplace earlier for collecting a child from school or for staying with a sick child at home. Fathers do feel uncomfortable in such situations due to the prevailing attitude regarding the importance of overtime work that demonstrate commitment to the company. Therefore, men rarely express their dissatisfaction with frequent extra work assignments though there is a tendency of internal resistance to practices of long working hours among young men. They seem to be dissatisfied with working conditions.

As a rule, company managers do not make open statements on any established privileges for parents with small children. Employers believe that providing an ad-hoc information is enough for their understanding of the issue. The principle position of employers is not to announce pro-family policy though they may declare support mechanisms for their employees in mass media. As a result, employees are insecure in most situations when they need to make decisions in favor of their family duties. Often employers insist that men with family duties do not make any demands, though they know for sure that men do not make demands due to their low awareness of the employer's policies. At any rate, employers prefer an unofficial deal instead of open procedures. This applies to cases of emergency that put men to risk of new employment stress situations.

Super mortality among men of working age in Russia is well known. The widely accepted causes are substance abuse, traumatism, traffic accidents, violent acts and low wages. We believe that a crucial factor of male mortality is unbalanced workload caused by the need in facing severe competition on the labour market and meeting increasingly stringent fathering requirements, particularly if a partner's educational background is similar or higher (Zdravomyslova 2015).

Conclusions: obstacles to establishing balance between family and professional roles among fathers

To conclude, we would name several reasons why fathering roles remain outside the area of mainstream politics in terms of the state or business:

1) Lack of public discussions on new fathering in mass media and popular literature. Discussions on new fatherhood are still rare in the Russian society. This is an underexposed issue in the media and popular literature, and publications on these issues appeared in sociological articles as recently as 10-15 years ago. These articles describe the ways of communication of fathers and children having discursive correlation with gender equality issues. However, value of fatherhood, its personalization and privacy in terms of freedom of choice and powerful force that can transform demographic characteristics of the society and the quality of new generations of children is not on the agenda.

2) Insufficient information about European situation in terms of the new fathering culture with legislative and institutional changes in public-private sector. There is more information available about the situation in the Nordic countries as they have a longer history and tradition of implementation of social and economic measures aimed at the fathers' involvement in various areas of family life. The fact that there are experienced scientists in these countries, who have conducted the multi-year researches on the issue, has a crucial role on the advancement of these studies in Russia. Along with that, number of NGOs that have been promoting pro-fathering policies and introducing fathering practices became well-known in northern regions of Russia within the framework of cross-border cooperation.

3) Deficit of the researches in Russia on fathering and fatherhood at the regional and national scale and most importantly the absence of statistical series of research, that are necessary for drawing reliable conclusions on the changes in fathers' parenting practices.

4) Like European countries, Russian society is not prepared to differentiate between parenting and fathering. For instance, parenting closely relates to men's role of a breadwinner. In contrast, fathering implies specific personal characteristics distinguishing between individual fathers. However, personal characteristics are determined in historical and cross-national perspective and depend on a form of a state structure. That will always be a source of practices divergence in establishing the balance between family and professional roles even under globalization of labour employment regimes.

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NETWORKING OF SMALL CITIES TO GAIN SUSTAINABILITY*

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Abstract. The paper addresses networking as a basis for cooperation of small cities leading to more sustainable regional development at the city, regional, and federal level. It is shown that networking of cities can contribute to increasing sustainability in many ways. Still, additional research is needed to adjust best management practices discussed in the relevant academic literature to the peculiarities of transition economies. The objective of the research presented in the paper was to help regional and municipal authorities in the optimization of territorial development planning aimed at long-term sustainability. Research was carried out in Russia on an example of two regions, namely Perm Krai and Vladimir Oblast. The case study revealed that local authorities underestimate the potential of small cities in raising regional sustainability. Actually, a number of small cities in both regions have hidden competitive advantages but cannot realize them separately, whilst development of regional city networking is a fruitful approach to improve their socio-economic situation, and to boost sustainable regional development. Therefore, when planning regional development, federal and local authorities should regard the role of small cities, including disadvantaged and depressed ones, as potentially valuable members of a city network. Measures to embed small cities into different types of networks should be based on the thorough assessment of their resources, with the aim to develop collaboration of cities with mutually beneficial network externalities.

Keywords: sustainability, small city, networking, regional development, planning, specialization

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1. Introduction

The last decades have been characterized by the expansion of economics, politics and institutional relations (Vázquez-Barquero, 2003). In particular, collaborative networking on different levels, both in business and in state and municipal administration, is now attracting attention in many countries (Gemünden *et al* 1997; Nijkamp, 2003; Gustavsson *et al* 2009; Ge *et al* 2010), including emerging and transitional economies (Sheresheva, Peresvetov, 2012; Derudder *et al* 2013; Taylor *et al* 2014). The impressive development of some industries in BRICS countries is often attributed to the cluster policy conducted by governments with the aim to boost entrepreneurial innovation activity (Wolman, Hincapie, 2010; Bek *et al* 2013; Santana *et al* 2015), and networking of cities is expected to grow in importance as a way to sustainable regional development (Satterthwaite, 1997; Camagni, 2002; Campbell, 2013; Nijkamp, Perrels, 2014).

Still, not all the economies are equally successful in pushing forward networking and entrepreneurship in and between cities, and thus to ensure their sustainable development. In particular, Russia falls behind to get the effect from collaborative networking of municipalities, local communities and organizations, in contrast to many European countries (Gustavsson *et al* 2009; Campbell, 2013), as well as BRICS countries (Xu, 2008). Therefore, this study aims to shed light on the impediments and prospects of small Russian cities' sustainable development, with the main focus on networking.

In this research, two Russian regions were selected, namely Perm Krai and Vladimirsky Oblast. These regions were chosen for a number of reasons. First, they represent different parts of Russia. Perm Krai is located in the Kama River basin, close to Urals, while Vladimirsky Oblast is a Central Russia region. Second, the two regions have different economic potential, history and development dynamics. Third, the number of small cities is equal (18 in each region), their significance for the regional economy is quite high; their initial specialization is different, some cities being in good condition, some facing depression. Finally, there is much space for improvement, since there is a good potential for diversification and sustainable development of their economy.

This article is structured as follows. Section 2 presents an overview of the literature on the system planning and spatial planning approach in connection with network concept, as well as on small cities' networking as an important factor of sustainable regional development. In Section 3, prospects are discussed to plan and develop networking of small cities for sustainability in Russian regions. The results of a case study are presented in Section 4. Finally, conclusions and suggestions for future research are provided.

2. Networking of cities and sustainable regional development

During the last decades, there have been major shifts in cities' roles in securing sustainable regional development. As Jessop (1997) underlines, these shifts were also reflected in increased interest in, and emphasis on, the 'competition state' at the national (and, at least in Europe, supranational) level and the 'entrepreneurial city' at both regional and local levels. The understanding is growing that the prosperity of any region directly depends on the sustainable urban development (Wheeler, Beatley, 2014). This paradigm is perceived as improving the quality of life in cities, including ecological, cultural, political, institutional, social and economic components, without leaving a on the future generations (Jenks, Dempsey 2005; Hopwood *et al* 2005; Flint, Raco, 2012; Yigitcanlar, Teriman, 2015; Larson *et al* 2017). A large number of competitive smart cities of different size is now recognized

as an important condition to address meta-issues of climate change, urbanisation, citizen engagement and resource efficiency (Taylor, 2005; Hollands, 2008; Angelidou, 2014; Daher *et al* 2017; García-Fuentes, De Torre, 2017; Taylor Buck, While, 2017).

At present, cities are regarded as economic actors developing their own development strategy, competing between and cooperating with each other (Camagni, Capello, 2005). This view is consistent with the city network paradigm (Capello, 2002) in which it is justified that networking - intended in a micro-economic sense as cooperation among individuals, firms and institutions concerning collective action, public/private partnerships and the supply of public goods – “may become a scientific paradigm for interpreting the macroscopic spatial behaviour of collective agents like cities, competing and cooperating in the global arena where locations of internationally mobile factors (professionals, corporations, institutions) are negotiated and large territorial projects are decided” (Camagni, Capello, 2005: 498). Similar to cooperation and collective action of individual economic actors with common interest inside the city, common interest might be defined "through new urban governance tools" (Camagni, Capello, 2005) to the entire local community, as well as to groups of cities.

In this connection, Arnold *et al.* (2016) point out an important role of policy entrepreneurs - well-resourced and well-connected individuals - in advocating and securing the adoption of policies, including forming new mechanisms for building a desirable urban future. They underline that policy entrepreneurs are more successful when they have a greater number of sympathetic coalition partners. That means that entrepreneurial mind in contemporary city management is of crucial importance (Jessop, 1997), as well as readiness to network and build long-term relationships, taking into account the needs of all external and internal stakeholders, including entrepreneurs, local communities, tourists, investors, potential migrants, etc. (Anholt, 2007).

Jeong *et al.* (2015) examine a typology of network cities by linking a range of mobility environments to small and medium-size cities in a socioeconomically disadvantaged Dongnam region, Korea. They had shown that some socio-economically disadvantaged small cities in the region where mobility environments are relatively weak were excluded in forming urban networks. Therefore, functional linkage to the major cities and the expansion of passenger and cargo based links are of crucial importance for small cities that aim to gain sustainability through networking.

The possibility of using system planning tools to ensure sustainable development of cities is actively discussed in the framework of spatial planning approach (Runhaar *et al* 2009; Angelidou, 2014; Albrechts, 2015), as well as network concept (Campbell, 2013). There is a substantial body of research on the role of cities as “key nodes in an increasingly globalized economy” (Derudder *et al* 2013), based on Castells’ argument for a network society that encompasses a “global network” of cities that cannot be reduced to “a few urban cores at the top of the hierarchy” (Castells, 1996). There is clear evidence now that networks of cities create a synergy, boosting both their own sustainable development, and regional economic growth (Meijers, 2005; Van Eck *et al* 2005; Van Oort *et al* 2010). Frenken and Hoekman (2006) analysed a set of regional economic indicators of European countries (EU-25) and conducted a factor analysis of economic growth in 1088 regions of Western Europe. Using regression models, they had shown that regions with intensive networking of cities (of different size) demonstrated higher economic growth than those without networks of cities. The same conclusion was made by a number of researchers who studied networks of cities in Japan, Korea, China, and some other countries (Kwon, 2009; Sohn, 2011; De Vries, 2012; MOLIT, 2014).

Most studies on network interaction between cities and their impact on the regional economic growth tend to focus on global network of major cities, on mega-regions, and growth corridors (Castells, 1989; Batten, 1995; Jacobs, 2000; Taylor, 2004; Taylor *et al* 2002; Hall, Pain, 2006; Taylor *et al* 2008; Harrison, 2010), while the

literature on the feasibility and importance of embedding small cities in networks remains scarce (Cross, 2001; Garcia, 2011; Dril *et al* 2016).

At the same time, small and medium-sized cities are much more numerous than large ones; in the next decades, the world population will largely depend on small cities' growth rate and welfare, especially in developing countries. It is expected that in 2007-2025 the world urban population will increase by 1.3 billion people, in 2025-2050 by 1.8 billion more, with the highest forecasted growth in India (an increase of 261 million in 2007-2025, and of 377 million in 2025-2050) and in China (an increase of 197 million in 2007-2025, and of 205 million in 2025-2050). As a result, China and India will account for 36% of the entire urban population growth. This percentage is forecasted to be higher than the input of the next nine countries (Nigeria and DR Congo in Africa; Bangladesh, Indonesia, Pakistan and Philippines in Asia; Brazil and Mexico in Latin America; and the United States). It is expected that by 2025 there will be 48 megacities in the world but their joint share in the world urban population will remain only 7%, while small urban centers are expected to grow fast. According to UN forecast, the number of people living in small cities will increase by almost 700 million, in medium-sized cities - by over 400 million, and in large cities (with 5 or more million inhabitants) - by 300 million. The spread of small cities where more than half of the world urban population is concentrated will further contribute to the emergence of new urban settlements (UN, 2008). As a result, sustainability of small cities is critical to well-being of any region in the world (Knox, Mayer, 2013).

Therefore, there is a need in additional research on the role of small city networking in connection with the issues of sustainable regional development. An important subject of study is planning and management of relationships between cities to improve the ability of all city stakeholders to achieve their aims, and to ensure joint prosperity in the long run. To address these gaps, we analysed the development state of small cities in two Russian regions, and proposed ways to "build bridges", to develop networking linkages, and to combine municipal resources and competencies for more sustainable regional development.

3. Small cities in Russia: prospects of networking for sustainability

In Russia, 70.8% of all cities are small (with population number less than 50,000) (Rosstat, 2016). The number and share of small cities varies by region, but not significantly. As to the Perm Krai and the Vladimir Oblast, there are 18 small cities in, which is more than 70% of the total number of cities in both regions. To compare, in the Tula Oblast there are 13 small cities, or 68% of the total number of cities (Rosstat, 2016).

In total, there are more than 780 small cities in Russia, extremely diverse in their current state. Many of them are unique in their history, cultural heritage, geographical position, and economic specialization. Some are quite successful in their development but there are also many depressive small cities, with low quality of life, lacking sufficient development conditions. This cannot be recognized as only Russian local specifics, since there is evidence that there are problems in

At the same time, the problems of Russian small cities are to a great extent the result of the post-Soviet decades, since no attention was paid to their development on the federal level. Such tendency to neglect the role of small cities was partly based on some modern theories of spatial planning and regional development which interpreted small cities as a deterrent for the sustainable regional development. Nowadays, both theory and practice prove that correct consideration of the role and place of small cities as network actors at the planning stage helps to combine their scarce resources with those of larger and more successful cities, to overcome negative trends in depressed small cities, and thus to boost sustainable regional development (Leigh, Blakely, 2016).

At present, a number of Russian researchers propose to abandon the idea of maximizing competition between cities and regions, which was widespread in the first post-Soviet decades, and to move from “the red ocean of bloody competition” (Kim, Mauborgne, 2014: ix) towards prioritizing coopetition strategy (Pasquinelli, 2013; Baggio, Sheresheva, 2014) in public administration and management. They underline that regional sustainability can be achieved through equalization socio-economic development of cities with different size and specialization within a single regional network, taking in account peculiarities of local institutional environment and existing local experience of spatial and socio-economic planning (Oborin, 2010; Meteleva, 2011; Dovbysh, 2016).

In Russia, to organize an effective planning process for creating a network that embrace cities of different size, a number of basic points should be ensured. Some are standard principles of planning network structure and mutual relationships, while others are based on local specifics.

First of all, it is necessary to take into account the historically conditioned environment for the socio-economic development of cities that are going to be network members. Huge geographical space, as well as XX century history of Russia, have led to the uneven distribution of transport connections in different regions. Many small and medium-sized cities do not possess sufficient transportation links with other cities, including administrative centres, even within the same region. In our research, we paid special attention to this point, since the local impact of passenger, cargo and migration flows on forming a network city within a region was approved to be of high importance (Jeong et al 2015). From our point of view, if the main goal is to gain regional sustainability, it doesn't make sense to create a network that consists solely of developed cities and excludes socio-economically disadvantaged settlements. In case they will be "left to themselves" and stay poorly connected to those cities that have entered the network, depressive tendencies may increase and lead to decrease in overall sustainability of a region.

There is evidence that sometimes the rapprochement with bigger cities or urban centers of a neighbor region appears to be the preferred path for small cities from a region where connections between such settlements are weak. Such "escape from own region" may be due to the shortsightedness of regional authorities that neglect of the interests of local small cities, but sometimes economic expediency may be the cause.

This evidence is important, since it questions some aspects of current norms accepted in public administration in Russia. Namely, KPIs of every region are now calculated and reported separately, just in the outdated logic of "competition, not cooperation". A number of institutional changes are needed to improve institutional environment. First of all, KPIs should be introduced on the federal level that will promote the development of mutually beneficial entrepreneurial networks and networks of cities, both within a region and interregional. Another conclusion that follows from the above is that it is necessary to focus on identifying strengths and weaknesses of each city in the region, to analyze the existing traffic flows between cities, and to plan the measures for optimization functional and transport links in compliance with the regional development strategy.

Secondly, regional and municipal authorities must take into account the existing structure of activities and resources allocation, as well as the potential for ensuring a balanced resources allocation and mutual benefits for network members, including prospective inputs and outputs of small cities located in the region. This point needs to be underlined, especially in connection with the need to understand more precisely what planning tools should be applied to ensure the evolution of low rank-size cities into an effective regional network, and what network structure may be considered as the most appropriate for this purpose.

In order to design and manage effective networking between cities on the basis of their functional specialization and resource allocation, spatial policy of local authorities should be based on elaborated mechanism enabling effective allocation and exchange of resources, competences, activities, and services, provided by each city,

taking into account the interests of all stakeholders (Meijers, 2005; Green, 2007). As to preferred type of network, functional specialization planning of different cities and settlements within a regional network structure implemented on the basis of polycentric model is regarded by many authors as a better way to reduce transportation costs, to optimize the structure of resources' consumption and to enhance effectiveness of state support in transition economies (Mingaleva, Pazdnikova, 2009).

The rationale of directions and measures to increase the attractiveness of small and medium-sized cities as elements with prospective functional specialization in relevant fields of activity, determined in the framework of regional planning, can help to optimize the overall economic specialization of a region, to improve the transport infrastructure that allows reliable functional network linkages, and to align network activities with the main goals of regional strategy.

4. Possible directions for networking of small cities: A case study of two Russian regions

Two Russian regions, namely Perm Krai and Vladimirsky Oblast, were selected to conduct research on possible impediments, opportunities and directions for networking of small cities in Russia. There are 18 small cities in each of the two regions, some of them demonstrate good socio-economic conditions, some facing stagnation or depression. At the first stage, desk research and case study methods were chosen as the most appropriate. In this article, some preliminary results gained in 2017 are discussed.

The 18 small cities of the Perm Krai (Table 1) have been formed in the Soviet Union as centers for industrial production and mining. Many of them are single industry cities which faced degradation after the crash of the USSR. For example, Gubakha and Kizel, previously known as developed centers of coal mining, are now depressive territories. Alexandrovsk and Nytva still remain centers of engineering, although their socio-economic status and their attractiveness for people have deteriorated significantly. Krasnovishersk is a single industry city - a regional center of the pulp and paper industry. It counts now for one of the most prospective small cities in the Perm Krai, gradually restoring its pace of socio-economic development. As a whole, small cities of the Perm Krai have a predominantly industrial specialization, while transport infrastructure is not well-formed.

Based on the case study data, 18 small cities of the Perm Krai can be conditionally divided into three main groups:

Group 1. Sufficiently developed cities: Alexandrovsk, Chernushka, Chusovoy, Dobryanka, Gremyachinsk, Gornozavodsk, Kudymkar, Vereshchagino.

Group 2. Conditionally disadvantaged cities: Chermoz, Gubakha, Okhansk, Osa, Nytva.

Group 3. Depressive cities: Cherdyn, Kizel, Krasnovishersk, Ochyor, Usolye.

The eight sufficiently developed small cities (group 1) are mostly single industry cities. There are several large enterprises in these cities that are quite successful in production of goods supplied not only for the Perm Krai and other Russian regions, but also for export. So, in Gremyachinsk there are two forestry enterprises *Gremyachinskiy* and *PLPK*, car accessories plant *Autospetsoborudovanie*, gas compressor station *Gremyachinskoye*. In Gornozavodsk there is cement factory *Gornozavodskcement*, a reliable supplier of all large building materials producers in the Perm Krai. In Alexandrovsk, there are two large enterprises: *Alekstrom* (pilot plant for the production of wall materials), and *Aleksandrovsky Machine Building Plant* that supplies mining equipment to different countries of Eastern Europe, Southeast Asia, and Africa. Vereshchagino, Kudymkar, Chernushka, Dobryanka, and Chusovoy are also quite promising in the corresponding areas of industrial specialization, as they have a diversified economy, growth potential in existing industries, and good transport accessibility. Dobryanka

and Chusovoy also have a significant growth potential in tourism and recreation, primarily in ski tourism and training services for professional athletes. As an example, the Russian Championship of Snowboarding is held on the basis of the Takman ski resort in Chusovoy. Since there are different types of activity in these eight small cities, their population does not decrease, amounting to 35-45 thousand people.

Table 1. Economic specialization of small cities in the Perm Krai

City name	Contemporary specialization	Potential specialization
Chermoz	Agriculture, industrial production	Agriculture, industrial production, tourism and recreation
Cherdyn	Industrial production	Industrial production, tourism and recreation
Usolye	Agriculture, industrial production	Agriculture, industrial production, tourism and recreation
Okhansk	Agriculture, industrial production	Agriculture, industrial production, tourism and recreation
Gremyachinsk	Industrial production	Tourism and recreation, transport (developed automotive connections, two railway lines)
Gornozavodsk	Industrial production	Transport (developed automotive connections to big regional cities, including Perm, railway line)
Alexandrovsk	Industrial production	Transport, tourism and recreation (developed automotive connections, route of regional significance: Solikamsk - Chusovoy – Kungur)
Ochyor	Single industry city in a state of depression	Tourism and recreation (poor transport accessibility)
Krasnovishersk	Single industry city in a state of depression	Tourism and recreation (poor transport accessibility)
Kizel	Industrial production	Tourism and recreation (automotive route of regional significance, railway connections to big regional cities)
Nytva	Single industry city in a state of depression	Tourism and recreation (poor transport accessibility)
Gubakha	Industrial production	Industrial production, transport, tourism and recreation (highly developed transport network: automotive & railway connections)
Osa	Industrial production	Industrial production, tourism and recreation (poor transport accessibility)
Vereshchagino	Industrial production, agriculture	Transport, tourism and recreation, industrial production (The intersection of the Moscow-Vladivostok railway and the regional highways Ochyor- Vereshchagino-Siva)
Kudymkar	Food industry	Food industry, agriculture, tourism and recreation (poor transport accessibility)
Chernushka	Industrial production	Transport, tourism and recreation, industrial production
Dobryanka	Industrial production	Transport, tourism and recreation, industrial production
Chusovoy	Industrial production	Transport, tourism and recreation, industrial production

Source: case study data

The five conditionally disadvantaged small cities Chermoz, Okhansk, Nytva, Gubakha, and Osa (group 2) are facing common structural problems. Financial difficulties of city forming enterprises are the main cause of socio-economic instability in these cities. Nevertheless, their transport accessibility, cultural heritage and favorable ecological conditions give them good prospects in the field of tourism and recreation. This allows us to positively assess the future of these cities within the framework of their traditional specialization, supplemented by new directions of development.

For the five depressed small cities Cherdyn, Usolye, Kizel, Ochyor, and Krasnovishersk (group 3), the common negative features are bankruptcy of local enterprises, population outflow, degradation of industrial and social infrastructure. At present, it is impossible to restore the initial industrial specialization of these cities. The only possible solution is to find some new directions of development, better within a regional network of cities. For example, Krasnovishersk can become a start or intermediate point for a variety of tourist routes along the Northern and Subpolar Urals, while Kizel and Usolye can become industrial transport network members, with access to Perm, Solikamsk and Berezniki through Gubakha (see Fig. 1).

Our analysis has shown that the 18 small cities of the Vladimir Oblast can also be divided into three groups, with similar problems in each group:

Group 1. Sufficiently developed cities: Vyazniki, Kameshkovo, Kirzhach, Petushki, Raduzhny, Suzdal, Yuryev-Polsky.

Group 2. Conditionally disadvantaged cities: Gorokhovets, Kolchugino, Melenki, Pokrov, Sobinka, Sudogda.

Group 3. Depressive cities: Karabanovo, Kosterevo, Kurlovo, Lakinsk, Strunino.

Thus, we can conclude that some of the small cities in the Perm Krai and the Vladimir Oblast with historically developed industrial specialization are experiencing problems associated with an unfavorable socio-economic situation, the decline of industrial and social infrastructure, and the outflow of population into more developed cities, first of all to the regional centers. Since Vladimir Oblast is not so far from Moscow, many people from this region are also moving to the capital of Russia. In Perm Krai, the socio-economic difficulties of a number of small cities are additionally exacerbated by weak transport connections. Nevertheless, the historical, cultural, tourist and recreational potential of these cities, combined with a favorable ecological situation, allows the development of various types of tourism and sports activities, agriculture and food industry. In case of changing their functional specialization, these cities will possess more reliable basis to enter city network as valuable members. However, alignment of all stakeholders' interests is crucial, especially of citizens and local authorities, to ensure joint activities in achievement of this goal.

Based on the analysis of current and prospective specialization of small cities in Russian regions, three most applicable types of small cities' networking were identified with different core functional interaction, namely industrial transport network (ITN), agricultural network (ACN), tourist and recreational network (TRN).

1. Industrial transport network. The core functionality for ITN is transport infrastructure. Therefore, closeness of regional centers to the main railway lines and highways, especially federal and regional, is of key importance. Figure 1 shows the example of prospective ITN in Perm Krai. There are two triangles depicting transport links between the small towns Kizel-Aleksandrovsk-Gubakha (the first triangle), Gremyachinsk-Gornozavodsk-Chusovoy (the second triangle), both connected to the regional center Perm through large railway nodes (Chusovoy-Gubakha-Perm line). The third triangle includes three large transport nodes: Gubakha as the central city of the network, as well as two large cities Berezniki and Solikamsk, forming the core of the Berezniki-Solikamsk industrial hub. There is also connection to Usolye, a small town for which tourist specialization is suitable due to its location on the Perm-Solikamsk railway line.

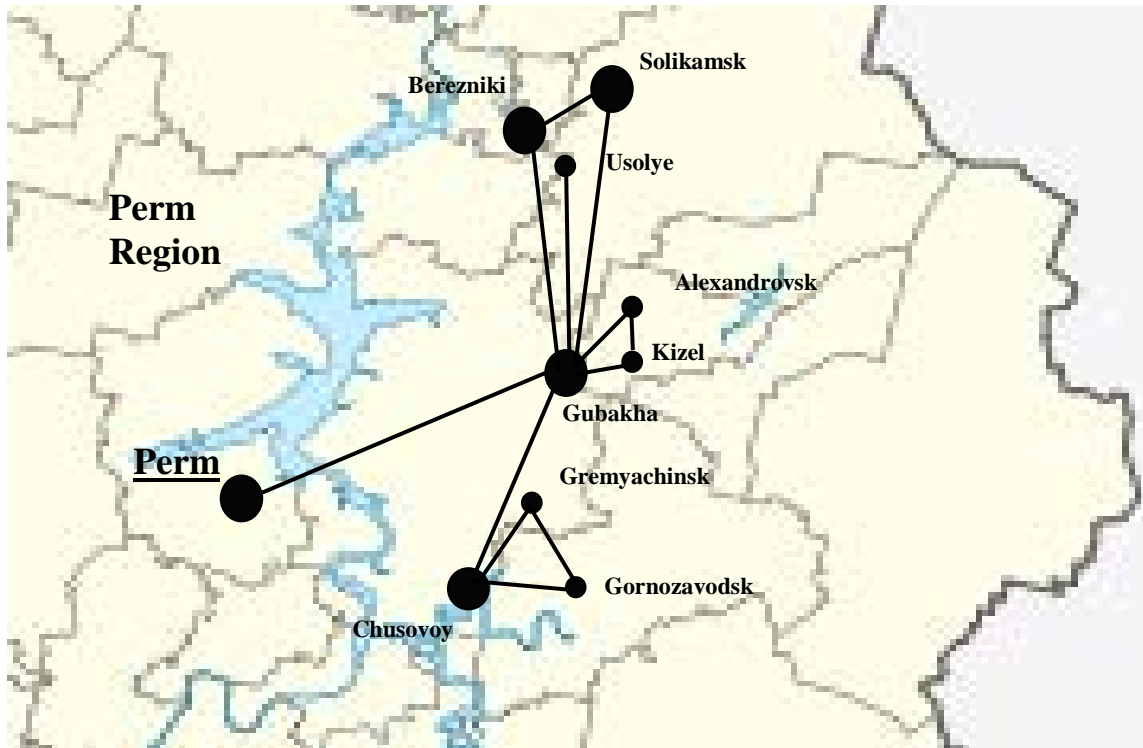


Fig.1. Prospective ACN in the Perm Krai

Source: overlaying graphic material on a geographic map available at: <http://www.mojgorod.ru/>

2. Agricultural network. ACN is based on sectoral specialization and covers spatially close regions and cities (in the Perm Krai these are Kudymkar, Oktyabrsky). Oktyabrsky district, with a center in the Oktyabrsky urban settlement (30 thousand citizens), may be regarded as an example of prospective ACN central node. Oktyabrsky district is located in the southeast of Permsky Krai, far from the regional center, at present with insufficient direct communication with Perm and other large cities of the region. At the same time, there is a railway station in the Oktyabrsky settlement. Oktyabrsky district borders in the north with the Ordinsky and Suksunsky districts of Perm Krai, in the west - with the Uinsky and Chernushinsky districts of the Perm Krai, in the south - with the Askinsky District of the Republic of Bashkortostan and in the east - with the Krasnoufimsky District of the Sverdlovsk Region. Most of these districts are known for their pronounced agricultural production structure. The Oktyabrsky is one of the leading agricultural districts in the Perm Krai. Therefore, it can become a transport hub center for ACN built by several districts of Perm Krai and neighboring agricultural districts from other Russian regions (Fig.2).



Fig.2. Prospective ACN in the Perm Krai

Source: overlaying graphic material on a geographic map available at: <http://www.moigorod.ru/>

3. Tourist and recreational network. TRN is preferable within the framework of mixed specialization. This type of city network can embrace settlements situated quite far from each other but connected by common goal (Mingaleva, Bunakov, 2014; Sheresheva, 2016; Oborin, Sheresheva, 2017). As an example, the Vladimir Oblast is a key region for the Golden Ring of Russia - the main and most popular tourist route around historical provincial cities of central European Russia since Soviet times (the brand was founded in 1967). The regional center Vladimir and the small ancient city Suzdal are the central nodes of this route. There is also a registered tourist brand Small Golden Ring that connects a number of historical small cities of Vladimir Oblast. These cities possess developed tourist infrastructure and can themselves function as central points for various tourist routes. To improve socio-economic situation in a number of depressed cities in the region, such as Karabanovo, Kurlovo, and Lakinsk, it is possible to create a TRN with participation of these small cities (Fig.3). The possibility of such development is ensured by their cultural potential, as well as by their comparative proximity to the cities that are part of the Small Golden Ring. Thus, depressed small city Kurlovo is only 18 km from famous Russian city Gus-Khrustalny, a single industry city with historical glass and crystal plant that is now slowly restoring after difficult post-Soviet decades. The best decision for both cities could be the reorientation of their economic specialization into a tourist-recreational one, taking in account that railway station in Kurlovo ensures good transport connection. Another depressed small city Lakinsk is located on the Nizhny Novgorod-Vladimir-Moscow highway M7 and can become an important transport hub in the regional city network.



Fig.3. Prospective TRN in the Vladimirsky Oblast

Source: overlaying graphic material on a geographic map available at: <http://www.mojgorod.ru/>

Given that most of the small cities of the Vladimir Oblast have historical and cultural sights, we can conclude that tourism is one of the most promising areas for regional sustainable development. In addition, at present hospitality and catering infrastructure is growing fast in the Vladimir Oblast, as well as the infrastructure of medical and health tourism, active, agro-, gastro- and ecotourism, industrial tourism, pilgrimage, etc. Therefore, it is advisable to form new tourist routes covering small cities in the framework of TRN.

For the Perm Krai, it is advisable to create a TRN with the main focus on sports tourism (including speleotourism), historical and patriotic tourism, industrial tourism, pilgrimage, as well as medical and health tourism (Oborin et al., 2016). Transport accessibility and hospitality infrastructure are the main impediments to be removed for the successful TRN development in Perm Krai, while Vladimirsky Oblast has excellent transport connections, both within the region and with other neighboring regions.

Conclusions

This paper describes results of the study carried to investigate network cooperation of small cities as a prospective way to improve their socio-economic positions. Research was carried out in Russia, selecting two regions, namely Perm Krai and Vladimir Oblast. It addresses the capability of city network to enhance sustainable regional development in transition economy. The main conclusions are as follows.

Ensuring sustainable regional development assumes a thorough assessment of the resources of small cities, with the aim to reveal their potential as valuable network members, to define the adequacy of their contemporary specialization to the requirements of the entire region, and to choose the best ways to develop city network of preferred type. This requirement should be especially stringent for those cities that lag far behind the leading regional cities in terms of socio-economic status, growth potential, and attractiveness for city stakeholders. It is also necessary to forecast the network externalities, both positive and negative, including the possibility of strengthening the competitiveness of disadvantaged and depressed cities without damaging sustainability of more developed network members or significantly reducing the overall efficiency of the network.

Based on the assessment, regional and municipal authorities need to define the preferred network type, and to welcome development of clear norms and rules for the distribution of basic services and functional activities among all cities in such a network. At the same time, combining efforts and the distribution of functional activities does not mean abandoning the individuality of cities. The uniqueness of each city should be regarded as an additional contribution to the overall sustainable development of the region. From their side, even the smallest cities should position themselves not isolated from other administrative entities, but as part of collaborative network that contributes to the overall development of the region.

Effective strategic planning is of high importance, since it can significantly help in ex-ante alignment of network members' interests, and to define priorities of joint development. This can serve as a solid base for joint projects implementation, exchange best management practices, experience and resources, as well as mutually beneficial coordination of joint activities.

When planning a network, special attention should be paid to the balanced spatial development of the region as a whole by linking long- and medium-term plans, strategies and concepts of spatial development on the city, district, regional, and sometimes inter-regional levels. The coordination of general development plans with the plans of individual cities is particularly important. A special section should clearly define aims, directions and scope of interactions of every city with other cities in the network.

The demand for a strict interconnection of municipal and regional development plans significantly complicates all planning activities. However, it is essential to have a joint plan of networking within a region, consistent with the real capabilities and potential of cities, including the small ones, as a reliable basis for sustainable development.

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ECONOMIC SUCCESS AND SUSTAINABILITY IN PHARMACEUTICAL SECTOR: A CASE OF INDIAN SMEs

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Abstract. Our paper examines one of the key aspects of the organizational economics – the factors of economic success and sustainability of the pharmaceutical small and medium enterprises (SMEs) in India. Indian pharmaceutical industry is known for its high fragmentation and weak generic based R&D initiatives. The study uses inflation adjusted cross section data for 20 SMEs in the year 2013-2014 and applies OLS regression model with robust standard errors. It has found that exports, R&D expenditure, and previous year profits have exercised positive impact on SMEs' growth. The negative, yet statistically significant influence of advertising and marketing expenditure highlights the need to rethink about strategic management policies of SMEs. Our results suggest that SMEs are required to pay more attention towards the global market expansion and value creation through R&D investment, as a part of their long-term growth and survival strategy.

Keywords: economic success, sustainability, pharmaceutical industry, economic growth, R&D

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1. Introduction

Organizational economics is distinguished by its special focus on the structure, interaction, operation and implication of organizations (that are distinguished here from the institutions (which become the subject of the

analysis attributed to the institutional economics) and are typically represented by firms – micro-enterprises, small and medium enterprises, or large enterprises (or even multinational corporations) alike), as well as its interest in drawing a link between competition and organization (Argyres et al., 2016). With regard to the above (and within the provided context), understanding the factors that lead to growth of firms (micro, small or large) becomes a very challenging endeavour that represents one of the key issues of organizational economics. However, it is not always that simple to conduct such an analysis since the data on many firms is unavailable and is very expensive to obtain.

Our research focuses on the factors of growth of the pharmaceutical small and medium enterprises using a sample of Indian pharmaceutical firms. Indian pharmaceutical industry is a knowledge intensive industry and majorly focuses upon export revenue generation from generic drugs manufacturing. It is globally ranked third largest industry in volume and thirteenth largest in value of pharmaceutical products (Annual Report, Department of Pharmaceuticals, Ministry of Chemistry and Fertilizers 2009-10). This industry is highly fragmented in nature and there were 10,563 pharmaceutical manufacturing units in India, comprising 8174 formulations and 2389 bulk drugs based units as per first Pharmaceutical Manufacturing Census of India in 2011 (Government of India, 2012). Though this industry is led by large firms but small and medium enterprises (SMEs) are also performing very well. It would be pertinent to explore which factors contribute in growth of SMEs in the Indian pharmaceutical sector.

Against this backdrop, the key objective of this paper is to analyze the determinants of growth in the Indian pharmaceutical SMEs for recent time period i.e., 2013-2014. The Indian pharmaceutical industry has been chosen as a subject of this research due to its peculiarity and uniqueness with regard to its development under the process patent regime introduced in 1970. Following the patent regime introduction, Indian SMEs successfully and creatively “copied” patented innovative products of foreign multinationals making them cheaper and more affordable to the less wealthy Third World customers (Mazumdar and Rajeev, 2009). This gives us enough material for studying the organizational economics and the growth and development aspect of small business enterprises represented here by the Indian small and medium enterprises (SMEs) in the pharmaceutical sector. The Indian flourishing pharmaceutical industry and the SMEs that prospered using the installed regime met the harsh reality when, following the intellectual property rights debate and signing the WTO agreement, India amended the Patent Act of 1970 for the first time in 1995 and then again in 2005.

Jane Bower and Sulej (2007) as well as Kumar et al. (2004) point out that following the changes related to international patents, SMEs in the Indian pharmaceutical industry had to seek for the new strategies in managing the business organization, some of them being American-inspired. Pradhan (2008) describes that evolution pointing out that the increasing number of Indian Transnational Corporations (ITNCs) during that turmoil experienced fundamental changes in the nature and scope of the investments, expansion into the new industries and sectors, as well as the emergence of India as an important region for trans-border activity. Chaturvedi and Chataway (2006) show that Indian firms did not fall into despair but managed to come up with many innovative ideas related to their management solutions and the structure of the organizational scheme and functioning. All the above makes them a promising subject for the research.

The rest of the paper is organized as follows: Section 2 provides a literature review. Section 3 encompasses description of databases and discussion on conceptual framework. Section 4 elaborates on the applied methodology. Section 5 focuses on results and discussion, while Section 6 sums up findings of the study and comes up with the discussion of main results and implications for organizational economics.

2. Literature review

The last quarter of the 20th century showed that SMEs are not subjects deemed merely to exist on the peripheries of the modern economy. On the contrary, there are lots of issues which large enterprises cannot deal with (Ehrenberger et al., 2015). The position of SMEs has grown steadily and the number of SME employees has increased tremendously. Today, the SME sector has expanded, with small and micro-firms operating in both traditional and newly emerging sectors. SMEs use the most advanced technologies and bring innovations to the market. Quite often, they attract perspective labour force to the potential labour markets (Glazar and Strielkowski, 2010; Janda et al., 2013; Strielkowski and Weyskrabova, 2014; Strielkowski et al., 2016; Jankelová et al., 2017). Recent technological changes from the second half of the 1970s are sometimes called the “Second Industrial Divide,” and can undoubtedly be compared to the Great Industrial Revolution (Lapinskienė et al., 2014; Fornahl et al., 2015; Chamberlin, 2015). Certainly, the most important innovations were those within the ICT (Information and Communication Technologies) sector or energy sector (see for example Naisbitt, 1995; Jovanovic, 2001; Lisin and Strielkowski, 2014; Štreimikienė et al., 2014; Tvaronavičienė et al. 2015; Lisin et al., 2016; Zielińska, 2016; Tvaronavičienė, 2016; Strielkowski et al., 2017; Zemlickiene et al., 2017; Tvaronavičienė, 2017). Thanks to these developments, SMEs were able to break through some of the largest barriers to their development and competitiveness (Strielkowski, 2012).

Consequently, they increased their access to information, to geographically remote markets, and to financial resources. Additionally, they appeared to being capable of decreasing portions of their transaction costs, improving managerial techniques, and decreasing promotional costs. Of course, this is not an extensive list of the effects brought about by the ICT sector alone. Some of the innovations emerged from large enterprises; however, those innovations could not give them the same advantage over the SMEs that they had before. The development of ICT is so dynamic that it appears difficult to describe not only its economic effects, but also its directions. Innovations often appear in startling moments and under unexpected circumstances. The access to information of firms and individuals becomes cheaper and easier. Their future impact on business cannot be described in detail. As a result, an SME might as well own the same technologies and know-how as the large firms and be able to use them more effectively (Naisbitt, 1995).

Information and telecommunication technologies influence all spheres of the economy, from the production of goods to services. Banking, the exchange of information, mass media, consulting and education – all these can offer new services since ICT’s appearance (for instance eBusiness). The revolutionary nature of the ICT sector’s changes was not just a result of its influence on economic processes but was also due to its quick expansion into other, newer sectors. Less-developed countries were getting access to new technologies faster and easier than before. ICT development is global by nature, and this partly accounts for the rebirth of the SME sector all around the world. A specific example of technological progress can be seen in the food- and raw material-processing industry, which used to be the domain of large firms because of the sheer scale of the economics involved. It was in this industry that the first signs of new trends and technological development emerged. This was connected to the digitally run machines which were introduced as early as 1952. The process of substituting mechanical machines with electronic devices had begun. Electronically operated machines were suitable for producing short series and could be easily re-programmed in order to perform different tasks.

However, the processes described above did not stop the effect of the economies of scale. Large enterprises still were the first to implement new labor-saving technologies. As a result, large enterprises were surpassing SMEs in dynamics and labor productivity. The processing industry is the best example of that progression: its share in the overall employment decreased over the last decades mainly due to the reduction in the number of workplaces in large corporations. An increase in supply caused by a rise in labor productivity would be sufficient to satisfy the

escalating demand (which is still on the rise due to the growing incomes). This increase in employment in the sector is no longer a pre-requisite for that. Apart from that, the need to reduce costs forced large enterprises to attempt to improve their economic effectiveness. In order to be able to free the entrepreneurial abilities of their employees, most of those enterprises had to decentralize and de-bureaucratize their structures. These attempts took different shapes, from decentralizing decision-making within the hierarchical structures, to dividing a firm into independent units within the same ownership structure, to giving up certain types of economic activities (Carree, 2002; Białowas, 2016). Within the context of large firms' changes, this ceding of certain types of economic activities was important. Diminishing large enterprises through subcontracting, franchising, outsourcing and the creation of spin-offs led to the appearance of small (dependent or independent) enterprises on the market. The decisive motive for employment reduction in large enterprises was the existence of high labor costs. The protection of employees' rights, guaranteed by the unions, was also lower or nonexistent in the SME sector.

The decreasing employment rates in large enterprises led to the loss of many jobs and the inevitable threat of widespread unemployment. The role of the push factor – establishing a private business – was growing. Surely, such small businesses were very well-known for their high death rate; however, they could considerably increase the population of micro-enterprises (Storey, 1994). The changes in the ways that technological progress has helped SMEs are hard to fully explain. Storey (1994) tried to explain them basing his reasoning of Kondratiev's theory of long waves (Storey, 1994). Namely, he suggested that the new cycle that started in the 1990s could be characterized by new technologies and new spheres of business activity, which would be developed and exploited by the SMEs. As a result, the importance of small firms would grow. However, with the passing of time, some of yesterday's SMEs would have become today's large enterprises, and the other part of small enterprises would have been absorbed by (or fused with) large firms. Large enterprises would have gradually gained control over the economy, so the rebirth of the SME sector would be, according to Storey, a temporary thing (Storey, 1994).

Economic growth nowadays does not depend on an increase in employment. However, the creation of new workplaces still remains at the center of attention for economists, politicians and the general public. Technical progress today has clear labor-saving characteristics, with labor productivity at quite high levels and increasing even more. Therefore, it is no longer necessary to increase the number of workplaces to meet the market's demand for products. Consequently, many developed Western economies face constant and relatively high unemployment. Of course, unemployment does not have exclusively a technological nature. Its short-term determinants might be quite different; however, a constant influence of this technical progress is apparent. The war on unemployment at the turn of the new century is becoming a growing priority of economic policies in the majority of the highly-developed and developed world economies. The same target is being pursued by the less-developed economies, although their determinants of unemployment are quite different (Strielkowski and Čábelková, 2015; Bordea and Pelligrini, 2016; Bordea et al., 2017).

As long as the creation of workplaces is in the interest of every human society, there should be some person, entity or organization that will have the task of creating them. SMEs are being looked at as one of the most important channels of reducing the threat of unemployment through the creation of workplaces. For many years, technical progress was generated in large enterprises, which produced goods on a large scale. Labor productivity grew very fast and the number of workplaces in the large economic organizations increased accordingly. Empirical verification from the 1990s confirms that the dynamics of employment are negatively correlated with the size of an enterprise. Employment increases in small enterprises, and especially in micro-enterprises. This means breaking "Gibrat's Law," according to which the growth (in per cent) of the firm does not depend on its initial.

In neoclassical and industrial economic theory, the main goal of the enterprise is to maximize profits or minimize costs (so-called "duality theory"). According to neoclassical and industrial economics, the most successful

enterprise will be the one with the highest profits. Moreover, profits and costs are easily quantifiable factors that can be relatively easily measured. Therefore, it is not difficult to define an enterprise's "growth" using the neoclassical approach. However, enterprises in the real world may have goals other than maximizing their profits and minimizing their costs. Therefore, their measures of "success" might be not easy to put into quantifiable (or objective) terms. For instance, one can see that in small enterprises, financial performance and success is not the same thing (Kotey and Meredith 1997). The entrepreneurship route to growth and success is not just creative, but also opportunity-driven. According to Du et al. (2013), enterprise growth and success cannot just be explained by a single definition but is a rather complex and holistic fit and balance of several factors.

Some authors define firm's "success" as its ability to survive on the market for a period of at least two to three years (Carter et al. 1997; Boden and Nucci 2000). Therefore, a "successful" entrepreneur as an individual who started a business, built it up where no previous business had been functioning, and continued for a period of at least five years to the present profit-making structure. Other studies on the personality of entrepreneurs (Gatewood et al., 1995) defined "success" more in financial terms, linking the most common characteristics found among entrepreneurs to measures like return on investment, growth in sales, and yearly profit, or to the personal income of the owner/manager of the business. Furthermore, according to Driessen and Zwart (2006), three main characteristics of firm's growth and success can be deduced, followed by five secondary ones: (i) the need for achievement, (ii) an internal locus of control and (iii) a risk-taking propensity. The secondary characteristics include: (i) the need for autonomy, (ii) the need for power, (iii) a tolerance of ambiguity, (iv) the need for affiliation, and (v) endurance.

All in all, measuring and determining growth (and success) of a firm is not an easy task. Good data is required in order to conduct a comprehensive analysis and to deduce the factors determining the growth and success of a business firm. In general, it appears that the two groups of factors (those internal to the firm and external to the firm) can be outlined and employed for such an analysis. In addition, factors that could potentially have some positive impact on enterprise growth and success can also be used. In the section that follows we will present our conceptual framework that would enable us to determine the factors of growth of our chosen sample of business entities.

3. Conceptual framework

Our study employs real financial data from the audited annual financial statements for Indian pharmaceutical industry for the year 2013-14. The study uses cross section data of 20 SMEs listed in Prowess Database of Center for Monitoring Indian Economy (CMIE). According to the Marginal and Small Manufacturing Enterprises act of 2006 Indian manufacturing sector SMEs are defined as follows (Table 1):

Table 1. Manufacturing Enterprises – Investment in Plant & Machinery

Description	in INR	in USD(\$)
Micro Enterprises	Up to Rs. 25 Lakh	Up to \$ 62,500
Small Enterprises	above Rs. 25 Lakh & up to Rs. 5 Crore	above \$ 62,500 & up to \$ 1.25 million
Medium Enterprises	above Rs. 5 Crore & up to Rs. 10 Crore	above \$ 1.25 million & up to \$ 2.5 million

Source: MSMED (2006)

The SMEs that are subject of our research are considered on the above-mentioned basis. The subject of the exploration of determinants of growth is of greater research interest because such research studies may help policy makers to recommend and implement public or company specific policies that may stimulate and

maximize growth among the SMEs in this competitive industry. The dependent variable in our study is the growth rate of SMEs. This measure is an indicator of how much potential these SMEs carry. Total assets, sales and employment are the most widely used variable for measuring firm level growth. Various studies namely, Loi and Khan, (2016); O'Regan and Garwe (2006); Hermelo and Vassolo, (2007); and Olwale and Garwe (2010) have taken sales as a measure of growth in their studies. Present study also uses sales growth rate as dependent variable as sales is the most important indicator of growth from the managerial point of view. It is calculated as annual growth rate of total sales for the year 2014 (1):

$$SGR = \frac{\text{sales revenue of 2014} - \text{sales revenue of 2013}}{\text{sales revenue of 2013}} * 100 \quad (1)$$

where SGR is sales growth rate.

Table 2 presents and defines the list of dependent and independent variables that are postulated to be affecting the growth of SMEs in the Indian pharmaceutical sector.

These independent variables are briefly described below:

- **R&D Expenditure:** Existing literature indicates that R&D expenditure affects SME growth in a knowledge intensive industry such as pharmaceuticals. R&D investment is made by SMEs to generate maximum profits and increase sales. R&D investment is a part of long term survival and growth strategies in the Indian pharmaceutical SMEs, so present study also supposes a positive impact of R&D on sales growth.
- **Exports:** Bernard and Jensen (1995), in their seminal paper, analysed the links between exports revenues and productivity. Increased productivity further results in sales growth due to optimal costs.. Thus basing upon a common notion of exporting firms being more profitable and drawing from the prior art, it is hypothesized that export intensity may have positive impact on the profitability.
- **Leverage Ratio:** Extant studies suggest that SMEs faces serious difficulties while borrowing from external sources due to their size. These SMEs generally do not depend upon external finances for increasing their growth rate due to high cost of external debt financing. Previous studies indicate a negative relation between leverage and performance (Athanasoglou et al., 2008; Mohpatra, 2012; and Sun et al., 2013). It is hypothesized that leverage ratio has a negative impact on SMEs' growth.
- **Past Profits:** Past profits are expected to favorably and significantly impact SME's growth rate because with the increase in profits, SMEs can manage to invest in high returns project and thus may increase their growth.

Advertising and Marketing Expenditure: It increases level of brand recognition and creates a favorable position for the SMEs. In pharmaceutical industry small firms prefer to advertise locally and they emphasize upon promoting their products among local doctors. These selling techniques help them to grow rapidly. Basing upon prior art, it is hypothesized that advertising and marketing intensity positively impact the profitability.

Table 2. Determinants of growth in the Indian Pharmaceutical SMEs

Variables	Symbols	Description
Dependent Variable		
Firm Growth	SGR	Annual growth rate of sales of the firm _i
Independent Variables		
Research & Development (R&D) Expenditure	RDE	R&D expenditure of the firm _i
Exports	EXP	Total exports revenue of the firm _i
Leverage Ratio	LEV	Total debt as a percentage of total equity of the firm _i
Advertising and Marketing Expenditure	AMI	Advertising and Marketing expenditure of the firm _i
Profits	PAT	Profit after tax of the firm _i lagged for one year

Source: Own results

4. Methodology

In order to examine the determinants of growth, the study uses simple OLS regression with robust standard error to deal with the problems of possible autocorrelation and heteroscedasticity. Descriptive statistics are presented in Table 3.

Table 3. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
SGR*	20	7.18	28.64	-92.88	59.38
EXP	20	348.33	538.32	10.00	2043.00
RDE	20	26.57	63.98	0.40	243.80
AMI	20	100.04	156.72	0.00	646.30
LEV	20	0.47	0.53	0.00	1.70
PAT	20	92.14	145.40	-53.80	530.60

Note: *SGR is shown in % while other variables are measured in million INR.

Source: CMIE Prowess Database (2016)

Table 4. Collinearity Diagnostics

Variable	VIF	1/VIF
RDE	6.69	0.15
EXP	5.6	0.18
LEV	1.91	0.52
PAT	1.27	0.79
AMI	1.22	0.81
Mean VIF	3.34	

Source: Own results

Collinearity diagnostics confirmed no multicollinearity among the variables, as depicted in greater detail in Table 4. Our empirical model specifications are as follows (2):

$$SGR = \alpha + \beta_1 RDE + \beta_2 EXP + \beta_3 LEV + \beta_4 PAT + \beta_5 AMI + e \quad (2)$$

where the independent variables are those described above and e is an error term.

Results and discussions

Estimated coefficients are presented in Table 5. Table 5 shows very small but statistically significant coefficients for EXP, RDE, AMI and PAT.

Table 5. Estimated Coefficients of OLS Model

Variables	Coefficient	Robust Std. Err.	P values
EXP	0.02060	0.01143	0.05
RDE	0.00674	0.00251	0.00
AMI	-0.00997	0.00430	0.00
LEV	3.49755	2.87207	0.86
PAT	0.00870	0.00467	0.04
Number of obs		20	
Prob > F		0.04	
R-squared		0.47	
Root MSE		1.61	

Source: Own results

These smaller values are due to running the regression on absolute values. LEV shows a higher coefficient value due to ratio measurement but it is in insignificant relationship with SME growth. Exports are positively associated with SGR as consistent with earlier studies. Indian pharmaceutical SMEs also depend upon exports for their growth like their market leaders and knowledge spillover from global market participation helps firm to multiply their sales in the global and domestic markets (Lu & Beamish, 2006). R&D expenditure is significantly and positively associated with firm growth. Indian pharmaceutical industry is a knowledge intensive industry and even SMEs are expected to invest in generics R&D and produce value added products (Simanjutak et al., 2011). AMI depicts a negative yet significant relationship with SME growth, contrary to the extant literature. This negative relationship may imply that SMEs may not gain from the advertising at a point of time due to the high costs of advertising. Results might differ in the long run. Profit after tax is positively and significantly associated with, SGR as expected. Past profits definitely help firms by providing an internal investible fund to invest in R&D, which is more important with reference to SMEs due to their low capability of availing external finances.

Conclusions

The presented study has found that exports, R&D expenditure, and past profits have exercised positive influence on growth of SMEs. All these determinants are of high importance as they provide very powerful tools to SMEs to increase their growth rate. The negative and statistically significant impact of advertising and marketing expenditure highlights the need to adjust firm level strategies to increase the growth rate. Using the cross-section data is one of the major limitations of the study which can be taken for the future research. The sector of firm (mostly represented by the SMEs) played a dominating role in the creation of new workplaces in the last two decades of the 20th century in the economies of the developed nations). It constituted a considerable share of employment on a national economic scale in the majority of countries all over the world. The largest part of this increase happened before the end of the 1990s. Moreover, the gross increase in workplaces is still higher in small firms than in large ones. This comparison only holds true if large and micro firms are compared. In case the net increase of the workplaces for the last several years is taken into account, those differences do not seem quite as apparent. The future research could also focus on some unexplored dimensions. Policy variables may also be

included in such research. Researchers may conduct a panel level study in order to provide interesting insights. Two-way relationships may also be explored between growth rate and R&D expenditure. Our results seem to be important for the field of organizational economics and economics of small and medium companies, both in the pharmaceutical industry and in the other industries that heavily employ R&D and tend to grow and expand in the recent years.

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