

INNOVATION MANAGEMENT AND CORPORATE SUSTAINABILITY 2015

Proceedings of the 3rd International Conference





Innovation Management and Corporate Sustainability



IMACS 2015

Proceedings of the 3rd International Conference
21 – 22 May, 2015, Prague



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Edited by: Martin Lukeš, Ivana Svobodová, Jan Mareš, Jitka Srpová

© Published by Vysoká škola ekonomická v Praze, Nakladatelství Oeconomica – Praha 2015

ISBN 978-80-245-2092-6

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EMPLOYMENT OF PPP AS AN INNOVATIVE APPROACH TO IMPLEMENTATION OF TRANSPORT INFRASTRUCTURE PROJECTS IN THE CZECH REPUBLIC

**Barbora Antonová – Tomáš Kučera – Klára Lustigová –
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Abstract

The member states of the European Union (EU) and EU institutions have increasingly used public-private partnerships (PPP) to accelerate infrastructure development. Based on the experience from other countries, PPP is considered an effective means to achieve a higher appreciation of funds invested in various types of projects. The experience of other countries confirms the advantages of using PPP for operational efficiency, innovative technological and management skills, and the more active involvement of private players in public services. This paper summarizes the trends in the use of PPP in projects within the EU and discusses options for implementation of PPP projects in the Czech Republic.

Key words: public-private partnerships, transport infrastructure, infrastructure project, funding

JEL Code: H54, O18, R42

Introduction

In the last three decades, public-private partnership (hereinafter PPP) has become an innovative approach to the implementation and operation of a wide range of projects. According to Bing et al. (2005), there is no single universal definition of a PPP, but a PPP can be understood as a public mission with a private supply; public sector institutions are partners to private sector companies with which they place orders for services and later buy the services for clients (citizens), or they facilitate the purchase of the services.

Walton and Euritt (1990) define PPP projects in transport infrastructure as a partnership concerning major investment projects and the provision of public services based on long-term contractual relationships between the entities of the private and public sector; while both entities share the risks and revenues associated with the projects.

This paper discusses the trends in the use of PPP as a part of transport infrastructure projects. Firstly, pros and cons of PPP and the risks assumed by the involved parties are explained. The main focus is on analysing the development of transport infrastructure investments in relation to the development of EU countries' GDP covering also PPP transport infrastructure projects financed by the European Investment Bank. The analysis is based on data from the EUROSTAT, the Organisation for Economic Co-operation and Development (OECD) and the European PPP Expertise Centre (EPEC). The experience of the Czech Republic with PPP transport infrastructure projects is also a topic of interest here.

1 Public-private partnerships – theoretical base

Reeves (2005) summarizes the most commonly used PPP models in his book. *Design and build* is the kind of project where the private sector as a subcontractor designs and builds an infrastructure which is transferred to the public sector upon completion. The contractor, i.e. the private sector, then receives a payment from a public sector entity. In the case of *Design, build and operate* partnerships, the private sector designs, builds and later operates the asset. The project is fully financed by the public sector. *Design, build, operate and finance* type of partnership is another way of the sectors' cooperating. Here, the private sector finances the project and, throughout the duration of the project, covers the costs through payments from the public sector (for 30 years at least). According to Reeves (2005), the last type of PPP is *Concession*, where the services are fully or partially paid by the end user.

1.1 Pros and cons of public-private partnerships

One of the main benefits of PPPs is the efficient allocation of risks associated with the projects. The public and private sectors share the risks so that both partners can manage the risks allocated to them effectively. The private sector assumes the risks which it is able to manage better than the public sector thanks to its knowledge and experience and is thus capable of managing and controlling the assigned tasks more effectively. Reeves (2005) also argues that the private sector, thanks to its competence and access to innovative technologies, is able to select the optimal variant implementation of the assigned task and thus reduce overall costs while ensuring an adequate quality. Consequently, the project can be implemented more quickly and at lower cost than if it were carried out only by the public sector. Geest and Nunez-Ferrer (2011) state that from a macroeconomic perspective, PPP projects are advantageous due to their good effect on economic growth, employment and

growth of selected sectors of the economy. Moreover, since the public sector can release financial resources gradually, it can implement more infrastructure projects at the same time.

Reeves (2005) points out that PPP projects have also some disadvantages associated mainly with the long-term nature of the projects. The current government may not last as long as is the duration of a project; the project's faults may therefore influence the success of the next governments and it is difficult to get the former government to take responsibility. Especially proper initial contracts are of great importance for the success of PPP projects as they are difficult to modify over the years. Also Geest and Nunez-Ferrer (2011) point out that the potential benefits of PPP can bear some disadvantages as well; in general, interest rates are generally higher for the private sector than for the public sector, therefore, PPP projects may turn out to be more expensive. In addition, PPP projects are demanding in terms of project planning; the contract for a project may not be concluded until after several years of preparation.

1.2 Risk of public-private partnerships

Corielli et al. (2010) maintain that the types of PPPs with a greater involvement of private entities require a careful analysis of the risks by the private and public sectors. For private organizations the risk analysis is important in determining the mix of financial resources to be used to finance the project that also affects cost of capital and risks borne by the public sector. The key factors influencing the decision process of the private sector whether to participate in PPP projects are therefore the risks it assumes. One of these risks is the construction risk associated with the design and building phases of the project. Another risk to the private sector may be contractual conditions of the project being deviated in the course of the project implementation.

Geest and Nunez-Ferrer (2011) point out that the risk for all parties involved is that the final market value of the project is lower than was expected. The value of the project is affected by the financial risk and market and revenue risk. The financial risk is related to fluctuations in interest rates and currency exchange rates. The market and revenue risks jeopardize the value of the PPP project when it is finished – the demand for the completed project is lower than expected. For example, in the case of highways, there is a risk that the toll collection will not be sufficient to at least cover the operation costs of toll collection systems. Therefore, the *Design and build* form is most commonly used within road

infrastructure projects. Miller (2000) declares that other significant risks relate to the ability of the public sector to establish and comply with contractual obligations and conditions.

2 Investment in transport infrastructure and PPP projects

According to Meng (2013), transport infrastructure is the bearer of the economic potential of each state. Data on the total investment in transport infrastructure and the development of gross domestic product (GDP) was used for the analysis of the link between an economy and transport infrastructure. European Union countries (except Greece) were chosen for the analysis. Indicators were (given the availability of data) set for the years 1995 – 2011. The results are summarized below in the subchapter 2.1.

The European Investment Bank (EIB) is an important banking institution in financing PPP projects in Europe. Of the total disbursement of the EIB funds, amounting to €43,293 million in the years 1990 – 2014, €34,861 million (80.5%) was used for financing PPP transport infrastructure projects and €8,432 million (19.5%) went on other investments (health, solid waste, education, water, sewerage, energy). These amounts demonstrate the importance of EIB financing for the transport infrastructure investments. An analysis of the disbursement of funds to finance PPP transport infrastructure projects in the years 1990 – 2014 is a part of the subchapter 2.2.

The subchapter 2.3 summarises the experience of the Czech Republic with PPP transport infrastructure projects.

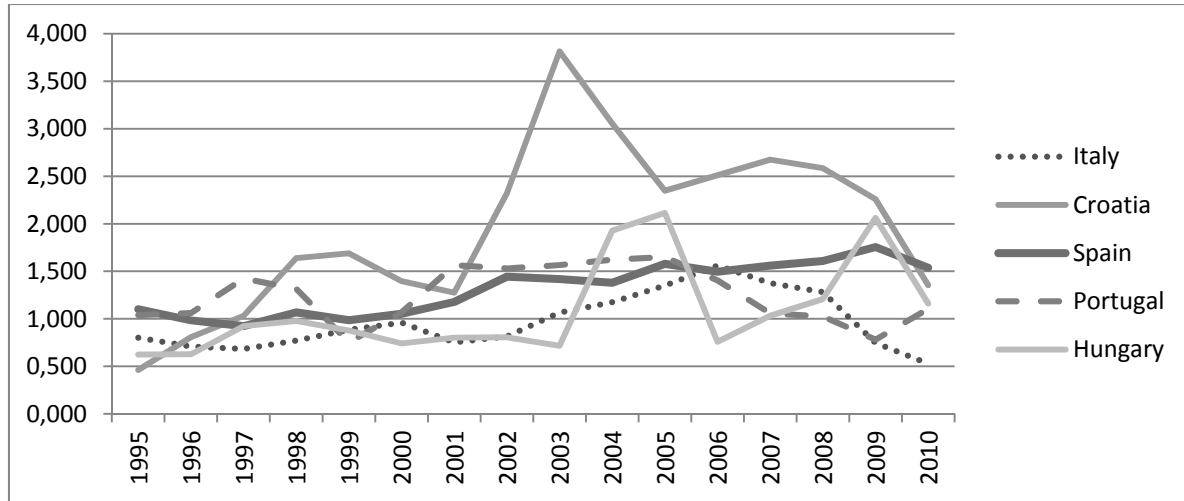
2.1 Total investment in transport infrastructure

In terms of the share of investment in transport infrastructure in GDP EU states can be divided into two groups. Countries in the first group – e. g. Austria, Belgium, Germany, Ireland, Netherlands, United Kingdom, France, Finland and Denmark – show 0.5 to 1.0% share of investment in transport infrastructure in GDP. These are states with high-quality transport infrastructure that is being built gradually throughout the observation period and where there are no large fluctuations.

The second group of states (see Fig. 1) are those with the share of investment in transport infrastructure in GDP of more than 1% in most years during the observation period. Italy, Croatia, Spain, Portugal and Hungary are in this group. These states can be further divided into two subgroups according the development of indicators. Spain shows a steady development of the investment/GDP ratio without large fluctuations. The fluctuations in the investment/GDP ratio are a common characteristic of Croatia, Portugal, Hungary and Italy.

Croatia reached the highest value; 3.8% in 2003. Hungary saw two big variations in the observation period; between 2004 (1.9%) and 2005 (2.1%) and in 2009 (2.1%).

Fig. 1: The share of investment in transport infrastructure in GDP (%)



Source: Eurostat (2014) and OECD (2015)

Tab. 1 shows the transport infrastructure investment share in GDP of the Czech Republic in the years 1995 – 2011.

Tab. 1: The transport infrastructure investment share in GDP of the Czech Republic in the years 1995 – 2011 (%)

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Transport infrastructure investment share in GDP	0,90	0,91	1,27	1,19	1,02	1,08	0,98	1,21	1,25	1,58	1,83	1,67	1,61	2,13	1,96	1,56	1,13

Source: Eurostat (2014) and OECD (2015)

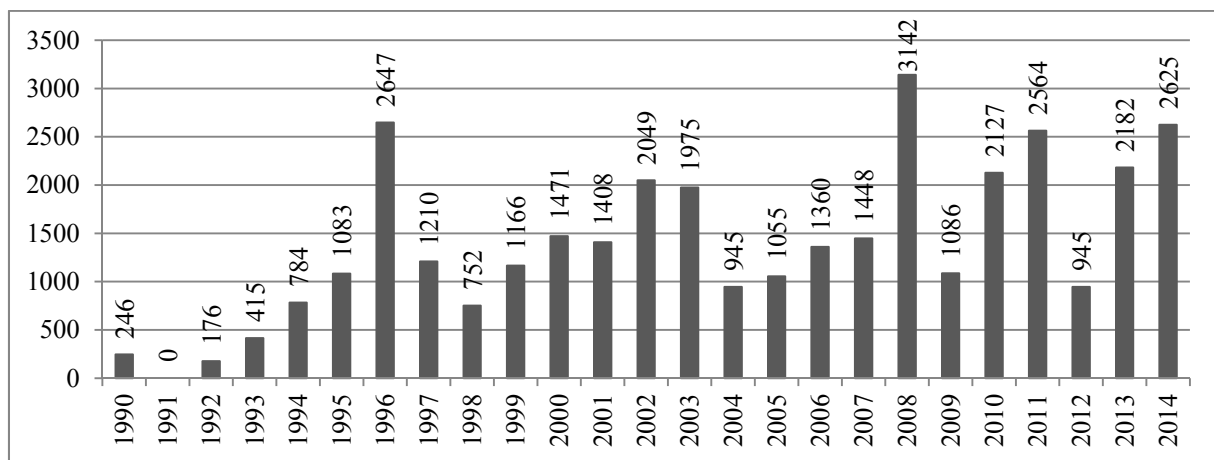
The Czech Republic ranks among the countries with the share of investment in transport infrastructure in GDP of more than 1% in most years during the observation period. The development of the indicator is not constant; a decline occurs in the years 1998 – 1999, 2001, 2006 – 2007 and 2009 – 2011. The highest share of investment is in 2008, the year when Europe is hit by the financial crisis.

2.2 Transport infrastructure PPP projects financed by EIB

The EIB lent the largest volume of funds (see Fig. 2) in 2008 (€3,142 million), the year when the European Union was hit by the financial crisis. It appears that investments in PPP projects were meant to serve as an aid to the sluggish economy. In 2008 following states borrowed funds from the EIB: Belgium, Netherlands, United Kingdom, France, Hungary, Morocco and Poland. The PIGS states – Greece, Italy, Spain, and Portugal – most affected by the debt crisis, also borrowed funds totalling to €1,330 million and representing 42.3% of the total volume of funds the EIB lent in 2008.

Apart from the year 2008, when the EIB investments in transport infrastructure PPP projects were on the highest level, there was another significant use of funds in the years 1996 (€2,647 million), 2011 (€2,564 million) and 2014 (€2,625 million). The decline in investment borrowing in 2004 and 2012, when investments in the construction and maintenance of transport infrastructure experienced a downturn, is interesting. Although GDP grew in all above-mentioned countries in both years, investments in transport infrastructure declined.

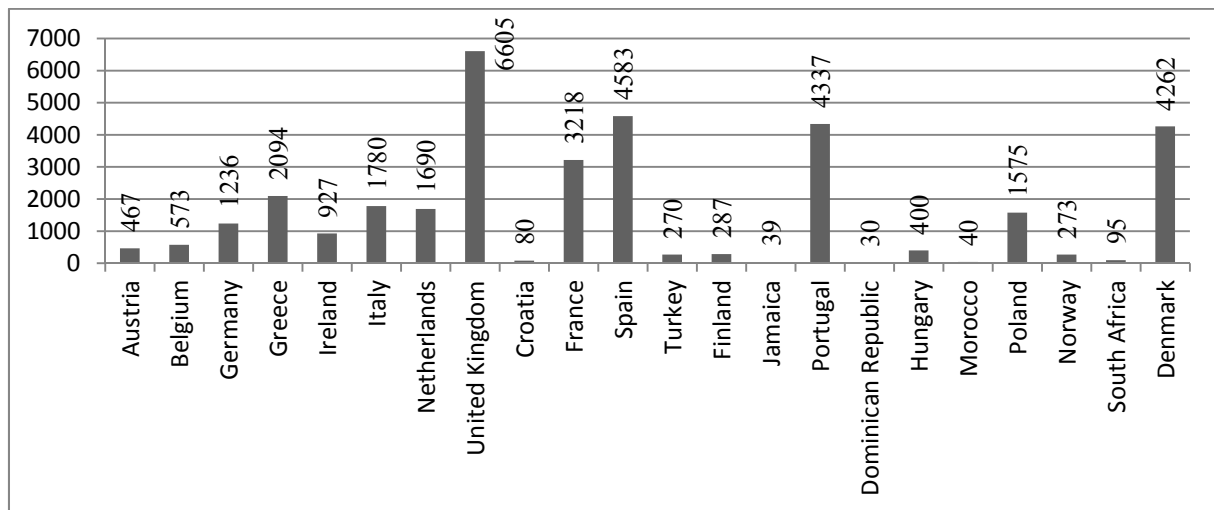
Fig. 2: Funds borrowed from the EIB to finance transport infrastructure PPP projects in the years 1990 – 2014 (million €)



Source: EPEC (2015)

22 countries borrowed funds from the EIB to finance transport infrastructure PPP projects in the years 1990 – 2014, including 16 EU member states and 6 other countries (see Fig. 3). The United Kingdom borrowed the largest volume of funds (€6,605 million), followed by Spain (€4,583 million), Portugal (€4,337 million) and Denmark (€4262 million), while Dominican Republic (€30 million), Jamaica (€39 million) and Morocco (€40 million) borrowed the lowest volume of funds.

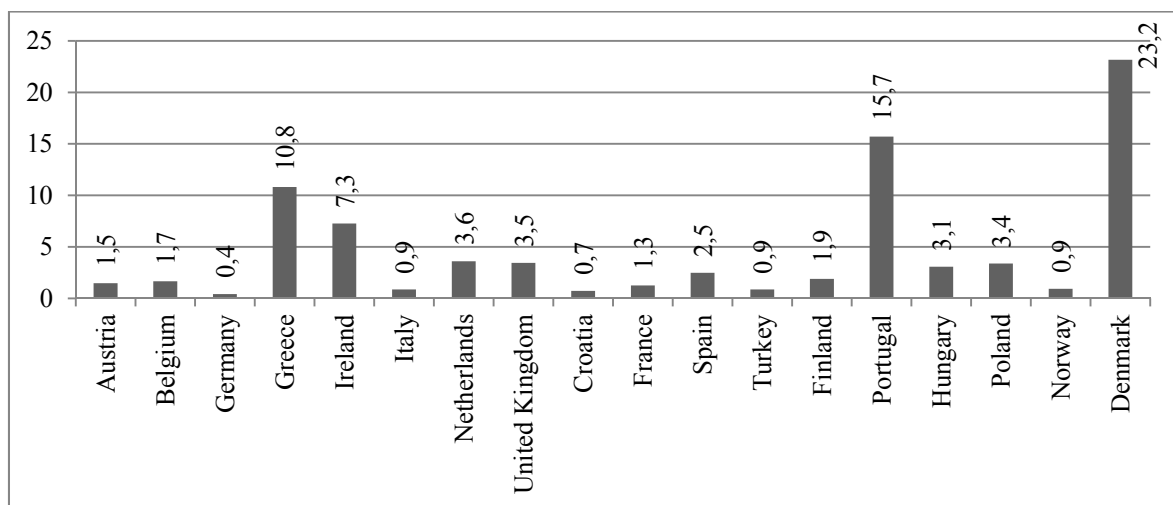
Fig. 3: The volume of funds borrowed by individual states from EIB to finance transport infrastructure PPP projects in the period 1990 – 2014 (€ million)



Source: EPEC (2015)

Some EU member states (including the Czech Republic) did not use this method of financing the transport infrastructure projects in the given period. From the total volume of investment in transport infrastructure, Denmark borrowed the highest share of funds on PPP projects from the EIB (23.2%) – see Fig. 4. Other countries that made the most use of this type of financing were: Portugal, Greece and Ireland. Another group of EU countries – the Netherlands, the United Kingdom, Poland and Hungary – used this method of financing for about 3% of their total investment in transport infrastructure.

Fig. 4: The share of funds from the total volume of investment in transport infrastructure the EIB lent out on PPP projects in the years 1990 – 2014 (%)



Source: OECD (2015) and EPEC (2015)

2.3 Transport infrastructure PPP projects in the Czech Republic

PPP projects are not very popular in the Czech Republic. The technical base (depots) of Plzeňské městské dopravní podniky (Pilsen city transport companies) is a successful transportation PPP project in the Czech Republic. Zrzavecký (2014) states it is one of the largest partnership projects in the Czech Republic. The premises are more than 116,000 square meters in surface area; in the technical base, there are located mainly sheds for servicing vehicles, spray booths, machine washers, filling stations, storage facilities, etc.; there are also covered parking lots for buses and trolleybuses.

The construction, maintenance and operation of the D3 highway Tábor – Bošilec in the length of 30 km (the duration of the project planned for 30 years) should have been a pilot PPP project, but ended up as one of the unfinished PPP projects in the Czech Republic; other unsuccessful PPP projects are the D5 and D47 highways. For being the causes of failure of the projects, Pavel (2007) blames the unclear division of risks between the private and public sector, incorrect specification of tender documentation and disorganized approach to PPP projects. As the risk factors for implementation of PPP projects in the Czech Republic he considers: misunderstanding of the principles and meaning of PPP (which is not supposed to replace public spending, but it works as a tool for increasing its efficiency); unresolved control of outputs; ambiguous and inadequate specification of political responsibility; the possibility of awarding a project without an open competitive tendering; and the risk of hidden debt.

Conclusion

PPP projects can be seen as an innovative approach to the implementation of transport infrastructure projects, which is used worldwide. Based on experience of some countries, PPP can be considered an effective way to achieve higher appreciation of funds invested in various types of infrastructure projects (including transport infrastructure projects). Some countries have adopted PPP due to fiscal deficit, budgetary pressure, demand-supply gap, and inefficient public services. The experience of other countries confirms the advantages of using PPP for operational efficiency, innovative technological and management skills, and more active involvement of private players in public services. However, examples of failed projects can be found abroad as well.

The Czech Republic is one of the countries that, in the period 1997 – 2011, invested more than 1% of GDP in transport infrastructure projects annually. In terms of the amount of

investment in transport infrastructure, the Czech Republic belongs to the countries that are characterized by high quality transport infrastructure and that borrow funds to finance PPP transport infrastructure projects from the EIB. The Czech Republic, however, has not used this method of financing transport infrastructure projects.

The use of PPP in transport infrastructure projects has been very limited in the Czech Republic. Some PPP projects have failed. The causes lie primarily in the lack of a consistent strategy regarding the PPP projects and in the misunderstanding of the meaning of PPP. In order to extend the use of PPP in practice, it is necessary to resolve the legislative and strategic aspect of the issue.

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THE SCIENTIFIC AND EDUCATIONAL POTENTIAL OF THE INTELLECTUAL PROVISION OF ENTREPRENEURIAL INNOVATIVE DEVELOPMENT

Evgeny Egorov – Tatiana Lebedeva

Abstract

This article presents the concept of the intellectual provision of innovative activity within entrepreneurship. The intellectual provision includes the organization and self-organization of the continuous information and knowledge in the "education-science-entrepreneurship" system. Intellectual entrepreneurship is considered the result of the integration of science and entrepreneurship and the transfer channel of knowledge between them. The aim of the experimental study is to validate the developed theoretical positions in the field of intellectual provision of the entrepreneurial activity development. The main objectives are the creation of the complex of entrepreneurship development in the framework of training courses, identify a set of characteristics of the intellectual entrepreneur and their assessment, to develop the optimal model of the course that prepares entrepreneurs for today's challenges.

Key words: Innovation in the entrepreneurship, complex of intellectual providing of innovative development of entrepreneurship, didactic means.

JEL Code: A 13, A 22

Introduction

Today, the word "innovation" means the result of creative activities aimed at the development, production and distribution of new products, technologies, implementation of new organizational forms. Entrepreneurship, as an engine of the modern economy, by definition, must be innovative. To ensure that it is necessary to create an appropriate intellectual environment. Meanwhile, the level of such assurance, at the moment, is rather weak, both at the state level and at the level of understanding of the public.

According to the All-Russian Public Opinion Research Center (VTsIOM) data, the Russians most commonly understand innovation as any innovations (in 27% of cases), as well as the implementation of modern technologies (15%). Less than those who believe that this is

the use of achievements of science and technology (3%), investments in promising sectors of the economy, social changes and specific innovations (1%). For every second person (53%) it is currently difficult to estimate. The higher the level of education of the respondents is the less difficulties they have with the definition of "innovation" (the share of those for whom it was difficult to answer is decreased from 89% in the group with the education less than secondary to 30% in the group with higher and incomplete higher education) (All-Russian Public Opinion Research Center).

1. Innovation in entrepreneurship: concept and prerequisites

In the Russian legislation the term "Innovation" is defined in the Federal Law № 127 "About science and state scientific-technical policy (Federal Law of the Russian Federation "About science and state scientific-technical policy", 1996). According to this law, "Innovation" is a new or significantly improved product (goods, services) or process introduced to the use, a new sales method or a new organizational method in business practices, workplace organization or in external relations. Unfortunately, the Russian legislation gives a too broad definition that allows scientists or entrepreneurs to issue upgraded products or services as something radically new, thereby deceiving the final consumer.

Nevertheless, the "enhanced" conception of innovations was universally acknowledged not long ago when the changes in the nature of innovation processes became obvious that led to the emergence of new challenges - both in theory and in practice - for innovative thinking managers of companies and developers of state policy. The retrospective analysis shows that many companies have been involved in joint research and development (R & D) with external partners for decades but R & D outsourcing became common practice a hundred years ago.

Modern innovative processes are becoming more distributed, continuous in time and acquiring multi-disciplinary and inter-institutional character. It is this combination of changes, partly mutually reinforcing, that contributes to the formation of "open innovations" as a new phenomenon, and this term has been discussed in the literature for more than 10 years (Dahlander, Gann, 2010). New knowledge and associated competencies for its usage are grouped into new inter-disciplinary clusters on a large scale. However, the space for innovative solutions to meet the needs of society which is becoming increasingly diversified is expanding faster (Robinson, Blenker, 2014, Ferrary, 2011). For the last decades the basic principles of the innovation management process have not been practically changed

(Huizingh, 2011). At the same time, the nature and role of different sources of innovations is significantly changing, as well as some ways of their usage (Bianchi, Cavaliere, Chiaroni, Frattini, Chiesa, 2011). The growing volume of the knowledge markets and information contributes to adoption of the concept of open innovation by companies, because in the process of the exchange and trade of knowledge within innovation networks they acquire new competencies. All this leads to the intellectualization of many areas of activity.

1.1 Intellectualization of innovative entrepreneurial activity

The intellectualization process is the process of usage and formation of intellectually significant possibilities and abilities. It is caused by the appearance of a large number of tasks in the working activity that requires the non-standard innovative approaches and solutions in various aspects of professional activity. This highlights the intellectual expenses (for the production of knowledge, information), which results in a modification of the functional structure of the labor (Egorov, 2004).

As we know, the economy of knowledge fundamentally changes all the traditional principles, approaches and models of development of competitive entrepreneurship.

The analysis of the modern literature on entrepreneurship shows that many scientists are beginning to pay more attention to the phenomenon of intellectual entrepreneurship typical for the economy of knowledge. The concept of the intellectual entrepreneurship is quite new and poorly studied. In the most basic approximation, the intellectual entrepreneurship is an entrepreneurship carried out by intellectuals, that is, by people with higher education, the results of their activity is the intellectual product.

The intellectualization of the entrepreneurship creates conditions for increasing of the role of education as a basis for the formation and development of intellectual resources, the creation and transfer of new knowledge into the economy (Baklashova, 2014.). The education system inevitably becomes closer to the entrepreneurship, integrates with it, which contributes to more effective sharing of knowledge, the implementation of more advanced scientific methods of production, the education and spiritual growth of entrepreneurship, forcing it to serve the interests of society, not just personal gain.

For effective implementation of this task the relationship between the education and entrepreneurship systems which are separated and develop independently that holds the processes of intellectualization and entrepreneurship back must change.

The strategy of innovative development of the Russian Federation for the period up to 2020 "Innovative Russia 2020" identifies a number of basic tasks that are associated with the development of the education sector: - to change people, to increase their susceptibility to innovations, to expand the class of innovative entrepreneurs, to create an atmosphere of tolerance to risk in the society; - to increase the innovative activity of the business and the dynamics of the emergence of new innovative companies.

1.2. Pedagogical approaches and results of the development of the personal qualities in the process of intellectualization of the entrepreneurial activity

We should refer to educational technologies, contributing to the development of entrepreneurial knowledge and personal qualities which allow to be successful in the process of intellectualization of the entrepreneurship (Hsu, Tan, Laosirihongthong, 2014).

The developed technology of training and development of professionally important qualities has been fulfilled and perfected for over a decade in the Nizhny Novgorod State Kozma Minin Pedagogical University. The result of its usage is a proved development of professionally important qualities of an entrepreneur.

The technology of formation of professionally important qualities is set up on the basis of the known principles developed by B.I.Teplov, V.D.Shadrikov. The main idea is that the professionally important qualities are understood as a product of lifelong formation. The determining role in this process belongs to the training which the development follows. The idea of the development of qualities is carried out in the process of preparation of participants within a refresher course "Technologies of modern entrepreneurship" (which consists of modular programs selected by participants).

The study was conducted on the basis of the Nizhny Novgorod State Kozma Minin Pedagogical University for 10 years (2004-2014). 498 people taking a refresher course on the program "Technologies of modern entrepreneurship" participated in the experiment. The aim of the experimental study was the validation of the developed theoretical positions as well as working out the optimal model of the course which allows to prepare an entrepreneur ready for the challenges of the time.

The objective of the course was the preparation of the entrepreneur-practitioner. Consequently, during the experimental study it was necessary to evaluate:

1. The level of mastering of the fundamental knowledge of the basics of entrepreneurial activity, management and marketing.

2. The level of formation of professional motivation for entrepreneurial activity.
3. The degree of readiness for practical entrepreneurial activity.
4. The development of entrepreneurial skills.

Let's see each point in more detail.

1. The level of mastering of the fundamental knowledge for each discipline was evaluated:

- a) in the course of mastering (during lectures);
- b) after doing practical exercises (current assessment via level tasks);
- c) during the end of course test (at the reportable events).

Table 1 shows the fulfillment results of the level tasks by the course participants at the lectures in the first stage of the experimental study.

Tab. 1: The fulfillment results of the level tasks in the process of mastering of the fundamental knowledge of the module "Basics of entrepreneurial activity"

Ser. No.	Module topic	The number of students who coped with the task (%)		
	Task level	I	II	III
1.	Entrepreneurship: the nature, aims, objectives	60	-	-
2.	Principles and forms of entrepreneurship	-	69	-
3.	Technology of establishing an enterprise	-	-	59
4.	Internal and external environment of the firm functioning.	-	72	-
5.	Management in the activity of an entrepreneur and a teacher	-	82	-
6.	Personnel. Productivity and salary.	54	-	-
7.	Marketing in the activity of an entrepreneur.	-	-	78
8.	Product development process			68
9.	Small business development		64	
10.	Financial activities of an entrepreneur. The concept of accounting. Investing in entrepreneurial activity	53	-	-
11.	Entrepreneurial activity and taxation of entrepreneurial firms. State regulation of entrepreneurial activity	71	-	-
12.	Analysis of the results of activity of enterprises in market economy	45	-	-
13.	Basics of Entrepreneurial Law	-	-	48
14.	Entrepreneurial ethics and morality	-	-	60
15.	Entrepreneurial activity at educational institutions	-	73	-
The average number of students who coped with the tasks of each level		56,5	73,4	62,5

Source: study of the authors of this article

As we can see from Table 1, at the first stage lectures the course participants were offered tasks of all levels. The surprising fact was (it can be clearly seen in Table 2) that the course participants coped with the second and third level tasks better than with the tasks of the first level.

2. The level of formation of professional motivation for entrepreneurial activity.

At the first stage of the experimental study the task of formation of professional motivation (Duval-Couetil, Gotch, Yi, 2014) to the practical entrepreneurial activity was not set since the courses were attended by people with the need to acquire professional knowledge enhancing their competence in the business.

Meanwhile, to determine the effect of the course on participants the survey was conducted. The results of the survey showed an increase in the level of motivation to the entrepreneurial activity (from 54% - up to 61% - in different groups of the course participants).

3. The degree of readiness for practical entrepreneurial activity.

The fact that the course developed by us really allows to prepare a participant to the practical entrepreneurial activity is confirmed by talks conducted with entrepreneurs - representatives of real business.

During the talks conducted with every entrepreneur the following questions were offered:

1. Is the successful implementation of the practical entrepreneurial activity possible without additional specialized training?
2. They say that one must be born as an entrepreneur. Then, is it necessary to use special forms of work (role plays, trainings etc.) aimed at developing entrepreneurial skills in the preparation of the entrepreneur-practitioner?
3. Knowledge of what main issues studied in the course turned out to be the most useful for organization of practical entrepreneurial activity?

The results of the talks with entrepreneurs-practitioners enabled to conclude that the methods and forms of education used in the course can not only develop entrepreneurial skills, but also motivate future specialists to the professional activity and develop reflective abilities.

4. The development of entrepreneurial skills.

To identify the initial level of the studied qualities - creative potential, sociability, initiative, working ability, ability to take risks valid test methods were used. For all applied tests the nine level rating scale was used to interpret the development indicators of skills: level 1 - very low level of development of appropriate skill; level 2 - low; level 3 - below medium; level 4 -

slightly below medium; level 5 - medium; level 6 - slightly above medium; level 7 - above medium; level 8 - high; level 9 - very high level of development.

It is known that an entrepreneur should possess all the skills we have dedicated at the level of their development not less than below medium. This assertion is proved by the results of our testing of entrepreneurs-practitioners. They are given in Table 2.

Tab. 2: Development of entrepreneurial skills among entrepreneurs-practitioners

Ser. No.	Entrepreneurial skills Level of development	Indicator of development (in % of the total number tested)								
		1	2	3	4	5	6	7	8	9
1.	Creative potential	-	-	-	-	-	2,7	19	27	51,3
2.	Sociability	-	-	-	-	-	-	-	21,6	78,4
3.	Initiative	-	-	-	-	5,3	13,5	43,2	19	19
4.	Working ability	-	-	-	-	-	-	3	10	24
5.	Ability to take risks	-	-	-	-	-	6	16	10	5

Source: study of the authors of this article

As we can see from Table 2, the vast majority of entrepreneurs-practitioners have entrepreneurial skills listed above at the levels above medium. Such skills as sociability and working ability are especially developed.

With the help of these tests at the beginning of the first stage of the experiment before the course started the initial level of the studied entrepreneurial skills was identified. The test results are given in Table 3.

Tab. 3: The monitoring results of entrepreneurial skills of the course participants doing the course “Technologies of modern entrepreneurship”

Ser. No.	Entrepreneurial skills Level of development	Indicator of development (in % of the total number tested)								
		1	2	3	4	5	6	7	8	9
1	Creative potential	-	-	-	38,9	44,4	16,7	-	-	-
2	Sociability	-	7	18	22,2	30,6	16,6	5,6	-	-
3	Initiative	8,3	19,4	27,8	31,9	5,6	4,2	2,8	-	-
4	Working ability	-	15,3	26,4	34,6	7	8,3	5,6	2,8	-
5	Ability to take risks	16,6	37,5	37,5	1,4	7	-	-	-	-

Source: study of the authors of this article

Table 3 shows that before doing the course the skills of the most of the course participants were developed at below medium level. It can be seen that sociability and creative potential show the highest indicators. During further investigation, we paid special attention to the least developed skills: initiative, working ability, ability to take risks.

At the end of the course we conducted the same tests as in the beginning of the experiment. The test results showed the increase of the development level of four out of five studied skills. Table 4 shows the monitoring results of the development of the entrepreneurial skills.

Tab. 4: The development of entrepreneurial skills of the course participants before and after doing the course "Technologies of modern entrepreneurship"

The personal qualities to be developed	Creative potential		Sociability		Initiative		Ability to take risks		Working ability		Motivation of achievement
Number of students (%) showed levels of development of qualities above medium	initial	resulting	initial	after	initial	resulting	initial	resulting	initial	resulting	Increased on average by
	25	47	45	86	35	53	49	55	24	47	
Difference in %	22		41		18		6		23		27

Source: study of the authors of this article

After statistical processing of the data presented in table 4, it can be asserted that the course really helps to prepare an entrepreneur-practitioner.

We will show how you can develop some professionally important skills of an entrepreneur. To do this, we present a table (tab.5), which shows the connection of the didactic means with the development of individual skills of an entrepreneur. Table 5 shows that in the column "The personal qualities to be developed" there are six professionally significant skills of an entrepreneur. All the twelve selected and presented in the Table didactic means are active methods and forms of training. This is quite natural, since only such means help the integration of the course participants into an independent search activity, which is a necessary condition for the development of personality. In Table 5, all the didactic means are combined into two groups. The first group - the general didactic means. The second

group reflects the specificity of means of the formation of the entrepreneurial knowledge. The usage of these didactic means for ten years allowed us to evaluate the impact of each of them. The following table presents this evaluation according to the effectiveness of influence of the didactic mean on the development of a particular professionally important skill of an entrepreneur:

- «+» – high;
- «+–» – medium;
- «–» – low.

Tab. 5: The connection of the didactic means with the development of individual skills of the future entrepreneur

Group of means	Didactic mean	The personal qualities to be developed					
		Creative approach	Sociability	Initiative	Working ability	Willingness to constant improvement	Motivation of achievement
First	Challenging lecture	+	–	+ –	+	+	+
	Solution of challenging situations	+	–	+ –	+	+	+
	Work in small groups.	+	+	+ –	+ –	+ –	+
	Role play	+	+	+	–	+	+
	Excursion	–	–	–	+ –	+ –	+
	Discussions and debates on the lesson	+	+	+	+ –	+ –	+
	The method of reviews	+	–	–	+	+ –	+ –
Second	Making a business plan. The company presentation	+	–	+	+	+	+
	Analysis and solution of specific business situations. Working out ideas to overcome the crisis	+	–	+	+	+ –	+ –
	Creative problem solving methods (methods of questionnaire, "notebook" etc.)	+	–	+ –	+	+	+ –
	Talks with the leaders of the real business	+ –	+	+ –	+ –	+ –	+
	Training	+	+	+	+ –	+	+

Source: study of the authors of this article

Looking back at Table 5, we see that the construction of the educational process on the basis of such methods and forms of teaching as work in small groups, discussions and debates on lessons, role plays ensures the development of virtually all complex of the dedicated skills. At the same time, such didactic means as excursions or method of reviews allow to purposefully develop two, maximum three skills. A similar picture is observed with the second group of means.

Next we turn to the training technologies, since they are the most efficient (Zalyaeva, Solodkova, 2014). Using the training technologies in the educational process is quite effective at the initial and the final stages of training, when the professional competence of the participant-entrepreneur is intensively formed.

So in the module "Advertising technologies" each trainee is given an individual economic task that is close to a real situation (developing of a promotional product). We will give an example of a practical lesson on the topic "Development of a slogan". The lesson is designed for 1 hour 30 minutes. The course of the lesson can be represented as follows:

Mini-lecture "Development of a slogan" (20 minutes).

1. Exercise: "Options for the development of a slogan" (60 minutes)

The course participants are distributed into micro groups. Each group is asked to select the object to develop a slogan (by lot), then the course participants work out the proposed algorithm. At the beginning each trainee works out his own versions of the advertising slogans, then the sharing of the slogans and the choosing of the "super slogan" takes place in the micro groups. Further, the results are given in the form of presentations.

2. Feed back (10 minutes)

Questions:

Which of the slogans may be effective for the "life" of the product?

Which of the presentations of the slogan is memorable?

The practice shows that the training technologies are quite effective during training of the specialists in various fields of business, because they allow not only to form the professionally important competencies, but also to develop the ability to assess the degree of possession of these competencies and to reflect one's own activity (Lebedeva, 2012).

So, the motivation of achievement after doing the course "Entrepreneurship" increases on average by 30%, creative approach – by 20%, initiative – by 20%, working ability – by 25%, sociability - by 40%.

All this contributes to increase of the share of intellectual products and services in the total amount in the production of goods. According to S.M. Klimov, the intellectual products and services occupy an increasingly important place in the international markets.

Conclusion

While conducting this study it became evident to the authors that the development of innovative entrepreneurship is impossible without the usage of the modern approaches to the training of entrepreneurs. Meanwhile, the training of entrepreneur-practitioner should be systematic, both from the point of practical knowledge and from a position of readiness and development of the professionally significant skills of a personality. On this basis, we can formulate a number of the practical recommendations for optimizing the usage of scientific and educational potential for the development of the entrepreneurship.

Firstly, the innovative development of the entrepreneurship is impossible without intellectual providing. Based on this requirement, it can be asserted that all the processes of the development of the entrepreneurship should be designed on the basis of "education-entrepreneurship".

Secondly, in the era of economy of knowledge, all the internal and external environment of the entrepreneurship should be formed through the management of knowledge.

Thirdly, it is evident that the entrepreneurs-practitioners are unlikely to "sit at the desk," and now the process of their preparation is realized primarily through the refresher courses. Therefore, special attention should be paid to a complex of didactic means contributing to the polyinformative preparation of an entrepreneur.

Thus, the intellectual providing of the innovative development of entrepreneurship includes the organization and self-organization of continuous counter information-knowledge torrents in the system of "education - science - entrepreneurship" that contributes to the development of competences and "knowledge" competitiveness of all participants of the process of the innovative development at all levels of the interaction.

As the main participants of the innovative providing of the intellectual development of entrepreneurship it is possible to highlight the following subjects of the education and science system (universities, scientific institutions), the system of entrepreneurship (large, medium and small businesses), the state and its institutions. The intellectual entrepreneurship is considered as a result of the integration of the science and entrepreneurship and the knowledge transfer channel between them. Each of them has an active influence on the state and development of all elements of the innovative providing of the intellectual development of entrepreneurship, and the effectiveness of their interaction determines the efficiency of the reproduction of intellectual resources, as well as the exchange and dissemination of the

knowledge in society (the country), which ensures the development of the "knowledge" competitive ability of the economic subjects at all levels of socio-economic system. For the development of the intellectual resources in the country it is necessary, first of all, to work out the strategy of development of the education system appropriate to the state policy. The education system should be a key integrator of the intellectual and innovative providing of the economic subjects.

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SELF-DEVELOPING INNOVATIVE COMPANIES: BEST PRACTICES ANALYSES

Irena Esaulova – Irina Semenova

Abstract

The concept of the 2S-systems (self-organizing and self-developing systems) describes the enterprise model through five interlinked elements: structure, leadership, motivation, learning, and culture. The authors borrow these elements to build a diagnostic model to analyse the experience of predominant Russian companies, which describe themselves as self-developing organizations. The diagnostic model is based on situational analysis as in a case study. The research demonstrates a bond between the elements of the 2S-system and the self-developing practice of companies. Findings revealed specific aspects of the management system for successful companies, which encourages innovative employee behaviour, focus on the improvement of the company's effort with leadership as a driving force for organisational development.

Key words: self-developing organization, management system, 2S-system, best practices.

JEL Code: D210, L200, F200.

Introduction

Ability of organization to generate and implement innovations is admitted as a main factor of success in the quickly changing external environment. Such ability is based on the high involvement of employees into the process of innovative development of organization on all its levels. Paradigm shift of the modern management is related to the new understanding of the employee's role in the company – as an active management entity; equal partner of organization, who contributes to its success; leader of changes, who possesses resources and mechanisms of changes. Obviously, the main task of organization is to set the development of employee on the right track, creating conditions for actualization and fulfillment of his capabilities. Therefore, today we increasingly face the issue of the goal-orientated system of employees' behavior management as a factor and potential for company development. In other words, creation of a company around and for the employee. This refers to a new,

“human-oriented” company, the goal of which is to create the active mechanism of employee’s involvement into management, constant increase of human potential as the main source of company development for efficiency assurance on a long-term horizon (Komarov, Molodchik, Pustovoi, 2012).

Since the beginning of 90s of the XX century the concepts have been developing for establishment of innovative organizations, adaptive to changes in external environment, with effective and flexible motivation system, with effective leadership and corporate liability, development of personnel and consolidation of behavior’s standards and rules in the company culture. The new concepts of company management system became widespread, for example, organization with intrapreneurship of H. Wissema, Learning organization of P. Senge, flat organizations. Within the new paradigm – “Management 2.0” (Hamel, 2009) based on the modern management theories, such as co-entrepreneurialism, core competence theory, fractal theory and with the new concept of “humanization of organization” – system of management, functioning on the principles of self-organization and self-development (2S-system) is being established (Akatov, et al 2013).

The source of transformation and development of company in 2S-system is the leadership, priority of the employee’s ambition to self-fulfillment, intrinsic motivation for efficiency and achievement of long-term results, ability for self-education and self-development, intrapreneurship and decentralization of decisions. Exactly such type of management system, where self-development of organization is based on self-organization mechanism related to transition of intrinsic motivation of people (personnel) into corporate external goals, become up-to-date and prospective in the context of both theory and practice. And today we can surely say that such companies exist, improve and inspire by their own example.

In our research work we introduce analysis of three Russian companies’ practices, which fulfill the process of tactical and strategic management based on principles of self-organization and self-development. Obviously, there are more of such companies, but we picked the most illustrative examples from different fields of activities, which differ according to brand awareness, company size and age. It is notable that each company has already managed to prove itself as a reliable partner in European countries and currently tend to expand their performance on international markets.

1 Research methodology

1.1 Diagnostic model

For the analysis of company performance we applied 2S-system model, including five key elements: structure, leadership, motivation, learning and culture (Krutova, M. Molodchik, Pustovoyt, 2012) (Table.). These elements are interrelated and mutually reinforcing. The basic relationship has been theoretically and empirically grounded in the research into 15 companies of the Perm region. (Krutova, A. Molodchik, M Molodchik, 2015), which accounts for the use of these key elements and their characteristics in creating original approaches to the diagnosis of “2C-systems” at the level of the enterprise (Yelokhova, M. Molodchik, 2012) and the construction of a diagnostic models for the companies analysis.

Tab. 1: Characteristics of key elements of self-developing companies

Elements	Organizational factors	Self-development and self-organization of personnel	Benefits for the company
Structure	Decentralization of rights and responsibility; functional flexibility	Adaptivity, independence, self-sustainability of departments, transformation of business model	Open, flexible, adaptive organizational structure
Leadership	Managers of all levels as leaders of changes; raising and promotion of the new leaders	Authority of the manager; in-house entrepreneurship, intrapreneurship (personal and team); healthy internal competition	Leaders of changes; pioneer work, innovations; high labor efficiency
Motivation	Support of initiative; involvement into projects on improvement of work of department / company; public recognition and achievement encouraging system; company commitment; attractive and comfortable work place	Long-term motivation of employees as tendency to self-fulfillment; involvement, team spirit, commitment; intrinsic commitment of employees to contribute into company's performance; self-leadership	Co-entrepreneurialism based on perception of corporate goals as your own goals; common result work; high labor efficiency; loyal and committed employees
Learning Development	Learning within work process; up and running experience and knowledge exchange; raising of talents	Establishment of unique competences based on self-development; ability and readiness to fulfill innovations	Open-mindedness of employees; aim for continuous self-development; initiative projects on improvement of company performance
Culture	Atmosphere of trust and cooperation; team work style; clear company values; initiative and creative approach to work is encouraged	Transformation of employees' values; acceptance of corporate goals and matching them with the personal values	Company goals are reached with highest efficiency; positive perception of changes; expansion of intrinsic activity energy of employees

Source: developed based on (Akatov, et al, 2013)

These key elements can be seen as the organizational factors of “influence”, focusing on employee's self-development, and ensuring sustainable development of the company.

The method of case study was used, which helped describe holistic management models rather than individual methods and tools. We selected Russian companies that meet the following criteria:

1. The company holds leading positions in the industry;
2. The company actively uses innovations;
3. The company positions itself as a self-developing one.

The analysis was based on publicly available information published in the reports, periodicals and on the companies' websites.

1.2 Characteristics of companies

PAKER a research and production company, established in 1992, occupies the leading positions in Russia, production and service maintenance of packer and anchor equipment for oil extraction boost activities. Over 700 qualified specialists work in the company. Company's declared goal is to become one of the best self-learning, self-developing, and quick acting companies in the world. The main message of its owner and the Manager – to manage means to encourage.

The giant of Russian economy – Sberbank of Russia is the leader of bank sector in Russia. Only in Russia Sberbank has over 110 million customers (over a half of the country's population), and around 11 million customers abroad. The number of personnel is around 270 thousand people. At the moment Sberbank sets an ambitious goal – to become one of the best financial companies in the world. Priority of the bank's strategy – challenging goals can be reached by the team of like-minded people, which are united by the common values.

AvtoVAZ is a flagship of Russia's automobile manufacturing. The company, founded in 1966 is at the moment the largest car manufacturer in Russia, with around 20% car market share in Russia and the number of personnel around 70 thousand people. Company's mission: we manufacture high-quality cars for affordable prices for our customers, bringing stable profit to our shareholders, improving the welfare of our employees and raising the value of our business for the national benefit. AvtoVAZ is the only factory, which manufactures cars of four brands – Lada, Nissan, Renault, Datsun at one site. This status has been acquired within the last year and related to the appointment of the new manager Bo Andersson.

2 Research results

Structure. The key factor, which determines ability of company to innovations, is its organization structure (Mládková, 2014). The entire international experience of management theory and practice shows, that adaptively and self-development are by nature more peculiar for decentralized management structures. In case of decentralization of rights and liability such qualities as initiativity, creativity, tendency to self-development are revealed best. Not incidentally, all the recently founded new concepts of company establishment are based on decentralized management systems (Hamel, 2012). In particular decentralized structures provide certain independence for separate departments, groups and employees. In the reviewed companies they pay much attention to different changes, improvements in management structure. And even today there are considerable results of those innovations.

One of the first considerable transformations in AvtoVAZ was “lightening of management structure”. Struggle with bureaucracy is considered to be one of the most important innovations. In the company they implemented the new form of team work: they gathered together 150 people in one office in the open room, who work on one project and responsible for style, engineering, manufacturing, procurements, and logistics. Thus, the team overcomes bureaucracy in their work. One of the main results of all the innovative work – increase of company’s profitability.

Focus on team result is the dominating principle of management activities in PAKER. They say that people should not just receive orders, but see the opportunities to improve system development process themselves. In order to improve organization and team spirit of personnel they arrange special interest groups, like a hobby. Such groups fulfill different production programs. In particular, the principle of hobbyists work, increase of hobbies by “200%” opens the new horizons in creation of an efficient management system.

Leadership is the key factor of effective organization. At the head of each successful company, there is a leader, a mastermind, a leader of changes, who is able to challenge, to inspire, to capture and to lead the employees with him. Specifically the leaders are able to affect innovative behavior of employees through the daily practice of business management (consulting, support, recognition of initiative etc.) (Jeroen P.J. de Jong, D.N. Den Hartog, 2007). Effective leadership is the main tool of management within the theory of company self-development. And it is first of all referred to self-developing organizations. Their leaders appear to be the basis of innovations establishment and their successful fulfillment. At the

heart of leadership there are skills, built-in by nature and developed through practical experience.

The reviewed companies have high leadership culture. There they trust people to initiate and to develop the new projects, encouraging the raise of the new leaders. In self-developing companies effective leadership rests upon authority, and not the administrative enforcement. However, all the analyzed companies' managers take their own initiative to develop other leaders by means of mentoring and practical learning. According to the opinion of companies' representatives such multilevel leadership is the mechanism, which starts and maintains self-development and self-organization process. All the analyzed companies place considerable emphasis on establishment of effective leadership culture and "raising" of the new leaders.

In order to create the great organization, according to PAKER manager, the special people are required. That is why, when they establish a candidate pool, they announce vacancy: "mathematician is required, but we will offer you a position after the interview." Such policy really works in Talent search.

President of AvtoVAZ Bo Andersson, the manager, who occupied important positions in the most famous companies in the world, managed to change the company in a short period, by placing a priority: "work for team and improvement of current situation". The most important in his opinion is to trust people and to give them opportunity to be proud of what they are doing.

Every year the president of Sberbank German Gref addresses to his employees with encouraging speech, which sounds like a challenge, a mindset and an inspiration. On the fifth page of "Development strategy 2014-2018" of Sberbank there are words of Howard Schultz, the founder and manager of Starbucks Coffee: «You can't expect your employees to exceed the expectations of your customers if you don't exceed the employees' expectations». This is exactly the priority message of leadership, which determines development of the company.

Motivation. The main driving force for transformation and improvement of performance in self-developing organization is the mechanism of intrinsic motivation. Mainly based on intrinsic motivation employees are getting involved into company developing process. Motivation for self-developing is a process of conscious substantiation and voluntary choice of the behavior method made by an employee, focused on improvement of company performance (Esaulova, 2013). In self-developing companies the main condition of positive changes initiated conscientiously by the employee without clear external regulating influence

is a co-orientation of goals and behavior vectors of employees and company interests (Molodchik, 2001). Scope of work, positive emotions are directly related to the general satisfaction with the job, which, obviously, supports innovative behavior of the employees (Sanders, Moorkamp, Torka, Groeneveld, Groeneveld, 2010) and establishes motivation for self-development.

In the analyzed companies they encourage ambition of employees for self-improvement and achievement of outstanding results in their work. The key characteristic of the team is the team spirit and team work. Employees demonstrate their commitment to the values and interests of organization, they are initiative and involved into the process of changes. In each company they support and take creative approach to work as a basis on the part of employees.

The management of companies understands that for the involvement, initiative and creativity they need to establish the right balance between the work and life of the employees. For this purpose they create conditions and comfortable environment. Special attention is paid to the corporate benefits package: medical service, resort and sanatorium therapy, organization of family vacation, sports etc. And it is important to note that each company maintains the salary on the level enough for the employee to have opportunity to concentrate on work (Esaulova, Semenova, 2014).

The head of PAKER company says that well-balanced system of employees' motivation can move mountains, make the workers take a fancy for a company and take its troubles and joys as their own. In Sberbank, except for the financial motivation they pay much attention to public recognition. In the bank they have special rewarding system for distinguished employees – privilege to take part in conferences, representing the bank, internships, payment for additional education, state rewards and badges of honor.

Learning. The main source of changes in self-developing organizations is a human being. Quality and speed of learning determine the potential of company growth. Processes of obtaining, generation, distribution and materialization of knowledge take place on the level of an employee, a group, inter-corporate cooperation and appear to be self-organized. Consequently the source of knowledge is both internal and external environment of company: its employees, partners, customers, suppliers. And here, firstly, people should want to develop themselves, which is to have motivation, secondly, for establishment of competitive advantages they should work better, which is to have better qualification. It is unique knowledge and skills which establish innovative competency of employees, and as a result

promotes the development of proactive innovative behavior (Esaulova, Linkova, Merkusheva, 2014). In other words the worker should understand that efficiency depends on the depth and relevance of knowledge, variety and the fluent skills, required by the company.

All companies try to make continuous development a part of corporate culture, actively involving personnel into development programs. In each company they encourage initiative from the “bottom”. It is considered normal that each employee tries to get better work result, and decides himself how and through which methods to increase his professionalism by the required level.

In Sberbank they tend to provide employees opportunities for realization of their potential and achievement of career success. In the bank there is a system of preparation of a candidate pool through development of key competences. For the employees with high potential they form individual development plans, valuable offers. Promotion of the promising employees can not only satisfy the bank’s demand in qualified personnel through internal resources, but also clearly demonstrates the others opportunities for professional growth.

Culture is the foundation of self-development of the company. Organization culture and values determine psychological climate in the company, attitude to innovations, development of creativity and initiative of employees. This is informal and rather difficult-to-form management element. Based on traditions, private examples, authority, and on the values that has been established for a long time, organization culture is a very effective management tool, as well as the powerful factor of the employee’s intrinsic motivation for self-development (Esaulova, Semenova, 2014). Organization structure is either a base of power or a bottleneck on the way to creativity and innovations (McLean, 2005), acting as a factor of stimulation or dragging of company development (Komarov, 2012). In other words, only well-established organization structure appears to be a fertile ground for development of initiative and creativity of each employee and encourages co-orientation of values of both organization and personnel.

In the corporate culture of all companies the pay special attention to the unity or harmonization of employees’ goals and interests, departments and company as a whole. The company values approve self-fulfillment of employees, encourage for success and recognition. Organization climate is characterized by a high level of trust, sociability and participation. Organization encourages employees to formulate and to reach their goals by themselves, take responsibility.

PAKER positions itself as an open platform for exchange of experience, opinion, achievements and failures. For this purpose they built the system of guest's acceptance. All achievements are discussed in public with wide audience in the form of a dialogue. Remarks of guests are our future work plans, they say in the company.

The single mechanism of work with innovative and labor-saving proposals for Sberbank performance is the project "Market of ideas". Over 50% of employees take an active part in improvement of bank performance. Effect from implementation of proposals accounts for billions rubles. The values of Sberbank are the basis of attitude to life and to work, internal compass, which helps to make decisions in difficult situations. Those principles and milestones: I am a leader, we are a team, and everything is for a customer.

In all three companies much attention is paid to creation of a "discovery" environment. The head of PAKER company says, that without chaos there cannot be any breakthrough, therefore, you should not be afraid to move forward, "breaking the walls", overcoming the barriers. In the companies they admit that chaos people and creative people are revolutionists of production and potential of the company.

Conclusion

The reviewed companies are united by the capability to changes and moving forward, considering and surpassing the up-to-date market developments; consistent orientation in rapidly changing technologies and preferences of customers; open and fair competition. Common results for all companies, received through the introduced diagnostic model are the following:

1. Employees' potential development orientation, their initiative and creative approach to work. All companies have learning by experience programs, fulfilled in a form of projects on improvement of departments' or company's performance. Much attention is paid to revealing, development and retaining of talents. This area is not only related to the task of "raising" the leaders, but also establishing of innovative company core by creation of a group of employees, who have enough analytical and project competency for taking part in complicated cross-functional projects. Systematic and continuous exchange of knowledge and experience is normal daily living activities for a company.
2. Motivation of personnel is established based on increase of involvement, activity and commitment of company employees. Those factors are supported by creation of

attractive work conditions for personnel (salary, benefits), system of public recognition and the range of benefits for the best employees (participation in upscale conferences, status of an expert, mentor etc.).

3. Fundamental background for transition of a company to self-developing model is an establishment of a culture, where (a) openly and systematically the values of individual development and growth for innovative development of company are declared; (b) initiative and creativity at all levels are encouraged; (c) managers demonstrate commitment to company values and leader behavior.

As a result, development and motivation of personnel based on company values encourage establishment of employees' behaviors patterns, supporting and initiating positive changes to the benefit of company development.

Questions and problems of self-developing organizations establishment introduce the certain trend in the field of the latest management technologies. High-performance companies extensively implement mechanisms and methods of self-development, as a result establishing competitive advantage, and determine success on the world's economic arena. Therefore research of internal factors and management mechanisms in those companies is an important branch of contemporary science, in terms of which they can get applied substantiation of management behavioral concept.

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INNOVATION PERFORMANCE OF THE SLOVAK REPUBLIC AND ITS REGIONAL DISPARITIES

Milan Fil'a – Jozef Kučera

Abstract

One of the most important lessons of the past two decades is the key role of innovation in economic development. The accumulation of the innovation capacities plays a central role in the growth dynamics of all successful developing countries. Innovation is the driving force of each economy, economic competitiveness, and an essential component of the knowledge economy, which is based on the production of higher added value. However, the innovation performance and potential differ significantly among the EU regions, as in Slovakia. Using statistical methods, this research article provides insight into the causal relationship to the regional development rate measured in terms of GDP per capita and investments in R&D, to indicate the significant regional disparities in Slovakia in the field of innovation performance.

Key words: Innovation, innovation performance, competitiveness, European Union, regions – NUTS, SME

JEL Code: O13, O30

Introduction

For more than 50 years, since the neoclassical theory of economic growth composed by Robert Solow was introduced, researchers and economists all over the world are trying to find an answer to question of different levels of successful economic growth and prosperity.

A search for new ways of understanding growth followed, and out of this emerged a new perspective on economic growth, which put technology and innovation, rather than capital accumulation, at the front. Increasingly, the ability of a poor country to catch up with the rich was seen not only – or mainly – as a reflection of its ability to generate (or attract) sufficient investments, but also of its capacity to absorb existing and generate new technologies (e.g. innovate), Fagerberg (2010).

1 Innovation policy and performance within the EU and the Slovak Republic

Innovations represent a driving force of all knowledge economies. At the very beginning it is necessary to explain and closely characterize the term itself. One of the most popular Slovak definitions of "innovations" can be found in publication "Innovation and Companies" TTSK (2010), where innovations are defined as introducing and implementing of new, or much better product (goods or services), process, new marketing method or a new organizational method in company practice, working environment of all organizational parts or in external relations. The most acclaimed form of explaining the term innovation is at present a comprehensive definition in the Oslo manual, Kováčová (2007), which was published in 1997 by OECD (OECD, 1997): „Technological innovations of products and processes (abr. TPP innovations) which include new products and processes based on new technologies, or significant technical improvements of already existing products and processes. TPP innovation is implemented when the product is launched to the market (product innovation) or a new process innovation is introduced (process innovation).“ OECD also defines four basic categories of innovations which create a base for further evaluation of innovation performance of companies and regions. We consider the following categories:

- product innovation,
- process innovation,
- organization innovation,
- marketing innovation.

Second important term is the innovation performance. Level of innovation performance can be expressed by comprehensive methodology, which is used by the European Commission used to compare innovation performance of its member states and individual regions of the EU, while it also uses the scheme of several basic indicators, such as:

- European Patent Office, www.epo.org
- Human resources in the area of science and technology (% of population)
- Participation in lifelong education (age of 25-64)
- Public expenses for research and development (% GDP)
- Company expenses for research and development (% GDP)
- Employment in medium-tech and high-tech production (% of overall work force)
- Employment in high-tech services (% of overall work force)

- EPO1 patents (per one m. citizens) [4]

1.3 Innovation policy and innovation performance in the EU

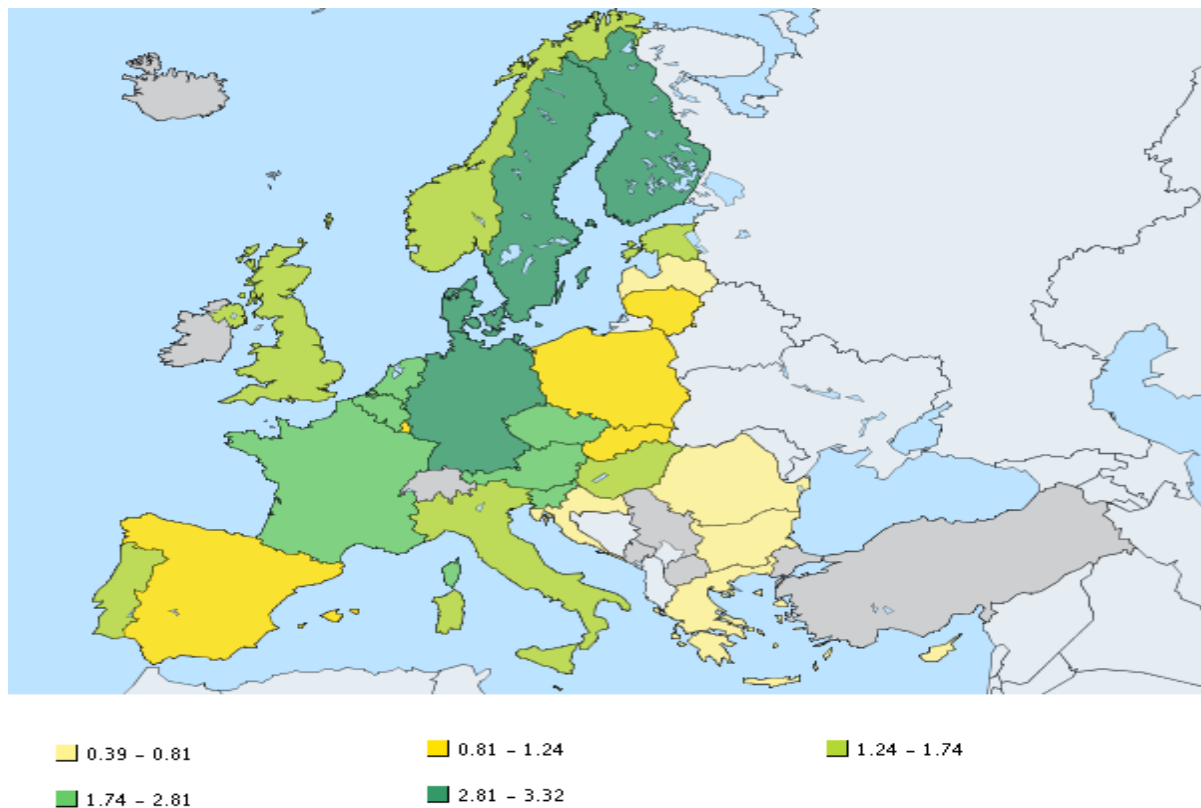
Innovation policy of the EU is based on the support of enterprise sphere. This helps to contribute towards better industrial performance and so to support meeting broader social objectives such as industrial growth, increased employment rate and competitiveness of the industry within society and its sustainability. One of the key documents supporting growth of investments into innovations and innovative solutions is Strategy 2020, approved by the Committee in 2010. This strategic document also confirmed the Lisbon Strategic Aim to increase the investment ratio into science, research and innovation at least on the level of 3% GDP of the member countries.

At present, except Sweden and Denmark, none of the member countries fulfils the set objective of the investment ration on science, research and innovation. The investment at present reaches the EU average of 28 individual investments into innovation (science and research) which represents 2.01% of the GDP. To reach the set innovation goals the EU has proposed 10 following measures:

- 1) To continue in investments into innovation regardless of saving measures.
- 2) To improve the quality of Europe and individual state internal systems of research and innovation.
- 3) To modernize educational systems at all levels.
- 4) To use the EU research area for improving cooperation of innovators and researchers.
- 5) To simplify the approach towards European programmes.
- 6) To commercialize innovations – improve the links among scientists and enterprises.
- 7) To dispose of the barriers restricting the introduction of new ideas into market – more functions for the SMEs sector.
- 8) To establish European partnerships this would support and accelerate the research, development and introduction of innovations to the market.
- 9) To improve innovations in the public sector.
- 10) To support the cooperation with international partners and open up the opportunity of the EU support programmes.

¹ European Patent Office, www.epo.org

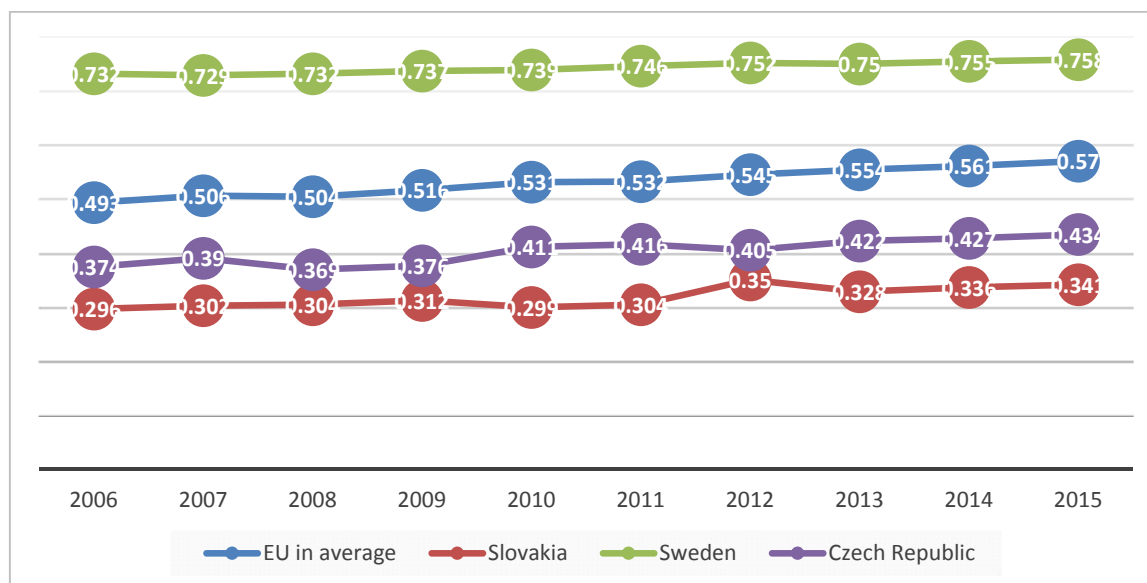
Fig. 1: The ratio of investments into innovation in % GDP within the EU member states in 2013



Source: EUROSTAT, 2014

Among the investments into research and development and the innovation performance there is an explicit correlation and therefore a higher % of costs into research and development that logically increases also the innovation performance of an individual country. A typical example is Sweden which in long term spends on research and development in the comparison with the GDP the biggest amount of financial means and so it represents the leader in innovation performance among the EU member states. The difference in the amount of investments among the selected old and new EU member states is becoming to shift – e.g. the Czech Republic which spent in 2013 up to 1.91% of the GDP on research, development which represents the minimum difference when compared to the Netherlands which spent 1.98% of its GDP. The following graph shows the research and development of innovation EU performance average of Sweden, the Slovak Republic and the Czech Republic on the bases of the available data.

Fig. 2: The innovation performance research of the EU average performance of Sweden, the Slovak Republic and the Czech Republic.



Source: European Commission, 2014, individual estimate of trends 2014-2015

1.4 Innovation policy and innovation performance in the Slovak Republic

The Slovak Republic continually and on the long term basis significantly lags (see Graph 1) in the ratio of investments into innovation behind the EU average and also in the innovation performance which has a long-term negative impact not only on commercial competitiveness of the country. From the long-term prospective is in the Slovak Republic considerably underdesigned science, together with applied research and development of new products, services, processes and methods. At the same time in the relative manifestation enhances the difference between the developed Europe and the overall average of the EU countries and the Slovak Republic. In the period of 2006-2013 the Slovak Republic reached the pace of the innovation performance growth in the ratio of 1.49% annually, while the EU average reached 1.66%, the Czech Republic 1.72%. The innovation leader, Sweden grew in the given period only by 0.35%, but in the long term period it keeps a steady growth and occupies top ranks (within innovation performance measurements), especially due to stable amount of investments on research and development and the creation of innovation-friendly environment. For the minimum balance of the EU average, the Slovak Republic will have to considerably increase the investments into research and development/innovations and create such an environment – mainly business environment which will enable the development of the innovation potential of the country.

Following the actual unfavorable development of investments into innovations and innovation performance was in November approved by the Slovak government a manual named: „From knowledge to prosperity – Strategy of research and innovations for an intelligent specialization of the Slovak Republic“. This manual defined following vision, fulfilment of which should lead up to the year 2020 to the transformation of Slovak economy to knowledge economy (Government of the Slovak Republic, 2013): „To encourage structural change of the Slovak economy towards the growth based on the increase of the innovation ability and excellence in R&I with the aim to support sustainable growth of incomes, employment rate and quality of life. “

The vision in question should be fulfilled by means of 4 strategic aims:

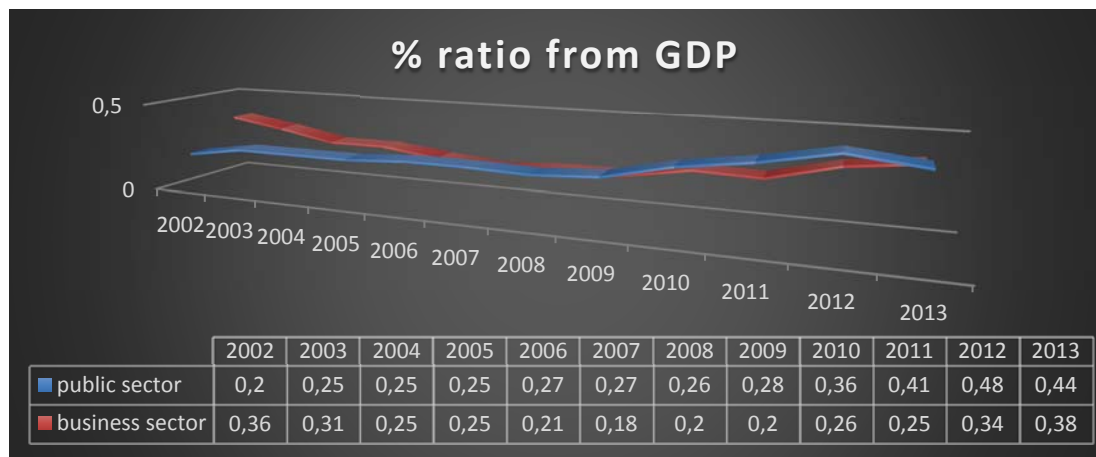
- 1) To deepen the integration and attachment of key industrial sectors which increase local added value by means of cooperation of local supply chains and support their mutual chaining.
- 2) To increase research contribution to the economic growth through global excellence and local relevance.
- 3) To create dynamic, open and inclusive innovation society as one of the assumptions of better quality of life
- 4) To improve the quality of human resources for the innovation Slovak Republic

For the completion of the individual strategic aims and fulfilment of global vision, there have been designed few individual measures. Individual measures aim particularly at the support of entrepreneurs and creation of business-friendly corporate environment. They also aim at intensification of science and research development, innovation projects improvement and general enhancement of the school educational system. Recent intensity of innovation support (or science and research support) can be evaluated by means of investments into the given field.

From the given graph we can see that although in the given period of time the support of research and development was growing but not in a sufficient speed. For example, in the comparison with the Czech Republic, where the state participate in the financing of the given field with the ratio of 0.87% GDP in 2013 and enterprise sphere with up to 1.03%, we still lag behind. Interesting is the comparison of science and research financing by the enterprise in the majority of the EU countries, private sources are dominant over state sources. In the Slovak Republic dominates financing of the innovations by public sources. This fact indicates that the transformation to knowledge economy is going to be up to the year 2020 very difficult task to fulfil. This is because it is enterprise sphere and intensity of the research conducted by

enterprise sphere (with the direct connection to the school education system) which are relevant indicators of knowledge economy development in a given country.

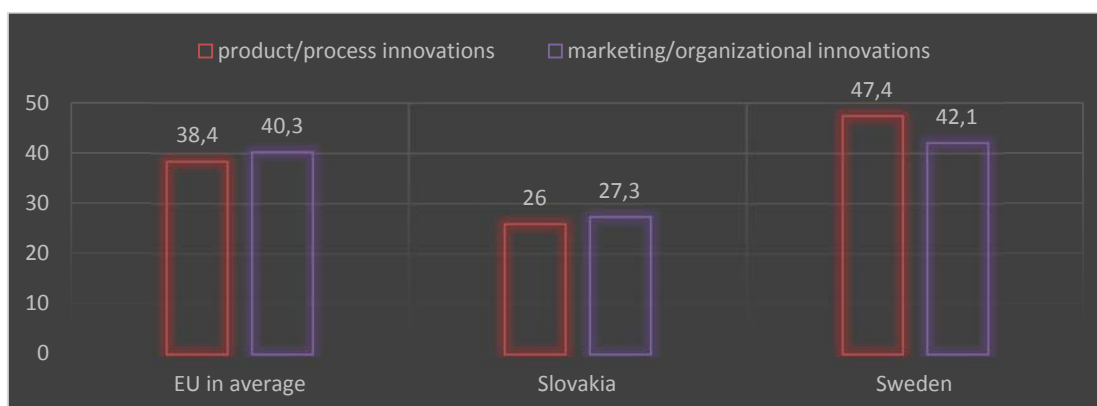
Fig.3: Investments into innovation/science and research in the Slovak Republic



Source: EUROSTAT, 2014

At the end we can compare actual intensity of the innovation performances in the aspects of product/process and marketing/organizational innovations which represents % ratio from the overall number of enterprise performances in the SME segment. From the graph it is evident that the Slovak SME lags behind the EU average and the biggest difference can be seen when compared with Sweden (leader in innovations). This situation is primarily caused by low costs into research and development in enterprise sector and also by the focus on activities with lower added value.

Fig. 4: Innovations in the SME sector in 2014

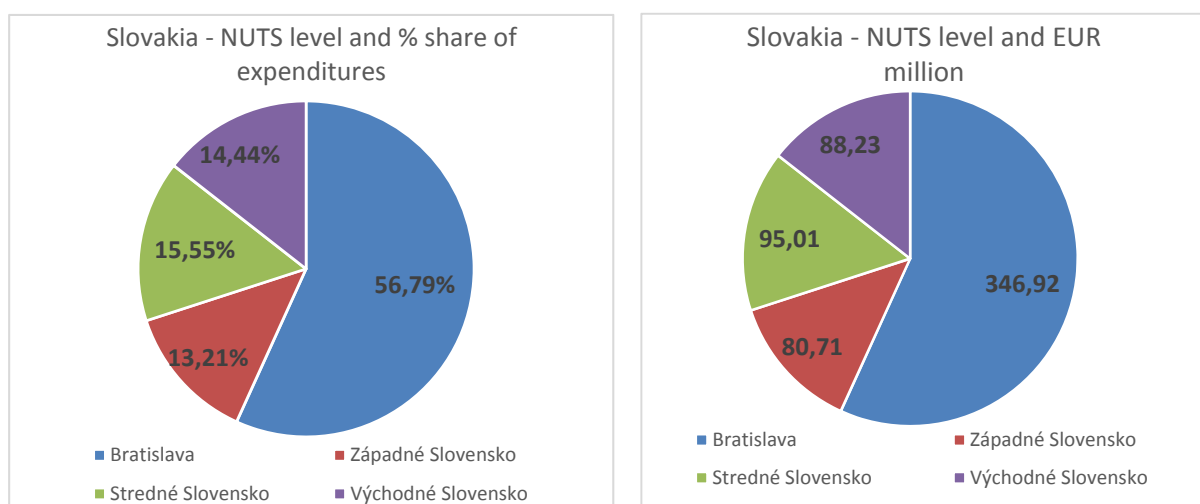


Source: European Commission, 2014

2. Regional disparities in innovation performance in the Slovak Republic

If we focus on the evaluation of innovation performance of individual Slovak regions, we come to a very similar conclusion as it is in the case of evaluation in other countries of the EU 28. There exist significant differences between the Bratislava region in the western part of the Slovak Republic and the rest of the country, whereby notable difference can be already seen also between the Bratislava region and other regions of the western Slovak Republic. This is the fact that is valid in the evaluation of the number of researchers and development employees as well as in investments or in total costs of R&D whether in enterprise sphere or public sphere.

Fig. 5: Current expenses into research and development in the Slovak regions



Source: EUROSTAT, 2014

In the Slovak Republic are the most striking regional disparities in the financing of research and development especially when compared with the Bratislava region (within the scope of which are re-invested up to 57% of the whole amount of investments into the given field in the SR) with the rest of the country (e.g. in Central Slovakia only 15.55 %).

In addition to simple graphic comparison we also focused to investigate the relationship between the level of gross domestic product and investments in research and development. When examining this relationship, we used regression and correlation analysis examining causal dependence of one dependent and one independent variable. After the initial analysis through visual assessment using X to Y depending chart we chose a suitable

mathematical function of which the curve best reflects the relationship between observed variables. In 3 of the 4 cases, an exponential function showed preferable, which suggests that expenditures in R & D rise with rising GDP exponentially. In layman's terms, the ability to increase R&D spending is faster than the need of GDP growth. For one analysis polynomial second-degree model has been used considering the nature of the data applied, which differs from the exponential model by the type of mathematical curve used to quantify the relationship between variables. The principle of the rest of the analysis is identical as in any linear and nonlinear dependence. The usage of the least squares method, which forms the basis of this regression and correlation dependence is standard in the presence of linear dependence but even for non-linear relation which can be adapted to linear dependence of parameters by using a suitable transformation.

Exponential function has the form:

$$y = b_0 * b_1^x$$

Second-degree polynomial function has the form:

$$y = b_0 + b_1x + b_2x^2$$

Interpretation of parameters will be explained on concrete models of the GDP to spending on R&D dependence. All models were evaluated through several indicators:

- The correlation coefficient (depending force)
- The coefficient of determination (depending tightness)
- ANOVA ((statistical importance of the model as a whole)
- Statistical significance analysis of the exponential function parameters (locating constant and regression coefficient)

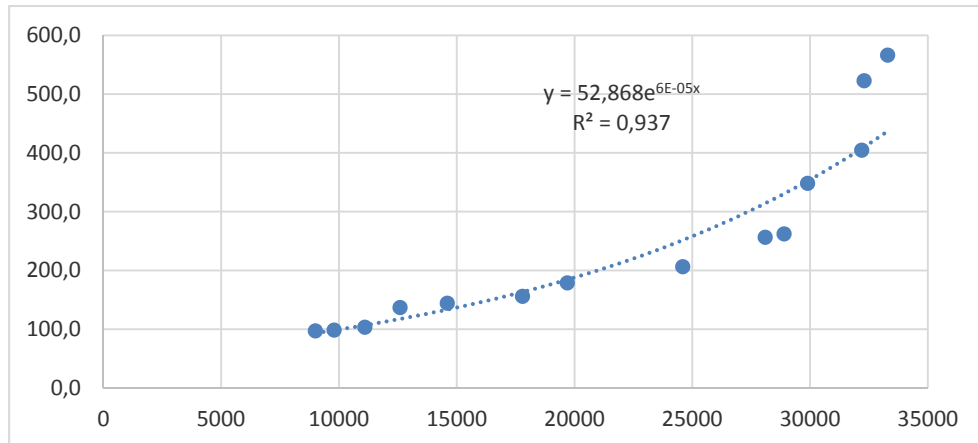
The resulting parameters can be used to interpret the model and define the relationship between GDP and expenditures in R&D.

Analysis between GDP and expenditures in R&D have been drawn up at NUTS 2 level - studying the changes of investment in R&D of Bratislava, The Western, Central and Eastern Slovakia, depending on their regional gross domestic product levels.

The exponential model used to analyze the Bratislava region has proved to be statistically significant (Significance F – F test for statistical significance of the model is at 1.448-08, which is considerably less than 0.05, therefore we accept the hypothesis of the model significance).

The strength and suitability of the model evaluated using correlation coefficient (0,967) and determination (0,937) claim strong dependence and high percentage of explanation ability of expenditures level in R&D by GDP level. Parameters of the model are found to be statistically significant, as both P Values will be well below 0:05.

Fig. 6: The Dependence of investment in R&D by GDP (Bratislava Region)

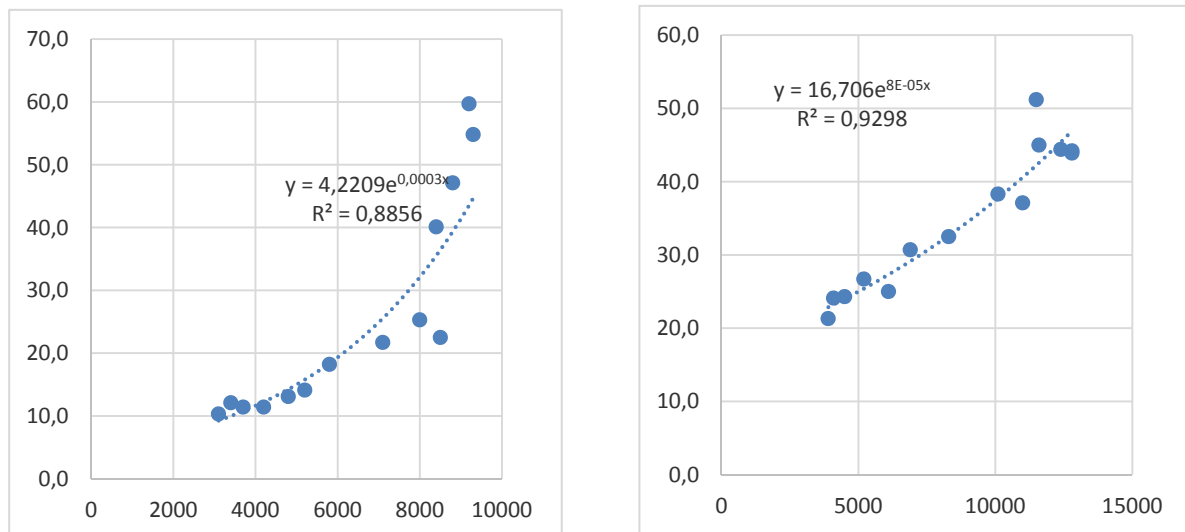


Source: Own research, 2015

Growth rate of expenditures in R&D depends on GDP growth, and can be expressed by mathematical relationship:

$$\text{Investment in R\&D} = 3.967^{0.0000635} * \text{GDP}$$

Fig. 7: The Dependence of investment in R&D by GDP (Western and Eastern Slovakia)



Source: Own research, 2015

The same principle of the model description can be applied also for the Western and Eastern Slovakia, the value of indicators and parameters are listed in the following chart.

Chart 1: The values of indicators and parameters of regression and correlation relationship analysis of GDP and investment in R&D

Region	Coefficient of correlation	Coefficient of determination	F test of significance	P Value of parameter b ₀	P Value of parameter b ₁	Value b ₀	Value b ₁
Záp. S	0,964	0,927	2,795E-08	5,090E-15	2,795E-08	2,816	0,0000807
Vých. S	0,941	0,885	5,319E-07	3,404E-06	5,319E-07	1,44	0,0002537

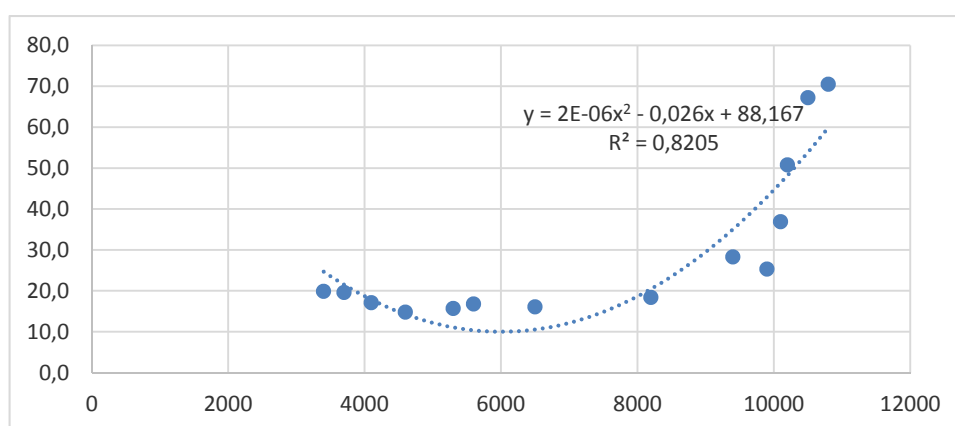
Source: Own research, 2015

The conclusion is similar to that in the Bratislava Region - both models show a strong dependence with relatively high percentage of expenditure variability explanation in R&D depending on GDP. Both models are highly significant, including all parameters.

However, as it is already seen in the XY dependence graphs, steep slope in view of the Bratislava region compared to the Western and Eastern Slovakia suggests that Bratislava can response the most flexibly to the need investment in R & D when increasing GDP.

As mentioned, a polynomial of the second degree showed as the most appropriate model for the Central Slovakia, and thus the response curve may be approached to the response curve which is the result of the quadratic function.

Fig. 8: The Dependence of investment in R&D by GDP (Central Slovakia)



Source: Own research, 2015

After adjusting the input parameters (for the achievement of the linear regression in parameters) we get a statistically significant model (F test of statistical significance = 0.0000789), in which 82% of investment in R&D variability rate can be explained by increasing of the GDP. The relationship between variables can be monitored in this case by the following relationship:

$$\textit{Investment in R\&D} = 2.169E-06 * \textit{GDP}^2 - 0,026 * \textit{GDP} + 88.16$$

It is not surprising that the most economically developed region of the Slovak Republic invests into research and development the biggest amount of money. Bratislava as the only region of Slovakia has a tendency of intense transformation to a knowledge economy based on innovation and significant investments in R&D. This trend will widen even more so-called 'scissors' of the regional disparities in the Slovak Republic.

Conclusion

Globally it can be stated that the situation of the innovation support policy in public as well as in private sector is more than alarming. In the long term, the Slovak Republic doesn't only lag behind the average of the EU-27, but also behind several neighbouring countries. This intensifies its vulnerability in the field of the competitiveness preservation of our economy in harsh competitive environment of Europe. Even more striking are problems in individual regions. With the exception of the Bratislava region, the situation in the rest of the Slovak Republic, thus in all other regions, is very bad. Also in this field takes still place deepening of differences between Bratislava and the rest of the Slovak Republic which is also reflected negatively on the employment rate and investments inflow to the regions. Among the most fundamental reasons of an insufficient innovation performance of the country and regional disparities in the given field are:

- insufficient support of SMEs activities in the Slovak Republic,
- absence of regional innovation centers,
- absence of high-tech incubators,
- lack of qualified work force, whose education would reflect actual market needs,
- insufficient support of applied research and development from the state and public administration prospective,
- insufficient cooperation of enterprises and public research and educational institutions (universities, vocational schools, research institutes),
- difficult access to the EU resources which are allocated for the support of science, research and innovations,
- insufficient government and regional support for fulfilling the innovation Slovak and European Union policy in Slovak conditions,
- absent strategic concept of change from manufacturing economy to knowledge economy,
- inconvenient spectrum and technical conditions of regional infrastructure

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EDUCATION AND TRAINING: THE TERMS CREATIVITY AND TVOŘIVOST AND THE COMPREHENSION OF THE TERMS IN A CZECH LANGUAGE ENVIRONMENT

Emilie Franková

Abstract

The paper first clarifies the understanding of the “international” usage of the term, creativity and the “local” term, tvořivost. It presents the process to examine the significance associated with the terms using a qualitative methodological procedure called mental mapping. Using an analysis of the content of the obtained mental maps it identifies the similarities and differences in the understanding of the terms. The results of the mental map for the term, creativity are compared with the results of the mental map for the term, tvořivost, among others using fictitious mental maps.

Key words: creativity, tvořivost, mental mapping, meaning associated with the term creativity

JEL Code: I25, M12, A29

Introduction

The terms “creativity” and “tvořivost” are considered synonymous by the researchers in the creativity field in the Czech language environment (see. e.g. Hlavsa, 1985; Encyklopedický slovník, 1993; Franková, 2011).

The author’s long practical experience in teaching and publishing shows that the general public feels a difference between these two terms. This is obvious e.g. when it comes to the representatives of the publishing houses, who prefer the term “creativity” in the books for the managers and employees dealing with creativity in the professional field, whereas the publications designed to develop children’s skills and abilities often work with the term “tvořivost”. Also the university students, who completed the courses focused on developing creativity, i.e. tvořivost taught by the author, quite often state in their individual essays the connection “creativity and tvořivost” while the context clearly shows that they are not considered synonymous. Therefore, the author of this article conducted an empirical study in

2015 to examine the content of these concepts in minds of her students. This article presents this qualitative study and its results.

1. Researched Terms in English and Other Languages

Both the “international” term creativity and the “domestic” term tvořivost are used in the Czech language. The situation is similar in other languages. The Slovak language, which is the closest language to Czech, also uses the pair of terms kreativita and tvorivost’ and the dictionary refers to both kreativnost’ and tvórchstvo. In German we can find die Kreativität, but also e.g. die Schaffenskraft (Franková, 2000).

The term creativity comes from the Latin verb "creare" (create, procreate) and many Latin based languages such as English, French and Italian adopted it. The Czech word "tvořivost" comes from the root tvor that reminds both the living entity (tvor) and its creation (výtvor); similarly in Slovak, Russian, Polish and other Slavic languages (Hlavsa, 1985).

Both the Czech tvořivost and originally Latin creativity can derive other terms for differentiating specific shades of the exact meanings – sometimes with the Czech version as a more suitable base, other times with Latin. When taking the common usage of both terms into the account we are facing an issue that is dealt with in this article: how do people perceive tvořivost and how do they perceive creativity? What content is attributed to these terms?

2. Research Aims and Research Methods

2.1. Research Aims

The aims of the part of qualitative research presented here were:

- to evoke associations related either to the term creativity or term tvořivost in every respondent’s mind;
- to capture the content and structure of these associations using the mental mapping technique;
- to keep a record of associations of the first order for each of the terms and categorize them;
- to compare the results of mapping of the term creativity with the results of the term tvořivost and identify their correspondences and differences in understanding the terms explored;
- to comment upon the discovered correspondences and differences in understanding the explored terms and highlight the practical implications for the content and organization of tuition that focuses on findings from the field of creativity and creativity development;
- to formulate suggestions for further research.

2.2 Methodology and Research Sample

A qualitative methodological procedure called mental mapping was used here to identify the content of the examined terms in minds of the respondents. This procedure is recommended and used by several authors although their approaches to application and focus of the method differ slightly (Franková, 2011). However, the method always uses the fact that a human brain emits thoughts in all directions and works with associations (Buzan, T., 2007; Buzan, T. & Buzan, B., 2008; Garavan & Deegan, 1995; Koh & Tan, 2006). Mental mapping therefore starts with an intentional induction of theme-oriented thought processes whose content and structure is drawn in a spatial model (mental map) by an individual/a respondent. To create a mental map, only a blank sheet of paper in A4 or A3 format and a pencil are needed (ideally coloured pencils). The individual - author of the mental map - starts working by writing or drawing a mapped theme in the centre of the paper and his/her task is to capture his/her thought processes that unwind from this central point and their final structure² (Franková, 2011). The use of mental mapping thus enables us to identify the content of a given term from the perspective of a respondent in the form of mental mapping (Franková, 2013).

In this study we deal with semantic planes associated with both the term creativity and – with other respondents – the term tvořivost. The individual mental maps were prepared by the students of the University of Economics at the beginning of courses on creativity and its development, i.e. before starting their own learning. The mental maps were created in four working groups, whereas the term creativity was a central point for two groups and the term tvořivost for the other two.

For purposes of this study 10 mental maps from the first two groups were processed. Their authors – men aged from 21 to 25 (average age 23,00 years) – did not state any educational background in the field of creativity and after having created the map they mentioned that in their opinions the terms creativity and tvořivost are not synonymous. Additionally, 11 mental maps from the other two groups were processed. Their authors – men aged from 22 to 26 (average age 23, 60 years) without any educational background in the field of creativity mentioned after having created the map that in their opinions the terms creativity and tvořivost are not synonymous.

For processing of all the obtained qualitative data the following methods were used: the method of enumerating of all the obtained associations of the first order, the method of inductive creating of content categories and the comparative method that leads to

² For a detailed description of mental map creation see e.g. Buzan, T., 2007.

identification of certain correspondences and differences in the gained content of the examined terms.

3. The Results of the Map for the Examined Terms

Tab. 1 shows all the associations of the first order received from all the 10 analysed mental maps on creativity (the associations of the first order can be regarded as associations mostly connected with the term given). These associations are classified by the identified content categories. Tab. 2 presents all associations of the first order received from all the 11 analysed mental maps on tvorivost; these associations are also classified by the identified content categories.

Tab. 1: Associations of First Order for the Term CREATIVITY

Identified categories	Associations of first order
Idea, thought, mind, thinking	<ul style="list-style-type: none"> • idea = 2 • free thinking = 1 • systems thinking = 1 • openness = 1 • free thinking creativity = 1 • paradigm = 1 • detached view = 1 • reflecting = 1 • mind = 1
Creativity	<ul style="list-style-type: none"> • creativity = 1
Creation	<ul style="list-style-type: none"> • glass office buildings = 1
Process	<ul style="list-style-type: none"> • reflecting = 1 • brainstorming = 2 • thinking = 2 • process = 1 • improvisation = 1 • creation = 1
Originality	<ul style="list-style-type: none"> • originality = 3 • new ideas = 2 • fresh thinking = 1 • new approaches = 1 • different perspective = 1 • uniqueness = 1 • inventing of new dishes = 1
Artistic, arts	<ul style="list-style-type: none"> • arts = 4 • paintings = 1 • films = 1 • statues = 1 • literature = 1 • photography = 1
Entertainment, excitement	<ul style="list-style-type: none"> • entertainment = 1 • rest = 1
Person, team	<ul style="list-style-type: none"> • person = 1 • team = 1 • team (member) = 1 • creative type = 1

	<ul style="list-style-type: none"> personalities = 1
Manual work	<ul style="list-style-type: none"> manual creativity = 1
Specific creative organizations	<ul style="list-style-type: none"> Milka Mondelez = 1 Apple = 1
Marketing	<ul style="list-style-type: none"> marketing = 2 ads = 1 analytics = 1
Design	<ul style="list-style-type: none"> design = 4 draft = 1 graphics = 1 fashion = 1
Business area	<ul style="list-style-type: none"> companies = 1 departments = 1 open space = 1 work = 1 practice = 1 salary = 1 technologies = 1
Innovation, competitive advantage etc.	<ul style="list-style-type: none"> innovation = 2 competitive advantage = 1 effectiveness = 1 business = 1
Quality, ability	<ul style="list-style-type: none"> quality = 1 ability = 1 imagination = 1 soft skill = 1 courageousness, assertiveness = 1 self-knowledge = 1 initiative = 1 activeness = 1 activity = 1
Colourfulness, colours	<ul style="list-style-type: none"> colourfulness = 1 colours = 1
Jokes	<ul style="list-style-type: none"> jokes = 1
Admiration	<ul style="list-style-type: none"> admiration = 1
Trend	<ul style="list-style-type: none"> trend = 1
Unclassified answers	school = 1; shortage = 1; society = 1

Source: the author

Tab. 2: Associations of first order for the term TVOŘIVOST

Identified categories	Association of the first order
Idea, thought	<ul style="list-style-type: none"> idea = 3 ideas = 1 thought, thoughts = 2 fantasy = 1 imagination = 1 intuition = 1 inspiration = 1
Creativity	<ul style="list-style-type: none"> creativity = 7
Creation	<ul style="list-style-type: none"> interpretation = 1 creation = 2 to create = 1 product = 1 cars = 1

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Innovation Management and Corporate Sustainability, 2015

	<ul style="list-style-type: none"> • constructions = 1
Process	<ul style="list-style-type: none"> • creative process = 1 • process = 1 • creation = 1
Lego, models	<ul style="list-style-type: none"> • lego = 2 • models = 1
Originality	<ul style="list-style-type: none"> • originality = 4 • novelty = 1 • something new = 1 • unique thoughts = 1 • individuality = 1
Artistic, arts	<ul style="list-style-type: none"> • artistic = 1 • arts = 4 • music = 1 • art lesson = 1 • origami = 1 • workshop, studio = 1
Positive experiences	<ul style="list-style-type: none"> • entertainment, enthusiasm = 1 • joy = 1 • zeal = 1 • happiness = 1 • success = 1
Brain	<ul style="list-style-type: none"> • brain = 1 • hemisphere = 1
Children	<ul style="list-style-type: none"> • children = 2
Manual work	<ul style="list-style-type: none"> • manual work = 1 • carpentry = 1 • cook = 1 • hands = 1
Specific creative organizations	<ul style="list-style-type: none"> • HELL = 1 • ADOBE = 1
Sources	<ul style="list-style-type: none"> • time = 1 • space = 1 • means = 1 • people = 1 • limitations = 1
Quality, ability	<ul style="list-style-type: none"> • quality, ability = 1 • ability = 1 • inventiveness = 1 • initiative = 1 • ambitions = 1
Business	<ul style="list-style-type: none"> • business = 1
Mistakes	<ul style="list-style-type: none"> • mistakes = 1
Unclassified responses of different content	sphere = 1; real = 1; unreal = 1; VŠE (University of Economics) = 1; map = 1; grain = 1; village = 1; psychology = 1

Source: the author

4. Correspondences and Differences in Understanding the Content of the Examined Terms

To compare the correspondences and the differences, Tab. 3 displays the number of associations in the main content categories obtained by the method of inductive categorization. Fictitious mental maps prepared on the basis of the obtained results also offer the comparison of correspondences and differences in the graphical form.

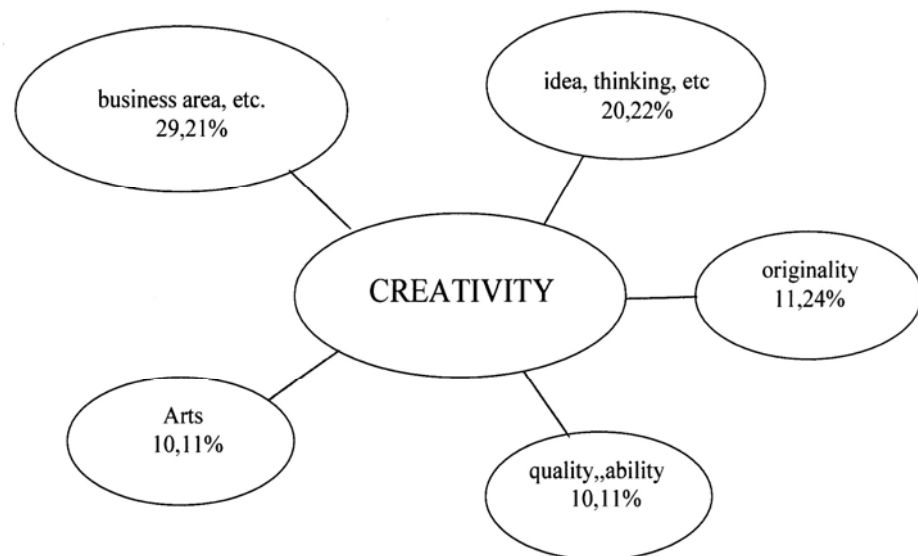
Correspondences and differences listed in Tab. 3 and the displayed fictitious maps indicate that whereas the respondents in both groups associate the examined terms within the categories “idea, thinking, mind, creation process” (and “brain”), “originality” and “arts”, the differences can be found primarily in the categories related to work activities and company affairs. The respondents mapping the term creativity reported a total of 26 associations of this kind (whereas one association was connected with manual work), whereas the respondents mapping the term tvořivost only found 10 associations (7 associations were related to manual work). “Creation” was mentioned in 7 associations with the term tvořivost and 1 association with the term creativity. Issues related to various resources occurred in the term tvořivost, not in the term creativity. The associations with the term creativity contained the references to a creative (adult) human or alternatively a team, whereas the associations with the term tvořivost had no such references (in two mental maps here the association “children” were recorded). When having examined the term tvořivost in the mental maps, there were 7 associations to the term creativity discovered, whereas creativity was associated with the term tvořivost only once.

Tab. 3: Compared Correspondences and Differences in Understanding the Content of Examined Terms

CREATIVITY	TVOŘIVOST	MAIN CONTENT CATEGORIES
18	13	idea, thinking, mind, creation process
11	0	marketing, design
10	8	originality
9	9	arts
9	5	quality, ability
7	0	business area
5	1	innovation, business, competitive advantage
5	0	person, team
2	5	positive experiences
2	2	specific creative organization
2	0	colourfulness, colours
1	7	creation
1	7	manual work
1	0	jokes
1	0	admiration
1	0	trend
1	-	tvořivost
-	7	creativity
0	2	children
0	5	sources
0	2	brain
0	1	mistakes
3	8	unclassified categories
89	82	SUM

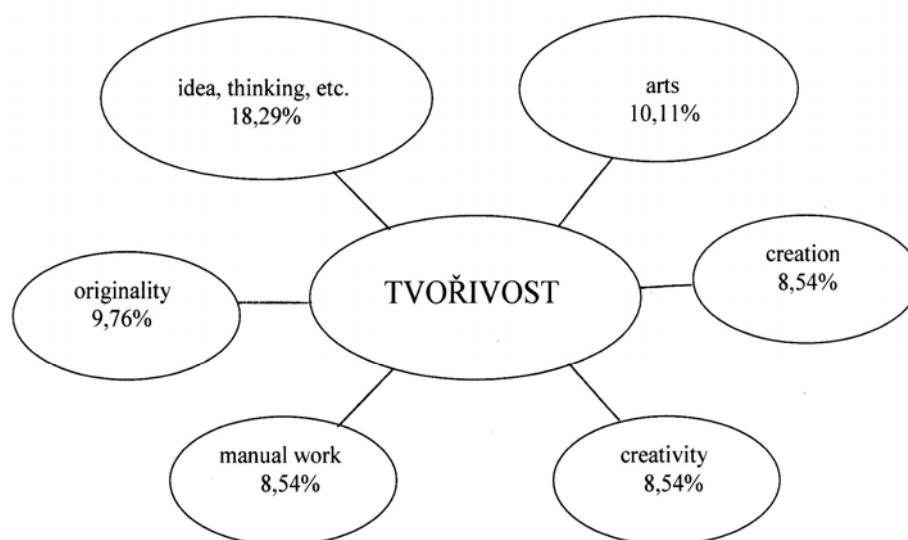
Source: the author

Fig. 1: The fictitious mental map displaying the number of associations of the first order for the term creativity



Source: the author

Fig. 2: The fictitious mental map displaying the number of associations of the first order for the term tvořivost.



Source: the author

The study in this article points to interesting results usable for the choice of content and organization of teaching focused on findings from the field of creativity and practical development of creativity. A deeper clarification of terminology used in the scientific texts on creativity is recommended at the beginning of the course together with the discussion on how the clarified terms are understood by the course attendants. The language used in teaching and the rate of content sharing of the terms used by the participants is an important indicator of understanding the taught scope of knowledge. When the same meaning is shared among the course participants, it facilitates their understanding within the course and improves their emotional wellbeing. It is extremely important at the stage of creativity development and creative skills training. This increases their chances of not only successful completion of the course and gaining an individual contribution for their own development, but also of understanding the relevant publications for consequent self-study. When the meanings of the used terms are not shared among the people, there are misunderstandings and misinterpretations, whereas the negative consequences of this phenomena not only impede the study but they may also lead to problems, conflicts and social and economic losses within the working environment outside the school with majority of people not being aware of what the cause of these misunderstandings and losses is.

Although the results of mapping of the terms examined are in accordance with previous practical experience of the author that gave rise to this study, it is necessary to

understand the results due to the number of respondents as a kind of pre-research. In subsequent studies, it is advisable to focus not only on the mapping results of the content of the terms with a larger number of respondents, but also on application of other qualitative and eventually also quantitative methods, the results of which may highlight other aspects of the researched questions.

Conclusion

The paper focuses on terms “creativity” and “tvořivost” and the understanding of these terms by the students of the University of Economics in Prague. The meaning of the terms in the students’ minds is examined using a qualitative procedure called mental mapping. This procedure enabled us to record the associations of the first order for each of the two terms and categorize them. The correspondences and differences in understanding of the above stated terms were presented and commented upon and practical consequences and suggestions were formulated for further research.

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IMPLEMENTATION OF THE SUSTAINABLE ENTREPRENEURSHIP PRINCIPLES IN CORPORATE PRACTICE WITHIN THE CZECH REPUBLIC AND THE SYSTEMIC SUPPORT OF FURTHER EXPANSION

Štěpánka Hronová – Vilém Kunz

Abstract

The topic of sustainable entrepreneurship has received considerable attention worldwide. The importance of issues connected with the wide implementation of Corporate Social Responsibility (CSR) principles in the Czech Republic has increased since the country's accession to the European Union. This paper explores possible ways to implement sustainable business practices in the Czech Republic as well as its further development. Moreover, it includes the identification of key areas of importance to the process of systemic support of sustainable business activities. The article also presents the results of an empirical investigation that maps government support of CSR among selected companies in the Czech Republic.

Keywords: sustainable entrepreneurship, corporate social responsibility, implementation of the CSR principles, sustainable business activities, the Czech Republic, empiric research

JEL Code: M14

Introduction

Corporate Social Responsibility is a complex and broad concept on its own which in addition serves as the fundamental basis for other partial concepts focused on particular areas of socially responsible behaviour of companies. Comparatively large width of the CSR concept as well as its unrestrained development has caused very high terminological disunity.

Even though the term Corporate Social Responsibility has been discussed for more than half a century, there currently still does not exist any universally applicable and uniform worldwide definition.

In our opinion, it is caused mostly by the fact that CSR is based on voluntariness and it does not have any strictly defined boundaries thereby giving space to a worldwide debate and a very broad understanding and interpretation of the comprehensive concept by individual stakeholders. Mura (2011) even believes that if a uniform and generally accepted consensus in understanding of the CSR concept exists, then it is the one claiming that the term CSR has different understanding by different stakeholders and different social commentators.

As a result of this, numerous definitions can be found as well as approaches of defining the notion of corporate social responsibility. However, these are often quite vague thereby giving considerable space to their relatively wide application and use.

A large number of authors have been dealing with the issue of the unified CSR definition not only abroad but also in the Czech Republic. For example, Mullerat thinks that to define the notion of CSR, either a simple definition should be used, which however might be simplified to a misleading level; or on the contrary a lengthy definition can be used which is more descriptive but more accurate. (Mullerat, 2010, p. 227).

Many international and national organizations and movements have been trying to define the concept of social responsibility as well. These entities often seek to promote CSR and disseminate ideas of the concept not only among business representatives but also among the general public. We can mention, for example, the following international organizations: Business for Social Responsibility, World Business Council for Sustainable Development, or an organization Prince of Wales International Business Leaders Forum linked to the transatlantic institutions such as the World Bank, the United Nations and the International Labour Organization (ILO). In Europe, CSR is supported by the EU institutions as well as by the network of its national partners.

Following the development of views on CSR in the course of time is interesting and informative. Issues of evolution and development of definitions of the complex theoretical approach to CSR were in the focus of interest of an acclaimed theorist in the CSR field A. B. Carroll (1999) in his paper called „Corporate Social Responsibility: Evolution of a Definitional Construct“. There he states that authors who have been involved in defining the CSR concept can be divided into two main schools of thought. While supporters of the first one emphasize the commitment of every business being mainly profit maximization within the law and with the minimum of ethical responsibilities, the others propose a wider range of responsibilities of enterprises towards society (Carroll, 1999). Carroll (2008) on his own considers CSR to be companies' obligation to make decisions and implement policies that are

desirable in terms of the values and goals of the society. In connection with the evolution of the development of definitions, it is possible to include a view of one of the major contemporary experts in CSR Wayne Visser according to whom CSR is: *“the way in which business consistently creates shared value in society through economic development, good governance, stakeholder responsiveness and environmental improvement. Put another way, CSR is an integrated, systemic approach by business that builds, rather than erodes or destroys, economic, social, human and natural capital.”* (Visser, 2011, p. 87).

The European Union slightly changes its CSR definitions in the course of time as well. In the European Commission document about CSR in 2001 it is defined as: *“A concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis”*(KOM, 2001, p. 8 [online]). Later in 2011, the European Commission puts forward a renewed definition as follows: *“the responsibility of enterprises for their impacts on society”* (KOM, 2001, p. 6 [online]). On its website the European Commission announces principles and guidelines which the current Commission’s CSR strategy is built upon. They are:

- “United Nations Global Compact
- United Nations Guiding Principles on Business and Human Rights
- ISO 26000 Guidance Standard on Social Responsibility
- International Labour Organization Tripartite Declaration of Principles concerning Multinational Enterprises on Social Policy
- OECD Guidelines for Multinational Enterprises” (European Commission, 2014 [online])

Despite the significant width and complexity of the CSR concept, but also the differing interpretation by individual stakeholders, we assume that it is still possible to define the basic principles of CSR. The following is mainly emphasized:

- voluntariness – enterprises implement CSR activities entirely voluntarily beyond their duties specified by legislation;
- active cooperation with all stakeholders - allows to create 'win-win' situations;
- transparency and open dialogue with stakeholders – businesses should enable stakeholders to access information, not just the data related to the economic performance of enterprises;
- complexity and functioning of the organization with respect to the so called *triple bottom line businesses* – companies focusing on economic, environmental and social aspects of its activities;
- systematization and long-term time horizon – CSR is included in long-term corporate values, business strategies and processes at all levels of the company;

- responsibility towards society and commitment of companies to contribute to the development of the quality of life – Social responsibility represents an ethical imperative to work for the good of the society.

According to some theorists, social responsibility can be considered an important feature of the new economy and, at the same time, a reflection of an opinion that not only governments but enterprises alike shall carry its part of responsibility for social welfare, environmental protection, sustainable development and rational use of non-renewable resources (Pavlů, 2009, Bobenič Hintošová, 2008).

1. Corporate Social Responsibility in the Czech Republic

In recent years, we have been witnessing a growing interest in CSR worldwide as well as in the Czech Republic (not only by businesses), including search for ways of its further expansion and promotion.

In the Czech business environment we can find elements of CSR already in the interwar period in the first half of the 20th century. In connection with the implementation of the principles of a socially responsible business, Tomas Bata (1876 – 1932), a founder of a famous footwear company, is one of the most frequently mentioned Czech entrepreneurs. (Čaník et al., 2006).

Many experts including Cekota believe that social responsibility - along with high-performance, customer focus and continuous improvement - belongs to one of the main hallmarks of the company during Tomas Bata's lifetime. Principles of the socially responsible business can already be found in the fundamental values of the Bata company. (Cekota, 2004)

A promising development in the area of socially responsible business growth in our country was interrupted by historical events (World War II and the subsequent Communist regime). By establishing the Communist government after 1948, the whole economy was centralized. The state took over the social protection and social security of the entire population. In contrast, the non-profit sector was virtually abolished and philanthropic activities were pushed to the very bottom of the human will.

It is the rebuilding of the corporate philanthropy tradition in the Czech Republic which is typical for the early nineties of the 20th century, even though it was frequently done without systematic and strategic interconnections.

Representatives of the business sector in the Czech Republic are gradually gaining understanding of the fact that socially responsible entrepreneurship should not be focused

only on the corporate philanthropy, even though much more sophisticated. It shall also be based on all pillars of the triple bottom line which means that social, ecological and economic aspects should be integrated into all corporate activities.

In the first years of the post-November development in the Czech business environment after 1989, a number of large multinational companies contributed significantly to the promotion of ideas of socially responsible business. These MNCs often carried forward their good practices in the field of CSR and transferred them onto their subsidiaries within the Czech Republic.

Accession of the Czech Republic to the Organisation for Economic Co-operation and Development (OECD)³ represented a significant shift in terms of further expansion of CSR ideas. The move towards CSR was even more significant after its integration into the European Union⁴, for which CSR represents one of the fundamental themes and which has been receiving its long-term support.

Awareness of the concept of corporate social responsibility in the Czech Republic has been gradually increasing since the new millennium and has gained its still growing support and affinity among the business community.

Skácelík assumes that the current situation in the Czech Republic can be describes as a phase of *awakening*, when the CSR themes is gradually gaining public attention and organizations are more and more aware of the fact that CSR not only exists, but could be beneficial for their future successful development (Skácelík, 2010).

CSR in the Czech Republic is not a domain of international companies or MNCs only; Czech businesses also trying to implement this concept into their corporate culture.

For the development of CSR on the Czech territory, the role of institutions focused on the area of CSR, philanthropy or business ethics is particularly important.

Major organizations supporting the promotion and dissemination of the principles of CSR in the Czech Republic are, for example .: Donors Forum, Business Leaders Forum (BLF), Gender Studies, Transparency International - Czech Republic and Czech Society for Quality.

Companies significantly involved in the field of CSR in the Czech Republic deserve public recognition for their achievements and can receive awards for their active approach. Recently, the Czech Republic has seen the first examples of awards in these areas:

³ Czech Republic accessed OECD in 1995.

⁴ Czech Republic joined the EU in 2004.

- National Award for Corporate Social Responsibility (Czech Republic),
- Top philanthropist,
- Ethnic friendly,
- *Health & Safety* and *Environment*
- Competition: Company of the Year - Equal Opportunities,
- Best Employer (Czech Republic)
- Best CSR Report

CSR in the Czech Republic is increasingly being incorporated into education and training schemes of future managers and entrepreneurs. A research carried out within the research project of the Faculty of International Relations at the University of Economics in Prague among 236 students tried to find out (among other issues) the level of their general awareness of the term corporate social responsibility. It also aimed to reveal the source of the information. The research disclosed that 73% of respondents have learned or heard about CSR mostly through their studies at the university or from newspapers. (Průša, 2008)

Especially in recent years an offer of conferences, workshops and seminars dedicated to CSR has expanded in the Czech Republic.

In the Czech Republic people who are interested in the topic can regularly find news from the world of CSR and corporate philanthropy, including interesting trends and CSR experience from home and abroad in a specialized magazine called CSR Forum published by the PubliCon agency. In 2012 the daily paper *Hospodářské noviny* began publishing a special supplement devoted to CSR. Annual Awards of best socially responsible companies in CR (eg. the competition *Top philanthropist*, or its successor *TOP Responsible Company of the Year*) enjoy growing attention of mass media (including Czech TV).

In terms of further expansion of CSR in the Czech Republic, a role of the Czech Government is crucial. Although it has been discussed among the experts for several years that our government should incorporate CSR principles into their policies – and, at the same time, that it is necessary to establish a uniform strategy for promoting the principles of CSR inclusive of a creation of system conditions enabling a rapid and wide deployment of the main ideas of the CSR concept into practice in the business sector as well as its general expansion in the Czech Republic – there still was no common vision determined nor main priorities set in CR. (Kašparová, Kunz, 2013)

The Czech Republic, unlike many countries of the European Union, had no national strategy approved to promote the CSR concept for quite some time.

One of the reasons for the absence of a single central formal support from the state in CR is the CSR agenda fragmentation among various ministries. It is caused by the fact that CSR is a very complex concept affecting a number of areas (environment, finance, employment and social affairs, health).

CR was solving the question of which ministry should be primarily responsible for the concept of CSR for quite a long time. The appointed ministry was to become the prime mover in the formation of the National Action Plan for CSR for the submission and implementation of which the European Commission reiterated its call on all Member States in 2011.

At the end of 2012 the Ministry of Industry and Trade was appointed a coordinator of the National CSR Strategy and this ministry started to work on the national action plan very intensively together with other actors namely the Ministry of Labour and Social Affairs and the Ministry of Environment (Růžička, 2013). In 2014 the Government of the Czech Republic approved the National Action Plan for CSR which is supposed to contribute to further expansion of organizational responsibility and corporate sustainability among organizations in the Czech Republic.

2. Own research of CSR within the Czech Republic

2.1 Objectives and Methodology of the Research

Numerous researches carried out in the Czech Republic on the issue of corporate social responsibility have often touched only certain issues related to this broad concept.

Our own empirical research therefore aimed to identify broader context of CSR. Thus it focused not only on determining the extend and manifestation of the main CSR principles in everyday business practice in the Czech Republic, but also on finding possible ways of CSR expansion including the role of the government.

The main tasks of the research were to find out:

- What activities, attitudes or behaviour companies in the Czech Republic consider to be the main manifestations of social responsibility.
- How companies inform about their CSR activities.
- If a CSR expert or a coordinator is employed by the company.
- What is it that companies in CR consider to be the main benefits received for their socially responsible behaviour.
- Opinions of businesses on the role of the Czech Government in the further expansion of CSR ideas including the National Action Plan for CSR.

The survey was carried out in the period January - February 2015.

2.2 The research sample and its selection

The research was intended to carry out a survey among enterprises in the Czech Republic which have been engaged in CSR and have been incorporating it into their business practice for a long time. Many of these entities have also received significant awards for their achievements in the field of CSR in recent years (for example the CSR National Award). The research sample was therefore chosen among companies who are active members of the *Association of socially responsible companies*, *BLF* or the *Business for the company*. Altogether, with the use of semi-structured interviews 52 representatives of enterprises were addressed out of whom 11 were representatives of large companies, 18 of medium-sized companies and 23 of small businesses.

2.3 The research results and discussion

Almost all respondents (96.2 %) consented that companies should engage in addition to generating profits also in benefiting the society and area in which the company operates. Majority of the addressed representatives of business sector in the Czech Republic (92.3%) also presume that CSR should not be a matter of large companies but that it should become the prerogative of the entire business sector.

All respondents consider the companies they work for to be socially responsible. The main manifestations of the social responsibility of their companies according to the addressed sample are – considering what the company is attempting to do:

- behave ethically and be transparent (36 %),
- be a good employer (26 %),
- provide help and donations to local communities (14 %),
- be respectful to the environment (12 %),
- offer products and services of good quality (8 %),
- maximize profit (4 %).

The main benefits of implementing CSR according to these companies:

- enhancing their image (30 %),
- attracting and keeping experts and skilled staff (27 %),
- gaining competitive advantage (26 %),
- building better relations with customers and stakeholders (17%).

Almost a fifth of the addressed corporate representatives (19%) stated that their company operates a coordinator or a CSR specialist operates in their company.

It is obvious from the respondents' answers that firms use multiple ways and tools to provide information about their CSR activities. The most frequently they use their websites, intranets, business meetings, events for employees and newspaper articles. Regular annual CSR reports are published by companies in the Czech Republic very rarely. Actually only four respondents declared that at least once had their firm published the CSR report in past.

According to most respondents, one basic assumption to strengthen the still insufficient pressure of public opinion in this area in CR is the need to offer more information about socially responsible corporate behaviour to the general public.

Regarding the areas of searching for ways of further CSR expansion, the questioned business representatives believe that the main task is not only to inform about the basic principles, tools and approaches, but also to emphasize the main benefits that companies can gain for the implementation of the CSR principles.

According to the respondents, the role of institutions focusing on CSR and business ethics in the Czech Republic is very important. In line with the survey, media representatives can greatly contribute to increasing awareness and gaining interest in the issues of social responsibility in the Czech Republic as well as to presenting best practices of companies that are already actively engaged in the field of CSR.

Almost four fifths of the respondents (79 %) are fully convinced that it would be appropriate to include subjects concerning CSR in the curriculum of managers' and entrepreneurs' education and training in the Czech Republic.

More than two thirds of respondents (68%) are familiar with the adopted National Action Plan to promote CSR in the Czech Republic but only 26 % of the addressed representatives assume the plan could significantly contribute to the expansion of CSR in the Czech Republic.

As far as the role of the Government of the Czech Republic is concerned in order to foster further expansion of CSR, the research results show that the respondents' tend to think that the role of the state should consist mainly of promoting socially responsible business rather than of its possible regulation, or excessive state intervention in this area. They also fear an increase of administration or complexity of processes. The effort of the state, according to majority of respondents (71%) should be the opposite: a reduction of the administrative burdens and improving motivators for responsible companies be it in a form of various advantages or some fiscal benefits.

Conclusion

Even the results of the survey showed that companies in the Czech Republic respond to new challenges in the field of CSR, although their approach and prioritization of CSR areas vary (for example based on their size). Despite this fact it is important to continue with the support of further expansion of CSR in the Czech Republic.

It is possible to support the following by all possible means and tools: increasing awareness about this approach and its principles, generating interest in it, as well as introducing the concept into practice. Information about CSR shall be available to all stakeholders (not only to representatives of the business sector in the Czech Republic), including employees, customers, clients, suppliers, investors and general public. That is why it is crucial to promote the transparency and innovativeness of the CSR concept and at the same time to develop a conceptual nationwide discussion about the role of CSR in the Czech environment.

Gathering and subsequently presenting examples of various activities of socially responsible companies in the Czech Republic (not only from the rank of large corporations and MNCs operating in the country) is crucial for building awareness about the CSR concept.

The aim of these activities should be pointing out the particular benefits of CSR and helping to convince not only companies, but also all other stakeholders about the need for their greater involvement in this area.

In terms of further expansion of CSR in the Czech Republic, the role of the government remains very critical (despite the adoption of the National Action Plan to Promote CSR). Another fundamental process to be undergone is the creation of systemic conditions that can contribute to the rapid and wide deployment of the main ideas of the CSR concept into practice in the business sector within the Czech Republic.

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METHOD TO ASSESS THE ATTRACTIVENESS OF REGIONS FOR INVESTORS

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Khayrullina**

Abstract

Commercial network development based on growth strategies requires appropriate methodologies to assess the attractiveness of the location of shopping centres. The aim of this study is to develop and test a methodological approach that permits to comprehensively assess the attractiveness of the region and the options of sites for development. The authors illustrate a complex method to evaluate the location of shopping centres. The study was conducted using the regional market of the city of Nizhny Novgorod. The research elaborates a comprehensive methodology to assess the attractiveness of the region for investment in general and attractiveness available to specific marketplaces.

Key words: investment climate, investment potential, investment risk

JEL Code: R 10, R 13, R 32

Introduction

Over the past 25 years the domestic retail has changed so dramatically that we may speak about the phenomenon of “Russian Trading revolution”. Russia's trade in a short time of an intermediary in the distribution system has transformed into the most important sector of the economy which generates almost 20% of GDP (compared with 5% in the pre-reform period). Considering this favorable tendency, the Russian trading market has become one of the most attractive investment objects including international and federal agents. In 2013, the share of online trading in Russia amounted to almost 26%⁵. In developed countries, the level of consolidation in the trade is much higher, for example, in Germany the share of the top five networks («Aldi», «Lidl», «Rewe», «Metro cash and carry», «Edeka») account for 80% of the market, in France («Auchan», «Casino», «Leclerc», «Carrefour», «Intermarche») - more than

⁵ Overview Retail: growth drivers 2013. (2013, September 10). Retrieved from http://www.rational.ru/uploads/rus/files/analytic/file_review/12.pdf

85%, in UK («Tesco», «Sainsbury», «ASDA», «Somerfield») - 60%, which may indicate the attractiveness of the Russian market for international networks. In 2014, after almost 20 years since the occurrence of the first international company "Ramstore" (Turkey, 1996), Russia ranked 8th in the world in the proportion of presence of large international networks (47%)⁶. According to research by the international consulting firm AT Kearney in 2013 Russia has risen from 23th to 12th place in the world ranking of countries, the most promising for investment in retail trade. When entering new geographic markets it is becoming more and more important to understand what factors determine region's attractiveness for retailers.

1 Theoretical framework of the research

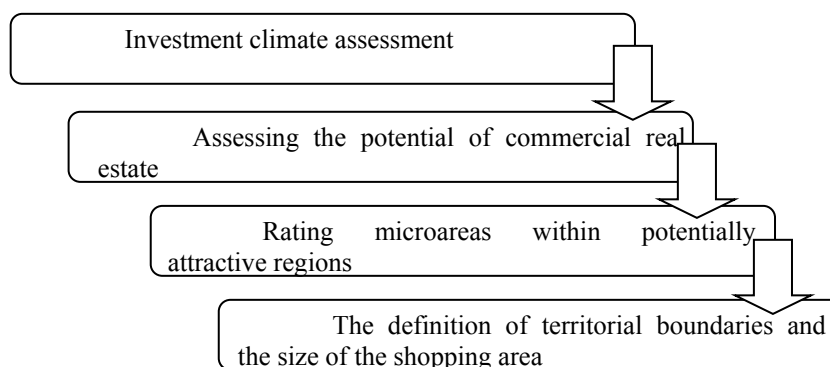
The attractiveness of the region for investors is one of the key factors of territorial development. The level of investment is one of the key indicators used by national authorities to assess the quality of regional governance (Glebova & Rodnyansky, 2015). There are different methods to address this issue. A conceptual model is developed to understand the factors, corporate as well as market characteristics, which influence companies in their location selection decisions on the example of Wal-Mart in the UK and Germany, Toys'R'Us in Sweden (Ghauri, Elg & Sinkovics, 2004). It is important to take into account market characteristics like size, infrastructure: for purpose of international market size, next to growth and competition is one of the most important dimensions (Jeannet & Hennessey, 1998). As the criteria also can be used industrial activities, services, advanced technologies (Nowicki, Hildebrandt, Susmarski, Tarkowski & Wandalowski, 2014). The success of individual companies depends on several factors such as an efficient logistics system, extensive internal communications, and a capacity for innovation and reinvention (Ferne & Arnold, 2002). In a foreign entry important to take into account cultural distance (Barkema, Bell & Pennings, 1996). The investment attractiveness of the region is also affected by major sporting events held there, such as the Olympic Games, Universiade (Kramin, Safiullin & Timiryasova, 2014). Improvement of investment attractiveness of the region is possible through the formation of special economic zones and to attract some new investors to the market, through the introduction of Investor Relations and Government Relations communications (Pechenegina, Kuznetsova & Radosteva 2014).

⁶ Malls.RU news portal. International networks in Russia 2014. (2014). Retrieved from <http://www.malls.ru/rus/analytics/mezhdunarodnye-seti-v-rossii-2014.shtml>

2 Methodology

The most common methods have put forward Berry and Parr (1987); Bowlby, Breheny and Foot (1984). Berry and Parr offered a four-step process that includes selection of areas of sales, the identification of suitable places, place selection and determination of the size of the store. Bowlby et al. offered three stages: search (geographical area), vitality (establishing of best places) and micro (evaluation of specific places). Based on a combination of these approaches, we proposed a four-step process (see Fig.1).

Fig. 1: The algorithm of the method of evaluation of investment attractiveness of regions for retailers



The methodological basis of the study were the materials of the Federal State Statistics Service of the Russia, materials of Ministry of Economic Development, the leading business and news agencies, expert method. The investigations performed on Nizhny Novgorod region.

3 Research results and interpretation

3.1 Stage 1. Assessing the potential of commercial real estate

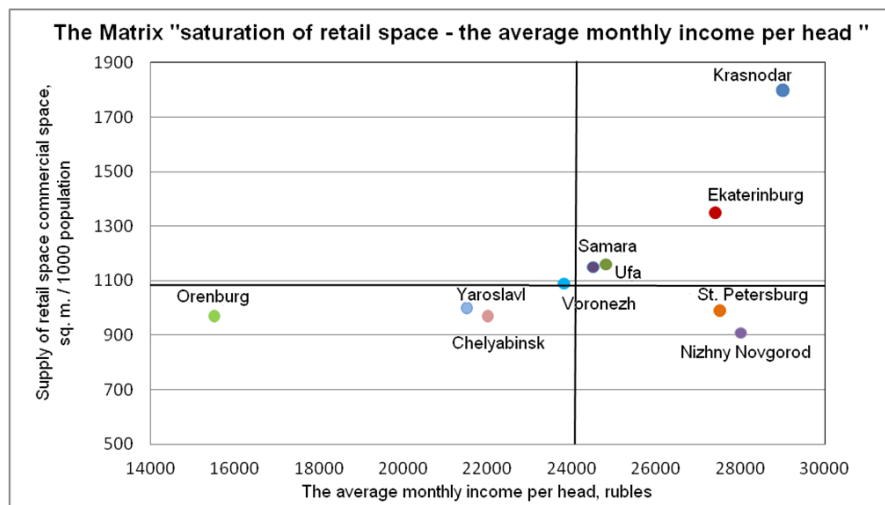
The identification of cities is realized on such indicators as the turnover of retail trade, the provision of the population of retail space, dynamics of retail space, the structure of trade enterprises by types of commercial enterprises and the development of network trade. Provision of the population of Nizhny Novgorod of trading network, including food and non-food by the end of 2013 is shown in Table 1.

Tab. 1: Availability of the population of Nizhny Novgorod by the trade network in 2013

The figure	The provision of the population of trading network per 1000 inhabitants, (sq.m.)		Deviation, (sq.m.)
	The actual figure	The normative figure	
the provision of the population of retail trading network per 1000 inhabitants, (sq.m.)	908	704	+204
the provision of the population of food retail trading network per 1000 inhabitants, (sq.m.)	315,9	489	-173,1
the provision of the population of non-food retail trading network per 1000 inhabitants, (sq.m.)	592,1	215	+377,1

Although this indicator in Nizhny Novgorod exceeds the norm of provision for retail space, compared with other regions this figure is not too high (see Fig. 2). According to the study matrix attractiveness of regions is constructed. Thus, according to 2013, Nizhny Novgorod is a city with a relatively low supply of retail space, but with a high purchasing power of the population, which makes it attractive for retail investors.

Fig. 1: The Matrix "saturation of retail space - the average monthly income per head in the regions of Russia in 2012"



After assessment of the state of the retail market makes estimates investment climate.

3.2 Stage 2. Investment climate assessment

One of the key indicators, which is evidence of the level and prospects of development of the Nizhny Novgorod region, we selected the investment climate, which determines the conditions for the implementation of investment projects. In turn, the investment climate depends on the investment potential and investment risk in the region.

The study dubbed indicators we conducted on the basis of materials RA rating agency "Expert"⁷, which contain data on the components of investment potential and risk regions in the dynamics since 1995. By combining indicators of investment potential and the average weighted risk index regions are clustered characterizing different investment climate. On the basis of the analytical data contained in ratings of investment attractiveness of Russian regions for the period 1995 to 2013⁸, we have analyzed the factors that determine the investment climate in the Nizhny Novgorod region from the standpoint of trade investors on the basis of the following tables:

Tab. 2: Investment potential of NN region and its components on average 1995 – 2013

The figures for the period 1995-2012		Average rank (position)	The average value of the rank weight component	The final rank (position) of the weight component
The general rank (position) of investment potential of NN region		9	-	-
Components of investment potential (a rank of NN region among other regions of Russia)	Labour	10	2,33	1
	Consumer	12	3,75	3
	Manufacture	12	3,08	2
	Financial	13	4,36	4
	Institutional	11	5,55	5
	Innovative	4	5,83	6
	Infrastructural	32	3,08	2
	Nature resource	59	7,5	7
	Tourist	12	9	8

⁷ The rating agency "Expert RA": The ratings of investment attractiveness of Russian Regions. (2014). Retrieved from <http://www.raexpert.ru/ratings/regions/>

⁸ Retailers: degree of development in Russia. Shop Shops in association with CBRE.2012. (2013, May 5). Retrieved from <http://www.shopandmall.ru/files/MagMag-retail-chainsRF.pdf>

Tab. 3: Investment risk of the NN region and its components on average 1995 – 2013

The figures for the period 1995-2012		Average rank (position)	The average value of the rank weight component	The final rank (position) of the weight component*
The general rank (position) of investment potential of NN region		17	2,33	-
Components of investment potential (a rank of NN region among other regions of Russia)	Legislative	28	3,75	3
	Social	17	3,08	2
	Economic	38	4,36	4
	Financial	20	5,55	5
	Criminal	44	5,83	6
	Ecological	24	3,08	2
	Administrative	36	7,5	7
	Political	62	9	8

Notes: Ranking (*) conducted by the authors from smaller to larger mean value rank (1 - most important, etc.).

Tab. 4: Investment potential and investment risk of some regions

The average values for the 1995-2012 period	Investment potential shares in the general investment potential of the Russian* Federation, %	The average weighted index of risk (risk index Russia - 1) **
NN region	1,958	0,752
Moscow	15,441	0,695
St. Peters	5,245	0,679
Tatarstan Republic	2,005	0,706
Bashkortostan Republic	1,775	0,767
the Samara Area	2,006	0,810

Notes: Ranking (seats) (*) in the ranking comes from the larger to the smaller value of the share of the region's potential in Russia's national potential. The total potential of the Russian - 100%. Ranking (seats) (**) in the ranking comes from the smaller to the larger value of the average risk index.

According to the data resulted in table 1 NN region has enough high rank of investment potential (an average of 18 years the region ranks nine out of more than 80 regions)⁹. The experts appreciate the influence of the following innovative potential components very highly - labour and manufacture. The innovative potential of NN region is quite high and the region ranks fourth steadily. However, the weight of the factor is not estimated by the experts highly enough. It is necessary to pay special attention to the consumer potential. According to this indicator NN region averagely ranks twelfth steadily enough. The infrastructural (ranks 32nd) and nature resource potential (ranks 59th) (Table 2) make the least contribution to the general potential.

Thus, the importance of an infrastructural component is estimated by the experts highly enough (it averagely ranks second out of eight). The region authorities practically

⁹ Investment ratings regions of Russia. (2013, October 5). Retrieved from <http://www.raexpert.ru/ratings/regions/>

cannot influence the nature resource component but the infrastructural component represents a considerable reserve for NN region investment potential growth, taking into account planned future prospects outlined in the strategy of NN region until 2020 period¹⁰.

Considering the indicator of investment risk and its components (Table 3) it is necessary to state the following. NN region averagely ranks 17th out of 80 Russian regions according to the indicator over the 18 year period. On the one hand, this result is high enough. However, in crisis years (over the 2008 to 2013 period) there was a sharp rank fall of NN region in the rating (it ranked 9th in 2007 and 30th in 2012). At the same time the economic and criminal components of investment risk had a sharp fall over the period, with more and more increasing their importance in the period. Thereby, we reveal a serious reserve to decrease investment risks - criminal and economic factors. Appeal to the above-mentioned strategy of NN region also speaks of understanding of the Government of NN region need to reduce these risks.

The above made analysis demands to specify the estimation of NN region investment climate as a whole comparing it with a number of regions of Russia. When making the factorial analysis we also took into account the results of Moscow and St. Petersburg that are respectively the "first" and "second" capital of Russia, which are traditionally considered benchmarks for the formation of the investment climate. Except these cities, the regions to be traditionally "competitors" of NN region are considered in the analysis as well. They are Tatarstan Republic, Bashkortostan Republic, and the Samara Area. These regions are comparable to NN region both with population and location (sufficient proximity of the scale of Russia). In addition, all of these regions (except for Moscow and St. Petersburg), including the Nizhny Novgorod region, are included in the Volga Federal District. According to the investment risk indicator - average weighted risk index of risk (Table 4) an average of 18 years from 1995 to 2013 "risk-free" leader of the group being analyzed is St. Petersburg (the average for this period is 0.679). Privolzhsky Federal Okrug is also among the least risky regions, second only to the Tatarstan Republic (the figures 0,752 и 0,706, respectively). Having analyzed the components and the factors defining the investment climate, it is necessary to turn to the total estimation analysis according to RA "Expert" ratings. Totally influencing, all the factors cause steady reference of NN region according to the total investment climate indicator (since 1997) to the rating group 2B "Average potential -

¹⁰ The development strategy of the Nizhny Novgorod region until 2020. Portal of the Government of the Nizhny Novgorod region. (2013, June 20). Retrieved from <http://www.government-nnov.ru/37721/>

moderate risk”, that increases its attractiveness to host international retailers with the planned development activities until 2020 period.

3.3 Stage 3. Rating microareas within potentially attractive regions

Commercial real estate market in Russia has entered a new phase of its development, when the construction of large shopping centers beyond the city limits and is located along the main thoroughfares. In this regard, the basis for using a procedure proposed by Chkalova and Efremova (2013) for out of town shopping centers. In this method we recommend criteria territories appeal, the region's infrastructure, transport accessibility, the criterion of the review and access to the site (Table 5).

Tab. 5: Results of the expert assess the attractiveness of suburban shopping areas of NN

#	Indicators	The weight indicator	Name areas along major roads				
			NN – Viksa	NN – Arzamas	NN – Dzerzhinsk	NN – Kstovo	NN – Gorodets
1	Territorial attractiveness	0,3	4	3	5	4	4
2	Infrastructure of the region	0,2	4	3	4	5	3
3	Transport accessibility	0,4	3	2	4	5	4
4	Overview and access to the place	0,1	3	3	4	4	5
5	Average attractiveness of the country area	-	3,5	2,6	4,3	5,6	3,9

The ranking result of territories in NN region shows the following picture (in descending order): Nizhny Novgorod - Kstovo, NN - Dzerzhinsk, NN – Gorodets, NN - Viksa, NN - Arzamas.

3.4 Stage 4. The definition of territorial boundaries and the size of the shopping area

Available at retailers there are a number of tools that help them define the shopping district, the most commonly used are the theory of a central place (Chnstaller, 1996), the theory of value of land (Haig, 1926) and the theory of spatial interaction (Huff, 1964).

We provide a modified formula we RD Converse (Converse, 1964). Propose instead of the population use the indicator “the attractiveness of shopping center”, prepared by weighing the factors affecting the attractiveness of shopping centers. The value of the attractiveness of the shopping center will be replaced in the formula (1) the population figures. This approach

may take into account many factors, the attractiveness of commercial enterprises subject to the Scoping.

$$D = \left(\frac{d}{1 + \sqrt{P_z / P_y}} \right) \quad (1)$$

where d = the distance between the two cities, km; P_z = the attractiveness of the shopping center with the higher, the score; P_y = the attractiveness of the shopping center with the lowest indicator score.

Table 6 shows the location choices of shopping centers.

Tab. 6: Calculation of size of trading spaces

Shopping centers	Shopping centers NN – Viksa	Shopping centers NN– Arzamas	Shopping centers NN – Dzerzhinsk	Shopping centers NN– Kstovo	Shopping centers NN – Gorodets
the attractiveness of the shopping center (point)	4,6	3,8	4,0	4,7	4,2
	The distance from the smallest shopping center (km)				
Shopping centers NN - Viksa	0	23,8	19,3	17,4	29,3
Shopping centers NN - Arzamas	50	0	14,8	17,0	21,9
Shopping centers NN - Dzerzhinsk	40	30	0	15,3	27,6
Shopping centers NN - Kstovo	35	36	32	0	28,1
Shopping centers NN - Gorodets	60	45	56	6100	0
	Distance between shopping centers				

To do this in the formula (1), substitute the value of the distance between the centers of the trade - competitors. Thus, to determine the boundaries of commercial space between shopping center NN - Kstovo and its rival shopping center NN - Dzerzhinsk in the lower left corner of the table 5 we find the first vertical mall, and across - the second. At their intersection find the distance between the centers of -32 km. Substituting into (1) the value of the size and importance of the attractiveness of shopping centers:

$$D = \left(\frac{32}{1 + \sqrt{4,7 / 4,0}} \right) = 15,3km$$

We find that the boundary of retail space is located at the distance of 15.3 km away. This distance is measured from the enterprise with less overall assessment score as the resulting number is less than half the distance between the centers of trade, i.e. from NN - Dzerzhinsk shopping center. Since the distance between the studied SC-32 km, therefore, from the shopping center NN - Kstovo-border retail space is located: 32-15.3 = 16.7 km. Thus Table 6 shows sizes of shopping areas between each of the shopping center.

3.5 Stage 5. Identifying the most attractive shopping areas, taking into account all the above factors

The last stage is the final and involves identifying the most attractive shopping areas, taking into account all the above factors. It is necessary to consider the potential profits that can bring this place, and the costs associated with its development.

Conclusion

In summary, we can say that evaluation of investment attractiveness of the regions on the basis of the proposed method makes it possible to obtain a sufficiently reasonable estimate of the development of trade and the region as a whole to make informed decisions to develop new geographic markets. This methodical approach contains a number of starting points required to assess the location of suburban shopping centers located along major thoroughfares and highways.

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MEASUREMENT EFFICIENCY OF SOCIAL INNOVATION

Monika Chobotová

Abstract

EU policy is aimed at social enterprises, which can at the appropriate time respond to national social problems. Social enterprise and innovation are not the domain of a single entity, but are a result of the continuous interaction between the various elements of the national innovation system. Social innovation and entrepreneurship are processes designed to resolve societal problems with innovative ideas and methods. These processes often occur between the private and public sector and civil society. Measuring social innovation activities and their effect represent one of the main indicators for the promotion of social innovation. This requires the utilisation of quantitative and qualitative measurement instruments that include the social return on investment indices. Measurements focus on the organisations' achieved results. The results in turn, prompt community organizations to review their current situation and assist to detect errors and shortcomings. The aim of this paper is to assess the current state of social innovation in the Czech Republic.

Key words: entrepreneurship, social innovation, measures,

JEL Code: O1, O15

Introduction

Innovation has long been recognized as an important driver of economic growth. The term of social innovation is not new. Social Innovations are innovations that are social both in their ends and in their means. Specifically, we define social innovations as new ideas (products, services and models) that simultaneously meet social needs (more effectively than alternatives) and create new social relationships or collaborations”(Caulier-Grice et. al., 2010).

We can define several reasons why she should solve the problems of social innovations. Firstly, it must be demonstrated that social innovations are able to effectively respond to social needs and contribute to the reduction of regional disparities in the social

sphere. Another reason is the allocation of public funds. To obtain further potential resources from the public and private sectors requires a common understanding of what is understood by the term measurable effect social innovations. Measurement can play a very useful role in supporting decisions on what to fund social projects. The third argument is the evaluation of the fulfilment of the usefulness and effectiveness of social impact.

The aim of the paper is give a view on possibility of evaluating social innovations. In this paper, we are investigating the use of multi criteria decision making techniques for sustainability evaluation of social innovations projects.

1 Theoretic background of social enterprise and social innovation

The majority of literature on social entrepreneurship has evolved within the domain of nongovernment not-for-profit organizations. Some researchers (Coo Dodds, & Mitchell, 2001; Wallace, 1999) suggest that social enterprises that carry out for profit activity to support other non-profit activities can be viewed as social entrepreneurs. Others have argued that for-profits that may take some innovative action towards building social capital can be considered as being socially entrepreneurial (CCSE, 2001)

Social entrepreneurship should therefore not be confused with or commercial enterprise, which as a primary goal puts profit, but does so with respect to social impacts, or supplement its profitable activities of charitable programs, employee volunteerism and donations for the non-profit sector. For this phenomenon has already begun puts on his other label, corporate social responsibility, from the English original corporate social responsibility (Adámek, 2013).

A variety of life spheres and academic disciplines have taken on board the concept of social innovation. To begin with social innovation is a hot topic in business administration where it refers to two new foci. The first one gives more attention to the social characters of the firm: the firm as a network of social relations as a community in which technological and administrative changes are just one part of the innovation picture, the institutional and social being at of least equal importance. But social innovation is not only back on stage business administration it is driving force of many non-governmental organizations, a structuring principle of social economy organizations, a bridge between emancipating collective arts initiatives and the transformation of social relations in human communities (Haddock et.al., 2012).

Drucker added the term “social” to innovation in 1985, in his work on innovation and entrepreneurship. With his notion of social innovation, Drucker points to the innovations that were not driven by technological development and breakthrough, but by the innovations that are driven by human needs. Hence, he addressed innovation in social welfare areas of healthcare and education. The work and tasks of the prison and probation service can be positioned in this category, along with other public actors, such as the police, departments in local municipalities and the state, dealing with security, safety and human development and change (Drucker, 1985).

Over the last 10 years, the concept of Social Innovation has been gaining importance in the academic arena as a novel approach for the examination of new social problems that have emerged in contemporary societies (Howaldt, Schwarz, 2010).

Mulgan et al., (2008), on the other hand, define social innovations as new services or activities that are motivated by the goal of reaching a social need and that are predominantly diffused through organizations whose primary purposes are social, in contrast to that postulated by the CSI (private organizations).

Tab. 1: Characteristics of social innovations

Author's	Definition
Cajaiba-Santana (2014)	Social innovations are innovations that act as a driver of social change.
Grimm et al. (2013)	Social innovation makes societies more sustainable and cohesive through inclusive practices, coproduction and pro-active grassroots initiatives.
Maclean et al. (2013)	Social innovation/innovator plays an important role in regenerating communities, through community engagement and self-organization.
Lopez Cerezo and Gonzalez (2013)	Any innovation should always be a kind of social innovation. This constitutes a label that includes very diverse types of practices that generate social change.
Lubelcová (2012)	Social innovation is a source of social change and modernization of society. Innovation is not only a tool and source of economic productivity and competitiveness, but also a potential tool for achieving social goals and social cohesion in society.
Dawson and Daniel (2010)	Social innovations are the main driver in the development and application of new ideas to solving problems, improving social conditions and improving the well-being of people in society.
Tanimoto (2010)	Social innovation is a result not only of the entrepreneurs and producers creativity alone, but of the various related stakeholders as well as customers and users. The social entrepreneur identifies social problems, gets ideas and resources, and creates social innovation in collaboration with related stakeholders.

Source: (Păunescu, 2014)

Social innovation used to be considered the sole preserve of the third sector and non-profit organisations. But these more recent perspectives emphasise that it takes place

in all sectors, and that particular innovations often move between sectors as they evolve. It can come from:

- the private market (for example, ethical finance or corporate social responsibility, or new models of collaborative business);
- the public sector
- the third sector (non-profit organizational).

Innovation is much more than just invention or creativity. It entails the practical application of a new idea as a financially sustainable form. Social innovation can be understood as an end-to-end process from the circumstances that trigger or prompt an innovation, through to the scaling up or mainstreaming of the innovation, and resulting systemic change that may occur.

2 Methodology for measurement of social innovation project

Historical a development of innovation metrics we can divide to four generations. The first generation of metrics reflected a linear conception of innovation focusing on inputs such as R&D investment, education expenditure, capital expenditure, research personnel, university graduates, technological intensity, and the like. The second generation complemented input indicators by accounting for the intermediate outputs of S&T activities. Typical examples include patent counts, scientific publications counts of new products and processes, high-tech trade. Third generation metrics is focus on a richer set of innovation indicators and indexes based on surveys and the integration of publicly available data. Fourth generation metrics, grounded in a knowledge-based networked economy, remain ad hoc and are the subject of measurement.

Measuring the social impact and change that companies have upon their stakeholders is a relatively new topic, under an emerging interest from social media and research scholars. Although innovations tend to be only assessed from an economic point of view, they provide other forms of value that is: social, cultural, political, environmental, and moral (Echeverria, 2013).

2.1 Multi – criteria analysis

Innovative projects focusing on the social sphere we can evaluate using multi-criteria analysis. Multi-criteria analysis is undertaken to make a comparative assessment between projects or heterogeneous measures.

Multi-criteria analysis can be useful:

- To evaluate the ability of various activities of a programme to fulfil a given objective. This assessment can take place to collect the opinions of decision-makers and beneficiaries about the effectiveness of the activities.
- To structure the views of project or programme managers about on-going activities.
- To discuss the content of the programmes, and the funding of various activities during the drafting of strategies and programmes.

General procedure multi criteria evaluation of alternatives includes the chosen level of resolution six relatively distinct steps:

1. Creation of the purpose-oriented set of evaluation criteria.
2. Determination of weights of criteria evaluation.
3. Determination of sample values of the weights of criteria (standards).
4. Assessment of the results achieved (outcomes, benefits, as well as any damages or losses) variants; concerning the sub-evaluation of options and their synthesis in the overall evaluation.
5. Assessment of risks associated with possible implementation options.
6. Determination of preferential ranking of the options and select the best option.

A Multi-Criteria Analysis (MCA) is used when a project is evaluated by more than just monetary terms. It is a form of appraisal that, in addition to monetary impacts, measures variable such as material costs, time savings and project sustainability as well as the social and environmental impacts that may be quantified but not so easily valued. For the evaluation of innovative projects in the social criteria have been used, you can see tab. 2.

For determining weights used scoring method. Scoring method assumes that the user is able to quantitatively evaluate the importance of the criteria. For a selected point scale, the user must evaluate the i -th criterion of value lying in the b_i scale (e.g. $b_i \in <0, 100>$). The criterion is important; it is a point evaluation higher. The user does not choose

only whole numbers on the scale, and may assign the same value to more criteria. Although scoring method requires the user evaluation quantitative criteria but It enables differentiated expression of subjective preferences before the order method. Calculating weights is done according to the relation (1).

$$v_i = \frac{b_i}{\sum_{k=1}^k b_k} \quad (1)$$

Where: $\sum_{i=1}^k v_i = 1$

For the subjective (s_i) evaluation criteria for the project were based on a scale from (1 to 5), where 1 is low, 2 - rather low, 3 - medium, 4 - rather high, 5 - high.

Total utility

$$T_i = v_i \cdot s_i \quad (2)$$

The total rating of the project is determined as the weighted sum due evaluation of the project to individual criteria.

$$Y = \sum_{i=1}^{11} T_i \quad (3)$$

Tab. 2: Criteria for evaluation of social innovations project

Criteria	Weight (v_i)	Evaluation of project (s_i) (score 1-5)	Total utility (T_i)
Total usefulness of project	v_1	s_1	t_1
Impact on the level of qualification of participants	v_2	s_2	t_2
Impact on the economic situation of the parties	v_3	s_3	t_3
Impact on other key actors	v_4	s_4	t_4
Resolving problems / needs of the target group	v_5	s_5	t_5
Usefulness of the project by the target groups	v_6	s_6	t_6
Usefulness of the project by other key actors	v_7	s_7	t_7
Filling efficiency project	v_8	s_8	t_8
Fulfilment of economy project	v_9	s_9	t_9
The project sustainability	v_{10}	s_{10}	t_{10}
Innovative effect	v_{11}	s_{11}	t_{11}
Total evaluation of project			Y

Source: own processing according www.esfer.cz

3 Social Innovation in the Czech Republic

Social innovation is quite a new concept in the Czech Republic. There is no academic workplace which would specifically deal with the subject; one cannot find its direct reflection in government policy. As in most of other EU members, when viewed from top-down, the innovation is mostly understood in technology and business connotations. Even then, the innovation concept is still rather new, sort of a buzzword and mostly understood as a desirable follow-up of research and development activities. So the concept of innovation itself is perceived very narrowly in its traditional, technical, linear, R&D based form, mostly linked to manufacturing industries (Kadeřábková, 2015).

A number of local initiatives have been supported by ESF. For 2007-2013, the Czech Republic is receiving over EUR 3.7 billion of ESF funds. With national co-funding, this brings the total ESF spending on jobs to over EUR 4.4 billion. ESF activities comprise three programmes: the first is improving education at all levels and boosting its relevance to the employment market. The second is bringing as many people as possible into the job market, with particular attention to the disadvantaged; and the third focuses specifically on building the competitiveness of the Prague region. The Czech Republic is using ESF funding to reach people who, for one reason or another, face obstacles to getting a job. The operational programme The Human Resources and Employment (HREOP) is focused on minimization of unemployment by means of active policy on the labour market, professional education, reintegration of socially excluded citizens into society, improvement of public administration quality and international cooperation in the said areas. HREOP is one of the multi-objective thematic operational programmes. It is financed in particular from finances from the Convergence objective but in the area of active labour market policy, modernization of public administration and public services and international cooperation, it is financed also from finances for the Regional Competitiveness and Employment objective.

3.1 Evaluation of individual criteria within the multi-criteria analysis

The projects were selected for the evaluation from the ESF - The operational programme The Human Resources and Employment, which focused on social innovation. Based on the survey we were approached by project participants who evaluated each project criteria.

Weights were determined using a point method. The resulting data are presented in table 3 and 4.

Tab.3 Evaluation of criteria of the project from target group and established weight

Criteria/ Evaluation of project (s _i) (score 1-5) Project from ESF – HREOP	Scale (v _i)	A (s _i)	B (s _i)	C (s _i)	D (s _i)	E (s _i)	F (s _i)
Total usefulness of project	0,08	2	3	4	3	4	3
Impact on the level of qualification of participants	0,08	4	4	4	4	2	3
Impact on the economic situation of the parties	0,07	3	3	3	3	3	3
Impact on other key actors	0,08	3	3	3	4	4	4
Resolving problems / needs of the target group	0,06	1	3	3	2	3	3
Usefulness of the project by the target groups	0,12	5	5	5	5	5	5
Usefulness of the project by other key actors	0,12	5	5	5	5	5	5
Filling efficiency project	0,09	3	3	4	4	4	4
Fulfilment of economy project	0,09	3	3	4	4	4	4
The project sustainability	0,10	4	4	4	4	4	4
Innovative effect	0,11	5	4	5	4	5	4

Source: own processing

Tab. 4 Evaluation of individual criteria within the multi-criteria analysis

Criteria /Project	A	B	C	D	E	F
Total usefulness of project	0,15	0,23	0,31	0,23	0,31	0,23
Impact on the level of qualification of participants	0,34	0,34	0,34	0,34	0,17	0,25
Impact on the economic situation of the parties	0,22	0,22	0,22	0,22	0,22	0,22
Impact on other key actors	0,25	0,25	0,25	0,34	0,34	0,34
Resolving problems / needs of the target group	0,06	0,18	0,18	0,12	0,18	0,18
Usefulness of the project by the target groups	0,60	0,60	0,60	0,60	0,60	0,60
Usefulness of the project by other key actors	0,60	0,60	0,60	0,60	0,60	0,60
Filling efficiency project	0,27	0,27	0,35	0,35	0,35	0,35
Fulfilment of economy project	0,27	0,27	0,35	0,35	0,35	0,35
The project sustainability	0,39	0,39	0,39	0,39	0,39	0,39
Innovative effect	0,54	0,43	0,54	0,43	0,54	0,43
Total evaluation of project	3,68	3,77	4,13	3,97	4,05	3,95

Source: own processing

The final overall evaluations of the projects are in the range (3.68 to 4.13) shows that projects are evaluated on a rather high level. The results show that the target group for this project was helpful and brought the desired effect. The funds that were used for the project were used effectively.

Conclusion

The social innovation is in the Czech Republic, a new phenomenon. It is unlike technical innovations focus on improving society in the field of social services. Evaluating the effectiveness of these innovations can be done according to projects supported by the ESF, which were aimed at creating social innovations. Multi criteria analysis has been used for their evaluation. The evaluation was based only narrow a sample, from which gave rise to effectiveness and benefits of the project focused on social innovation consider its researchers and participants as rather high.

For the period 2014-2020 are planned specific operational programs for the promotion of social entrepreneurship, which should enable further development of social entrepreneurship and consequently its greater contribution to employment and social inclusion. One of these operational programs is the Employment program.

Acknowledgment

This paper was based on the project SGS /16/2015 - The support social innovations from funds of EU.

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VIRTUAL TEAM AS A PROGRESSIVE FORM OF MUTUAL CO-OPERATION IN MANAGERIAL THEORY AND PRACTISE

Eva Kašparová – Jan Mareš

Abstract

With the advent of globalization, virtual teams are now commonplace within the work environment. Despite this, many areas still lack sufficient access to Information and Communication Technology. This study uses a structured questionnaire to acquire respondents' data and feedback. The study is based on the virtual team participant's feedback and indicates that problems originate from the Course Management System as well as the absence of sufficient tools, methods for mutual communication and collaboration, previous practice to use the tools and managerial skills to foster virtual teamwork.

Key words: virtual teams, managerial education, training

JEL Code: I21, M10

Introduction

We can see a growing number of flexible and adaptable organizations which have found out that the virtual environment opens a great opportunity to transform and modernize the current organizational structure, level and the form of communication and relationship among the different subjects as well as the processes of their business. (Furst, Blackburn, Rosen, 2001). Information and communication technologies have entered the process of transformation with a great intensity and opened previously unknown space for creating new forms of mutual communications and social interaction at various levels. (Kasparova, 2014)

Information and communication technology usage and the cyberspace especially offer a huge space for mutual social communication and social interaction cross boundaries not only organizations but also countries and continents all around the world. Connection of different subjects through nets lets to build effective, flexible and speed units achieving common goals. (Kasparova, 2012)

More and more companies are faced with the necessity to get the knowledge and expertise they require in different projects from different domains and areas (Precup, 2006), therefore, people from different companies often need to work together to bring the entire knowledge and experience that are needed for the success of a new product, process or service.

Supporting the development of ICT and their use in practice has become one of the key priorities of most of the countries all around the world. (Kasparova, 2014)

As companies continue to expand globally, the number of people working in teams with colleagues and managers separated from them by many miles (and often different time zones), is growing. This virtual team strategy has many advantages, but it presents its own set of managerial challenges; working online is less formalized, and companies frequently lack clear policies on how to manage virtually. (Reiche, 2013)

Virtual teams seen as a progressive form of human cooperation supported by ICT therefore occupy an important place both in virtual and classic organizations. It can be said that the ability to create efficient project teams suitable for the assigned tasks is considered one of the main benefits of the recent way of organization leadership. Many tasks taken up by today's organizations do not have known solutions and there are no established processes and techniques for these tasks. It is necessary to look for new ways, to think about them, to exchange experience, ideas and suggestions, to gather findings and to contemplate new possibilities, approaches and their benefits. Therefore, a virtual team that offers a possibility of borderless cooperation is flexible regarding both time and space which means that there is space for creating highly efficient teams consisting of competent specialists for solving particular tasks. (Kasparova, 2014)

Members of virtual teams communicate using electronic means of communication (telephone, fax, email etc.); they often use specific IT&C tools and technologies: groupware, ERP (Enterprise Resources Planning), DMS (Documents Management Systems) etc. The team will usually have a temporary existence, spanning the project lifecycle. Teams can be very dynamic – in the sense that people join or leave the project as required and/or provided by availability. (Stefanescu, 2011)

The technology needed for problem-free communication and cooperation must be provided to the members of a team in time and in sufficient quantity. On the other hand,

sufficient knowledge and skills for using these technologies still remain a question. This applies to the current offer of means of communication and tools of electronic communication and to their user accessibility. New products are developed by specialists educated in the field of technology who are primarily interested in completing their tasks in technical and technological ways. Despite all efforts to make the developed products more human in their nature i.e. to make them accessible and easily controllable, the segment of competent users remains very narrow. (Kasparova, 2006)

Many organizations realize the primary necessity of providing adequate electronic infrastructure to their employees. (Powell, Piccoli, Blake, 2004). The availability of a flexible and configurable base infrastructure is one of the main advantages of agile virtual teams. At present, except for open source software, little is known about how to utilize this know-how (Fuller, 2006).

Virtual teams represent a large pool of know-how which seems to be a promising source of companies' growth.

1 Students and their perception of virtual team experience

Students at universities are just few years from taking on significant roles in all areas of business management. In many cases students apply in daily practice what they learnt through university courses. The demand for practical contribution has increased over the years as the labour market becomes more competitive. It is not enough to learn only theory how to run companies. Students are eager to learn by doing, by direct application of the theory.

The qualitative and quantitative analysis of student's answers gives us continually valuable findings for the innovation of the provided training as well as the empirical data for the theory of the virtual teamwork training building. The paper focuses on the recommendations for implementation of the virtual team management in real companies. The recommendations based on research findings could help improve the present virtual teamwork training preparation as well as increase knowledge sharing and experience exchanging in the monitored area.

1.5 Methodology and data sample

We have observed a sample of 77 former students of virtual team management course, where they were asked to complete certain tasks resulting in their seminary paper. To gain the data,

we created a Google Form that was later distributed among respondents. Majority of our sample (51 respondents) were females and the rest (21) were males.

In our previous article we found that majority of students found the environment of Moodle (which is a default platform for virtual teams education) rather chaotic. As a result the students used various other instruments for communication (most frequent answer was Facebook since this social network disposes with user friendly group communication and real-time chat – a feature missing in Moodle).

Inspired with the results from our previous study, we conducted further research, which may answer why virtual teams are not more common in business practice. When asked, whether they had any experience in regards to virtual teams, students answered Yes in 74 cases (96,1 %) and no in 3 cases (3,9 %). This means that vast majority of them at least once experienced work in virtual environment.

We were also curious, where came the experience with virtual team management, since this can provide insight into our sample's background. Most of the respondents, 59 (76,6 %) gained their experience with virtual teams through studies at the University of Economics, Prague. Significantly smaller group gained their experience in their business or employment (9 respondents, 11,7 %). Only 6 respondents (7,8 %) worked in virtual team both during studies and business / employment. Three people did not answer this question. Given this data, we can assume that our pool of respondents will have quite limited experience not only in time spent working in virtual teams, but also in variety of projects, which of course influences their perception of virtual teamwork.

Tab. 1: Where did students gained experience with virtual teams

		Frequency	Percent	Valid Percent
	In business / employment	9	11,7	12,2
	During studies at VSE	59	76,6	79,7
	Both	6	7,8	8,1
	Total	74	96,1	100,0
	System	3	3,9	
Total		77	100,0	

Source: Primary data

When asked whether the respondents would use working in a virtual team in their business or employment, 18 respondents (23,4 %) stated *definitely yes*, 30 of them (39 %) stated *probably yes*, 23 of them (29,9 %) stated *probably no*, and 16 of them (20,8 %) stated *definitely no*.

responded *rather yes*, 11 people (14,3 %) stated that they *do not know* and 18 (23,4 %) choose *rather no*. None of the respondents strictly rejected using virtual team work in their business practice.

Tab. 2: Frequency of students that would use virtual team management in business practice

	Frequency	Percent	Valid Percent
Definitely yes	18	23,4	23,4
Rather yes	30	39,0	39,0
Does not know	11	14,3	14,3
Rather not	18	23,4	23,4
Total	77	100,0	100,0

Source: Primary data

As work in virtual team is quite complex and varies across industries, there is relatively small chance that there exists an ideal application for the students, that is so called *top of mind* (we are not discussing custom made applications that are developed to serve for needs of certain industry). We asked the respondents, whether they are able to name (from their point of view) an ideal application for work in virtual team. A number of 27 respondents (35,1 %) were able to pick an ideal application, the rest not (50 respondents, 64,9 %). Only several respondents specified their ideal application. Seven of them stated Skype, three like to work with Google Docs, two stated Dropbox and also Sharepoint was stated two times. The rest had only one appearance in our data sheet (e.g. Facebook, Asana, Lync, Moodle, etc.).

1.6 Barriers that prevent students from usage of virtual team practices

What might be a hint for improvement in virtual team education is what problems do students perceive and what discourages them from further use of virtual teams in their daily business environment.

Tab. 3: Perceived barriers that prevent students from applying virtual team practices

		Frequency	Percent	Valid Percent
	Difficult control	11	14,3	14,9
	Non-personal contact	27	35,1	36,5
	People do not want to learn new ways	14	18,2	18,9
	IT related issue	4	5,2	5,4
	No barrier	2	2,6	2,7
	Do not know	3	3,9	4,1
	Other	13	16,9	17,6
	Total	74	96,1	100,0
	Missing	3	3,9	
Total		77	100,0	

Source: Primary data

The most frequently stated barrier was the lack of personal contact with team members. Some people just prefer to communicate face to face since there is better possibility to express emotions as opposed to electronic communication, where the message is often misunderstood (Enemark, 2006).

The second biggest barrier stated was that people do not want to learn new ways to do things. Yet, this is somehow arguable since the willingness to learn depends on how motivated one's team is or / and what are the teams' levels of intelligence, humans in general prefer routines in their work processes to preserve resources (both physical and psychical).

As the third biggest category was listed the difficulty to control the flow and outcome of teamwork, which might be caused by the absence of chat or message board in Moodle software, not necessarily related to general virtual teams practice.

1.7 Relation between variables

There can be several statistically significant correlations observed in our data sample. Relatively high level of negative correlation can be observed between International / Local virtual team experience and having an ideal application preference ($r = -0.397$, $p = 0.01$). This means that students, who participated in international team during their virtual team work, tend to have a preferred application to manage their team, whereas students that operated only within local team tend not to have a preference.

Another negative yet statistically significant correlation can be observed between the sex and participation in local / international team ($r = -0.238$, $p = 0.05$). This says that males have slightly higher relation to international team experience than females.

On the other hand those students, who have a preferred ideal application to manage their team, rather tend to use virtual team practices in real business.

Tab. 4: Correlations between variables

		Int / local	Experience	Would use	Ideal app	Sex
Int / local	Pearson Correlation	1	. ^b	-,153	-,397**	-,238*
	Sig. (2-tailed)		0,000	,193	,000	,042
	N	74	74	74	74	74
Experience	Pearson Correlation	. ^b	1	,054	,007	,002
	Sig. (2-tailed)	0,000		,641	,950	,987
	N	74	77	77	77	77
Would use	Pearson Correlation	-,153	,054	1	,256*	,071
	Sig. (2-tailed)	,193	,641		,025	,540
	N	74	77	77	77	77
Ideal app	Pearson Correlation	-,397**	,007	,256*	1	,108
	Sig. (2-tailed)	,000	,950	,025		,348
	N	74	77	77	77	77
Sex	Pearson Correlation	-,238*	,002	,071	,108	1
	Sig. (2-tailed)	,042	,987	,540	,348	
	N	74	77	77	77	77

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

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

b. Cannot be computed because at least one of the variables is constant.

Source: Primary data

Conclusion

This paper focused quite narrowly on group of students that studied virtual team management course at the University of Economics, Prague. Still the findings might support future research and possibly improvement of such courses.

Based on our data the choice of good platform to manage the team is crucial. The vast majority of our students have their first experience with virtual team practice in the university course. For this reason, more attention should be paid what platform (and with what features)

is used and demanded for the students to use. It is highly possible that if the software is not user friendly (or does not provide necessary communication means), students are frustrated by the work and later might be unwilling to work in virtual team when employed.

We have also discovered some of the biggest barriers that could make it more difficult to implement virtual team practices in real business world. Teachers of subjects related to virtual teams should pay attention to those and innovate the theoretical preparation of students so they are able to cope with those barriers (e.g. to be able to explain their employees, why it is necessary to learn to work in virtual space, how the company can save budget on this, allocate money in more useful areas and possibly reinvest back into employees).

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IMPLEMENTATION OF INNOVATIVE PRACTICES IN CORPORATE SOCIAL RESPONSIBILITY OF CZECH COMPANIES

Klára Kašparová

Abstract

Corporate Social responsibility (CSR) reporting can be considered as process innovation. It is a way to identify opportunities for process and performance improvements company-wide. These improvements ensure its competitive advantage. However, it is valid only when content of the report respects the principle of materiality and credibility is assured. One way to determine materiality is the concern expressed directly from the stakeholders. Therefore, the research objective is to determine whether Czech companies support dialogue with stakeholders in their CSR reports. The paper uses conceptual content analysis. Results indicate that companies include in their CSR reports information on contact details, but impersonal passive forms prevail.

Key words: corporate social responsibility reporting, materiality, credibility, annual reports

JEL Code: M14, O31

Introduction

Corporate social responsibility has not been an utterly unknown term in the Czech Republic – both among the companies and the consumers themselves. This is one of the reasons why the issue of reporting on the socially responsible behaviour is getting into the focus. This is often conceived as the “practical side“ of corporate social responsibility (Gond & Herrbach, 2006), which help build up good relationships with stakeholders and support positive image of the company. Apart from the above, this type of reporting can be understood as the means by which a company can understand both its exposure to the risk of changing social conditions and expectation and its potential to profit from the new commercial opportunities (KPMG, 2013).

This way reporting on social responsibility represents a competitive advantage, allowing the company to pursue its sustainable development. This all under condition that

certain principles are adhered to during the process of reporting. This article focuses on two of them – materiality and credibility. Level of adherence to these principles was analyzed by means of content analysis on the research sample of 69 annual reports issued by Czech companies.

Reporting on socially responsible behaviour – literature review

According to KPMG, reporting on socially responsible behaviour (CSR reporting) can be defined as a process by which a company can gather and analyze the data it needs to create long term value and resilience to environmental and social change (2013, p. 9). In case the company starts to implement it within its system, it is frequently forced to collect information on processes and impact of activities which the company never collected and analyzed before (Ernst & Young, 2014, p. 3). This leads to creation of new procedures, requirement on technical equipment and software. The fact above is the reason why the CSR reporting is defined as the process innovation (OECD, 2005). Collection of such data allows the company to avoid or mitigate environmental and social risks and to identify opportunities within the industry it is active in. This is why the ability to increase the company's business performance and to create a competitive advantage leading to sustainable development of the company is often stated as the key advantage of CRS reporting (KPMG, 2013).

Researches confirm that CSR reporting has been dramatically growing in this decade (KMPG, 2013; Ernst & Young, 2014). Together with this trend, there is increasing demand for recommendation of how to compose a CRS report in order to achieve the benefits above. One of the fundamental principles contained both in GRI Guidelines and in e.g. the International <IR> Framework, is materiality. Materiality in the context of CSR reporting means that CSR report is centered on matters that are really critical in order to achieve the company's goals and manage its impact on society (GRI, 2013, p. 3). Relevant issues are those that have, or may have, an effect on the company's ability to create value (IIRC, 2013, p. 18).

The recent research performed by KPMG showed that 75% of reports issued by the world's largest 250 companies identify issues that are material to their business (2013, p. 53). Nevertheless, most of them lack an explanation how material issues are identified and how often this is done (KPMG, 2013, p. 54). A recommended method of how to identify these issues is to involve stakeholders in the process of their identification. In the Czech Republic, CSR reporting is still at the beginning of its development (Kašparová, 2011). Thus, we cannot

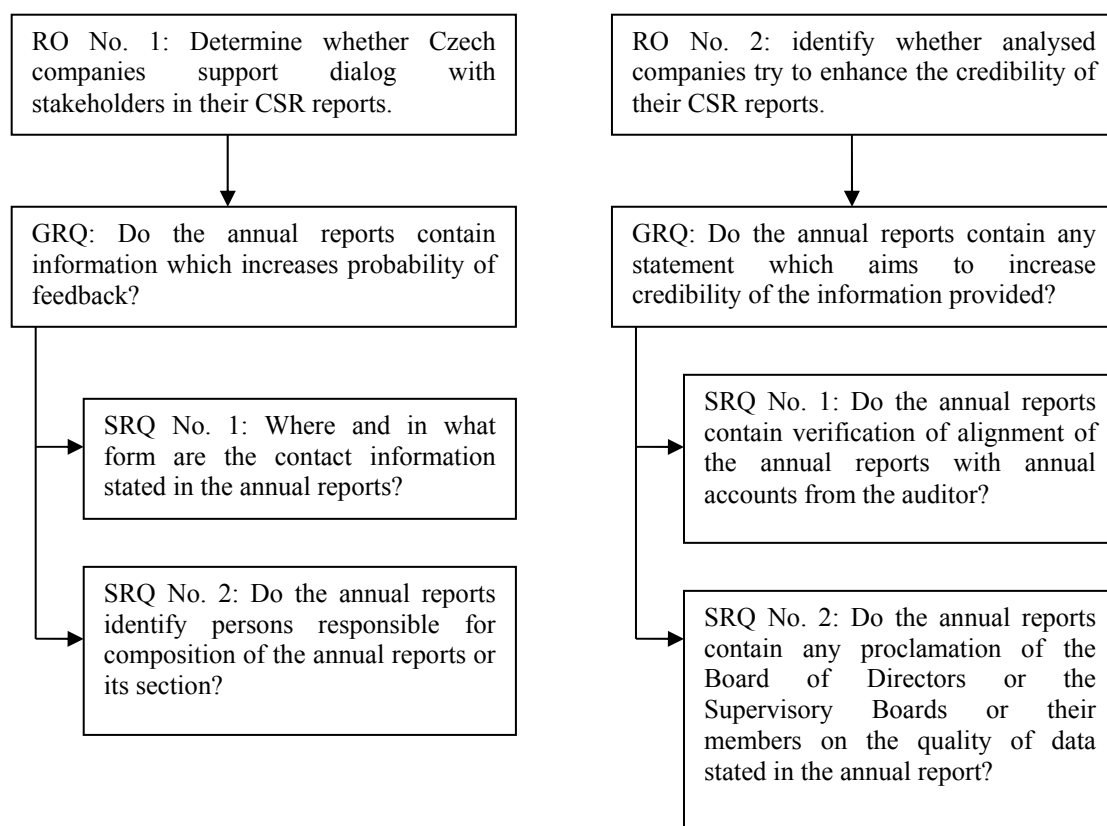
presuppose that this principle is somehow specially taken into account by the Czech companies. Leading organization in the sustainability field The Global Reporting Initiative or the International Integrated Reporting Council started to put more focus on it in the last few years. For this reason the Author in the research presented below focuses only on the initial stage of materiality – i.e. if the companies list any information encouraging feedback from stakeholders at all.

CSR report represents one of the channels of corporate communication which is generally considered less trustworthy. This fact weakens some of the benefits resulting from the CRS reporting. For this reason, another principle of composing a good CRS report is credibility, often also called reliability. Credibility of report may be enhanced by various methods. Most frequently it is by means of verification by a third party – specifically by an auditing company (KPMG, 2013, WBCSD, 2014). In majority of cases (71% researched reports) these are only so-called limited assurance statements (WBCSD, 2014, p. 17). This phrase is usually used for relatively general auditor's statement that the auditor found nothing, which causes him to believe that the reported data do not accurately reflect performance of the company in certain areas (CorporateRegister.com, 2008, p. 14). Thus, in the research presented below the Author also focuses on finding whether the reports contain some statements aiming at enhancing the credibility of presented information.

Methodology

Within this research, two research objectives (RO) were determined. The first one was to find whether the Czech companies support dialogue with stakeholders in their CSR reports. The second was to identify whether the analyzed companies try to enhance the credibility of their CSR reports. In accord with the methodical procedure formulated by Punch (2008, p. 37), these objectives were consequently transferred into the general (GRQ) and specific (SRQ) research questions – see Figure 1. Integration and accumulation of answers to the specific research questions lead to answers to the general research questions. This way the set targets will be accomplished.

Fig. 1: Hierarchy of concepts



Source: Author

The analyzed CSR Report was made up of annual reports. The Author selected this option for several reasons. According to the recent research of KPMG, the annual reports are the most frequent place where companies tend to place information on their socially responsible activities (KPMG, 2013, p. 27). According to KPMG, this finding applies also to the enterprises located in the Czech Republic (KPMG, 2008, p. 73). The advantage of focus on the annual reports lies also in the fact that these are static documents, publicly available in the Czech Republic.

To achieve the set research objectives, the content analysis method was selected. According to Neuendorf, this can be defined as a “systematic, objective and quantitative analysis of message characteristics“ (2002, p. 1). Coding scheme was adopted from Author’s previous research– see Kašparová, 2011. Each annual report was rated independently by two raters. Consequently, a comparison of their assessment results was conducted. In case of disagreeing ratings, the raters had to come into agreement in code.

In total, 69 annual reports of the public limited companies from the processing industry (57 annual reports) and civil engineering (12 annual reports) for 2012 were analyzed. The number of annual reports and selection of industry was determined by linkage of this research to the previous work conducted by the Author – see Kašparová, 2011. In accord with the findings of the previous research, the content of the annual report was divided into three sections – introductory pages, body of the annual report and the annex to the annual accounts – which were analyzed independently. The data were processed in MS Excel.

Results

In order to accomplish the **first research objective** (RO No. 1) the Author first researched **where and in what form the annual reports state the contact information** (SRQ No. 1). This part of analysis did not include the information published in the Auditor's Report even though it forms a part of the annual report. The subject of interest was to find which forms of contacts are provided by the corporation itself. The detailed results are summarized in Table 1.

Tab. 1: Location and Forms of Contacts (N=69)

Forms of contact	Introductory pages		Body of the report		Annex to the Annual Accounts	
	n	%	N	%	n	%
Contacts given	37	53.6	48	69.6	66	95.7
Telephone number excl. name	7	18.9	10	20.8	4	6.1
Telephone number of a person	1	2.7	1	2.1	0	0.0
Corporate e-mail	8	21.6	7	14.6	1	1.5
Personal e-mail	1	2.7	1	2.1	0	0.0
Fax number	6	16.2	9	18.8	2	3.0
Physical address	37	100.0	48	100.0	66	100.0

Source: Author

The results show that the information with corporate contact can almost always be found in the annex to the annual accounts (66 annual reports of 69). Nevertheless, almost exclusively it is a physical address of the subject. This finding is not surprising as the Article 39 of the Statutory Instrument on Double-Entry Bookkeeping requires the annex to the annual accounts to contain the identification data of the accounting unit, i.e. also the location of its registered seat (Government Decree no. 500/2002 Col., Article 39, section. 1).

In absolute majority of the annual reports the corporate contact information can also be found within the introductory pages of the annual report as well as in its body. The results show that if the corporation does decide to state some form of contact in these sections, such

contact is always the corporate physical address. Unlike the annex to annual accounts, these sections frequently feature information on further forms of contact. Unfortunately, these are most typically non-personal forms – i.e. forms of contact without identification of a specific person. In most cases the contact is a telephone and fax number of an electronic mail address.

Further, within the first objective Author researched, **whether the annual reports identify the persons responsible for composition of the annual report or its sections** (SRQ No.2). The results show that this information is not too frequently included in the annual reports. It was found only in 12 annual reports, i.e. in 17.4% cases. The responsible persons were in majority Members of the Board of Directors, less frequently Managing Directors and Finance Directors. In almost all cases (11) the responsibility was declared for the annual report as a whole. In just 2 cases the responsibility for the overall annual report was declared together with responsibility for the partial sections of the annual report. In majority of cases (8) there was no contact to the responsible persons presented. In two cases, the corporate address or place of residence of the responsible person was stated. No other forms of contact were mentioned with such people.

Based on the findings above we can answer the general research question (GRQ) **whether the annual reports contain information which increases probability of feedback**. The conducted content analysis revealed that the contact information is provided in all the analyzed sections of the annual report. This fact is positive as the legislation imposes the duty to provide the contact information¹¹ only in the annual accounts¹² and their annex. The results also show that the introductory pages of the annual report and its body feature wider range of contact forms. All sections are clearly dominated by physical corporate address. Among all contact forms in all analyzed sections, non-personal forms of contacts prevail which does not induce too active efforts to encourage the feedback. The analysis also uncovered that the occurrence of information on persons responsible for composition of the annual report is rather small. In majority of cases there is no identification what specific section the persons are responsible for. The personal contact is frequently not given and, repeatedly, it is always the physical address only. Also these findings support the conclusion that the corporations do not too actively strive to encourage the feedback from the report readers this way.

¹¹ The duty applies only to provide information on the company's seat.

¹² This was obviously not entering the evaluation.

To fulfil of the **second objective** (RO No. 2) Author researched first **whether the annual report contains verification of alignment of the annual reports with annual accounts from the auditor** (SRQ No. 1). The results show that 84.8% (56 of 66)¹³ annual reports contain a statement on this alignment. In 10 cases the authors of the annual report considered it as crucial that they place it within the introductory section of the annual report. In other cases, this statement was found in the body of the annual report.

Further, within the second target, author researched **whether the annual reports contain proclamation of the Board of Directors or the Supervisory Board or their members on quality of data stated in the annual report**. Only statements explicitly mentioning the phrase “annual report” entered the analysis. Thus, the analysis did not include proclamation on quality of data stated within the annual accounts or within the auditor’s report.

Occurrence of this information was identified only in 23.2% cases (i.e. in 16 annual reports). This fact is rather surprising. At that time applicable Commercial Code imposed both the Supervisory Board and the Board of Directors duties¹⁴, which could imply that such proclamation should be stated in the annual report in order for the annual report to be able to “generally, fairly and comprehensively inform on performance, activities and current financial standings of the accounting unit” (Accounting Act, Article 21). An interesting fact also is that the given statement, contrary to the information on alignment between the annual report and the annual accounts, was always placed within the annual report body.

Based on the findings above we can answer the general research question (GRQ), **whether the annual reports contain any statement, which aims to increase credibility of the information provided**. The results show that the annual reports contain such a statement. External verification of the auditor prevail even in spite of the fact that such a verification is not imposed by the Law.

¹³ 3 annual reports contained no Auditor’s Report. This fact does not automatically mean breach of any legal obligation. The obligation to verify the annual accounts concerns only some corporations (see Act No. 563/1991 Collection of Law, § 20, section. 1).

¹⁴ The Supervisory Board should supervise the execution of rights of the Board of Directors and the conduct of entrepreneurial activities of the corporation (Commercial Code, § 197). The Board of Directors is obliged to submit to the General Meeting the Annual Accounts together with the Report on the Business Activities of the Company and its Asset Status which constitute the part of the Annual Report (Commercial Code, § 192).

Conclusion

In the last ten years, the volume of reporting on social responsible behaviour has been on the rise globally. Apart from exceptions in some countries, the reason for this is not the legislative duty to present such information. The companies are typically driven by benefits resulting from this reporting. The companies state that one of the key reasons is improved business performance and innovation (KPMG, 2013). In order for CSR reporting to lead to such benefits, certain principles must be respected. This article focused on finding how two of these principles are respected by the Czech companies during the process of composition of annual reports.

The first research objective was to identify, whether Czech companies support dialog with stakeholders in their CSR reports. The research shows that the creators of the annual reports in this area perform some activities which go beyond their legal obligations. In general though, their efforts cannot be marked as pro-active feedback encouragement. The second research objective was to identify whether the analyzed companies try to enhance the credibility of their CSR reports. The result of the presented research are fully in accord with the findings of KPMG or World Business Council for Sustainable Development. The most frequent method of enhancement of credibility is inclusion of verification of the annual report contents by an auditing company on a limited assurance level. The statement covers only the information occurring both in the annual accounts and the text of the annual report.

Result of this research support the assumption that the creators of annual reports so far have not realized the advantages which may be gained from this type of reporting. Perhaps this is the reason why they do not fully respect the researched principles. The next research thus should concentrate on finding whether the fact above is caused rather by the type of report or by an unawareness of the CRS reporting as a whole.

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THE SIGNIFICANCE OF KNOWLEDGE IN BUSINESS INNOVATION IN SMES IN SOUTH MORAVIA

Petra Koudelková

Abstract

This article seeks to answer whether or not entrepreneurs find knowledge in innovation management important. Education brings valuable knowledge and knowledge represents an important factor in the field of business. Primary research is based on a questionnaire distributed to businesspersons. This contribution aims to determine whether theoretical knowledge in innovation management is a significant factor to create successful innovations. It attempts to determine whether business practitioners with higher education generate more successful innovation than their colleagues with lower education.

Key words: Education, Knowledge, Knowledge management, Innovation management, Successful innovation

JEL Code: A29, M10, O10

Introduction

Business growth plays an important role in the life cycle of a business. Growth in relation to small businesses represents a complex matter and is multidimensional in scope and character (see e.g. Scase and Goffee 1989; Morrison et al 2003). There are many studies that deal with a success or failure of businesses. Extensive research of growth of enterprises (above all of small and medium sized enterprises) goes back to the 90s when the business growth of various SMEs was analyzed by case studies (Begley et al 2005). The scientists responded to a niche in the scientific field and created a theoretical model of growth and expansion of SMEs (Barringer - Greening 1989). The business growth is supported by management as well (Candida 2009).

Innovation is one of the determinants affecting success of firm's growth. (Barrington, Greening, 1989). The innovation success also depends on human factor (Marcati et al, 2008). Educated employees produce better results and there are several approaches how to motivate people (Dobbs, Hamilton, 2006).

1 Business growth: state-of-the-art

Successful long term business growth is usually a top goal for the majority of SMEs and it is often praised in the media (Brush et al 2009). The first extensive scientific research relating to the growth of SMEs was made in the 1990s. Economic scientists compared growth between various SMEs and created the theoretical model of SME growth and expansion (Barringer, Greening, 1989). One of the studies that are looking into the economic growth of companies is "The Growth, Decline and Survival of Small Businesses" (Headd, Kirchhoff, 2009).

There are many factors that influence business growth and there are also various ways how to improve growth in SMEs (Dobbs and Hamilton, 2006; Janda et al 2013). One of them is innovation. This article does not deal with a definition of innovation but it focuses on knowledge and education of managers with the aim to support successful innovation in the market. The successful innovation results in gaining new clients and their interest/trust together with a higher turnover and higher profit (Headd-Kirchhoff 2009).

1.8 The role of knowledge in business growth

Already in 1998, Barringer and Greening expressed an idea that sooner or later businesses will face tasks how to motivate their employees and transfer knowledge & skills in order to support further business growth when the business is looking to expand or increase their profits and a number of employees. Knowledge is the starting point for innovation. Human capital brings knowledge into businesses.

Knowledge represents an intangible company asset, such as know-how, processes in production or intellectual property, which has the potential to create wealth and prosperity (Sheng-Tun Li et al 2007). This type of an asset belongs to a company; however it is important to remember that this asset was created by an employee who contributes to the business growth and who is able to communicate, think and solve problems. This type of an employee is usually known as a knowledge expert. Some authors believe that managers and directors should be considered as knowledge experts, i.e. Papadakis and Bourantas (1998). However, some other authors suggest that all employees are knowledge experts (Rosen 2011). Rosen (2011) also believes that the terms "a knowledge worker" and "a worker" are no longer mutually exclusive. Manual workers can also contribute by their knowledge and experience to the business development. .

Knowledge is closely connected with the knowledge management. For some authors firm knowledge can be viewed as tantamount to information (Koudelkova-Svobodova, 2014). Knowledge management (KM) was created as a response to the increasing importance of knowledge for the organization. The knowledge determines the success or failure in business and it is a major source of wealth (previously it was land and capital). Knowledge supports innovative ideas at any stage of the development and in any department. In other words, not only the Science & Research department should be responsible for innovative business development (Pitra 2006). This activity should be part of all employees' day-to-day job. The important factor influencing knowledge is education. Education is important for entrepreneurs, business owners, top managers and other relevant employees. It is always sensible to remember the following points (Vodak-Kucharcikova 2011):

The top and senior management is responsible for commercial success of their company it is important that they make sure that they co-ordinate unique and creative ideas, which lead to successful innovation, efficiently in a long term view (Pitra 2006). It is also necessary to bear in mind that development of innovation and its introduction to the market must be part of normal day-to-day business activities.

Knowledge management is important point in process of creation innovation which allows sharing information among all staff.

2 Methodology

There were two steps in the research process.. First one was secondary research and the second one was primary research and it was based on questionnaire survey. A questionnaire was sent to micro, small and medium-sized companies operating in South Moravia. The following sectors have been selected for the purposes of the research:

- 15 – manufacture & sale of products from abalone shells
- 26 – manufacture & sale of computers, electronics and optical devices
- 31 – manufacture & sale of furniture

According to the Czech Statistical Office's records the research sample included 3,389 companies. Based on the estimated degree of reliability of 95% and the relative permissible error of 5% it was calculated that the required number of returned questionnaires should be at least 321.16. Research questionnaires were sent to 2.105 companies in summer 2013.

Tab. 1: Research Sample

Company size (based on a number of employees)	Number of companies in the research sample	%
50 - 249	6	1.8691
10 - 49	17	5.2960
1 - 9	298	92.8349
Total	321	100.0000

Source: Own research

2.1 Questionnaire Survey

A questionnaire survey is a type of a quantitative research method. The questionnaire survey was evaluated by statistical methods. Both open-ended and close-ended questions were used in the questionnaire.

Various statistical tests have been used within the statistical analysis. The tests were performed by the statistical program IBM SPSS Statistics 20.

The Chi Square test (χ^2) test is one the most used statistical tests

It tests hypothesis $H_0: \pi_i = \pi_{i,0}$ where $i = 1, 2 \dots K$ (K is a number of categories) against an alternative hypothesis $H_1: H_0$. The basic computational equation is as follows:-

$$\sum_{i=1}^K \chi^2 = \frac{(n_i - n\pi_{i,0})^2}{n\pi_{i,0}} \quad (1)$$

In the above formula $n_i, 0$ is an expected variable i - category in the selection of range n .

The Spearman Rank Correlation Coefficient is a number that shows how closely two sets of data are linked. It can only be done on data that can be put in order, highest to lowest. Each element X has its ranking a_i , which means $\sum a_i = n(\frac{n+1}{2})$, and each element Y has its ranking b_i , which means $\sum b_i = n(\frac{n+1}{2})$. The formula is as follows:-

$$r_s = \frac{2T_x - D^2}{2\sqrt{T_X^2}} \quad (2)$$

Spearman coefficient always gives an answer between $\langle -1, 1 \rangle$. Program IBM SPSS Statistics 20 automatically calculates all of the above statistical tests. The Spearman and Kendall's coefficients can also show how strong the link is.

3 Results of the Research

The research survey was carried out in South Moravia from March to May 2013. The following hypotheses have been established for the purposes of the research:

H1: *Businessmen with knowledge in innovation management are more successful than businessmen with no knowledge in innovation management.*

H2: *Theoretical knowledge in innovation management is important for the successful innovation.*

Testing hypothesis H1: Businessmen with knowledge in innovation management are more successful than businessmen with no knowledge in innovation management.

From the questionnaire the following questions were selected to test H1:

- Question 1 (Q1) – *Were your innovations that you introduced to the market successful?*
- Question 2 (Q2) – *Do you, as the business owners, have any knowledge in innovation management?*

Two sets of data were used for calculation purposes. This includes the Spearman rank correlation coefficient, Kendall's tau (τ_b a τ_c) coefficient, **Goodman-Kruskalov** γ and Kruskal's gamma and asymmetric Somers' d.

The following table shows respondents' answers to Q1 and Q2.

Tab. 2: Respondents' answers to Q1 & Q2

		Do you have any knowledge in innovation management?				Total
		Definitely yes	Rather yes	Rather not	Definitely not	
Were your innovations that you introduced to the market successful?	All of my innovations were successful	86	23	2	0	111
	More than a half of my innovations was successful	36	51	6	1	94
	A half of my innovations was successful	9	18	46	6	79
	Less than a half of my innovations was successful	3	4	10	17	34
	None of my innovations were successful	0	1	0	1	2
Total		134	97	64	25	

Source: Own research

Then, two other sub-hypotheses have been set out:

H₀: There is no statistical correlation (zero coefficient) between the two sets of data.

H₁: There is a statistical correlation (non-zero coefficient) between the two sets of data.

Tab. 3: Symmetric Analysis of H1

		Value	Asymp. Std. Errora	Approx. Tb
Table for two sets of data	Kendall's tau-b	.630	.034	17.065
	Kendall's tau-c	.590	.035	17.065
	Gamma	.802	.033	17.065
	Spearman correlation coefficient	.690	.035	16.989
Interval	Pearson's R	.709	.034	17.923
Total of valid cases		320		

Source: Own research

The above table (table 3) shows that sub-hypothesis H₀ was not confirmed; therefore, the alternative sub-hypothesis H₁ is applicable. This means that there is a relationship between successful innovations and businessmen's education in innovation management.

The rank correlation coefficients (Kendall's tau-b and Spearman's coefficient) are very similar, approximately 0.63. Values are shown in table 4.

As all values are positive and close to 1 the correlation is positive. The correlation is direct and medium-strong. In all case, the sub-hypothesis H₀ does not exist. This means that H₁ is applicable.

Therefore, successful innovations and theoretical knowledge in innovation management are correlated.

Testing hypothesis H2: Theoretical knowledge in innovation management is important for successful innovations.

In the case of the second hypothesis subjective businessmen' opinions and views are tested. The test should provide an answer to whether or not businessmen consider theoretical knowledge in innovation management being important for successful innovations.

A question '*In your opinion, does theoretical knowledge influence success of innovations?*' was given to the respondents.

Table 4 shows businessmen's answers and it is already obvious that businessmen believe/assume that theoretical knowledge of innovation management is important for successful innovations. In order to finalise the test it was also necessary to apply the Chi Square (χ^2) test.

For the test purposes we formulate an assumption that theoretical knowledge of innovation management influences successful innovations.

Tab. 4: Frequencies of respondents' answers - using the Chi Square Test χ^2

In your opinion, does theoretical knowledge influence success of innovations?	A number of answers	A number of expected answers	Difference
Definitely yes	107	74.8	32.3
Rather yes	126	74.8	51.3
Rather no	53	74.8	-21.8
Definitely no	13	74.8	-61.8
Total	299		

Source: Own research

Taking into account all answers it is possible to re-formulate the assumption – if there is no significant difference between the answers, then theoretical knowledge in innovation management doesn't support successful innovation; however, if there is a significant

difference between the answers, then theoretical knowledge in innovation management supports successful innovation.

The Chi Square test χ^2 was applied to verify the hypothesis and the following two sub-hypotheses have been set out:

H₀ – there is no significant difference between the answers

H₁– (alternative hypothesis) – there is a significant difference between the answers

Tab. 5: Test χ^2 for hypothesis H2

	Theoretical knowledge in innovations
Chi Square	106.391
Df	3
Asymp. Sig. α'	.000

Source: Own research

The level of importance was defined at 0.01%. The first row shows a value, df represents a degree of freedom and the minimum value is shown in the last row (Asymp. sig = α'). The null hypothesis is ignored therefore, the alternative hypothesis is accepted. The relationship is as follows:

$\alpha' \leq \alpha$ H₀ is ignored

$\alpha' > \alpha$ H₀ is accepted

If the level of importance is 1% the null hypothesis is ignored (this means that there is no significant difference in the answers) and the alternative hypothesis is accepted (this means that there is a significant difference in the answers). Therefore, we can say that theoretical knowledge in innovation management is important for successful innovations.

4 Discussion

Various studies prove that there is a relationship between education and successful innovation. It was established that people with higher education are more creative in respect of new innovations. However, it is also important that the innovations are successful.

Our research provided interesting results in the relationship between theoretical knowledge in innovation management and successful innovations

People who have theoretical knowledge in innovation management are not only able to generate innovations but they are also able to make the innovations profitable and successful.

Active involvement in the process of education in innovation management is increasing and this has a positive effect on business innovations. Businessmen can attend private courses that are offered by various educational agencies. Sometimes, it is also possible to use e-learning. However, there is a lack of specialist educational programmes provided by well-known agencies. If a businessman cannot find any suitable courses provided by educational agencies he/she can study on their own. The educational process should be divided into the following steps:-

- 1 Set a target of studying
- 2 Find a suitable form of learning (agency, e-learning, self-study, university, etc)
- 3 Assessment of new knowledge and its use in a real life
- 4 Keep process of personal development

It is sensible to pass new knowledge onto other colleagues and partners in the business. If necessary, it is possible to pay for an educational course for relevant employees. Each business owner/director can decide what types of courses are suitable for their employees. The decision should be based on their experience with the innovation process.

Conclusion

Knowledge in innovation management is a significant element for a successful introduction of the business innovation to the market. As is mentioned above, innovation is important factor for business growth. From this reason is necessary focus on gain theoretical knowledge about innovation and innovation process.

As show results of this research, businessmen in south Moravia in the Czech Republic realise the importance of knowledge and want to continue in education and collecting information. In this case is important to choose the best kind of courses or education, because not all courses are suitable, effective and necessary for their employees. Information should be a key element for business plans and strategies.

SMEs including micro companies form important parts of all national economies and their importance could grow as they are supported by the national governments and the European Union. The ongoing support could also secure their privileged position in the economy. Therefore, it is necessary that the research in their growth and life cycles continues. The research results should become an important part of theoretical knowledge not only for the scientific community but also for the wider professional public.

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THE RELIGIOUS ROOTS OF INNOVATIVE THINKING

Dušan Kučera

Abstract

The article is dedicated to the religious roots of innovative thinking. The paper presents the basic concepts of the phenomenon of religious thought and its outlet in the base of the religious systems of Judaism, Catholicism, Islam, Protestantism, Buddhism, Hinduism, Taoism, Shinto and Confucianism, which has significance in certain lines of business and management. Religious thinking naturally affects the anthropological basis for the managerial position and the relationship of spirituality to the Western concept of science. Finally, it is necessary to deal with the concept of capitalism, spirit of capitalism, concept of the invisible hand in economics and contemporary religious features of capitalism itself, which in today's economic world plays an important role.

Key words: spirituality, religion, innovative thinking

JEL Code: A13, O30, P10, Z1

Introduction

The roots of innovative thinking can be identified in the fundamental philosophical and religionist systems which for centuries significantly influenced the birth and gradual development of the innovative approach and have potential also to meet the challenges of today's business and innovative thinking in management.

1. Starting points

1.1 Concept of „religio“

According to Cicero the concept of *religio* is derived from Latin *relego* – *relegere* = *to pick up again, take something into account, respect*. The opposite meaning is *negligare* = *neglect*. According to Lactancius it comes from Latin *religo* – *religare* = *associate, rebind, e.g. human dependency on God*; in the Bible known as conscience or manifestation of faith and piety or simply as religion. Immanuel Kant understood religion as recognition of moral law (*categorical imperative* or divine command). Friedrich Hegel wrote about the *absolute spirit*

(absolute knowledge) with emphasis on the whole. Friedrich Schleiermacher understood religion as *awareness of infinity, contemplating the eternity*. All these meanings have a great potential for innovative thinking.

1.2 Spirit and innovative capitalism

We can find the basic spiritual understanding of business innovation in Max Weber's concept of the *spirit of capitalism* based on protestant ethics (WEBER, 2004). The word *spirit* is to be found originally in Hebrew language (*ruach* = *breath, wind, breeze*). In the biblical Book of Genesis, but also in the first sentence of the Gospel of John, this "spiritually-charged word" occurs at the beginning of the universe (*arché*) as principle of all creation. We can also say that the spirit is active at the beginning of any renewal process (lat. *innovare*). In the Old Testament *spirit* is conceived as "aspect of God's wisdom in the world". Due to the fact that *spirit* is in the old Eastern mythologies and languages (Hebrew) in the feminine form, it is often associated with a "goddess". This introduction also marks the difference between the Hebrew *ruach* and the Greek *pneuma*. *Ruah* is in ancient literature mentally focused, with a special idea, clearly value oriented, and typically characterized by its creativity and fertility. The Greek word *pneuma*, Latin *spiritus*, is neutral. This fact, unfortunately, in Greek and European philosophy "*opens the possibility of harmful (value) neutrality and only abstract factuality*" which is used also in the current economic environment. The last note to the word *spirit* is the managerial formulation of „*entrepreneurial spirit*“, „*entrepreneurial mindset*“ or in German: „*unternehmerischer Geist*“, that is possible to be updated and deepened for innovative thinking. Spirituality, therefore, expresses the overlap of everyday life and man's own existence, the emphasis on the meaning of his existence and acceptance of the mission toward the profession via innovation.

2. Religious concept of the "invisible hand"

A research of this popular concept has proved that the commonly mentioned "*invisible hand of the market*" cannot be impersonal or mindless because it is a part of the current social and even spiritual framework of the economy. Swiss Economist Hans Christoph Binswanger from the University of St. Gallen writes in relation to it directly about "*alles regelnde Vorsehung eines weisen, mächtigen und gutigen Gottes*", i.e. about the "*highest universal instance*". Other metaphoric interpretation describes the invisible hand as a „*divine intervention*“ in the society (WIESER - ROHRHUBER, 2006).

3. Anthropological basis of spiritual character of innovative thinking

The anthropology reminds us of the humanity based on a combination of body - spirit - and soul (life). This spiritual function is usable as a source of each manifestation of human innovative thinking. This anthropological concept approaches the religious (vertical) concept of human vocation: to be a creative and innovative „image of God“. We do not hit on any psychological effect (feeling, impression), nor on empirical influence of any idea in the society (the statistical and sociological majority of typical thinking and behavior). The human thinking, searching, receiving inspiration (*in-spiritus*), and the use of innovative capabilities in the context of values and meaning, is typical spiritual concept supported by some religions. In the economic environment we follow the specifically human "*search for meaning, unity, connectedness, transcendence and the highest potential*" (RICAN, 2007, p. 44).

It is remarkable how often economists, engineers, and technicians are talking about the inspiration and innovation without apparently realizing that they left the materialistic and purely scientific (empirical) basis. On the contrary – in this area they benefit from religious sources. The German philosopher Karl Girgensohn described the typical spiritual experience of modern men as a search for inspiration and innovation, intention, and invention by the means of three positions (postures):

- Opening up to the thinking that "*overcomes our own border.*"
- Confidence as the opening for answers to our internal questioning "*in the imaginary and emotional forms.*"
- "*The uplifting of myself for some higher goal – even e.g. losing myself*" in order to achieve a new target (GIRGENSOHN – GRUHN, 1930).

4. Concept of creation as basis for creativity and innovation

According to the oldest religious ideas, the creation of man is derived from the creation of the world. Also the world is designed by three factors: matter – energy – information (code of life). The ancient world has been talking about the nature of the world as about special "*logos*" (a code, gen of existence, art of thinking, nature), which contains the crucial channeling and targeting. *Logos* (word, idea) is the basis of the very beginning in the Jewish (Gen 1.1) as well as in the Christian thought as the incorporated Word (John 1,1.14). For the European environment, the Jewish way of thinking, which has strongly influenced the Christian history in Europe and the US, is very important. These includes the following concepts:

- The existence of the universe, our planet, nature and humans as a result of a free decision of the Creator. For the entrepreneur and manager it is the basic spiritual and meaningful basis of their creativity and innovation.
- Man was created with free will and was positioned into the World with a specific mission and responsibility towards himself, nature, and people. This mission gives our innovative efforts permanent value and meaning.
- For overcoming any obstacles we got spiritual energy at our disposal (action of the *Holy Spirit* through the *divine word*). No innovator has to work in a spiritual vacuum, because – as the Christian religion ultimately articulates – the spirit is given to all, and forever.
- The institution of Sabbath provides human beings with a balanced rhythm of work and rest periods as an active experience for gaining more wisdom, spiritual energy which can be used for themselves, family, and society (KUČERA, 2012).

5. Protestant roots of innovative thinking

Weber understood the protestant spirit as a concept of internal energy, intellectually focused and spiritually oriented personal power. A particular manifestation of protestant thinking can be observed in the emergence of modern capitalism:

- The liberation of an individual from the power and also from the economic catalyst role of papacy which led to support of individualism (at first as human position directly under the influence of God - *homo coram deo*) and his own creativity.
- The liberation from the Roman Empire led to the independence of the German first and other countries of Europe, and to their separate political and economic development.
- Philosophical and theological liberation of human beings led to the use of rationalism, humanism, spirituality, critical thinking of individuals, and responsible human activity.
- The liberation of man in economic activity led (first in Lutheran Germany) to the freer development of crafts, cities, business activities, construction of modernism, and, of course, to the emphasis on personal and professional development.
- The interpretations of the New Testament teachings about God's pardon for every individual have become the strongest and deepest liberating topic for the daily systematic work and new creativity.

We can summarize other spiritual potentials, supplemented later by Calvinism, as:

- Active interest in the work efficiency as a manifestation of spiritual channeling.
- Active spiritual challenge to the calculated orientation and rational strategy.
- The concept of profit as a sign confirming the spiritual (divine) calling for the creation of values.
- Inclination for saving (opposite of debauchery).
- Spiritual energy to risk and deal with crisis.

6. Postmodern calling for „*new spirit of capitalism*“.

Many scientists claim that the abandoning of initial spirit of capitalism causes the decadence of Europe today. Very concrete contradictions describe the situations when the businessmen consider profits private, but with the costs they try to burden the state. Observing that the original "*spirit of capitalism*" dies, we hear the calls for a "*new spirit of capitalism*" with the original protestant characters of entrepreneurship (BOLTANSKI – CHIAPELLO, 2003), which would in this way find new sources for the development of stagnating Western companies.

6.1 Spiritual intelligence and its application in the innovative thinking

Some scientists (ZOHAR – MARSCHALL, 2003) suggest using the phenomenon of *spiritual intelligence* as a truly higher (vertical) level of innovative mindset. We know that the method of IQ (*intelligence quotient*) follows the logical capabilities of rational procedures, the *emotional intelligence* (EI) is working in the sphere of inner empathy and motivation, but the *spiritual intelligence*, however, dares to aim at even higher goals:

- The ability of mental flexibility - it means to think actively and spontaneously with a willingness to deal with new ideas regarding to customer needs.
- High degree of self-confidence as a spiritual orientation which the entrepreneur and manager has to learn and use.
- The ability to face problems and difficulties.
- Being ready to be inspired by values and new visions.
- The ability of holistic thinking to see things in the context of interconnections.
- The effort to ask mainly "why" or "what if", and search for answers to the deepest questions (not just to a pragmatic and functional questions such as: "how", "who", "where" and "when").
- Acquiring internal personal and moral-visionary independence.

In comparison of purely functional and holistic assessment, we can find a series of contradictions, e.g.:

Functional perspective	Holistic/ethical perspective
Functionality	Responsibility, Accountability
Rationality	Wisdom, balance thinking
Paradigm of reduction	Plurality
Pride	Humility
Past, presence	Future
Short term orientation	Long term orientation
Variability	Stability and continuity
Rules	Vision and future orientation
Purpose	Sense
Randomness	Systematical order
Effect	Value added

Tab. 1 Value contradictions

Source: SCHÜTZ, 1999, p. 69 (own adaptation)

7. Innovative aspects of Jewish spirituality

When Max Weber wrote about the “*spirit of capitalism*” on the basis of Protestant ethics, he knew, of course, also the primary historic role of Judaism in the birth and development of European culture in general and the development of entrepreneurship in particular:

- The concept of work as a virtue against the current complaints about work as a "punishment" or annoying obligation.
- The emphasis on private property as an expression of God's calling, blessings and individual freedom (creative partnership with God).
- The emphasis of the Hebrew bible on integrity, freedom and independence of the individual in his thinking.

The Christianity with the common fundamentals for innovative thinking is also based on the Jewish background for entrepreneurship (KUCERA, 2012):

- The world has its noble origin and meaning. Therefore also a man, his life and work has special value, meaning, and purpose.
- The world is created in perfection and certain order. A man is set in the frame of world order on which he can rely and which he can discover and deepen.
- The world is in its diversity and universality declared as "good", and is designed for a man's life and his creative and innovative work.

8. Catholic roots of innovative thinking

In the literature we find special contribution from some scholastics of the 16th and 17th century. They wrote surprisingly about the free market theory at that time. Thomas Aquinas defined the natural law as a "*share of the eternal law in rational beings*" (*participatio legis aeternae in rationali creatura*). Alejandro Chafuen explains that Aquinas refers to the eternal law, "*God's plan*" which is "*the whole creation to its ultimate goal*." For the practical thomistic thinking, the foundation of "*rational use of human understanding*" is important. (CHAFUEN, 2011, p. 15). For our context with innovation, the scholastic Ludwig von Mises, who lists the three main benefits of the Catholic faith for management, is interesting:

- The belief in the existence of the natural order,
- The importance of human reason and imagination as the means of understanding and using the natural order for special goals
- The methods for ethical assessment and value consequences.

Francisco Pierre de Jean Olivi (1248-1298) wrote in his tractate about the "*fair price*", that it is not possible to calculate the price from the "*objective factors*" (e.g. only overheads or workload). He wanted to derive the fair price from the relationship between the seller (entrepreneur, trader) and the purchaser (the customer). Among the Spanish Jesuits it was then Cardinal Juan de Lugo (1583-1660) and Luis de Molina (1535-1600) who represents the understanding of the "*grace of God*" as donation which supports the free individual thinking. In Molin's writings "*De jure et Iustitia*" he stands for a "*fair price*" which may be regarded as the manifestation of "*God's grace*" for all free participants working "*without any tricks, monopoly and other slickness or privileges*." (JEZEK, 2009, p. 10).

9. Muslim roots of innovative thinking

A large part of contemporary business world is formed by the Muslim countries whose thinking (Islam) has a lot in common with the biblical religion:

- As monotheistic thinking, it believes in one God, the creator, the universal ruler, and keeper of the world, which gives our world a certain order. In this reliable order a Muslim can live and work freely (KROPACEK, 1994).
- The Muslim-oriented entrepreneur believes that his faith is proven by the way of his life and work; he believes in the sense of "*good deeds*" which can be (innovatively) developed.
- Good deeds are "*added up*" and are eventually evaluated in the last "*day of judgment*". It is a crucial defense against laziness or spiritual passivity.
- Awareness of the permanent presence of Allah in the life of a Muslim frees him from fear and adds him courage for specific decisions and actions.

- The relationship between a Muslim and Allah is a direct one, without intermediaries (in contrary to the Roman Catholic Church, where there is a number of saints and advocates); for a Muslim, this represents a deep and powerful source of his spiritual energy and orientation.
- The supporting rhythm of work and rest periods (Ramadan).
- Prayer as a means for innovative thinking providing the spiritual rest, cleansing, forgiveness, mission, source of motivation, and value framework.
- Success as a sign of God's favor – similar as in Calvinism.

10. Hindu roots of innovative thinking

Hindu culture and religion offers a rather relaxing and meditative environment (KÜNG, 2006):

- It puts the individual into the world order with which one has to get to a harmonious relationship.
- It frees the individual from a craving and ownership at any cost.
- It teaches the promotion of good objectives by using no violence.

For Western managers (full of stress and depression), the Hindu environment is a frequent destination for their trips; it enables them to rediscover their lost inner balance, peace, and a new concept of values which include:

- Spiritual openness for new inspiration from the infinity of the space.
- Realistic point of solution, which a Hindu seeks "beyond his reason".
- The use of the concept of divinity in the soul of every human being.

11. Buddhist roots of innovative thinking

Weber regarded Buddhism as a "*mystical concentration of internal enlightenment*". It manifests itself as the contemplation of spiritual focus on meditation which „*relieves the spirit of man from longing for the world - and from any connection with some pure secular interests*“ (WEBER, 1977, s. 274).

12. Confucian roots of innovative thinking

In Confucianism, we find many beneficial factors putting emphasis on practical values of life, ethics, compliance with the universe and always present accent on "*wisdom*". The Eastern concept of wisdom is completely different from the Western concept of "*cleverness*" and pure information. In Confucianism, wisdom is the important *spiritual* understanding of the whole world; searching for and finding its meaning and personal position in it. The valuation of entrepreneurial activity in the world order is related to this search (KÜNG, 2006).

13. Taoist roots of innovative thinking

In Taoism we find a very remarkable innovative initiative for a holistic conception of man and of the world. Although this ancient Chinese philosophy reflects all the opposites in the world, in the same time it is looking for the holistic harmony in the global dynamics. This is represented by the famous diagram:

Fig. 1.: Symbol Yin – Yang.
Source: <http://symboly.xrs.cz/jin-jang/>



The modern entrepreneurs and managers know some accents, e.g. in the Chinese medicine. Generally we find the following aspects in Taoism:

- The concept of life and work as the "*right path*".
- The use of combination of work and value-oriented "*spirit*" by using holistic, dialectic or dynamic duality (FANG-FAUREB, 2011) instead of static and bipolar world.
- The traditional symbol works with the phenomenon of universality and with two opposing energies of the universe. This model is very useful for problem solving methods:
 - Yin: the female part of the world: moon, night, weakness, softness.
 - Yang: the men's site of the world: sun, day, strength, clarity, hardness.
 - A black dot in the white field and the white dot in the black field are symbolizing the parts of opposing powers in the contrary fields.
 - The curve inside the circle indicates that opposites are not strict and absolute, but that sometimes they are overlapping.
 - The whole principle of the paradox is illustrated by duality, unity in diversity and the dynamic process of change within a single unit.

14. Shinto roots of innovative thinking

"*Shinto*" means the "*path of gods*". In this ancient, yet still live religion in Japan, we find a huge respect for rituals of devotion to country, group, family, and company. Well known accents for excellence and quality of type "*kaizen*" originated from Shinto. Strong elements of Shinto are known even from the innovative war strategy (KÜNG, 2006).

15. Holistic understanding of the innovative scientific thinking

On the basis of Descartes and his „*turnover to the subject*" (subjectivism?), the historical division of originally uniform science dealing with the whole universe (*universitas*) was initiated. The original division of "*res cogitans*" and "*res extensa*" was transferred to the

division of exact and empirically measurable natural science and moral philosophy. Here we can refer to the distribution of German division of the most Colleges in the "*Naturwissenschaften*" – *natural sciences*, and "*Geisteswissenschaften*" – *spiritual sciences*. This concept for innovation helps to keep track with the concept of science as one unit (ANZENBACHER, 2004).

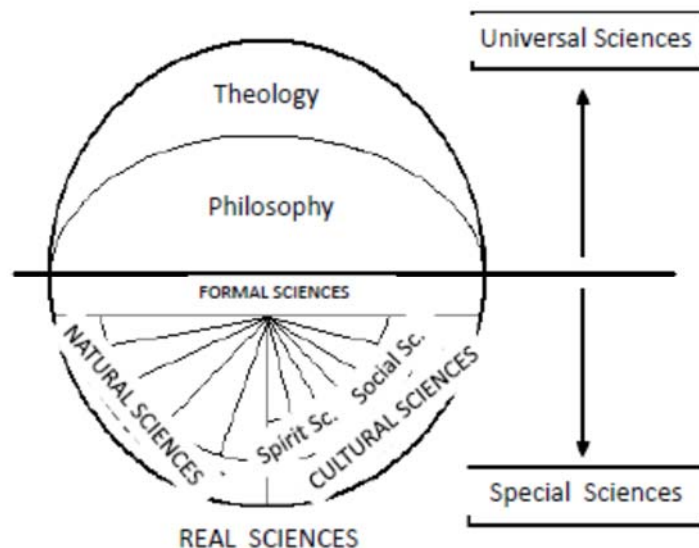


Fig 2: A comprehensive conception of the scientific environment.

Source: ANZENBACHER, 2004: *Úvod do filozofie*, p. 35.

16. Practical understanding of the complex innovative environment

Professor Friedrich Hanssmann from Munich concluded that all the activities of human society can hardly be divided into the separate system areas such as economics and politics as separately thinking domains. On the contrary, man and his environment build unity which includes all other elements (HANSSMANN, 2010). His concept is based on the methodology of the Austrian scientist Johann Millendorfer who is known as the researcher with spiritual visions about the future with a few propositions:

- Economic success cannot be attributed to purely economic factors only.
- The life context of man is based on a network of relations between people – things - and their purposes.
- On the basis of the introduced framework (see fig. 29?), he shows his understanding for the prosperous development of the future economy and society (the so-called values of the future). They are also provable in practice.

The specific relationships between the following subsystems are displayed as:

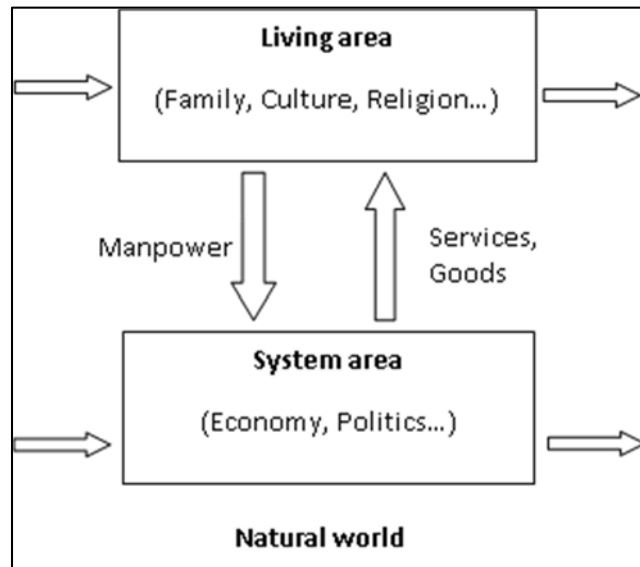


Fig. 3. Simple System Model. Source: HANSSMANN, 2010, p. 6.

17. Religious features of capitalism itself

The last remark belongs to the very modern and post-modern manifestation of capitalism as a religious phenomenon with concrete religious forms:

- Universe - pantheisms of money, devotion to "the dollar" (COX, 1999).
- Temples - company buildings, skyscrapers of banks.
- Priests - capitalists and famous managers.
- Bible - management literature.
- Rituals - ecclesiological morphology of company celebrations, certificates.
- Saints - management stars, pictures, statues, quotations.
- Sacrifices - way toward wealth, big property, experience, credit card (credo).
- Faith - in the endless economic growth and development, future, etc.

Conclusion

The article is devoted to the religious roots of innovative thinking. The short overview shows the historical roots of religious perspective, which played for the development of the world economy and management a special role. The article presented the basic concept of the phenomenon of religious thought and its appearance in the religious systems of Judaism, Catholicism, Islam, Protestantism, Buddhism, Hinduism, Taoism, Shinto and Confucianism, which has significance in certain lines of business and management. Religious thinking was naturally associated with the anthropological basis for the managerial personality, relationship to his spirituality and to the Western concept of science. Finally, the article dealt with the concept of capitalism (spirit of capitalism), concept of the invisible hand in economics. And

last consideration was dedicated to the contemporary religious features of capitalism itself, which in today's economic world has a great importance.

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AN INSTITUTIONAL APPROACH TO INTELLECTUAL CAPITAL IN OPEN INNOVATION SYSTEMS

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Abstract

The rapid acceleration of change of existing economic and institutional conditions confronts business entities with new problems. Their resolution requires new ways and approaches that subsequently accelerate innovation and modernization transformation. Thus, innovation policy is a key factor for economic, technological and social development at the national and international levels. For these reasons, there is a demand to develop and implement new methods for the formation of innovative strategies and the management of the innovative process. Open innovations provide a broader base for new ideas and technologies, and have become a strategic tool for the study of new growth opportunities. This article examines the framework of institutional models and their conformity to the transformation of intellectual resources into intellectual capital. The research is based on the economies of Europe and Russia.

Key words: intellectual resources, intellectual capital, open innovation systems, knowledge economy, new institutional economics, institutional approach.

JEL Code: P51

Introduction

Knowledge and abilities of person are main factor of economic growth on modern stage economic development. There are specters of specific actives in economic and innovation activities. Knowledge, abilities, skills make human capital. Human capital is valuable specific active in a quality of economic growth.

However human capital is foundation of industrial economy, intellectual capital is foundation of the post-industrial economy or the knowledge economy. New institutional economics (NIE) may be characterized as a new perspective in economics. Scholars doing research under the NIE perspective share a common purpose to extend economics by focusing on the social and legal rules that underly economic activity. Although NIE has its roots in

Ronald Coase's fundamental insights about the critical role of institutional frameworks and transaction costs for economic performance, at present NIE analyses are built on a more complex set of methodological principles and criteria. They now depart from both mainstream Neoclassical economics and «old» institutional economics, though authors often care about both efficiency and distribution issues.

1. New institutional economics

Among the many concepts/aspects that are often taken into account in current NIE analyses these can be mentioned: organizational arrangements, transaction costs, credible commitments, modes of governance, persuasive abilities, social norms, ideological values, decisive perceptions, gained control, enforcement mechanism, assets specificity, human assets, social capital, asymmetric information, strategic behavior, bounded rationality, opportunism, adverse selection, moral hazard, contractual safeguards, surrounding uncertainty, monitoring costs, incentives to collude, hierarchical structures, bargaining strength, etc.

Major scholars associated with this school include Ronald Coase, Douglass North, Oliver Williamson, Claude Menard and Thrainn Eggertsson, to mention but a few. All they run an association founded in 1997 that is called International Society for New Institutional Economics.

As is well-known, Ronald Coase is one of the NIE founders, and his classic works are inevitable NIE references, together with the contributions of the property-rights theory in the sixties and seventies.

However, it was through the articles and books published over the 1980s and 1990s that a more complete and coherent set of central core concepts, assumptions and criteria could in fact be gathered from the many self-labeled NIE contributions of the time. It was particularly so since the international seminar series on the New Institutional Economics began in 1983 and these debates were published in the Journal of Institutional and Theoretical Economics.

In 1997, when the International Society for the New Institutional Economics (ISNIE) was launched, a long way had already been traveled by those hundreds of scholars who participated in the inaugural ISNIE meeting. Ronald Coase and Douglass North had already received the Nobel prize award.

Of course, those events already belong to the NIE-ISON history. Historic are also those initial contributions mentioned in which transaction costs, property rights and few more concepts were combined in an attempt to just solve some limitations of standard neoclassical reasoning. As North (2005), Menard (2004), Menard and Shirley (2005), Eggertsson (2005), Toboso and Arias (2006) (see references below) and others make it easy to check, most analyses are now built on a much more comprehensive approach.

At the early nineties Erik Furubotn already was able to envisage the evolution in approach that was going to take place. He wrote that the future theoretical developments would likely be «in the direction of a more flexible and comprehensive political economy approach». And it has turned out to be so concerning the analyses of transactions people take at different institutional frameworks. This is also the case concerning the articles that follow.

Although no single, universally accepted set of definitions has been developed, most scholars doing research under the NIE methodological principles and criteria follow Douglass North's demarcation between institutions and organizations. institutions are the «*rules of the game*», consisting of both the formal legal rules and the informal social norms that govern individual behavior and structure social interactions (institutional frameworks).

Organizations, by contrast, are those groups of people and the governance arrangements they create to coordinate their team action against other teams performing also as organizations. Firms, Universities, clubs, medical associations, unions, etc. are some examples.

Because some institutional frameworks are realities always «nested» inside other broader institutional frameworks, this clear demarcation is always blurred in actual situations. A case in point is a University. When the average quality of its teaching services must be evaluated, for example, an University may be approached as an organization with its people, physical capital, the general governing rules common to all that were passed by the University governing bodies, etc. However, if the task consists of evaluating people's performance in a specific teaching department, for example, along with their own made internal formal and informal rules, then the University as a whole enters the picture as an institution. General University rules, then, form part of the broader institutional framework influencing people's performance at the said teaching department.

This is why scholars usually divide institutional frameworks into several levels.

– *Level 1* consists of embedded informal institutions; these include traditions, customs, values and religion. These institutions arise spontaneously over a long period of time and are

very slow to change. North asks, «What is it about informal constraints that gives them such a pervasive influence upon the long run character of economies?». The answer is unknown but many lower level institutions are designed to protect Level 1 institutions.

– *Level 2* is where formal rules (legal rules) are created, for instance, Constitutions and General Laws defining the rules of the game. Major changes at this level are rare but are often preceded by major upheavals such as the Civil War or the American Revolution. Marginal legislative reforms are frequent however.

– *Level 3* is the level of governance when more detailed organizational rules exit. Level 3 is also the level at which the game is played. Cooperation and conflict, exchange and bargaining, efficiency and distributive issues enter here into the equation. These organizational rules usually serve to facilitate the resolution of conflicts and realize mutual gains by at least a significant part of participants in each arena. Attempts to collectively reform this governance structures are also frequent.

2. The model of open innovation

The new models of innovative activities find development in the knowledge economy. One of them is open innovation.

Open innovation is a term promoted by Henry Chesbrough, adjunct professor and faculty director of the Center for Open Innovation at the Haas School of Business at the University of California, in a book of the same name, though the idea and discussion about some consequences (especially the interfirm cooperation in R&D) date as far back as the 1960s. The concept is also related to user innovation, cumulative innovation, know-how trading, mass innovation and distributed innovation.

«Open innovation is a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology». Alternatively, it is «innovating with partners by sharing risk and sharing reward». The boundaries between a firm and its environment have become more permeable; innovations can easily transfer inward and outward.

The central idea behind open innovation is that, in a world of widely distributed knowledge, companies cannot afford to rely entirely on their own research, but should instead buy or license processes or inventions (i.e. patents) from other companies. In addition, internal inventions not being used in a firm's business should be taken outside the company (e.g. through licensing, joint ventures or spin-offs).

The open innovation paradigm can be interpreted to go beyond just using external sources of innovation such as customers, rival companies, and academic institutions, and can be as much a change in the use, management, and employment of intellectual property as it is in the technical and research driven generation of intellectual property. In this sense, it is understood as the systematic encouragement and exploration of a wide range of internal and external sources for innovative opportunities, the integration of this exploration with firm capabilities and resources, and the exploitation of these opportunities through multiple channels.

3. Intellectual capital: assessment in the model of open innovation

Intellectual capital is the highest form of organization of person's quality characteristics, which are the basis of innovation economy in the form of new creative knowledge, ideas, inventions, products, services and etc.

At the same time reproduction of intellectual capital depends on institutional organization of system. Forming of effective institutional structure in post-industrial economy is important aim for national policy. In many ways institutions determent quality of economics growth of modern national innovation systems.

In our research we consider theory of intellectual capital by way of institutional economics. Institutional economics focuses on understanding the role of the evolutionary process and the role of institutions in shaping economic behaviour. Institutional economics emphasizes a broader study of institutions and views markets as a result of the complex interaction of these various institutions (e.g. individuals, firms, states, social norms). And this coordination detects level of innovation activity in post-industrial economy.

To our mind this sphere of scientific research is interesting, valuable and up to date. From this it should be noted that success in the competition depends on innovation. We think that innovation technology develops quickly. It is difficult business, including the creation of product and its implementation in the market. Then faster the country begins develop innovation business that faster it gets competing economic and social profit.

The hypotheses of research bases on statement, that Institutional structure in Russia puts obstacles in the way of innovation economy, which bases on intellectual capital. It influences new quality of economic growth. One of the factor of economic development in Russia is imbalance inputs and results of innovation activities. Therefore it is important to identify institutional influenced innovation system and work out directions of institutional changes.

The methodology of research includes analysis, synthesis, description, system method, historical method, comparative analysis, statistical and economic-mathematical models.

The results of research reduce to the following provisions.

1. Social, economic and political institutions influence transformation of intellectual resources into intellectual capital for new quality of economic growth. Social institutions include family institution, education institution and social norms. Economic institutions include property institution, intellectual property institution, entrepreneurship institution, market of intellectual service institution. Political institutions include legislation framework, human resources management, formal and informal rules, administrative market. Intellectual resources consist of education, mental models, knowledge, abilities, skills, training and creative potential.

2. In Russia economy we observe tendency of rice intellectual resources without their transformation into intellectual capital and it negatively influences economic growth.

3. Transition to new quality of economics growth is realized by means of institutional requirement's satisfaction (f.e. making a «learning organization», organizational transformation, update of knowledge, system mentality and etc.).

4. The research contains comparative characteristics of the level innovation development European Union countries and Russia with the technique «innovation scoreboard». The methods of matrix positioning of the national innovation system based on integrated indexes «inputs» and «results» of innovation activities are proposed in this research.

Analyses of innovation activity using the European Innovation Scoreboard is presented. The methodology of the European Innovation Scoreboard was added economic-mathematical model and matrix positioning. We used integrated indexes «inputs» and «results» of innovation activities.

Integrated index «inputs» includes:

- Human resources (S&E and SSH graduates per 1000 population aged 20-29 (1.1), S&E and SSH doctorate graduates per 1000 population aged 25-34 (1.2), population with tertiary education per 100 population aged 25-64 (1.3), participation in life-long learning per 100 population aged 25-64 (1.4), youth education attainment level (1.5));
- Finance and support (public R&D expenditures % of GDP (2.1), venture capital % of GDP (2.2), private credit (2.3), broadband access by firms (2.4)).

Integrated index «results» includes:

- Innovators (small and medium-sized enterprises introducing product or process innovations (3.1), small and medium-sized enterprises introducing marketing or organisational innovations (3.2), resource efficiency innovators, calculated as the average of: share of innovators where innovation has significantly reduced labour costs and share of innovators where innovation has significantly reduced the use of materials and energy (3.3));
- Economic effects (employment in medium-high & high-tech manufacturing (4.1), employment in knowledge-intensive services (4.2), medium and high-tech manufacturing exports (4.3), knowledge-intensive services exports (4.4), new-to-market sales (4.5), new-to-firm sales (4.6)).

Using regression models we got weights of «inputs» and «results» and then we calculated Integrated index «inputs» and Integrated index «results».

Integrated index «inputs»: $(0,0317 \times 1.1 + 0,00418 \times 1.2 + 0,0381 \times 1.3 + 0,0385 \times 1.4 + 0,0006 \times 1.5 + 2,6491 \times 2.1 + 0,0024 \times 2.2 + 0,8226 \times 2.3 + 0,0531 \times 2.4) / 3,6403$

Integrated index «results»: $(0,0545 \times 3.1 + 0,0288 \times 3.2 + 0,0051 \times 3.3 + 0,5145 \times 4.1 + 0,1994 \times 4.2 + 0,0911 \times 4.3 + 0,0437 \times 4.4 + 0,0925 \times 4.5 + 0,4759 \times 4.6) / 1,5056,$

where 1.1, 2.1 ... 2.4 – Indicators to assess the cost of innovation;

3.1, 4.1...4.6 – Indicators to assess the results of innovative activities.

Based on Integrated index «inputs» and Integrated index «results» European countries and Russia were segmented.

The first segment with high integrated indexes «inputs» and «results» is presented Germany, Switzerland, Finland, Sweden, France and others.

The second segment with high integrated indexes «inputs» and low integrated indexes «results» is made Norway, Russia, Iceland and others.

The third segment with low integrated indexes «inputs» and «results» is presented Bulgaria, Latvia, Turkey, Croatia and others.

The fourth segment with low integrated indexes «inputs» and upward middle level integrated indexes «results» is made Luxembourg, Czech Republic, Romania and others.

5. We mark out groups of institutions influenced national innovation system. There are «main institutions» (Higher School, Research and development institutes, Design departments, Project centres, Technology towns, Industrial parks and Business-incubators and «secondary institutions» (property institution, administrative market entrepreneurship institution and others).

Conclusion

Thus, learning processes of transformation of intellectual resources into intellectual capital in open innovation systems has great scientific and practical importance. Results and conclusions may be used for the development of national innovation policy and working out a system of measures of formation and development of institutions of innovative activities.

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CIVIC EDUCATION FOR THE NON-PROFIT SECTOR IN THE RUSSIAN FEDERATION - PRACTICE OF TRANSLATING THE INNOVATIONS

Kulkova Varvara

Abstract

The purpose of the study is to generalise the experience to implement the educational programs of NPO leaders, and to identify the socio-economic effects and constraints in their implementation. Experience in the organization and implementation of an educational program for NPO specialists is revealed in the case of practice "Regional Resource Centre of Support of NPO RT" implemented in the city centre of education. The need for a permanent active resource centre to support non-profit organizations in the republic is examined.

Key words: civil society, sustainability, non-profit organizations, indirect public administration

JEL Code: I2, L31, L 380

Introduction

Development of institutions of civil society is outlined as priority in the concept of long-term socio-economic development of the Russian Federation for period up to 2020. According to the development strategy of the state support of NGOs in the Russian Federation (Kulkova, 2014) at the present stage (2010-2015) occurs "building of non-profit sector and its infrastructure," within which the key role is given to improvement of training for managers of NGOs and representatives of the state, performing the interaction with the third sector. However, despite the measures taken in accordance with the values of NCO Sustainability Index in the Russian Federation (USAID, 2013), stability of NGOs has not increased (the total value of the index for the period of 2009-2012 remains unchanged 4.4) and significantly lower than that in the countries of Central Eastern Europe (CEE), in which for the period of 2009-2012, there is a trend to improve the development of NGOs, as the index value decreases from 3.2 (2009) to 2.7 (2012). Potential threats to the stability of non-profit sector are associated with the recession of socio-economic development. The inner factor of NGO

sustainability is the quality of human capital, which, in many respects, is stipulated by competence of leaders of NGOs and stakeholders, thus, the development of civic education. Currently, in the Russian Federation there is widely developed civic education in school segment, as well as legal education, education in the field of human rights, as evidenced by numerous regional practices. At the present stage of development of the third sector it is initiated learning process of NGO leaders, affecting the level of subjects of the Russian Federation, although the "point" practices of civic education of socially active population and NGO activists were prior to this period (program of Feminist Orientational Center "Development of non-profit organizations and fundraising" in 1995,1996; "Dove" (Moscow); fund "Strategy" (Kaluga); "Serving" (Nizhny Novgorod); Interregional Public Foundation "Siberian Center of Supporting Civil Initiatives", NGO Development Center (St. Petersburg), etc.) (Sungurov, 2005). Thus, there is duplication of educational innovations accumulated in successful regional practices of NGOs, non-profit sector of the Russian Federation. Obviously, the practices gained in the region of formation of civic education in the segment of NGOs require initial compilation and analysis. The purpose of the study - generalization of experience in implementing education programs of NGO leaders, identifying the socio-economic effects and constraints (economic and social risks) in their implementation.

The non-profit sector of the Republic of Tatarstan (RT) was selected as the object of study. It seems that the experience of the Republic of Tatarstan has the analytical perspective, since the socio-economic development of Tatarstan at the present stage is identified with the model of socially-oriented economy characterized by active governmental support from NGOs, implemented within the framework of regional programs for 2011-2013(Regional target program, 2011), 2013-2015 taking the leading positions as to the value of the given subsidies in contests of the Ministry of Economic Development of RF among the subjects of the Russian Federation.

1 Theoretical basis of the study

Over the past few decades in the foreign theory and practice, the change of paradigm of public administration takes place based on redesign of classic public administration into "new" management or indirect public administration (non-governmental control), based on cooperation between the state and NGOs (Salamon, 2001; Salamon, 2002; Bürger, 2014; Carson, 2000; Douglas, 2009; Josserand, 2006; Weisbrod, 1988) providing positioning the NGOs as an actor of governance. In the Russian Federation, the practical implementation of

this concept is spreading in initiation of development of public-private partnership. Taking into account the target direction of public-private partnerships to solving the infrastructure problems with the presence of investment interest, it is necessary to expand in domestic science and practice the concepts of indirect public administration to the borders of intersectoral social partnership involving the interaction between: the state and NGOs (public-state partnership), NGOs -Business (public - private partnership), NGOs- population (social-individual partnership) (Kulkova, 2014).

In fairness, we note that (Clarke, Newman , McDermont, 2010) pays attention to the fact that close cooperation between the state and NGO representatives is associated with increased risk of corruption, increasing the financial dependence and, in general, decrease in independence of NGOs, i.e. gaining distribution of the syndrome of NGOs affiliation, which reduces their resistance. In Russia, in the Strategy 2020 (document outlining the conceptual approach to socio-economic development of Russia up to 2020) the non-profit sector is seen as an element of strategy to improve the efficiency of public administration and development of social services sector.

In Russia, at the present stage the civic education issues are not new. The memorandum "Actual problems of civic education in the Russian Federation" on the basis of All-Russian Scientific-Practical Conference "Actual problems of civic education of Russia", held in St. Petersburg, 25-28 September, 2002, laid the foundations of civic education: the essence of civic education was determined, competence-based approach was proposed to the civil education of pupils with details of academic disciplines, interactive and active learning methods, positioning of educational institution, continuing education institutions and public associations was indicated.

We will use the following well-established definition of civic education - "a public-state, socially-oriented system of lifelong learning and education aimed at the formation of civic competence, democratic culture, satisfying the needs for socialization in the interests of individual, civil society and the rule of law" (Sungurov, 2005). The versatility of this definition is that in it are denoted: firstly, methodical approach to civic education, in particular, the competence approach and the concept of lifelong learning. Secondly, the contour of stakeholders (objects and subjects) of civic education.

In the study (Sungurov, 2005) are identified stakeholders of civic education or focus groups in the Russian Federation – these are students, teachers, academic community, NGOs, government representatives, client groups of population (people with disabilities, people of

the "third age", etc.), Commissioners for Human Rights. It should be emphasized that only NGO work with all stakeholders, are the object and subject (consumer and producer of services) of civic education, thereby have determinate positions in the development of civil education.

According to the position (Kuzminov, 2008) competence approach to civic education involves the formation of civic competence, which consists of: research competence (abilities associated with analysis and evaluation of the current social situation), the competence of social choice (ability to make a choice and decision in a particular social situation, when confronting with specific social problems), communicative competence (abilities to interact with others (including tolerance), especially when dealing with social problems), educational competence (ability associated with the need for further education in ever-changing social conditions).

Civic education is based on the concept of lifelong learning, which envisages training throughout life, in forms specific to education in general, outlined in a number of papers (Kuzminov, 2008): additional (non-formal) education – courses, training programs, short programs that can be offered at any stage of education or professional career; informal (spontaneous) education – self-education of socially active individuals in saturated cultural and educational environment.

The saturation of cultural and educational environment provides for the certain infrastructure of informal education, in particular: creation of electronic information resources, providing on-line counseling. The team under the leadership of the author tested in practice of civic education of NGO the competence approach and the principles of lifelong education with implementation of forms of additional and informal education in the framework of the project "Regional Resource Center of Support of NGO RT" on the basis of non-governmental educational institution "City center for adult education" (CCAЕ) in 2012. Generalization of the author's experience is given in the article and displayed in the methodology of the study.

2 Method of the study

The goal set involves the description of the case of implementation of educational program of specific NGO, as well as interviews with experts.

The case of implementation of educational program for NGO leaders is carried out within the project "Regional Resource Center of Support of NGO RT" on the basis of non-governmental educational institution "City center for adult education". The implementation of this project

should be viewed as a form of state-public partnerships and practice of indirect governance, because the project was co-financed by the regional government, and implemented by NGO. Co-financing by the regional government was based on a competitive mechanism. The experience in organization and implementation of educational program for specialists of NGO in RT is revealed in context of: description of module names; highlighting the specificity of educational program; translation of technologies to attract listeners and post-educational support.

Interview method identified socio-economic effects and restrictions (of economic and social risks) in implementation of educational program of NGO at the regional level. Need to study the experts' opinions about NGOs comes from the perspective of the main statements of *implementation research*, according to which the success of social reforms is largely due to perception of and their support by stakeholders, which are understood as all interested persons, including professional community and social groups.

The study was focused on the following issues: experience in retraining within educational programs; how the experience of retraining within educational program was reflected in the activities of non-profit organization and the state of the sector as a whole; appropriateness of educational program to real needs of NGO leaders.

On the basis of these issues at the first phase of the study the guide-interview was designed and step sampling was identified. It included three groups of informants: NGO leaders, representatives of regional authorities, members of the Civic Chamber of RT. NGO were selected on the basis of the registry of NGO of the Republic of Tatarstan. Among executive agencies there were selected interacting with non-profit organizations – the Ministry of Economy of RT, the Cabinet of Ministers, the Office of the President. At the second phase there were collected focused interviews with stakeholders of the third sector according to step sample in February-May of 2014, March of 2015 (N = 15). All interviews were recorded on electronic medium without interrupting the recording. At the third stage, transcription and printing the interviews as texts were carried out. For qualitative discourse analysis of texts the method of progressive approximation was used: creation of the structure of assumptions and concepts; their approbation, allowing us to see how these assumptions correspond to the evidence and disclose data characteristics. The coding was implemented: open coding (choice of topics, which are attributed to the codes, creation of list of topics and analytical memo); axial coding (organization of a set of primary concepts, review and verification of primary codes, establishment of the key concepts of analysis).

3 Experience in organizing educational program for specialists of NGOs of RT

Substantive content of the educational program for NGO leaders included the following subject modules: "Development of social projects"; "Project management"; "Regional everyday practices of project activities of NGOs in RT"; "Fundraising"; "PR in fundraising"; "Technology of business communication." Brief description of each module in the context of the course objectives, target audience, requirements to the listeners, forms and content of the training sessions are given on the website CCAE (Urban Education Center, 2015).

The specificity of educational program of NGO, is stipulated by taking into account the peculiarities of organization of educational process, when working with adult audience, which were identified by the factors of micro-background: form of training sessions taking into account the androgogic features of contingent of listeners: combination of lecture Intensive (20 min) with interactive communication: trainings, case-studies, master classes; mobile team of teachers-speakers: of general geography (several subjects of the Russian Federation: Nizhny Novgorod region, Moscow, the Republic of Tatarstan), and broad competences (leaders of the "advanced" NGOs, the Civic Chamber of the Republic of Tatarstan, scientific community); final examination: testing and feedback of students about the content, technology and quality of teaching in random form as a feedback tool. The success of implementation of educational program for NGO conducted by CCAE was influenced by technologies of attraction of NGO leaders to participate in the educational program modules, in particular: first, it is address mailing (electronic, telephone) about all services of CCAE of NGOs RT according to the roster received in the Mineconom of RT; as well as posting the information announcements about implementation of educational program on websites of CCAE and the Civic Chamber of the Republic of Tatarstan.

Secondly, holding the "Preliminary" works: creation of the page of the Regional Resource Center of NGO Support on the website CCAE <http://gcenter.tisbi.ru/SONKO.htm>; development of practice-oriented training programs and their methodical support; development of methodical guidelines for "project management" with accommodation on the website.

A distinctive feature of implementation of the considered educational program was the realization of informal form of education: organization of information support of implementation of educational program of NGOs of RT (Urban Education Center, 2015), post-educational support of listeners.

The information support of implementation of educational program of NGOs of RT was carried out within the activities of the Regional Resource Centre of support of socially oriented non-profit organizations on the website of the City Center of Adult Education, was presented under the following headings: **"Information Resources"**, including the legal framework; articles; methodical guidelines and materials; NGOs in researches; subjects of infrastructural support of NGOs; **Education**: training schedule; application for seminar; teaching staff; **Services**: consulting; mailings; **News Digest**: activities of NGOs; Information about competitions and grants; **Promotion of projects of NGOs**: recommendations for presentation of projects; donor base; NGO projects.

Post-educational support included: organizing presentations of social projects of NGOs of RT. The recommended structure of presentations of the project: **Information on NGO** (NGO's name, address, phone, fax, e-mail, website, name of the head of the organization, activity of NGO); **The content of the project** (the problems addressed by the project, the aim of the project, project objectives, activities (work) on the project, the necessary resources for implementation of the project (information and methodical, material, institutional, etc.), the expected results (quantitative and qualitative indicators), risks associated with the project; examination, evaluation and resource support (information, guidance, etc.) of NGO projects with a view to their promotion and implementation; provision of advisory support for the activities of NGOs in financial management, law, and others. including the organization of counseling in the online mode.

4 Implementation of educational programs in NGO sector by eyes of stakeholders

The state and NGOs representatives differently estimate the organization of professionalizing the representatives of the third sector, agreeing about the need to implement this trend. The representatives of the state, noting the existence of five NGO - resource centers in the Republic of Tatarstan, identify the Civic Chamber as a coordinating body for educational program for NGOs, pay attention to passivity of NGOs to participate in educational programs.

It should be noted that as to activities of these NGOs on resource centers, two of them pretend (Regional Resource Center of socially oriented non-profit organizations in the Republic of Tatarstan ("CCAЕ") and creating the Resource Centre for Development of NGOs (Non-governmental organization "Economic Society of RT")). At the same time, public organization "Economic Society of RT" was the developer of the program for 2011-2013 "

On support for socially oriented non-profit organizations in the Republic of Tatarstan" and at the same time the recipient of subsidies from the budget of the RT on the implementation of measures of developed program, indicating about the syndrome of affiliation and characterizes emerging of indirect state governance of "informal autonomy" of non-profit organizations. Activities of the Regional Resource Center of NGO RT created within the project of the City center for adult education, with the end of the project have not completed. Currently Regional Resource Center of socially oriented non-profit organizations in the Republic of Tatarstan ("CCAЕ") is a regional platform in the Republic of Tatarstan of a network of resource centers of socially oriented NGOs of Volga Federal District (Urban Education Center, 2015).

In general, there is a variation of expert assessments of implementation of educational programs for NGOs, depending on their supplier. Approval is caused by educational programs implemented by NGO resource center, and rejection - teaching by representatives of ministries and the Civic Chamber of the Republic of Tatarstan.

It is thought that noted by representatives of the state passivity on the part of NGOs is explained by dissatisfaction with the quality of the educational program implemented by responsibility center for professional training the NGO.

The study confirmed the working hypothesis on activization of project activities due to implementation of educational program for NGOs and government officials, including workshops on project management in nonprofit organizations. The obtained expert opinions allow us to position the project activities of NGOs as a stage of nucleation and refinement of innovative social technologies that continue to undergo a process of routinization in public institutions. Individual NGO leaders pay attention to the need to improve the professional level as to fundraising.

The attitude of solidarity is expressed by NGO leaders, indicating the need for a full-time resource center to support non-profit organizations in the republic, sprouted out of the midst of the third sector. The implementation of educational programs works on the consolidation of the third sector and expansion of social partnership through translation and exchange of the best practices of NGOs. At the same time, most experts note that with implementation of civic education for NGOs there was increasingly intensified interaction between republican NGOs and non-profit organizations inner-regional communications, in particular, within the Volga Federal District, remained at the same level.

Conclusion

1. At the present stage in Russia the emergence of indirect public administration takes place, when the state provides services to customers indirectly through service providers, in particular, NGOs. This is reflected in practices of implementation of civic education, where the state acts as a customer, co-financing on competitive basis educational programs for leaders of NGOs, implemented by non-profit organizations, this being the public-private partnership. Implementation of educational programs works for: consolidation of the third sector and expansion of social partnership through exchange and translation of best practices of NGOs;
2. Generalization of the case of implementation practice of educational programs for leaders of NGOs and civil society activists allowed us to identify risk zones, causing the development of technologies attracting the students to courses and informal forms of education by including counseling and other technologies of post-educational support.
3. Expert estimates obtained during interviews allow us to reveal the socio-economic, organizational effects- limits of implementation of civic education in the NGO sector:
 - The difference in the perception of the state and NGOs of quality of the educational process. The authorities are not satisfied with passive participation of NGOs in educational programs and the NGOs - quality of programs carried out by individual providers;
 - Duplication of educational retraining programs for NGOs allows us to conclude about "institutional blurring" of infrastructural support, which is characterized by the lack of structure, responsible for training, formation of NGOs infrastructure, accompanied by the rejection of the Civic Chamber of the Republic of Tatarstan and the ministries as key providers of educational programs for NGOs;
 - The need is identified for the permanent resource center to support non-profit organizations in the republic, sprouted out of the midst of the third sector that supports evidence in favor of indirect state governance development.

Acknowledgment

The research is executed at the financial support of Russian Foundation for Humanities within the research project № 14-02-00119.

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RESTRUCTURING AS A FACTOR OF INDUSTRIAL ENTERPRISE INNOVATION DEVELOPMENT

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Abstract

The article presents vital problems associated with the theoretical-methodological base of research and considers application-oriented aspects of restructuring proprietary technology. It analyses the context wherein the main tool of management appears to be the formation of the reorganization mechanism. The article specifies the definition of an enterprise restructuring based on the analysis of the determinations considered by various authors. This paper reveals the special character of restructuring in that it bears the features of not a simultaneous but a periodical process. Transformation of business can be required at any stage of the enterprise development.

Key words: practice, enterprise, methods, mechanism, restructuring

JEL Code: Q 400, Q 430

Introduction

Dynamism of economic processes caused need of periodic structural changes at both - macro and microlevels of economic system. In modern activity of the industrial enterprises of Russia under the influence of external and internal factors the enterprises' environment restructuring becomes a necessary rule. In modern conditions the issue of the use of corresponding economical and administrative tools in the restructuring mechanism, the enterprises of the industry in particular, as the most actively changing economy sector is actual.

Works of many foreign scientists and experts – I. Ansoff, D. M. Bishop, J. K. Van Horn, A.R. Lazhu, S.F. Read, B. Richardson, K.K. Prahalad, G. Hamel are devoted to problems of restructuring of the enterprises.

Despite the existence of the amount of works on the problem of formation of the organizational and economic mechanism of restructuring, the results of researches do not entirely meet the requirements of the modern economy focused on innovative development.

Research objective is the development of methodical support on formation of the mechanism of restructuring of the industrial enterprises which has to provide their effective functioning.

Scientific novelty of the author's research is based on the following results.

The essence of restructuring of the enterprise which is understood as the management tool of transformations in activity of the enterprise which need arises under the influence of the external and internal factors of the environment, the existence of periodic character directed on the elimination of unproductive, unprofitable structures and the increase of overall effectiveness of activity by continuous improvement of parameters of production and technological processes at parallel creation of new structures of management is defined.

The organizational and economic mechanism of restructuring of the industrial enterprise which is understood as the ordered system of the economic levers and interrelations reflecting actions for planning, the analysis and formation of effective restructuring of the industrial enterprises under the influence of the external and internal environmental factors' change is formulated.

The technique of carrying out restructuring of the industrial enterprises is developed. The given technique differs from the already existing following provisions: it can be applied to both - the successful enterprises and the enterprises experiencing temporary difficulties, and also the crisis enterprises; accurate formation of expediency of restructuring of the enterprise; orientation of the subject of managing to personal resources; possibility of the intermediate analysis, transition to the previous stages of restructuring for their adjustment; opportunity to avoid a randomness in the course of acceptance and realization the restructuring of decisions.

Theoretical bases of research

Despite the existence of the amount of works on the issue of formation of the mechanism of restructuring, the results of researches do not absolutely meet the requirements of the modern Russian economy focused on innovative development. In the works of most of authors' integration problems, and also uses of restructuring as means of financial improvement of the enterprises, overcoming of financial difficulties are generally considered.

In our opinion, there is a number of incomplete problems. Much attention in economic literature is paid to the problems of reorganization of the enterprises in the form of merge, accession, allocation, division and transformation. Economic practice also needs scientific and methodical guidance for other forms of restructuring, and not just for the reorganization

issues. The generalization and analysis of domestic and foreign experience of carrying out restructuring are insufficiently reflected in economic literature. Therefore scientific researches on restructuring problems according to features of functioning of the enterprises in modern conditions are necessary.

Research methodology

In the course of research were used as general scientific methods of knowledge: methods of induction and deduction, analysis and synthesis, classification and group and special: methods of the situation, comparative and economical and statistical analysis, methods of the expert and analytical and strategic analysis.

1. Specification of concept of restructuring of the enterprise

In scientific literature it is possible to allocate some definitions of the term “restructuring”. The American scientists James K. Van Horn and John M. Vachowicz refer almost to any change of structure of the capital, operations to corporate restructuring business or property, i.e. change of the normal course of business operations of the company, Van Horn (2003). The American economist Patrick A. Gaughan defines restructuring of corporations as sale of assets, Gohan (2004).

The Czech scientist Vodacek (2002) defines restructuring process as the complex and interconnected changes of the structures providing functioning of the enterprise in general. In the organizational plan the author allocates with her object an independent organizational unit. Usually it is the company, plant or the autonomous organization allocated with the right to carry out business activity. Restructuring, in his opinion, provides change of the production program (structure of products) and the innovations connected with it in the following structures: production (components of technological base); functional (at realization of function of public division of labor); information (the used information systems); organizational (economical and legal forms and the distribution of the rights and duties accepted at the enterprise); personnel (professional and qualification structure of workers); financial (assets and liabilities).

The term "restructuring" in the Russian scientific literature is considered by G. A. Alexandrov (2002) who treats restructuring as fundamental complex changes, in a basis – the transformation of structure of business covering practical all aspects of activity of the enterprise. An ultimate goal are increase of overall performance and competitiveness, increase in profit".

Yu.V. Ivanov (2001) gives broader concept of reorganization of the enterprise, calling this process transformation. Eight forms of transformations are allocated to them: creation, connection (merge, accession), association, recombination, transformation, division (division, allocation), separation, elimination.

Thus, research of the available scientific and practical works of the Russian and foreign authors, normative legal acts allowed to draw a conclusion on lack of system approach to restructuring definition. From the opinions given above it is visible that most of authors pays attention to various aspects of activity, to the purposes and problems of restructuring, Kermani (2001).

In spite of the fact that definitions of domestic authors mostly have fragmentary character, describing only a part of properties of the concept, they enable to allocate some main characteristics of restructuring:

Restructuring constantly concerns change, reformation and transformation.

Restructuring affects all fields of activity, levels of management and types of assets of the organization.

At the level of the enterprise the restructuring represents the transformation process directed on formation and maintenance of its competitive advantages in all spheres.

The ultimate goal of restructuring is the increase of the efficiency, competitiveness and profitability of economic system.

However, all given definitions of restructuring do not draw due attention to the function of the enterprise adaptation to the changes of internal and external environment.

Thus, the unilateral understanding of restructuring conducts to restriction of opportunities of this instrument of achievement of advantages in competitive fight. The leading domestic researchers in the field of crisis management, and restructuring in particular, note that it has more fundamental character, Kuznetsov (2015).

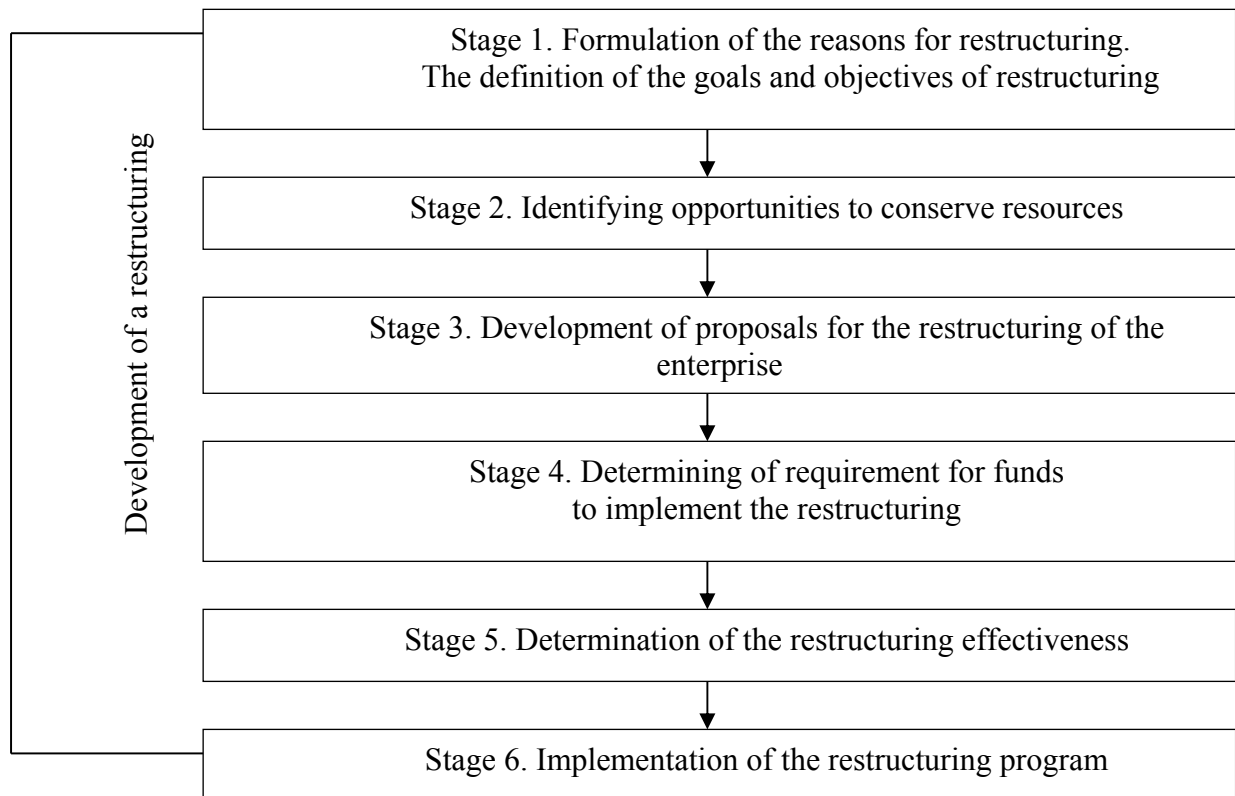
Therefore, in our opinion, reflecting essence of this process, the following definition of restructuring will be fuller.

Restructuring is the instrument of transformations' management in the activity of the enterprise which need arises under the influence of external and internal factors of the environment, the existent periodic character directed on elimination of unproductive, unprofitable structures and the increase of overall effectiveness of activity by continuous improvement of parameters of production and technological processes at parallel creation of new structures of management.

2. Development of a technique of restructuring of the industrial enterprises

As the methodical means promoting increase of efficiency of transformation of structure of the enterprise we offer the following stages of works on restructuring at the industrial enterprise presented in figure 1.

Fig. 1: Technique of carrying out restructuring



One of the distinguishing features of this method from the existing ones are:

- the proposed method can be applied by successful businesses, enterprises experiencing temporary difficulties as well as crisis enterprises;
- clear formation of feasibility of the enterprise restructuring;
- orientation of a business entity on its own resources;
- the possibility of interim analysis, transition to the early stages of restructuring for their correction;
- possibility to avoid randomness in the process of adoption and implementation of restructuring decisions.

Let us consider the stages in the enterprise restructuring, Sinyagin (2008).

Stage 1. Formulation of the reasons for restructuring. Determination of the need for restructuring, substantiation of restructuring necessity, definition of its goals and objectives.

Determining the need for structural changes is based on continuous monitoring of the environment variables and forecasting their changes, as well as monitoring of internal factors in the development of an industrial enterprise.

This stage allows to assess operatively the status of the enterprise management system and outline the areas of improvement.

Stage 2. Identifying opportunities to conserve resources. Decision-making process on optimization is proposed for the following areas:

- conduct a comparative analysis of goods cost price between enterprises, determine reasons for difference in the cost price of similar products; compare procurement prices, identify optimal procurement policy;
- compare the levels of companies' capacity utilization; calculate the possibility of products transferring to the industrial enterprises with the lowest production cost, due to their additional loading;
- define a specific range of products which transmission is possible technically and economically feasible according to preliminary calculations;
- conduct refined calculations on this range taking into account the costs of production preparation and costs of goods transportation from the enterprise to the enterprise;
- determine the possibility of outdated production facilities withdrawal at the enterprise;
- assess the possibility of combining production units performing one activity in each unit;
- assess the possibility of the certain activities functions transferring from one performers to other with their higher utilization, i.e. the possibility of operations combining;
- check the appropriateness of this type of activity and the possibility of exemption;
- conformity assessment of regulatory documents (job descriptions, regulations, etc.) to modern requirements and the performed functions, comparison of job duties to identify duplication of functions;
- identify the possibility of unification and consolidation of units and introduction of the unified management.

According to the analysis, all potential internal resources of the enterprise are identified and assessed. Criteria changes of which could lead to reduction in the payback period and the restructuring cost-effectiveness increasing are determined.

These criteria include:

- unused or unloaded equipment;
- excessive maintenance costs of production, the economic effect is due to economy of materials and energy resources. Saving recognized effective if it is more than 80% of the costs;
- excess stocks of material assets;
- inefficient use of the industrial buildings areas and territories.

Stage 3. Development of proposals for the restructuring of the enterprise. Specific recommendations which will contribute to improve the efficiency of industrial enterprises are offered the possibility of its more effective operation is studied in details.

At this stage the optimization by types of activity takes place, organizational, production structures of the enterprise are changed, domestic resources aimed at their most efficient use are mobilized, management of financial flows is changed, redevelopment of the fixed assets placement is carried out, placing on the existing areas of other technological processes, improving the layout scheme of production facilities, changes in the functional duties are also carried out.

Stage 4. Determining of requirement for funds to implement the restructuring. Development of a system of measures by which the pending changes will be implemented, time-bound and secured by funding and other resources. Adoption of the all procedures perform timetable.

Stage 5. Determination of the restructuring effectiveness. The essence of the stage is that prior to the implementation of the restructuring is necessary to evaluate its effectiveness, to conclude the feasibility of the project and to make adjustments in the event of adverse analyses results or choose another method of implementation, or abandon it.

Stage 6. Implementation of the restructuring program. The result of the enterprise transformation is to develop a comprehensive restructuring program. The program should combine all the already received information. The program must be approved in due course. The final phases of the implementation are the processes of the industrial enterprise restructuring realization.

This technique has been tested on the metallurgical production of "GAZ". Analysis of indicators before and after the restructuring talks about the effectiveness of the implemented measures (Table 1).

Tab. 1: Performance analysis of metallurgical production of "GAZ"

Indicator	Normative value	Before restructuring	After restructuring
Current liquidity ratio	1,0 – 2,0	0,95	1,0
Equity ratio	$\geq 0,5$	0,65	0,52
Equipment load factor	0,85 – 0,95	0,72	0,86
Overage machine shift	2,5 – 2,7	2,0	2,5
Nomenclature performance rate	0,97	0,92	0,98
Utilization rate of industrial production area	0,7	0,6	0,68

It should be noted that the enterprise performance indicators after the restructuring answer to the specifications. It is possible to make a conclusion about the effectiveness of restructuring mechanism implementation according to the proposed method. Restructuring of production area, compression of production into fewer buildings contributes to the effectiveness of the enterprise by reducing energy consumption, transport, logistics and intrashop costs.

It also should be noted that after introduction of the developed method, increasing of production, the tonnage of suitable casting in steel production (Fig. 2, 3).

Fig. 2: Output per worker

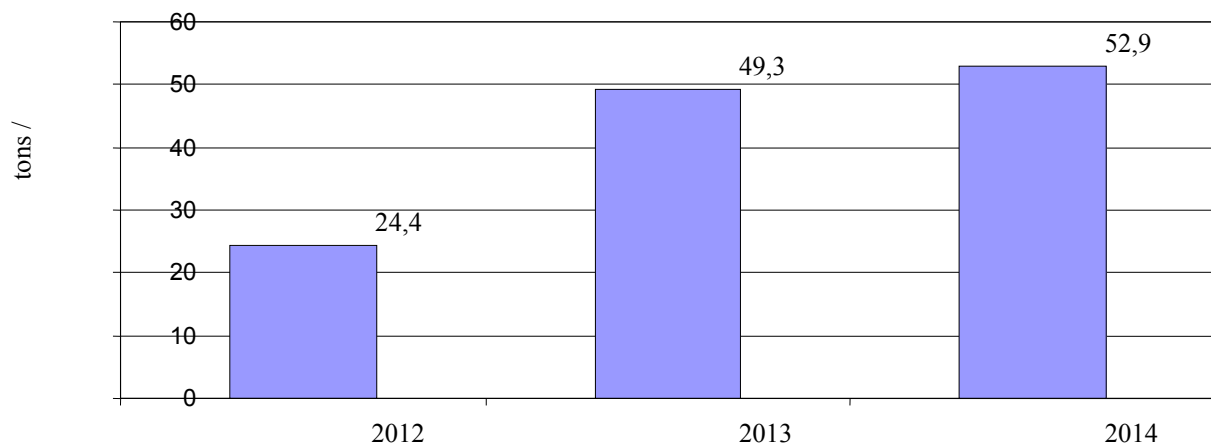
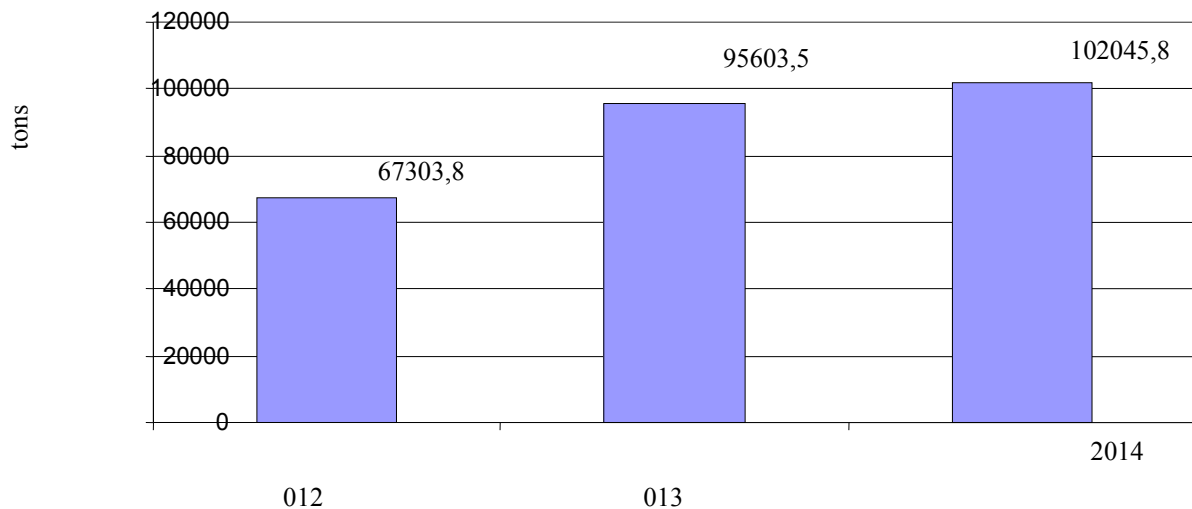


Fig. 3: Tonnage of suitable casting



Thus, the restructuring allowed to create an efficient operational structure for engineering enterprises adaptation to constantly changing market conditions; developing flexible production technologies for more rapid adaptation to changes in the market of goods and resources. Implementation of the proposed research activities allowed to reduce the cost of production, eliminate unused areas, rationally locate flows of production, implement efficient use of energy resources and involved equipment.

Conclusion

This study enabled us to formulate the following main conclusions and recommendations. Industry should be promptly adapt to market conditions, change its objectives, structure, strategy, organizational characteristics and functions to remain competitive. Restructuring as a management tool is one of the basic in solving these problems. It should be noted that the restructuring method draft may include all of the above work stages, and only some of them that are most relevant for a particular enterprise.

Thus, the described method of restructuring is available for use by owners, executives and managers of any enterprise, gives a clear interpretation of the restructuring of the enterprise in any of its financial and economic situation.

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INNOVATION ACTIVITIES OF SMES IN THE CZECH REPUBLIC: POLICY RECOMMENDATIONS BASED ON THE GLOBAL ENTREPRENEURSHIP MONITOR PROJECT

Martin Lukeš – Martina Jakl

Abstract

Innovation activities of new firms and SMEs are important for future growth and economic competitiveness. Therefore, they are subject to government support programs. The paper presents the results of a representative survey of innovative entrepreneurs that was conducted as part of the 2013 Global Entrepreneurship Monitor project in the Czech Republic. Ninety-one entrepreneurs were interviewed in regards to their innovation activities and requirements for innovation support. Based on these results, the authors derive specific recommendations for the modification of the current Operational Program Entrepreneurship and Innovation for Competitiveness (OPPIK).

Key words: innovation support, SMEs, entrepreneurs, government programs

JEL Code: O38, L26

1. Introduction

Innovation is required for economy competitiveness in the long term. Innovation is traditionally perceived as a new combination of a specific product on a specific market that replaces old products and helps market to develop. More up-to-date typologies of innovations distinguish product, service, process and business model innovations (e.g., Moore, 2004). Start-ups and SMEs are more flexible and innovate in order to find their place on the market and are thus a subject of policy support. In the Czech Republic, there is a scarcity of information on innovative activities of early-stage entrepreneurs and SMEs and their support. Some exceptions involve “Ukazatele výzkumu a vývoje [Indicators of research and development]” from Czech Statistical Office published annually and paper by Srholec and Žížalová (2014) arguing for well-informed regional policies supporting innovations.

Global Entrepreneurship Monitor is the largest project worldwide that focuses on entrepreneurial activity and its different facets (Singer, Amoros, Arreola, 2015). In each

country participating, it gathers data from questionnaire survey of representative samples of adult population and from interviews with entrepreneurship experts. This paper is based on two unpublished reports that are the outputs of GEM Czech Republic 2013 (Lukeš, Jakl, Zouhar, 2014; Lukeš, Jakl, Zouhar, 2015). The main goal of the paper is to present innovation related activities and needs of innovative SMEs and, based on these findings, to suggest modifications of national policies focused on supporting innovations in the economy.

2. Measures

GEM measures innovative orientation of entrepreneurially active individuals based on subjective answers of individuals who state that they are involved in entrepreneurial activity and that their products and/or service will be new and unknown for at least some customers and in the same time they perceive none or just a few firms offering the same product or service. Innovative orientation is thus understood in a relative way, but despite this, positive influence on subsequent economic development can be expected (Bosma, Wennekers, Amoros, 2012). To understand better to innovation activities of Czech entrepreneurs, we prepared a set of additional questions mapping innovation activities and needs of innovating entrepreneurs.

3. Sample

In 2013, the representative sample of 5.009 adults in productive age was interviewed in the Czech Republic (see Lukeš, Jakl, Zouhar, 2014 for details). Out of these individuals, 136 entrepreneurs reported that their firms operate on the market for at least three months and their products or services are new for at least some customers. Out of these entrepreneurs, who would be labeled as *entrepreneurs with innovative orientation* according to GEM methodology, 45 answered that their products or service innovated in the last 3 years create less than 5 % of their turnover and were thus excluded from subsequent evaluation. The group of remaining 91 entrepreneurs might be described as *innovating* entrepreneurs. We further asked them to describe their business and based on content analysis of their answers (following the procedures suggested by Mayring, 2000) we created second more reduced sample of *innovative* entrepreneurs. We excluded businesses such as accommodation services, cosmetics studios, trade companies, financial advisory and similar ones in which innovations may take place, but not in the sense of product, technological, ICT and similar innovations. The sample of 39 innovative companies included firms active in manufacturing, life science,

innovative services with high added value etc. In the subsequent text, results are presented for both these samples.

4. Results

Innovation activity

According to GEM methodology used worldwide, 27,5 % of individuals involved in new entrepreneurial activity reported innovative orientation in 2013 in the Czech Republic (Lukeš, Jakl, Zouhar, 2014). It means a 4 % decline when compared with 2011. Entrepreneurs running established companies reported this innovative orientation in 10,4 %. Moreover, 7,8 % of early-stage entrepreneurs were active in medium or high tech sector (2 % less than in 2011) and 10,9 % of them used the newest technologies (6,9 % less than in 2011). In between established companies, the ratio was similar on the level of 6,4 %. Finally, 10,9 % of established entrepreneurs were active in medium or high tech sector and 15 % of them used the newest technologies (1,2 % growth when compared with situation in 2011).

We asked reduced samples of innovating and innovative entrepreneurs (see the description of the samples above) how often impulses for innovation come from different types of sources. The most frequent answer was that these are the result of their own perception of environment (51 % of innovating and 63 % of innovative entrepreneurs answered often or very often) and the second most frequent answer was that impulses from customers (34 % and 42 % respectively). There was a gap between these two frequent impulses for innovation and the third and fourth places occupied by impulses from suppliers and employees. Impulses from business partners (fifth place) and universities and research institutions (last place) were much less frequent. Only 7 % of innovating and 8 % of innovative companies used this source often or very often.

Concerning the type of innovations, 74 %, resp. 77 % reported service innovation, 62 %, resp. 69 % process innovation and 59 %, resp. 62 % product innovation. Business model innovation was reported less frequently with 35 % of innovating and 23 % of innovative entrepreneurs. Further, 86 % of innovating and 95 % of innovative entrepreneurs answered that they consider design to be an important aspect for their business success. Most of them (69 a 77 %) used design as a part of innovation process.

Need for innovation support

All entrepreneurs in the sample were asked on perceived barriers in their entrepreneurial activity. Below, we present results for firms with innovative orientations. Start-ups (N=101)

reported insufficient funding (19,0 %), bureaucracy and legislative problems (14,8 %), low number of orders (11,1 %) and not enough time (10,2 %) as the most significant barriers. Results differed for established entrepreneurs (N=27). For them, bureaucracy and legislative problems were by far the most significant (32,3 %), followed by not enough orders (17,4 %) and various personal issues (12,2 %).

Reduced sample of innovative entrepreneurs was further asked what forms of support for innovation activities development they would use in the future. The most, 65 % (or 59 % for narrower sample of innovative entrepreneurs) answered that they would use trainings and seminars. This type of support was followed by subvention for innovation implementation (54 % in both samples), individual advisory (53 %, resp. 50 %), state guarantee for easier access to loans (44 %, resp. 48 %) and subsidized loan for innovation implementation (42 % in both samples). Subsidies for cooperation with research institutions (31 %, resp. 23 %) and interest in investment of state in equity were less frequent (24 %, resp. 23 %). However, when we extrapolate this percentage to the overall population in the country, the interest is not negligible (for more detailed information see Lukeš, Jakl, Zouhar, 2014). Finally, 48 % of innovating and 49 % of innovative entrepreneurs would be interested in professional advisory and information related to design, 41 % (resp. 33 %) would like to get subsidies used for design and 40 % (resp. 34 %) would be interested in support of cooperation with designers.

5. Policy recommendations

International experience (e.g. CTI Startup, www.cti.admin.ch) suggests that technology driven startups face specific challenges for growth. Support activities may involve advisory for submitting a patent or financial support for patenting, advisory in the area of human resources or internationalization, e.g. advisory related to export territories and specific support. Above mentioned Swiss program is very successful – survival rate and venture capital financing for companies that went through the program exceeds 90 % (Lukeš, Zouhar, Jakl, 2015).

Priority axis 1 of OPPIK (Operational program Entrepreneurship and Innovation for Competitiveness) is focused on research and development for innovation and supports innovative activities of firms, cooperation networks including clusters and technological platforms and different activities leading to commercialization of research. Individual programs are focused on support of commercial firms, especially SMEs, with the exception of currently discussed Proof of Concept (PoC) and Pre-commercial Public Procurement (PCP). There is a tendency to involve research institutes in utilizing new financial tools.

Program Innovation incorporates activities related to implementation of innovation projects including buying intellectual property or new methods focused on launching innovations. Innovative orientation can be acknowledged in calls in which young firms can be a specific target. There is a positive Swiss experience of independent programs focused on supporting innovation abilities of young firms. In these projects that are analogous to programs such as innovation vouchers or TAČR Beta existing in the Czech Republic, start-ups do not need to provide financial co-financing but they are expected to invest mandays of their staff. It enables them to be more competitive to established companies. There is also the need to take into account innovative firms operating in technologically demanding industry, however not in manufacturing, e.g. internet based businesses.

Our research results show that innovative companies are interested in trainings and workshops focused on innovation activities. Swiss experience shows that trainings, coaching and mentoring support motivation of new suitable applicants for innovation support programs, because these can then better define and plan innovation activities – a necessary condition for the application. Examples can be taken from Austria or Switzerland where innovation mentors are active on the market (see e.g. www.innovationsassistent.at).

Main focus of **program Potential** is foundation and development of centers of industrial research. Innovative entrepreneurs were asked in the frame of GEM survey about innovation types, many of them indicating non-product innovations. Therefore, such a new program should take into account also process and service innovations and acknowledge them in the process of applications and their evaluation.

In the frame of **program Application** there is a suggestion to provide possibly a bonus to such consortium in which young innovative firms are members. **Program Knowledge transfer partnership** is identified by GEM results as important area of future support (cf. www.ktponline.org.uk). It can be expected, based on answers of innovative firms, that the firms which do not cooperate with research institutions, will just unlikely start such cooperation by themselves. Such program can motivate actors on both sides to cooperate.

Program Innovation vouchers targets two groups of beneficiaries – SMEs and institutions providing innovation infrastructure. Based on GEM, we can recommend to involve workshops and advisory services focused on innovation process management.

Finally, **program Infrastructure services** offers services of science parks, innovation centers and business incubators. Large part is devoted to services for innovative companies. GEM results raise the question whether established firms are the only acceptable clients.

Different industries as well as entrepreneurial activities in different stage have different needs. Science parks serve effectively established firms, but nascent growth oriented entrepreneurs have other primary needs – testing and adaptation of business models, financial planning or customer acquisition. These services can be provided by business incubators and program Infrastructure services might be enhanced in this direction.

Conclusion

The questions mapping innovation activity and needs of relatively small, but representative sample of Czech innovating entrepreneurs helped to shed light on support they would need from state programs focused on supporting innovation. In this paper, we made specific recommendations how to enhance current version of OPPIK and what needs of entrepreneurs might be taken into account in future calls prepared in the frame of OPPIK.

Acknowledgment

This paper is based on two unpublished research reports prepared in the frame of project “Research of current entrepreneurial activities in the Czech Republic, capturing their changes in the recent years and international comparison using GEM method“ (TB930MPO001). Preparation of this paper was supported by Internal Grant Agency of VSE, project IP300040.

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THE RESEARCH POTENTIAL OF INNOVATIVE DEVELOPMENT OF THE TYUMEN REGION---CURRENT TRENDS' ANALYSIS

Makhmudova Muhabbat – Evremova Veronika – Koroleva Anna

Abstract

The key factor of economic growth and competitiveness that strengthens the economic system is the research and development that permits to create new technologies in the field of production and product sales, innovative goods and services. In conditions at implementation of the innovative scenario of national economic development, the discovery of innovative and research capacity of certain regions, stimulation of innovative activity of business activity subjects become actual. The research objective is to determine a growth resource of formation and development efficiency in the innovative sector potential in the Tyumen region. In this article the role of innovative business in the economy as well as the specific character of the innovative enterprises' management is considered. The authors describe the development indicator dynamics of the research organizations.

Keywords: innovative potential, research organizations, regional innovative system

Jel-code: O 320, R 580, D210

1. Innovative potential : the nature and assessment

The key factor of the economic growth and strengthening of the economic system competitiveness is the scientific researches and development allowing creating new technologies in the field of production and product sales, innovative goods and services. A discovery of the innovative and research potential of various regions and the innovative activity stimulation of economic subjects become actual in modern conditions at the innovative scenario implementation of the national economy development.

In modern literature the concept "research potential" is often identified with such categories as "innovative potential", "scientific and technical potential", etc. First of all, in our opinion, it is connected with the distinction of approaches to interpretation of "innovations". So, on the one hand, innovations are considered as a process (P. Druker (Drucker, P., 1970),

Y. Shumpeter (Schumpeter, J., 1911.), K. Yu. Voloshenko (Voloshenko, K. Yu., 2012) etc.), with another, - as a result (F. Geels (Geels, F., 2005), N. A. Belova (Belova, N. A., 2015), E. V. Petrukhina, L. I. Gubareva (Petrukhina, E. V., Gubareva, L. I., 2013). etc.).

As a rule, at the characteristic of innovative potential the resource component and also the possibility of development commercialization for the purpose of the subsequent reproduction of the research base and innovative products are considered (Voloshenko, K. Yu., 2012). The realization of innovative potential is focused on the transformation, updating and development of the innovative sphere while the discovery of scientific and technical potential is connected with the sphere of the scientific and technical progress affecting socio-economic indexes of society activity (Razuvayev, V. V., 2012)

The research potential represents the system of educational and research establishments with a certain level of research and development functioning, personnel structure of these establishments, the number of educational institutions' students, the number of inhabitants improving skills, defending thesis of various level, and also new knowledge created by them, technologies and other results of the research work (Belova, N. A., 2015).

There are various approaches to an assessment of the innovative and research potential. Among the most significant techniques of research the following methods should be noted:

- the techniques used by the World bank, the World Economic Forum (WEF), National scientific fund of the USA, the Organization for Economic Cooperation and Development (OECD), the Commission of the European Communities (CEC), the Maastricht institute of economic researches in the field of innovations and technologies, Institute of economy of the Russian Academy of Sciences, the Center of strategic development "Northwest", Expert RA rating agency;

- the techniques presented by foreign authors: H. Bryuynier (Bruijn, (H., Voort, H., Dicke, W., 2004), F. Geels (Geels, F., 2005), B. Lundvall (Lundvall, B., 2010), K. Nauvelayers (Nauwelaers, C., Wintjes, R., 2008), R. Nelson (Nelson, R., 1993), M. Fischer (Fischer, M., Fröhlich, J., 2001), K. Freeman (Freeman, C., 1995), etc.;

- the techniques developed by domestic authors: Avdulov, A. N. (Avdulov, A. N., Kulkin A.M., 2015), Belova, N. A. (Belova, N. A., 2015), Gubareva, L. I. (Petrukhina, E. V., Gubareva, L. I., 2013), Kulkin A.M. (Avdulov, A. N., Kulkin A.M., 2015), Petrukhina, E. V. (Petrukhina, E. V., Gubareva, L. I., 2013), etc.

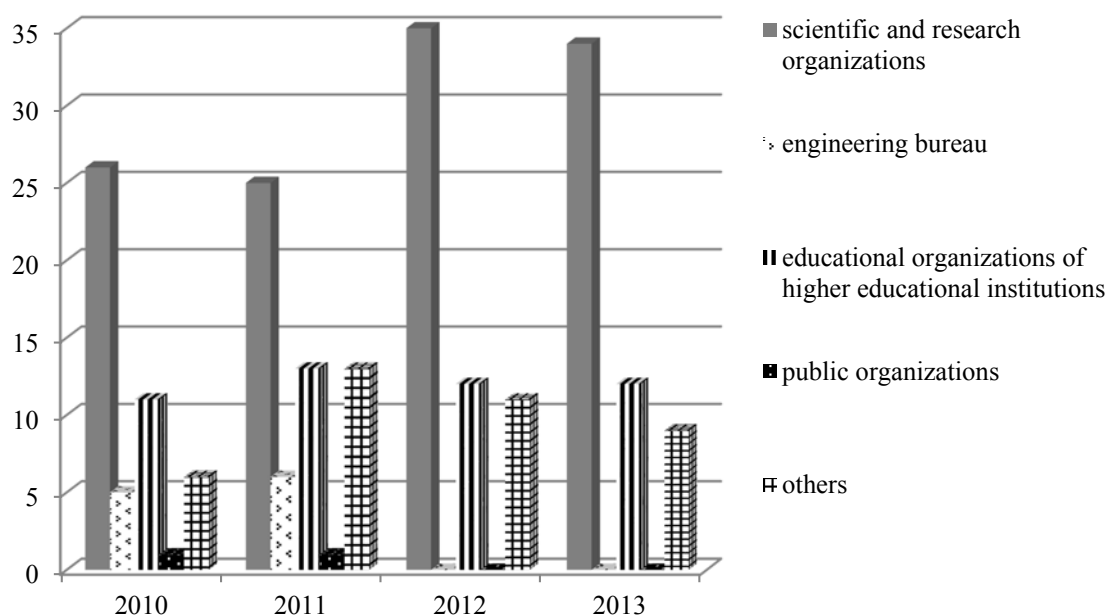
2. The scientific potential of the Tyumen region

2.1. The research complex of the Tyumen region

At an assessment of research potential of the region such indicators as the amount of financing of a scientific complex, a level of material base development of science, personnel structure, a condition of regional innovative system are included into an information and statistical database of an assessment.

The research complex of the Tyumen region is presented by a network of the state scientific organizations of the Russian Academies of Sciences: Russian Academy of Sciences, Russian academy of natural sciences, Russian academy of agricultural sciences, Russian academy of medical sciences, Russian Academy of Education and their offices, branch scientific organizations of various ownership forms, scientific and innovative divisions of higher education institutions. Today in the Tyumen region there are more than 55 organizations carrying out scientific researches and development works (fig. 1) (Regions of Russia, 2015). The majority of organizations in a research complex of the region is research organizations (more than 60% are in the structure of organizations carrying out scientific researches and development). Higher educational institutions (22%) which structural divisions engaged in the scientific development and researches of applied character are also active subjects in the scientific sphere.

Fig. 1. The dynamics of the organizations' number carrying out scientific researches and development in the Tyumen region, units.



And 55% of the region organizations of research complex are functioning in the public sector of the economy. In a business sector of the regional economy 11 scientific organizations or 20% of their total number carry out their activity. Besides, scientific development and researches are carried out in noncommercial branches of the region (4% of the scientific organizations).

The dominating form of the scientific organizations' ownership is state (77% of total number of the organizations carrying out scientific researches and development), among them 56, 4% are of federal property and about 2% are in the department of municipalities. Eight scientific organizations functioning in the territory of the Tyumen region belong to the private sector. There is also the mixed form of ownership in the science (about 8%). The scientific sphere of area is not attractive to foreign investors yet, and there are no organizations with the participation of the foreign capital and joint companies.

2.2. The intellectual component of scientific potential of the region

The most important indicator of the research potential of the region is its intellectual component, formed by the number and qualitative characteristics of personnel structure of the scientific sphere. Dynamics of the personnel number occupied with scientific researches and development in the Tyumen region is recently described by a favorable tendency of growth. So, in 2013 in the scientific sphere 7009 people worked that is 1, 3% more than in previous 2013 and it is 4% more than a level of 2011. The main founders of an intellectual product - researchers – occupy about 70% in the general personnel structure of a research region complex. And, during the analyzed period their number increased annually and in 2013 the number of scientists grew by 8, 4% concerning the level of 2010.

The technicians of science carry out special function in the scientific sphere, materializing, mastering and introducing scientific development, embodying and realizing applied researches. This category of workers occupies 12% in the total number of the scientific personnel and their number today (840 people) exceeds the level of 2010 for 13, 4%.

Staff workers which duties are maintenance and ensuring uninterrupted carrying out researches and development (installation, adjustment, service and repair of the scientific equipment and devices; experienced workers (experimental) productions; the laboratory assistants who do not have the higher and secondary professional education and so forth) are a part of the research personnel as well. Their share in the general structure of the scientific

personnel in the Tyumen region makes a little more than 9%. And, for the analyzed period their number was reduced in 2013 by 22, 2% concerning the level of 2010. However, today in the scientific environment due to the development of skilled and experimental base the number of scientific support personnel increased in comparison with the previous 2012 year for 9,5% (Regions of Russia, 2015).

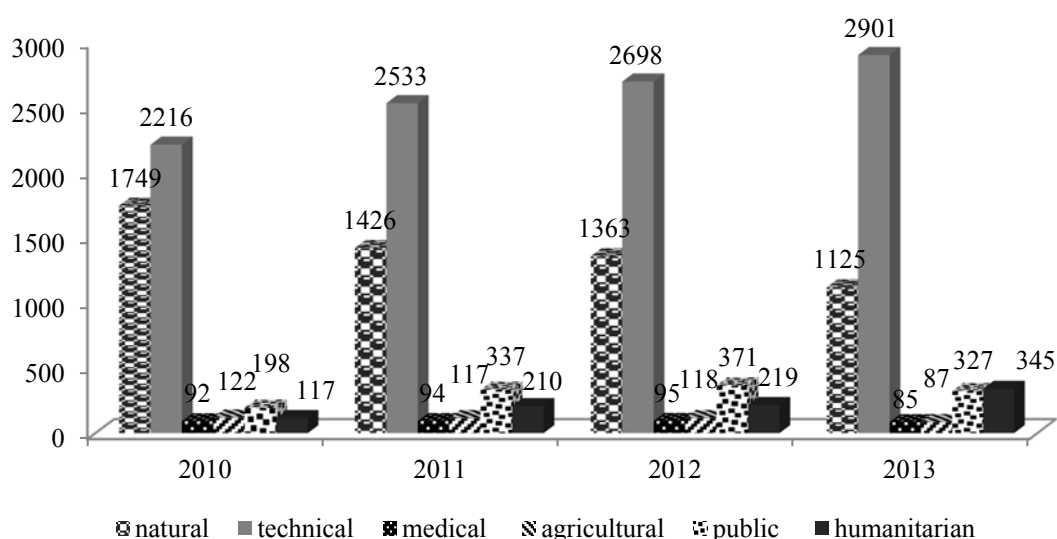
At the same time the number of economic services' employees, offices, and logistics of the scientific sphere was significantly reduced today. So, in 2013 the other personnel of scientific organizations makes only 60% of number of this category workers in 2010.

The prevailing part of the research personnel is occupied in a business sector of regional economy in the Tyumen region (more than 58% of the total number of scientific personnel). Considering that in the territory of the region 11 scientific organizations function and 4088 people are occupied there it is possible to draw a conclusion about the high degree of intellectual potential concentration in a private business sector of the regional economy.

The essential share of scientists is concentrated in the state scientific organizations (about 25% are in the general structure of the scientific personnel). Scientists of the higher educational institutions engaged in the scientific development and innovations make about 17% of intellectual potential of the region.

The scientists' distribution according to fields of science is characterized by their accurate differentiation between technical science, where the concentration is 60% of the region researchers and the humanitarian direction and there is only 7% of intellectual potential of the region research (fig. 2). Moreover the dynamics of researchers' number in the field of technical science is described by a steady tendency of growth. So, in 2013 in this direction 7, 5% of scientists were engaged in researches and development that is more than in previous 2012 and 31% more concerning the level of 2010. Though in the sphere of the humanities a gain of researchers' number is more considerable: in 2013 their quantity increased by 57, 5% in comparison with 2012 and almost grew relatively 2010 for three times.

Fig. 2. The distribution of researchers' number according to the science fields, persons.



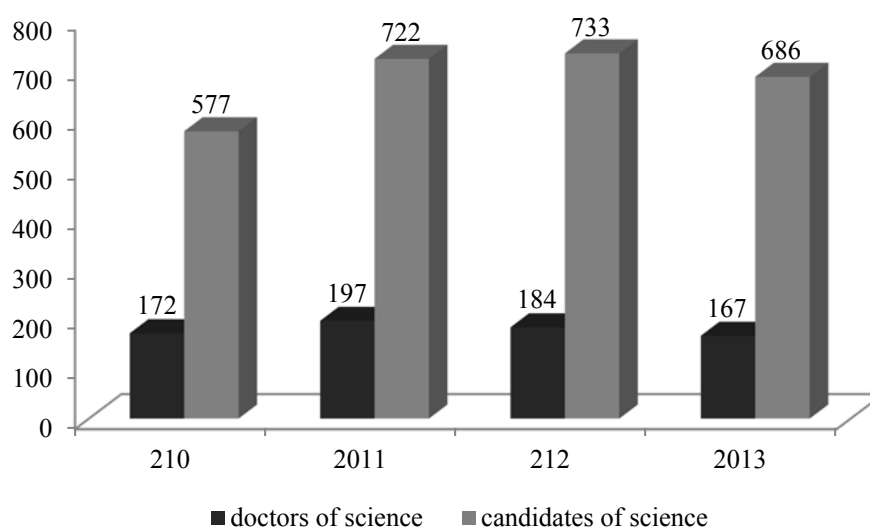
In other areas of scientific knowledge of the researchers' number dynamics is not such unambiguously favorable. So, rather steady stability in the sphere of medical sciences in 2013 was broken: the number of scientists engaged in researches and development in branch was reduced by 10% than in previous 2012. The number of researchers in the field of social sciences was reduced in 2013 as well (by 12% in comparison with 2012). Significantly the situation with the intellectual potential in the sphere of agricultural sciences where the number of scientists decreased in 2013 by 26% relatively to 2012 and for 29% in comparison with 2010 became worse. Also there is the catastrophic reduction of researchers' number in the field of natural sciences, where with the concentration more than 33% of intellectual potential in the region is remarkable. For the analyzed period the number of scientists in this branch was reduced in 2013 by 36% in comparison with 2010 and made only 83% of the 2012 level (Regions of Russia, 2015).

The scale and quality of scientific researches and development depend on a condition of intellectual and personnel potential of the region and efficiency of their work that as a result affects the innovative potential of the region (Petrukhina, E. V., Gubareva, L. I., 2013).

As for qualitative characteristics of the research potential in the Tyumen region, the analysis of statistical information allows to draw a conclusion about low achievements in the level of its development. So, only 3,4% of researchers have an academic degree of the doctor of science and 14% - the candidate of science (fig. 3). And the dynamics of "scientific" staff

potential number of a research complex of the region is characterized by its further deterioration.

Fig. 3. The dynamics of the researchers' number in the Tyumen region having academic degrees, persons.



The number of doctors of science engaged in scientific researches and development in areas of technical, medical, natural, agricultural knowledge is reduced. The more favorable situation is in public and the humanities' spheres where the number of doctors of science increased, but their share in the general personnel structure of scientists remains insignificant.

The greatest number of candidates of science are engaged in scientific researches and development in areas of technical and natural knowledge (on 3, 6% of the total number of researchers having an academic degree of the candidate of science). More and more researchers of the humanitarian direction having an academic degree of candidates of science are engaged in scientific researches (in 2013 their number increased by 40% in comparison with the number in 2012 and by 2, 5 times concerning the level of 2010).

In general, it is possible to draw a conclusion about a satisfactory condition of intellectual potential of a research complex in the region.

2.3. Research funding and their effectiveness in the Tyumen region

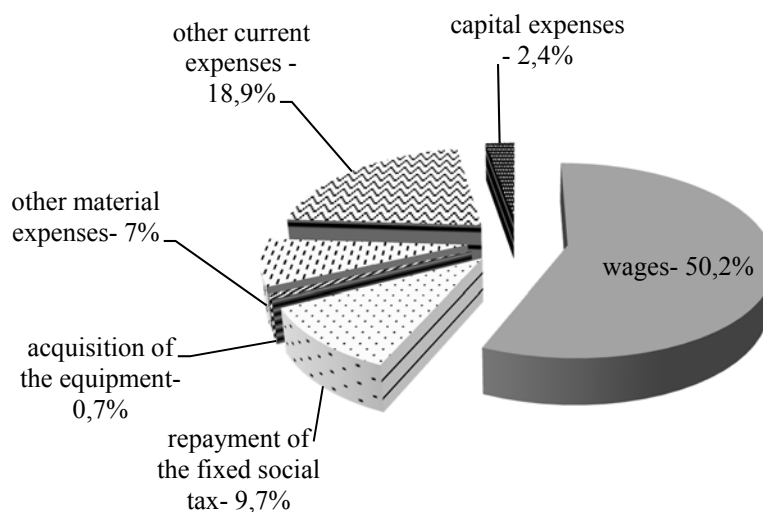
The level and quality of research potential development in many respects depend on the amounts of scientific researches and development financing. Today in the Tyumen region the

scientific organizations spend to 10325, 3 million rubles for researches and development. Thus the big share in the structure of expenses belongs to internal sources of financing. The dynamics of scientific researches costs and development is recently described by a tendency of their insignificant, but steady growth. So, in 2013 scientific organizations spent for the development 109, 6 million rubles, it is more than in previous 2012 and 11% more concerning expenses of 2010 (Regions of Russia, 2012).

In the structure of scientific organizations expenses the internal current costs connected with the payment of a salary, acquisition and service of the equipment purchase of special mechanisms and tools, capital expenditure prevail (89% in the general structure of expenses). The external expenses connected with the attraction to carrying out scientific researches and development of outside organizations make 11% in the total value of scientific organizations' expenses.

The essential share in the sum of current organizations' expenses is occupied by expenses on a salary (50, 2%) (Fig. 4), and their share and size increase annually. So, in 2013 the organizations paid under this article the sum of 5186, 6 million rubles that for 8, 5% exceeds the level of the previous 2012 year, and it is 36% more than a level of 2010. This situation is caused by the annual indexation of the of scientists' income on an inflation rate. Also the organizations' expenses connected with the purchase of accessories, fuel, energy, materials which share in the total value of expenses makes about 7% of grow. In 2013 it cost to scientific organizations 723 million that is 23% more than a level of 2012.

Fig. 4. The structure of internal current expenses of scientific organizations for carrying out researches and scientific development, %

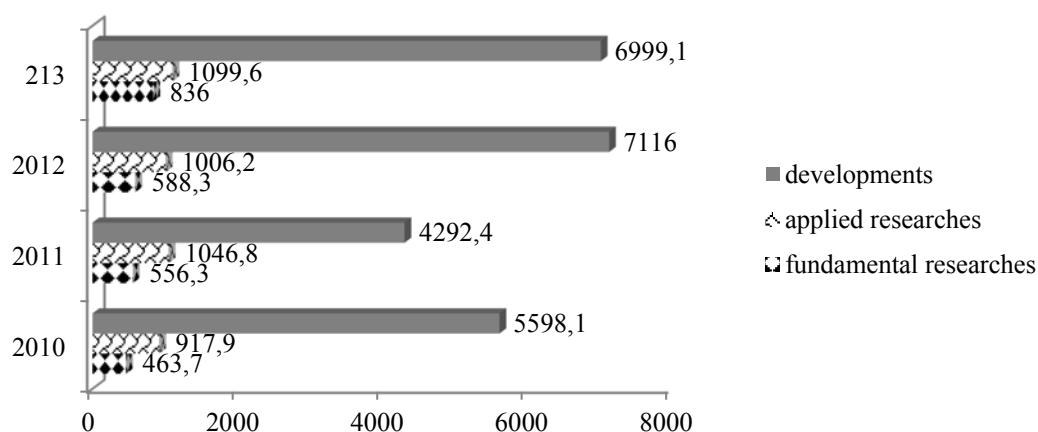


According to other articles the decrease of organizations' expenses for carrying out researches and scientific development is observed. So, in 2013 expenses for the acquisition of the special equipment reduced to 69 million rubles that made only 50% of level of 2012, having reduced by that their share in the total value of expenses. In comparison with the beginning of the analyzed period these expenses decreased by 64%. Also other current expenses connected with performance of researches and developments were reduced. An essential reduction of capital expenditure of organizations was in 2013 relatively 2010 for 61% that allows to assume about insufficient funding and, as a result, the development level discrepancy of material base of the scientific sphere in the Tyumen region to modern requirements is remarkable.

In general, across the Tyumen region the main financing of the scientific sphere enterprise region sector carries out which share is 72% of the sum of money allocated for carrying out scientific researches and development. But also the state scientific organizations spend about 2136, 2 million rubles that makes 23% in the general structure of scientific complex expenses in the region.

And, scientific developments are the most expensive for the scientific organizations. In 2013 about 7000 million rubles were spent in the region that makes about 78% of the total amount of scientific activity financing (fig. 5). And for the analyzed period the size of expenses connected with carrying out scientific development increased in 2013 for 25% concerning the level of 2010.

Fig. 5. The dynamics of the scientific organizations' expenses for scientific researches and development by types of works, million rubles.



Today more and more means the scientific organizations are invested for basic researches' financing. And expenses' growth rates by this type of works considerably exceed a gain both other works and the total value of science funding in the region. So, in 2013 the size of expenses by this type of works made 836 million rubles that for 42% exceeds the sum of expenses of 2012 and 80% more than a level of 2010. Thus, it is possible to assume about strengthening of attention in a research complex of the Tyumen region to basic researches, being the primary direction of innovative development as they possess a key role in the discovery of new technologies, ideas. However, the share in the total amount of the scientific organizations' expenses in the region falls to the share of basic researches no more than 10% (Regions of Russia, 2012).

The steady tendency of growth describes the size of the scientific organizations' expenses connected with carrying out of applied researches. Their specific weight in a total amount of scientific researches and development financing makes a little more than 12% that reached 1099, 6million rubles in 2013. Researches of applied character are directed on the solution of specific technical and technological objectives, social and economic problems and therefore their demand was reflected in dynamics of their size in the analyzed period. For the solution of practical tasks the scientific organizations of the Tyumen region in 2013 spent more funds for 10%, than in previous 2012 and it is 20% more than a level of 2010.

Invested means in scientific researches and development are transformed to the advanced production technologies, which quantity and quality reflect productivity of research potential in the region.

For the analyzed period in the Tyumen region the scientific organizations developed and created 45 advanced production technologies. In 2013 only 17 technologies are developed, among them 13 technologies are new for Russia and 4 of them are essentially new technologies. The greatest share of innovative development is concentrated in the sphere of design and construction engineering (engineering) – 71% of total of new development. Besides, scientists of the Tyumen region regularly develop new technologies in the field of the automated supervision, communications and management, production information systems, the integrated management and control.

Conclusion

Thus, it is possible to draw a conclusion that current trends reflect stirring up of the scientific organizations' activity which is engaged in researches and development in various scientific

spheres in development of research potential of the Tyumen region. In the region the intellectual potential is increased, the range of researches, both the fundamental directions, and applied character extends. In general, development scales and efficiency of a research complex in the region is equitable to interests of the regional economy.

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RELATIONSHIP BETWEEN CORPORATE SIZE AND SUCCESS INNOVATION PROJECTS IN CZECH REPUBLIC

František Milichovský – Veronika Bumberová

Abstract

This article represents a study examining the structure and properties of enterprises with the focus to the success of innovation-projects in the Czech Republic. The reason is that not all innovation efforts are successful in terms of percentage share successfully realized innovations. For many small businesses, unlike large firms, has the character of innovation rather arbitrary and ad hoc process that is not formalized or project driven and therefore they are not predominantly successful. However, the ability to innovate is increasingly viewed as the most important factor in developing and sustaining competitive advantage. With a focus on innovative projects at the micro level of companies, this paper is based on primary research questionnaire survey with a random selection of 527 and total return of 157 respondents. The major analytic procedure comprises methods of correspondence analysis and validation technique based on chi-square nonparametric tests and for transparent representation of the structure of dependence and interpretation is used symmetric correspondence map. This research study contains the results in terms of the share successfully innovation projects companies due to the size and other factors that affect them.

Key words: innovation, success, corporate size, correspondence analysis

JEL Code: M15, M21

Introduction

The ability of firms to adapt in their external environment and to remain competitive is closely related to their capacity to innovate and continuously upgrade and renew their knowledge bases, products and structures (Varis, Littunen, 2010). The innovation efforts of companies are viewed as the most important factor in developing and sustaining competitive advantage (Tidd et al, 2011).

In general, empirical research suggests that innovation is positively related to firm performance, although in some studies direct effects have not been found (Mavondo et al.,

2005; Lin, Chen, 2007). From an organizational perspective, real innovation success resides in the marketplace. However, for a better understanding of factors affected successful realization of innovation projects in Czech companies it is essential to include the firm specific characteristics as well as the factors that influence this management process.

1 Theoretical background

A review of the relevant literature reveals that micro level of firms (organizational) innovation studies can be grouped into four research streams (Lin, Chen, 2007; Soderquist et al., 1997): 1) innovation typology and its comparison, 2) determinants or critical success factors of innovation, 3) developing conceptual and specific models and methodology of innovations and technology, 4) consequence, result approach or assesses of successful implementation of technology and innovation practices.

This research are based on a mixture of second and fourth stream stated above. The rationale is that organizational performance tends to be the ultimate goal of implementing innovation (Lin, Chen, 2007) that are concerned with the accrual of financial and non-financial benefits to the enterprise such as steady state support, promotion and distribution, market feedback (Dewangan and Godse, 2014).

1.2 Does the size matter for innovation?

Innovation pressures apply to large companies as well as SMEs (Lin, Chen, 2007). Recent researches show that the external environment, and structural factors as well as firm-specific characteristic affect innovation in enterprises (Laforet, 2010). Much debate has been given to assess those variables that are thought to differentiate innovation in organizations (see Rothwell, 1985, 1989; Rothwell and Dodgson, 1991; Nooteboom, 1994). For example, large and small firms are often depicted as diametrically opposed with large firms showing innovative advantage in terms of material or resource factors while small firms are attributed with behavioural advantages (Rothwell, 1985). Although this perspective has been well rehearsed we would concur with Vossen (1998) that „small and large firms are likely to play complementary roles in the process of technical advance, in the sense that they are better at different types of innovation“.

According to Edwards et al., (2005) the role of SMEs cannot be appreciated outside of the contextual characteristics of the innovation process, including the technology and industry and the marketplace. Assuming that SMEs benefit from behavioural factors such as flexibility

and speed of response has limited explanatory value unless we understand how such factors come into play (or not) within a specific context over time.

There is consensus that if innovation going to be successful, it must be a systematic activity and not random and all operations performed in the innovation process applied (Tidd et al. 2007). However, in many SMEs innovation has character rather random process that occurs frequently under the influence of temporal and factual circumstances in the form of ad hoc process output. Also common metrics used in research studies mainly focused on large companies, measuring the level of innovation or innovation level (expenditure on R&D, the number of patents, etc.) are inapplicable.

1.3 Success of innovation project

Project management is a well-regulated field with established standards and effective practices; so innovation is certainly not the first concept that springs to mind when mentioning project management (Ivan, Despa, 2014). Its because the project is unique and unrepeatable process that is inherently difficult and complex, encompassing elements of uncertainty and risk (Dvořák, 2006). Innovative project can be described as the project aimed at increasing the technical and utility value of products and services or increasing the efficiency of production processes and services or to update managerial methods, significant changes of organizational structure or changes in strategic goals of an enterprise or other technical innovations, thus strengthening the ability of long-term competitiveness of enterprises and their sustainable growth (OPPI, 2005).

Many researchers point out that is necessary to examine the factors influencing innovation success from process point of view (Edwards et al., 2005). It is because innovation is not just a realization of an idea, but they are all activities that must be done from this idea to the application of innovation into the target market or groups. Invention implies conceiving and developing the idea into a work able application, whereas exploitation entails the process of commercialization and reaching the benefits (Dewangan and Godse, 2014). The life cycle of the project and lifecycle management innovation must be consistent with each other and carried out at the same time. In practice, this means that the innovative project is implemented in two parallel levels (see Dvořák et al., 2006).

There are of course many studies that give an overview on success factors in both project (e.g. Dvořák et al. 2006, based on the conclusions of the research report of Standish Group "Chaos Report 1995") and innovation management (e.g. Tidd et al. 2007). They argue

that successful innovation, for example, strongly correlates with how the company selects and manages projects to coordinate inputs from its various functional sections as connecting with customers. Research suggests that successful innovation management is associated with the ability to create an integrated set of routines, which is then the basis for competitive advantage taxation of business.

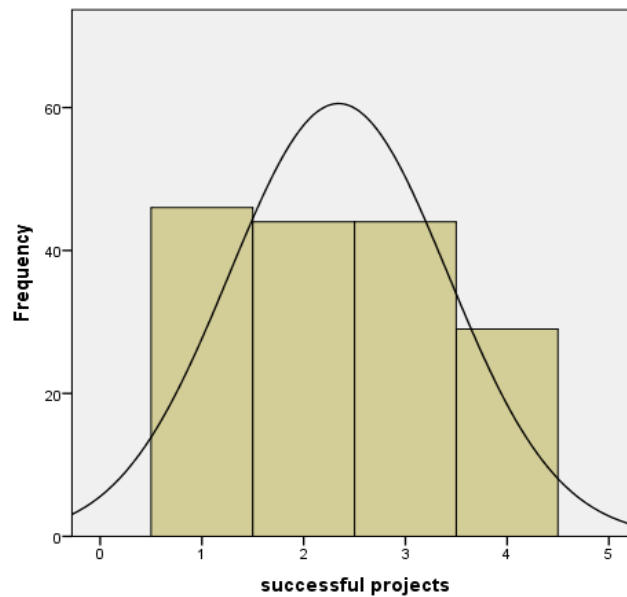
But the reality is somewhat more complicated. As Kirschner et al., (2004) pointed out, project success is not innovation success. There are two types of success, namely the success of the innovation project itself and the success of the innovation (its ultimate implementation). These two successes are completely different and neither is a requirement or guarantee for the other. Also, success of an innovation at the project level does not automatically generalize to success at the institutional level. Therefore, this paper reflects the factors affected of success implemented innovative projects of Czech companies from these two points of view.

2 Methodology

Entire primary research focused on the evaluation of enterprises in the area of business and innovation activities in the Czech Republic. It was prepared as pilot research. The primary research was designed by a questionnaire survey, which included both open and close questions. Questionnaire was compiled on the basis of achieved theoretical knowledge, defined areas of solved problem and specific objectives in innovation projects.

For purpose of the research quality there was proved Gaussian distribution of successful projects, if exist any extremes. According to Figure 1, no extremes were found and therefore all data are acceptable.

Fig. 1: Gaussian distribution of successful projects



Source: own work

For the purpose of this article only one part, which was targeted on success projects in company, was chosen. Presented paper is based on primary research by questionnaire survey, conducted in 2014 in the Czech companies. 527 companies were randomly selected to participate in this survey. Totally 157 questionnaires were returned (relative amount 29.79%).

Corporate size is defined according to European Commission regulation (see Evropské společenství, 2006).

To process the results of the questionnaire survey there were used both of descriptive statistics and correspond analysis. The data were processed by using the statistical program IBM SPSS Statistics 22. The conclusions provide characteristics of the limitations of our research and its potential further direction. For purpose of the article by correspond analysis method the data were processed. In the fact this method focuses on the multidimensional observations.

Correspond analysis describes relation between both two nominal variables in pivot table and individual categories. In pivot table there is category combination which should become significant or not. If any categories are similar or associated, there are located in graph near themselves. Correspond analysis itself is focused on association rate, usually by chi-square measure. There are nominal variables as input into correspond analysis, and kind of premise, that there is no ordering between variables (McGarigal, Cushman, Stratfgord, 2000; Beh, 2010; 2008).

Correspond analysis processes dimensional homogenous data which consist only positive values or zeros. Chi-square range has become coefficient which excludes zeros, and help to define relations between rows and columns.

Calculation of correspondence analysis includes three steps (Řezanková, 2010): (1) pivot table transformation into table with support of Pearson chi-square; (2) individual value decompositions are applied into defined table, then there are calculated new values and new vectors; (3) new matrix operations serve as input to graph design.

Basis for two dimensional pivot tables is data matrix $n \times 2$, in which categorical variable A get r values (a_1, a_2, \dots, a_r) and categorical variable B get s values (b_1, b_2, \dots, b_s). Due realised observation there is created table by two dimensional separations of both variables. In the table is used n_{ij} frequency, which represents intersect of both variables This n_{ij} provides number of observations, where are both a_i and b_j . Except n_{ij} there are used marginal frequency n_{i+} , where row observation with a_i value are observed (similar approach is for n_{j+} in column).

3 Results

In own questionnaire survey there were questions on which individual respondents in companies had to answer from point of project and innovation view. Main aim was to find knowledge about the success of innovation—projects the Czech Republic in terms of percentage share successfully implemented and realized innovations. Representativeness of the used population wasn't important because the survey was designed as pilot research. In terms of company profiles, the proportion in percentage of the total number of respondents ($n = 157$) is formed by micro (22%), small (36%), medium (27%) and large (15%) enterprises.

At first step there was analysed frequencies of individual corporate size group in connection with successful projects' level proved by Gaussian distribution (see Table 1). Even though the results of the research show that large enterprises are the closest of all respondents in achieving 100% share of successfully innovatory projects, their share is higher in 25% success of innovation projects. In contrast, the best results in the 75% share of successfully implemented innovative projects recognized medium-sized category (36%) and then micro (47%) of companies with 50% success rate.

Tab. 1: Pivot table of Successful projects and corporate size

	Micro enterprises		Small enterprises		Medium enterprises		Large enterprises		Total
do 25%	4	11,76%	23	40,35%	10	23,81%	8	33,34%	45
do 50%	16	47,06%	10	17,55%	10	23,81%	5	20,83%	41
do 75%	10	29,42%	12	21,05%	15	35,71%	5	20,83%	42
do 100%	4	11,76%	12	21,05%	7	16,67%	6	25,00%	29
Total	34	100%	57	100%	42	100%	24	100%	157

Source: own work

Evaluation of correspondence analysis is reached by Chi-square test, which has significance at acceptable level (sig.=0,032). Therefore, results of correspondence analysis are significant for its application on observed raw data (see Table 2).

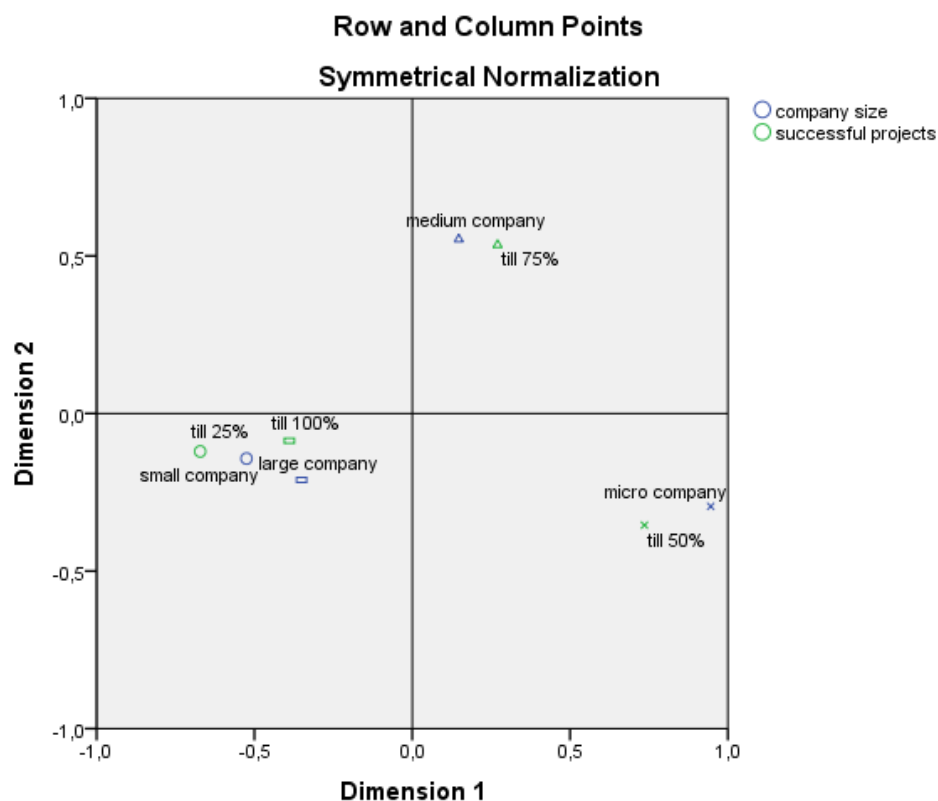
Tab. 2: Significance summary of observed dimensions

	Singular value	Inertia	Chi Square	Sig.	Proportion of inertia		Confidence sing. value	
					Accounted for	Cumulative	Std. dev.	Correlation 2
1	,318	,101			,869	,869	,074	,126
2	,115	,013			,113	,982	,085	
3	,046	,002			,018	1,000		
Total		,117	18,307	,032	1,000	1,000		

Source: own work

Results of correspondence analysis are included in graphs, which illustrate relations between individual categories and variables. Figure 2 shows row and column points of two dimensional solution. By using symmetrical normalization simplifies examining the relationships between individual categories of the variables. In graph there are brightly observed four different groups of individual categories.

Fig. 2: Symmetrical correspond map of row and column points



Source: own work

Discussion and Conclusion

A 97% of the innovations implemented in selected companies are due to efforts to understand and respond to the demands and needs of customers. Companies mostly dedicated to improving its established and existing products and services (regardless of company size) and a change occurs only at selected processes. In the majority of SMEs the change occurs naturally when the situation requires it, or the high potential of its success with low risk. Management (entrapreneurs) monitors the incoming ideas and evaluating them according to financial possibilities, current trends and their goals. In most of SMEs to accurately determine the proportion of successful completed projects were not available relevant data.

Main factors of failed (or uncompleted) projects are various according to individual managers and entrepreneurs. However, according to Dvořák (2006) all failures could be included in one of three possible groups which are: (1) technical, (2) economic, (3) other. Except these three groups, there is important time perspective, in which many projects are uncompleted. Such main factors of failing from project point of view there should be four kinds:

1. **Technical** (unsuitable specification in contractual documents; difficult to describe failures because of the order processing manufacturing).
2. **Economic** (failure of finance sources because of the savings; projects results failure in the market; additional proof of possible financial revenues - low level).
3. **Other** (inexperience with project realisation; company looks forward the customers instead of finishing innovations).
4. **Time** (projects are still in preparing phase before realisation; time dissonance between project planning and project realisation).

From innovation management point of view were identified the following factors that affect the successful implementation and realization of innovative projects:

1. **Systems and processes** (unsystematic (operational) management of change and improvement, closed innovation - defense against leaks, every idea undergoes multiple stage approval procedure, the ratio between ideas, innovations approval and their implementation is due to the complicated approval is very low, brainstorming is applied only at senior management levels, the realization and implementation of ideas does not possess sufficient support, no records of successful projects or after action report, risk aversion to new innovative projects due to practical use, payback period, an informal approach to project management).
2. **Staff and knowledge** (personal growth of employees and relationships in company is not supported by leadership, scarcity of information sharing, low confidence among workers in the workplace, poor foster an innovation culture).
3. **Customers and markets** (poor communication between the processes of marketing and development, a poorly specified requirements and specifications from the customer, poor communication with business partners, long response from customers to the new products - application tests).
4. **Others** (a lack of capacity in terms of finance, human resources and time).

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CSR MODEL FOR SMALL AND MEDIUM-SIZED CULTURAL ENTERPRISES

Jan Mísař – Jitka Srpová

Abstract

The aim of this paper is to describe a method to achieve sustainable development for entities that operate in the cultural and creative industries in the Czech Republic. This is accomplished through the implementation of Corporate Social Responsibility (CSR) into their business practice. The study reveals that all these entities prioritize creative and non-restrictive approach, therefore, any acceptable method must resemble these conditions. Another important factor is that entrepreneurs from this sector perceive themselves as artists and not as entrepreneurs. Most of these entities experience long term financial issues. To develop a method for CSR implementation, the authors develop a three step program.

Key words: Corporate Social Responsibility, Implementation, Creative Industries

JEL Code: M14

Introduction

There are a lot of definitions and perspectives on CSR which is partly due to the fact that CSR is practised in a broad range of different organizations - small businesses, public sector organizations, NGOs, etc. In the following part, we will have a look at the main distinctions between large corporations and small and medium-sized enterprises (SMEs). As the word “Corporate” in CSR indicates, this concept mainly applies to large corporations. One of the prominent issues for thinking about CSR in the context of large corporations is the question: *whose interest should its managers pursue?* – just the interests of the owners or also the interests of society at large, represented by different groups such as customers, employees or local communities?

The importance of SMEs for the whole Czech economy is very crucial, as it significantly affects both current and future competitiveness of our economy - economic growth, employment and sustainable development. Due to their size, they can occupy the market segments that are not lucrative for large companies. It might be through discovering

entirely new opportunities or simply using already known approach but in a different area. SMEs account for about 99 % (depending on the sector) of all businesses in the Czech Republic and supply 61 % of total employment (Veber, Srpová, 2012). The situation is very similar in other EU countries.

In recent years there has been growing academic interest in the cultural and creative industries (Howkins, 2001; Florida, 2002; Dostál, Dianová 2012). In every sector of the creative industries are those who believe that the market should determine the output, and then there are others who feel that this approach is detrimental to their artistic freedom (Fillis, 2002). A great example of this is the film industry. In this industry, Hollywood studios are competing in their struggle to generate record sales worldwide by producing one hit after another (more recent example is the studio Legendary Pictures, founded by brokers from Wallstreet). Opposite to them are small independent (European, Indian, etc.) producers, for who the artistic content is the main motivation driving their efforts. Fillis (2002) showed some empirical evidence that for a creative person to respond to a market demand is perceived as a demeaning activity. For these individuals, the need to express themselves through their art completely overrides any concept regarding the efforts of commercial gain.

1 Empiric Research

In May 2012 was conducted a pilot research in Pacov and its surroundings, as a part of project NAKI, aimed at consumers. At the same time there was conducted a separate survey among companies operating in the field of culture, related to the topic of corporate social responsibility. This qualitative research was conducted through a structured interview.

Consequently, further research was conducted in October 2012, this time in Jindřichův Hradec, where were in the same way approached 34 companies. Of this number, we managed to arrange a meeting with 14 subjects. The findings were very important for structuring future research, as it brought - the first ever in the Czech Republic - a view on this business area. Since then the research was expanded into following cities: Kutná Hora, Stříbro, Kladruby and Broumov.

1.1 The Aim of The Research

The aim of the research was to determine the approach of small and medium-sized enterprises operating in the field of culture to CSR. The gathered information will be used in structuring the upcoming method for implementing CSR into everyday business practice.

Each part of the research also had its sub-goals, e.g. the goals of the pilot survey were to check whether the questionnaire is well formulated and also thorough and to obtain information that are essential for formulating further research questions and hypotheses. Completing these goals was very crucial for the following research.

1.2 Methodology

Since this area is fairly unknown, we decided to use the qualitative research through the method of personal interviews. Qualitative research does not mean compliance with a selection strategy for the purpose of representativeness of the data obtained (and possible generalization). During data collection we have to constantly check whether the data really correspond to the research problem. The point is - if possible - to obtain fully comprehensive data on the issue. The best option proved to be semi-structured interview with the semi-open questions. Respondent therefore has a choice of possible answers, but there is also a possibility to formulate his/her own, in case no given option suits him/her.

In the first stage were prepared questions in the questionnaire which were later revised several times and filtered. The result was a series of questions exploring the full spectrum of CSR, but still maintaining maximum brevity and accuracy. The main areas of research are social, environmental and economic activities.

The questions were constructed so that they can be answered without knowing any difficult terminology. Each question first offered range of examples that were supposed to help the respondent to get oriented in that matter and be able to address the situation. As a result of the pilot survey, the questions were reformulated and put into their final form. Each interview lasted between 45 to 60 minutes.

The Mayor's office was contacted prior to each research and informed about the plans for the research and also asked to help with selection of respondents. This way was assured a higher response rate – as being backed by local authority raised prestige and trustworthiness in the eyes of respondents.

In the last two locations – Stříbro and Broumov – we introduced model Lean Canvas to respondents, which we believe – based on our previous results – is the most suitable basis of which can be derived the new method for implementing CSR into business practice.

1.3 The Research Sample

The research involved 61 small and medium-sized organizations, which include eg. an observatory, galleries, cultural centers, theater companies, choirs, ateliers, restorers, pottery shops, museums, etc. With the exception of one case, there were only micro and small organizations, which is for creative industries quite common. The actual data collection was preceded by contact with the local council, which was aware of the planned research and helped with the selection of subjects. In this way we have gained a higher willingness of respondents to participate in this research.

Researched subjects came from three areas:

- Stabilized industrially developed region - Kutna Hora (UNESCO)
- Culturally destabilized dynamic region - Stříbro, Kladruby, Broumov
- Culturally stabilized traditionally agricultural region - Pacov, Jindřichuv Hradec

Kutna Hora is located in Central Bohemia between Prague and Brno, and is thus one of the business and tourist centers. In 1995, it was inscribed in the UNESCO list, which greatly increased its attractiveness and also contributed to the development of local culture.

Stříbro and Kladruby are located in South-west Bohemia, between Pilsen and borders with Germany, and in the past faced the exodus of the population to Germany, which resulted in massive decline of population, as bearers of traditions. Stříbro, as the name suggests, has a rich mining tradition which is best represented by the local mining museum, which offers outdoor and underground exposure. Broumov is located in North East Bohemia, in one of the promontories of the border with Poland. Thanks to its location it is an altogether isolated micro.

Jindřichuv Hradec has long been a popular tourist destination, although its position is rather away from regional centers. Pacov is also a traditional small town, which has had over the years a stable population.

Subject selection was based on communication with the local authorities and using databases such as ARES, Firmy.cz, Fler.cz and other local information portals. The aim was to obtain a database of all entities that operate in the area, as well as mutually verify the information obtained. In this manner were excluded and deleted entities that were at the time of the research already extinct or their activities fell within other categories, etc. In many cases, the entities engage in more activities, in this case the decisive criterion was the main object of their activities.

1.4 Results

The total of 61 SMEs, participated in our research, among which include for example: observatory, art galleries, culture centres, theatre companies, choirs, ateliers, restorers etc. Most of the companies (44) responded that they have not heard or just barely heard the term „Corporate Social Responsibility“.

Only 17 enterprises knew what this term represents. It proved to be a difficult question as some respondents – at first - held their answers back and looked for alternative –or indirect- ways to give an answer. Although, some respondents claimed to be aware what this term means, further questioning revealed, that they are not able to describe it or give us their own thoughts on this subject. Therefore, the level of knowledge about this subject is rather superficial and very inconsistent.

Only very few companies are not involved in environmental activities. Other companies prefer recycling and energy saving over more active approach. They take it as a simple and convenient way to contribute to something good. They see energy saving in the first place as a way of saving their own costs, rather than as a targeted effort to minimize the impact on the natural environment.

Half of the companies is trying to somehow support (or encourage) their staff. Most of them focus on facilitating flexible working hours and encouraging further education – mostly language or professional education. Another popular tool is providing vouchers and gifts for life occasions. Last but not least are also provided transport allowances. Among other interesting activities - that are found only in small quantities - are: discount for members of the family, wellness programs, corporate kindergarten.

To receiving CSR from another entity registered 16 respondents, all of these companies also develop themselves their own CSR activities. It can not be said that one of the forms of support prevailed over the other. The amount of financial and non-financial forms is almost balanced, with many of the respondents receiving both forms. Respondents often mistakenly confuse sponsorship and donations. Many respondents that currently are not already receiving financial support from another company said that in the past someone had supported them this way, but in the wake of the global financial crisis, these donors and sponsors ceased to support them. In addition, there is a trend that large firms can better establish their own foundation, which is then financed by these funds. Respondents often have to settle for a non-financial support, which mostly takes form of old equipment.

Furthermore, it became clear that respondents that stated that they did not practice CSR, in fact, developed a number of activities in this area. This trend can be observed in other studies, so this is no surprising finding but at the same time is also necessary for confirming this fact for this sector. Entities most preferred activities aimed to promote the region and cooperation with the local community. As the most appropriate form of support, seems to be non-financial donations (less than 75% of respondents) in the form of: own products (e.g. raffle, schools), bestowing business premises, organizing cultural activities (dances, competitions). Of course financial form is also used, although, to a much lesser extent (almost 20%).

These activities tend to be focused on one-time events that do not require a lot of planning. The most imaginative activity can certainly include supporting local animal shelter, which was mentioned by several entities.

Most of the companies could not explain what or who is behind these activities. All companies that said they knew the concept of CSR were able to answer this question. In this case, they almost always named as the reason the owner / manager of the company and the second most common was "external pressure" that subjects could not quite define. Apparently this behaviour is nowadays expected and great amount of pressure comes from customers and government authorities (councils).

The companies also indicated that large barrier in the development of CSR activities are finance and know-how, which again confirms the findings of other studies on SMEs. Also there is a fear of underestimation of these activities and the potential of triggering an obligation to continue these activities, although it was not the original intention. Businesses showed interest in cooperating with other businesses for the purpose of CSR activities. Enterprises that have indicated that they do not have the funding for their own activities would be willing to organize and deliver, if they found a partner willing to finance them. The condition would be to focus on supporting the region.

1.5 Implications and Recommendations

The knowledge gained was used to prepare a method that helps organizations in this sector with the implementation of CSR. The main barriers for implementing CSR are:

- Lack of awareness about the topic,
- possible restriction of creativity caused by standard methods,

- overly structured implementation plans that do not allow flexibility,
- the entrepreneurs do not perceive themselves as entrepreneurs but as artists,
- lack of time,
- they usually have no strategy at all.

It is necessary to encourage them to start planning and enlighten them on its advantages and on other important aspects of entrepreneurship. To do so, we need a model that goes beyond the stated barriers. The most appropriate basis for the new method seems to be Lean Canvas. The main advantage of this concept is that it is adapted for small and medium-sized enterprises. Its key features are: ease of orientation, does not take much time and can be quickly explained. At the same time it does not limit the creativity of entrepreneurs, which is in the field of art and culture greatly appreciated. The first reactions were favourable. Respondents expressed interest in this method and said it helped them to organize their thoughts and clarify some of the issues that they had not even thought about (e.g. competitive advantage).

Next task was to expand the original Lean Canvas by social and environmental aspects and yet leave its simplicity and clarity. There is a social modification (Social Lean Canvas) under development but the social and environmental aspects are completely separated from the rest of the key areas – similar to early Carrols “CSR Pyramid”. We find it unsuitable for the same reasons as the “CSR Pyramid” – CSR activities have to be fully integrated into everyday business process instead of being left out at the end as a nice add-on.

2 The Implementation Method

The methodology consists of the following steps:

1. Business map

Author gets an overview of the structure of their organization and its activities. This method allows him to gain an insight and a better perspective of the overall view of the organization and its surroundings. The output can also be used for the presentation of the organization and an explanation of the different areas.

2. Business model

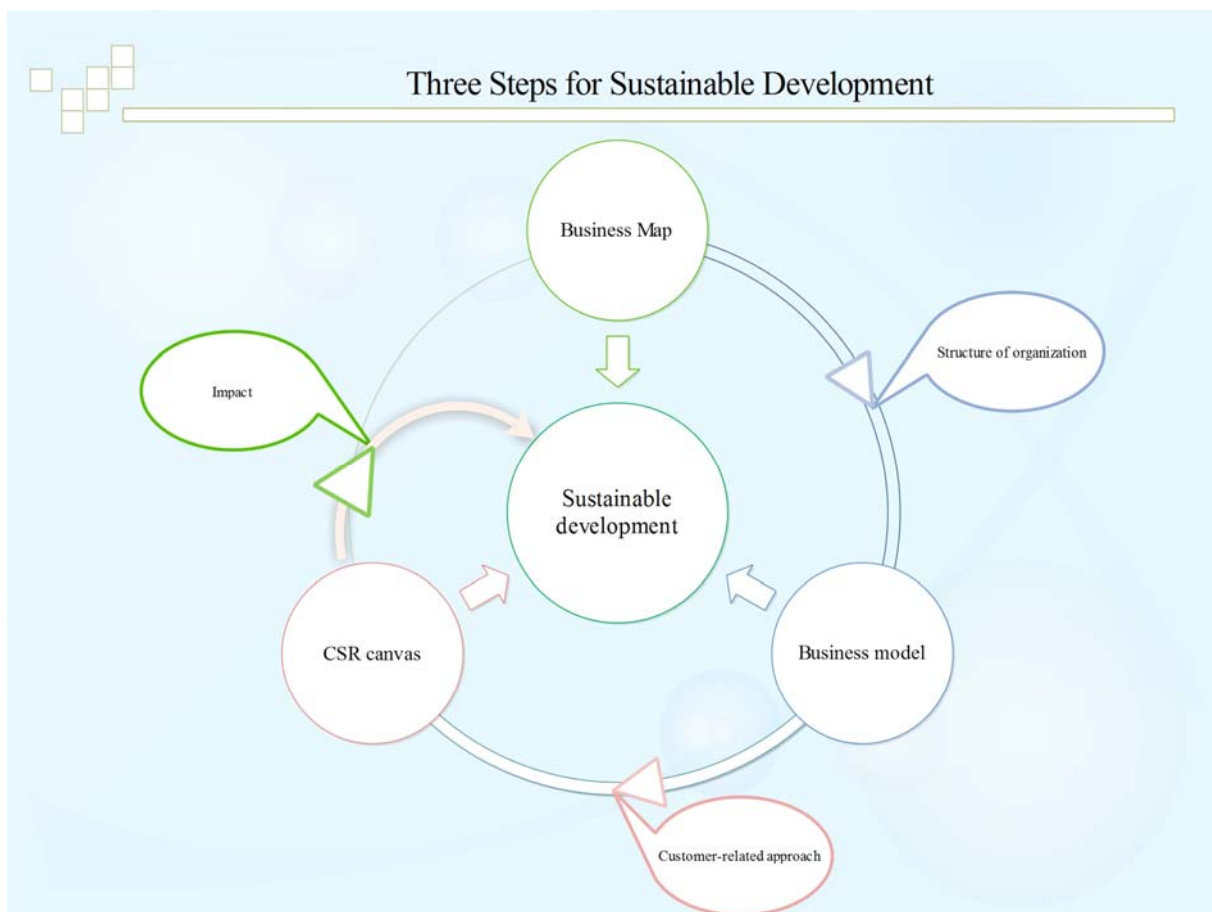
This section is aimed at a product / service that the organization offers. The aim is to be able to describe your customers and their needs, which the company satisfies, and then

realize relations between these two. It also serves as a development tool for new products / services.

3. CSR canvas

The aim is to obtain an overview of all key groups (all groups who influence the organization or are influenced by it) and their interaction with the company. It provides a broader view of the business, i.e. organization and its place in society. This method allows the preparation of the strategic social and environmental activities, including monitoring and measuring of their impact. Great emphasis is placed on creating a reliable method for measuring business activities.

Diagram 1 Overall model



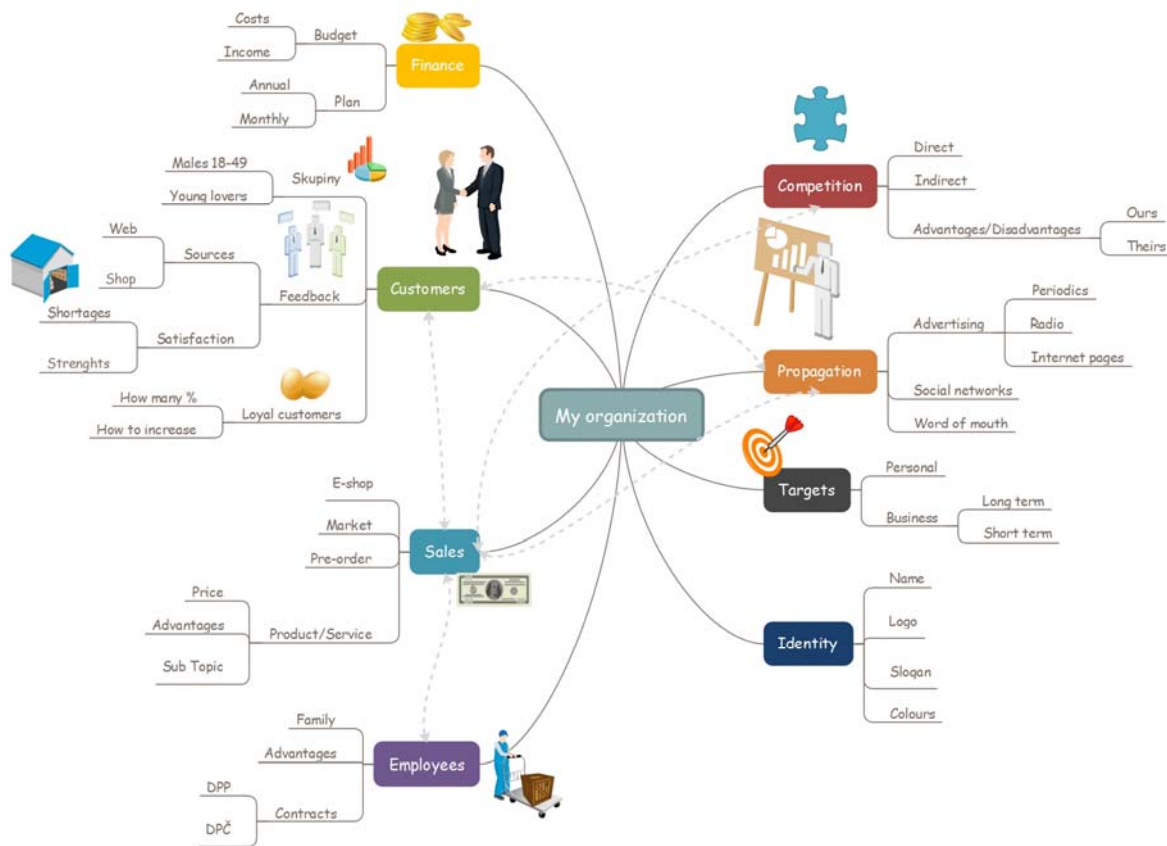
Source: Author

2.1 Business Map

Business map is used to creatively record the organization structure. The purpose is to get an overview of the overall structure of the company, its surroundings and potential problems or opportunities. It serves as a comprehensive tool for presentation. Creating of a Business map

promotes creative thinking and allows for better organization and to record thoughts in the same as we keep them inside of our minds. The figure below shows a template, indicating how the Business map might look like. However, as with conventional mind maps, every Business map is a matter of an individual approach and therefore will differ for each person, thus this template is more a source of an inspiration and a reminder of important areas on which the creator should not forget.

Diagram 2 The Template for a Business map



Source: Author

How to create a Business map:

- 1 Write the name of your organization in the center of the paper.
- 2 Start to gradually write in circle its various key areas - units. For each unit, try using a different color, pictures - anything that wakes up your emotions.
- 3 Next, you create individual sublevels, which refer to individual units.
- 4 If you can not think of anything, feel free to draw pictures, signs or outline words. Meanwhile, you either get an idea or you can venture into another area.

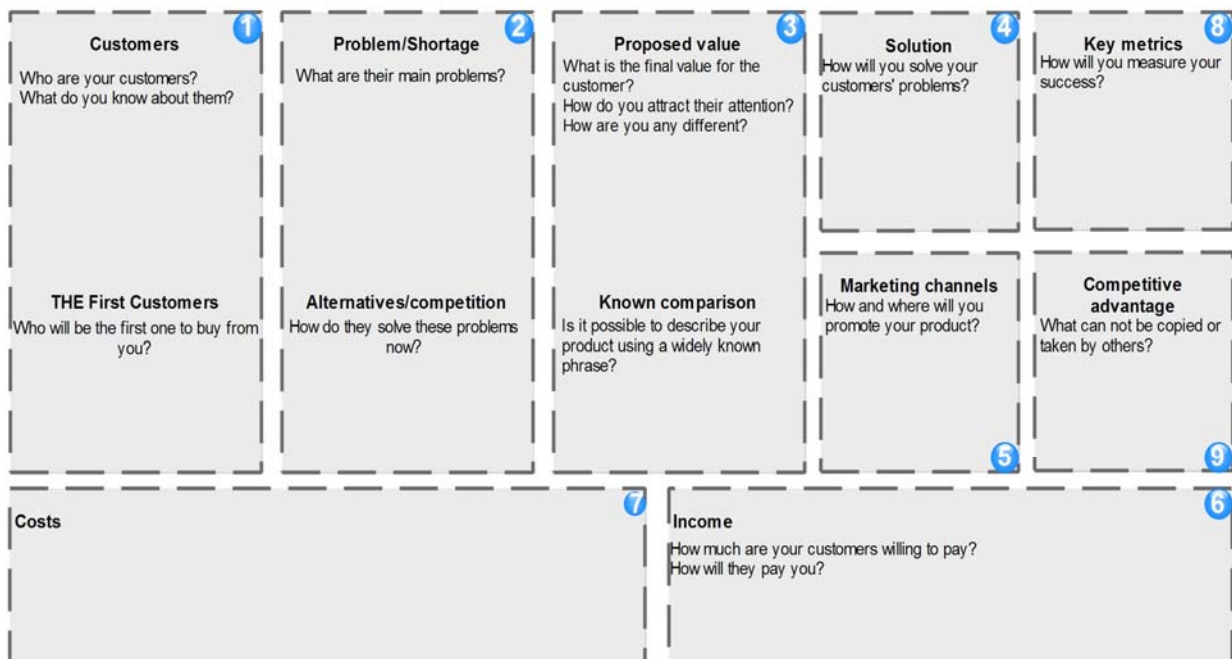
- 5 Deepen branches gradually. Some areas are deeper than the others because they bind multiple components. If a word is repeated again and again, it might be appropriate for it to have a separate branch.
- 6 Imagine that you are explaining your Business map to someone and trying to describe its structure. Can you explain the relations?
- 7 Pay special attention to areas where you have an unsolved problem and determine a single symbol, which can indicate problems.
- 8 Try to go do something else, and over time - calmly and in a few days - return and record a new impetus and ideas. What solutions did you find? What can be expanded or improved?

2.2 Business Model

The Business model is based on the model Lean Canvas, which created by Ash Maurya specifically for small and medium-sized enterprises, and especially suited for start-ups.

To be simplified, the model was converted into chronological form that requires from its creator even less time to get oriented and fill it in. The new modification is filled naturally from left to right, instead of the previous jumps throughout the model, which was a feature that was during an interview with entrepreneurs proven to be very problematic. Likewise, certain terminology was modified to avoid its misinterpretation. Its initial benefits remain intact.

Diagram 3 Business Model



Source: Author

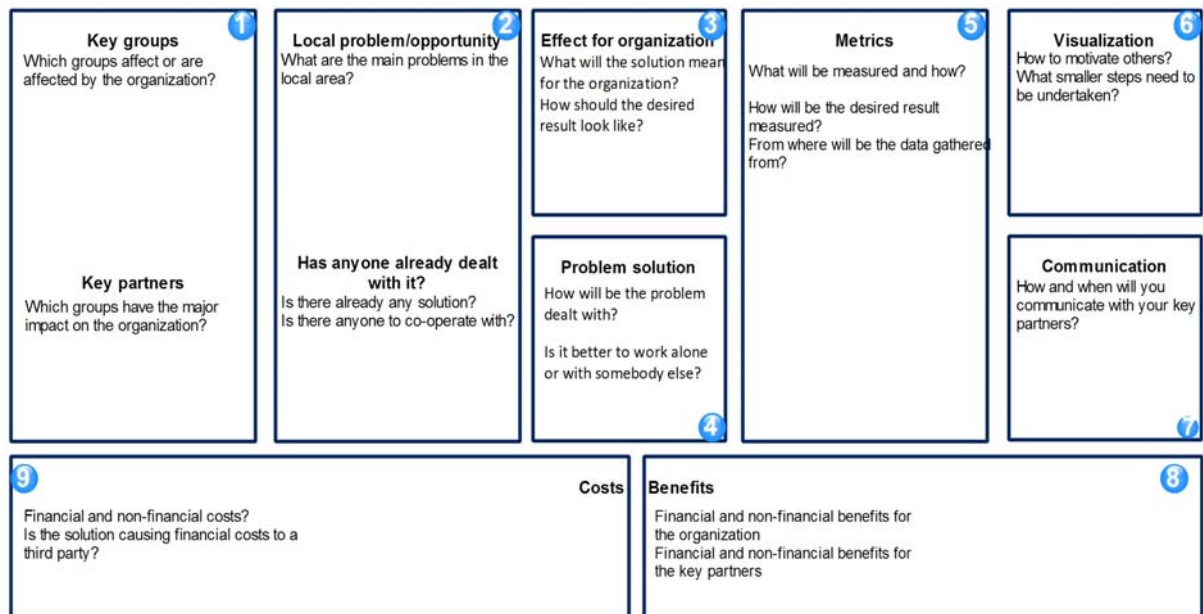
2.3 CSR Canvas

An organization has much broader impact on its surroundings than just an economic one, in the form of making profits and creating jobs. Entrepreneurs commonly spend finance on environmental and social issues, while their selection is mostly random or based purely according to their personal preferences. They seldom monitor impact of these activities on business, sometimes they even do not want to have an impact, for fear of a backlash or feeling shame for getting something back in return - and thus spoil the sense of the activity (donation etc).

The aim of this model is to help during selection and implementation of these activities, so that they have a strategic and measurable impact, through overall view of the organization and the impact on the environment in which it operates. The model develops the relationship between the key groups (stakeholders) and the organization, their common problems and possibilities to solve them, as well as determining the outcome of these activities and the measurement method, in order to monitor progress and verify the correctness of the result - the effect on the organization.

The model has been tested on over of 100 university students, who chose as minor specialization Small and medium-sized enterprises..

Diagram 4 CSR Canvas



Source: Author

When you first create this canvas, we recommend the following procedure:

1. Print or rewrite the model on a paper (preferably A4), or create it in electronic form (eg. Excell).
2. For the filling, use self-adhesive office papers - sticker. It is easy to work with them and forces you to be concise.
3. Start to fill in the boxes in the order from 1 to 9. What you do not know now, you can skip and then to come back. The core part is the identification of key partners, their problems and finding ways to either fix them or alleviate its effects. Therefore give these fields your maximum attentions. For these activities to be effective, they must be very precisely targeted.
4. Search for continuity and relationships between different fields.
5. It is important write down the idea so when you read it out loud, it still makes sense. The fields are small on purpose, forcing you to write clearly and concisely.
6. After completion of the first attempt, try to focus on areas that proved to be problematic.
7. Create a separate model for each group for which you have found the problem or opportunity and extend it in detail.
8. Evaluate what you think is the best option and begin with implementation.

Conclusion

The sector of creative industries seems to be slightly different than other sectors. Entrepreneurs often choose their artistic goals over the profit. At the same time a lot of these organizations struggle with finances and overall sustainability.

We believe that our approach would really benefit any entrepreneur from the sectors of art and culture, as we have learned that they prefer creative ways over the strict ones. This way they would be able to put their ideas together on a paper in a creative way and yet remain structure. When put into canvas, the idea is tested through series of question which help to develop the whole concept before it is implemented. This way, entrepreneurs in culture are slowly pushed to the economical way of thinking about their enterprise and sustainability, but at the same time they would not feel forced to do something they do not like. The model is currently under development and has been so far tested on over 100 students and several organizations, which helped greatly with the development.

Acknowledgment

This paper was done as a part of the project „Efektivní metodiky podpory malých a středních subjektů sektoru kultury v prostředí národní a evropské ekonomiky NAKI registrovaného u Ministerstva kultury České republiky pod evidenčním číslem MK DF11P01OVV024“.

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THE SUPPORT FOR SOCIAL INNOVATION IN SELECTED REGIONS OF THE CZECH REPUBLIC THROUGH SOCIAL ENTREPRENEURSHIP

Zuzana Palová

Abstract

Social innovation is crucial for economic and social development, and thus social welfare. The implementation of social innovation still depends largely on public support particularly, in less developed countries. Social enterprises are one type of social innovation. These enterprises play an important role in local development and often create employment opportunities for individuals with disabilities or social and cultural disadvantages. Profit is used for further development of the social enterprise. This paper is devoted to the creation of social enterprises through the European Social Fund in selected regions of the Czech Republic. Its aim is to analyse the evolution of unemployment inclined towards social exclusion and to compare this situation with the support of new social enterprises.

Key words: social innovation, unemployment, social entrepreneurship, European Social Fund

JEL Code: E24, 035, R23

Introduction

Social innovations are crucial for economic and social development, and thus social welfare. Their implementation still depends largely on public support, especially in less developed countries. Social enterprises can be considered a kind of social innovations. Today, so far, social enterprises play a small but significant role especially in the employment of people with different kinds of disadvantages. These way social enterprises are innovative tools for creating effective and efficient jobs. These businesses play an important role in local development and often create job opportunities for people with disabilities, social or cultural disadvantage.

Aims of this paper are to analyze the development of unemployment of persons with disadvantages on the labor market and to compare the situation with the support of new social

enterprises and thus new work places. Within the paper there will be analyzed those social enterprises that were created through support from the European Union in operating period 2007-2013. The analysis will be performed in four regions in the Czech Republic, and specifically in Moravian-Silesian, Hradec Králové, Usti and Plzen Region.

Empirical part is divided into two parts, where one will be focused on disparities in unemployment and the second part will be dedicated to supporting the development of social enterprises. In the first part there will be examined several factors separately. All of these descriptors will be evaluated as a whole, using the point method, for the years 2007 and 2013. This analysis will be followed by an analysis of support of setting up of social enterprises through the European Social Fund by Human Resources and Employment OP. This analysis will evaluate the number of jobs created for persons of the target groups, the total financial support and the financial support per person. Both analyzes will be compared in conclusion and evaluated the relationship between reducing of unemployment among disadvantaged people through social enterprises.

1 Theoretic background

Innovation and social entrepreneurship are not concepts from different worlds. Social entrepreneurship is often regarded as a particular social innovation. Market sector is increasingly intertwined with the social sector for a number of reasons. Entrepreneurship in social sectors is still developing (health, education, social welfare). Companies are looking for the social innovation for new business opportunities, including human capital, and social reputation. The social enterprises (or their clusters) belong among the most important phenomena of social innovation.

1.1 Social innovation

Social innovation is crucial for economic and social development, and thus social welfare. Implementation of social innovation still depends largely on public support, particularly in less developed countries.

There are also some definitions which have been put forward and have gained currency due to their explanatory value. One definition which can claim such currency is that deployed by Murray et al (2010) in the Open Book of Social Innovation who, „... *define social innovations as new ideas /products, services and models) that simultaneously meet social*

needs and create new social relationships or collaborations. In other words, they are innovations that are both good for society and enhance society's capacity to act“.

It may perhaps be useful at this stage to also untangle social innovation from traditional conceptions of innovation in the wider economy. Mulgan (2006) offers a useful distinction that may enhance the understanding of those to whom social innovation is a novel concept, *“Social innovation refers to innovative activities and services that are motivated by the goal of meeting a social need and that are predominantly diffused through organizations whose primary purposes are social. Business innovation is generally motivated by profit maximization”*.

1.2 Social entrepreneurship

The term "social economy" was formulated in the 80s in France, from where it spread to other countries in the European Union. In 1980, the National Council for relations between mutual societies, cooperatives and associations adopted the Charter of the social economy (Social Economy Charter), which defines the social economy as a group of organizations that do not belong to the public sector, are democratic and have a special allocation of profits for their further development and improvement for its members and for society. In the last decade, the social economy managed to get at European level stronger position. It was recognized by the European Commission in 1989, when was also prepared its definition. According to the Directorate General of Enterprise the social economy includes cooperatives, mutual societies, associations, foundations and social firms. Social economy is often defined as a third sector located between the public and private sectors (Dohnalová, M., 2009).

Thematic network for social economy TESSEA defined the most commonly used definition of social enterprises in the Czech Republic. TESSEA defined the social enterprise as follows: *"Social enterprise means" a subject of social entrepreneurship ", i.e. A legal entity established under private law or any part thereof or natural person that meets the principles of social enterprise. Social enterprise fulfills the public benefit objective, which is formulated in its founding documents. It creates and develops the concept of the triple benefit - economic, social and environmental"* (TESSEA, 2011).

Among disadvantaged persons there are included persons with disabilities, youth and young adults, the homeless, persons leaving facilities designed for institutional or protective care and people leaving prison sentence, victims of crime, persons caring for a relative, people with addiction experience substance abuse, or long-term unemployed (Dohnalová, Deverová,

Šloufová, 2012). In the call no. 30 Social economy, which has been implemented through the Human Resources and Employment OP, target group was defined as follows: people with disabilities, youth and young adults, the homeless, people leaving institutional or protective care and people leaving imprisonment, crime victims, persons caring for a close, personal experience with addicts, and those who are long-term unemployed and other unspecified socially excluded or at risk of social exclusion persons (MPSV, 2013).

2 Metodology

In this paper will be used the point method, whose method of calculation for integrated indicators Tuleja (2009) elaborated in his paper. Melecký and Staníčková (2011) used this method in their research, where they used it for measuring of the competitiveness of the NUTS 2 regions.

The point method is one way of measuring of regional disparities. Tuleja (2009) in his paper states that the author of the point method is M. K. Bennet. One advantage of the point method is its ability to summarize characteristics captured in different units of measurement in one synthetic characteristic. The result is a dimensionless number that does not possess a real sense, but it can be used either to determine the rank of the regions or to determine the regional differences that are associated with different categories of indicators. Specific form for using the point method is to determine the value of the index of regional disparities using weighted average of points (1) that each region will receive for the relevant indicators.

$$EI_{RD} = \frac{1}{p} \sum_{i=1}^p \frac{x_{ij}}{x_{imax}}, \text{ resp. } \frac{x_{imin}}{x_{ij}} \quad (1)$$

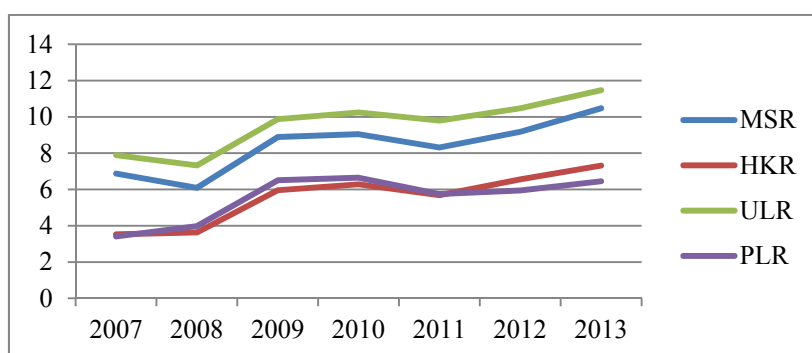
Where, x_{ij} represents the i^{th} variable for the j^{th} region,
 x_{max} represents the maximum value of the i^{th} indicator,
 x_{min} –represents the minimum value of the i^{th} indicator (Tuleja, 2011).

3 The empirical part

The following figures 1-4 show the evolution of unemployment according to the proportion of unemployed and employed job seekers with disabilities, graduates and young people registered and more than 12 months. Throughout the period the Usti Region contended with the largest problems of unemployment in all examined categories. In contrast, the Hradec

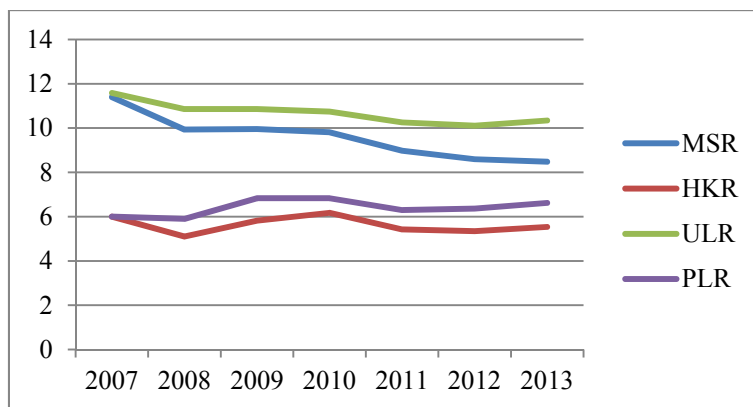
Kralové and Plzeň Regions belonged in the monitored period to the regions with the lowest unemployment. However different evolution there can be observed in the proportion of unemployed persons in the population and job applicants registered by employment offices for longer than 12 months. In this case in both indicators occurred an increase in unemployment in both categories in period 2007 - 2013.

Fig. 1: The proportion of unemployed persons in the population



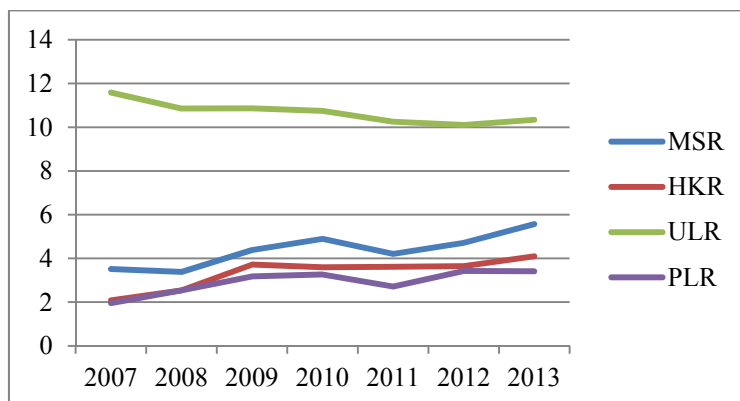
Source: Own proceedings according data by CSO.

Fig. 2: Job seekers with disabilities per 1000 population



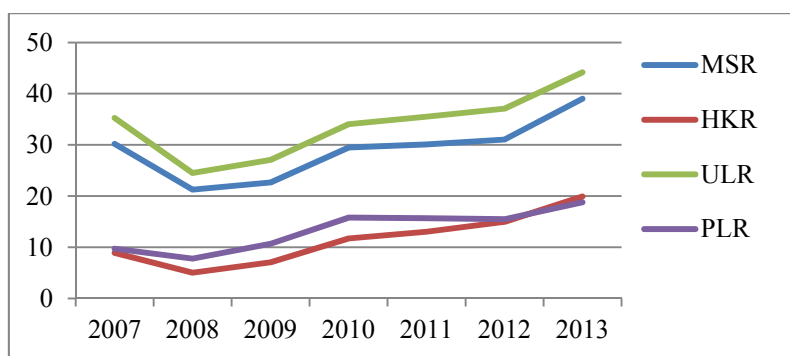
Source: Own proceedings according data by CSO.

Fig. 3: Job seekers graduates and young people per 1000 population



Source: Own proceedings according data by CSO

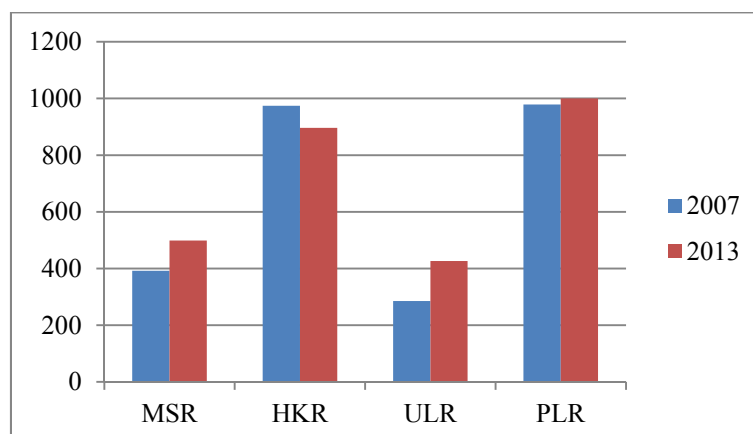
Fig. 4: Unemployed job seekers registered more than 12 months per 1000 inhabitants



Source: Own proceedings according data by CSO

Fig. 5 summarizes the overall situation on labor market in the regions using the point method. This chart assesses all the indicators monitored together, where the region with the highest points is the region with the lowest labor market problems. The graph shows that the largest problems were in the Usti Region and Moravian-Silesian Region that belongs to the most structurally affected regions in the Czech Republic. In both these regions occurred in period 2007-2013 to the deterioration on the labor market. Only in the Hradec Králové Region was region where the situation on labor market improved in the reporting period.

Fig. 5: Point method



Source: Author's calculations.

Tab. number 1 shows the creation of new social enterprises in the regions supported by the Human Resources and Employment OP. The most social enterprises and new jobs have been created in the Moravian-Silesian Region, where there were created 17 new social enterprises and 111 new jobs. Total financial support was also the highest. Because it is a region with the largest population, financial support was recalculated per 1000 population aged 15 and over, in 2013. In this recalculated status there were also pumped the most funds in the Moravian-Silesian Region. In the setting up of new social enterprises the Usti Region placed on the second position, where there were supported by 11 social enterprises and created 56 new jobs. Financial support per 1000 inhabitants reached the second highest value and so 49.05 thousand CZK. In contrast, the lowest setting up of new social enterprises was in the Hradec Králové Region (6 enterprises and 22 new workplaces) and in the Plzen Region (5 enterprises and 69 workplaces). As the table shows that in regions with the largest problems on the labor market there were also the largest setting up of new social enterprises and new workplaces, which corresponds to the needs of the region.

The Plzen Region was the most effectiveness region in the funds spent per one new workplace. In this region, however, it caused primarily by one social enterprise that in the project created 49 new jobs for persons with disabilities in the total budget of 3,461 thousand CZK. Conversely, among the least efficient regions Usti Region belonged with the cost per one workplace 610.38 thousand CZK.

Tab. 1: Supported enterprises

	Number of social enterprises	Number of new workplaces	Financial support (thousand CZK)	Support per 1 workplace (thousand CZK)	Support per 1000 inhabitants (thousand CZK)
MSR	17	111	52 055.34	468.97	49.83
HKR	6	22	12 696.76	577.13	1.23
ULR	11	56	34 181.54	610.38	49.05
PLR	5	69	14 491.48	210.02	0.43

Source: Own proceedings according data by ESF CR. [online]. [10.4.2015] Available from:

<http://www.esfcr.cz/modules/projects/index.php?lang=1>

Conclusion

Social enterprises can be considered a kind of social innovations. Today, so far, social enterprises play a small but significant role especially in the employment of people with different kinds of disadvantages. The first empirical part was devoted to situation on labor market in the regions using the point method. The regions with the largest problems were the Usti Region and Moravian-Silesian Region. They belong to the most structurally affected regions in the Czech Republic.

The second part was devoted to setting up social enterprises by Human Resources and Employment OP. The most social enterprises and new jobs have been created in the Moravian-Silesian Region, where there were created 17 new social enterprises and 111 new jobs. In the setting up of new social enterprises the Usti Region placed on the second position. In contrast, the lowest setting up of new social enterprises was in the Hradec Králové Region and in the Plzen Region. The Plzen Region was the most effectiveness region in the funds spent per one new workplace. In this region, however, it caused primarily by one social enterprise that in the project created 49 new jobs for persons with disabilities in the total budget of 3,461 thousand CZK. Conversely, among the least efficient regions Usti Region belonged with the cost per one workplace 610.38 thousand CZK.

The analyses showed that in the regions with the highest problem on labor market there were spent the most funds and set up the most new social enterprises. Nowadays the setting up of social enterprises is still so small that it cannot significantly affect unemployment of people with disadvantages. Due to it was not possible to see any significant changes in unemployment rate which relate to spent funds on social enterprises.

Acknowledgment

This paper originated from the project SGS 16/2015 “The support social innovation from

funds of European Union”.

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UNIVERSITY-INDUSTRY PARTNERSHIP AS A KEY STRATEGY FOR INNOVATIVE SUSTAINABLE ECONOMIC GROWTH

Ekaterina Panarina

Abstract

The intensified global competition for factors that drive the competitiveness of entrepreneurial ecosystems forces policymakers to seek new models of economic growth. The current Russian model, based on the exportation of natural resources, has become increasingly obsolete. Today, to achieve growth targets, Russia must move from the redistribution of mineral resources to intensify innovation activity and develop technology-intensive products. Universities and industry are two partners of the entrepreneurial ecosystem that can connect to merge the discovery-driven culture of universities with the innovation-driven environment.

Key words: innovation, competitiveness, partnership, centres of competence, innovative environment

JEL Code: O 300, O 310, F 430

Introduction

Innovation is increasingly becoming the foundation of the world's leading economies, economies in which long-term prosperity and development depend on technologically based intellectual products. These new products make possible the creation of companies that can foster long-term sustainable economic growth—in short, new economic perspectives to create, harness, and leverage technology-based intellectual capital.

Russia's potential for growth is recognized by the World Economic Forum's (WEF) Global Competitiveness Report 2013; however, the report also acknowledges that the country is currently falling behind India, China, and Brazil (BRICS countries) in terms of competitiveness.

Russian large and expanding consumer market, a solid telecommunications infrastructure, and abundant natural resources are being central to Russia's competitiveness. However,

underdeveloped institutions, stifled competition, declining quality of education, underdeveloped financial markets, and low levels of business sophistication are the country's key competitive challenges. The lack of sufficient funding and a supportive environment for startups has translated into a shortage of new ventures.

When building a comprehensive innovation system, Russia should focus on upgrading technological capabilities through higher public expenditures on research and development (R&D). This would enable the country to access its innovative potential, which to a large extent is based on strong R&D capacities and an innovative environment.

University-Industry Partnership as a key strategy for innovative sustainable economic growth

Fostering collaborative university-industry partnerships to enhance commercialization efforts has emerged as a critical imperative to sustaining global competition. As shown by countries such as the United States, innovation and business competitiveness are greatly enhanced through the activities of research universities. US universities through their research and the products of their research have assumed a vital role in growing vibrant economies (Cohen, Nelson, and Walsh 2002 Rosenberg and Nelson 1994; Mowery and Nelson 2003).

The success of high-technology regional clusters in the United States such as Silicon Valley in California and Route 128 in the Boston area have connected a large number of companies and major research universities (in California, the University of California at Berkeley, Stanford University, and the University of California at San Francisco; in Boston, Harvard University and MIT). Many new firms in these regions have been created through efforts to commercialize technologies developed at regional universities.

To build a knowledge-based economy, Russia needs to similarly integrate business elements into its education system, with the plan being to drive innovation by strengthening links between higher education, research, and business practices.

In 2012, Russian president Vladimir Putin announced in a formal address that Russia's universities must be revamped to become key players in the economy of the country. As a long-term strategy, higher education has to become a strategic asset that links with industry to strengthen the national economy by enhancing and accelerating technology-transfer initiatives.

In this paper we propose for the establishment of stronger ties between education and industry when Russian universities create what are known as Centers of Competence. These

centers can be used to promote innovation and business competitiveness in the Russian economy. World-class research universities are at the forefront of creating such partnerships (Making Industry-University Partnerships Work 2012), and it is these partnerships that result in a broad range of beneficial activities that provide regional and national economic outcomes. As partners, educational institutions and industry can invest in technological advancement, plan strategically, and greatly affect the competitiveness of local and regional economies. Therefore, Russian universities should go beyond the traditional funding of discrete academic research projects and establish long-term strategic partnerships with industry to improve innovation in Russia.

Centers of Competence (CCs) will link innovative technologies developed by research universities with industry partners in an effort to target relevant market needs. Government agencies will also be a key component of these endeavors with supportive policy, as for example grants, reduced taxes, etc.

Coupled with government support and outside investment these collaborations can help to solve pressing social and economic challenges. The CC will be a hub for leaders in science, education, business, and government where R&D projects will be transformed into marketable high-tech products and services. The CC will help create regional innovation clusters and eventually lead to the advancement of the country's competitive position and economic growth.

Russia's innovative initiatives of economic growth

Positive notable changes to Russia's innovation policy in recent years have been accrued at the center of the government's agenda. The new government strategy "Innovative Russia 2020" foresees large increases in funding for research, commercialization, and innovation infrastructure. The strategy implies an increase of the share of innovatively active companies from the current 9.3% to 40–50% by 2020, as well as growth of Russia's share of the global high-technologies market from the current 0.3% to 2%. Under these plans, by 2020 the number of patents registered by Russian companies in the European Union, the United States, and Japan is expected to reach about three thousand. Total budgetary funding on innovations in the next ten years is estimated at approximately \$530 billion, which includes expenses on education, science, and a number of other fields.

However on a global scale, these numbers are still low. In 2013, the United States, China, Japan, and Europe (excluding Russia) accounted for about 80% of the total \$1.6

trillion invested in R&D around the world. For instance, in 2013, the amount that Russia spent on R&D as a percentage of GDP was a mere 1.5%; the percentage of total exports that were innovative products, works, and services was 3.8%; and only 9% of Russian organizations were involved in innovative activities. Despite the existing potential in the sphere of human capital and research activities, the level of innovation in Russia is very low. The United States remains the world's largest R&D investor with a projected spending of \$465 billion in 2014. At the same time in 2013, for the first time, China accounted for the largest number of patents filed throughout the world.

In April 2012 the government adopted a list of innovative territorial clusters (mostly in the central area of Moscow and St. Petersburg) that would receive public support until 2018. The first establishment of an innovation cluster is noteworthy: the Skolkovo, which is an innovation hub built near Moscow to provide researchers, entrepreneurs, and investors with a platform to focus efforts on IT, energy efficiency, biomedicine, space, and nuclear technologies. However, unfortunately, these initiatives so far have had only a limited impact on enabling sustainable economic growth in the country.

Respondents who participated in Ernst & Young's attractiveness survey Russia 2013: Shaping Russia's Future suggest that a shift to a more collaborative approach would help to improve Russia's innovation and technological capacity (table 1). Their top recommendations are as follows:

- Facilitate R&D collaborations between foreign and local companies. A number of these partnerships have been forged in the recent past, for example, Alcatel-Lucent signed an R&D pact with SC Rostekhnologii, Russia's largest high-technology corporation, to accelerate the deployment of advanced long-term evolution or 4G mobile services, new network systems, and groundbreaking trans-mission technologies.
- Strengthen links between universities and industry. Encouraging collaboration between industry and academia would help to improve Russia's innovation climate. This would strengthen the foundation of entrepreneurship and innovation.

Tab.1: Measures Most Needed to Improve Russia's Technology and Innovation

Capacity

Measure	Percentage of respondents who named the measure a top-three priority
Facilitate R&D partnerships between foreign investors and local companies	25%
Focus on collaborations between universities and industry	19%
Increase incentives for companies to invest in R&D and innovative technologies	17%
Establish policies that support the development of emerging technologies	16%
Support and facilitate the establishment of high-tech projects and technoparks	14%
Develop a culture of innovation and creativity	14%
Increase government support for the commercialization of innovative projects	14%
Focus on public-private partnerships in technology	13%
Develop joint research programs	11%
Support the development of industrial parks and industrial zones	10%
Can't say	18%

Source: Russia attractiveness survey (total respondents: 206), 2013, Ernst & Young.

Center of Competence at Perm National Research Polytechnic

University

National and local governments in many countries stimulate their economies by forming “Science Parks” or “Technology Centers” or what we call “Centers of Competence” (CCs). Based on a review of the relevant literature, for the purposes of the present research we have developed the following definition of a Center of Competence: an entrepreneurial, flexible, innovative eco-structure that integrates knowledge produced by universities with industry expertise, and utilizes the support of government and local communities to create strategic synergies that boost economic growth.

We propose the creation of a CC at Perm National Research Polytechnic University. It would be the first CC in the Perm region and would be designed as a hub of science (knowledge produced by the university), industry (the major economic sectors), local government (funding and financial support through programs and grants), and society (the entrepreneurial community). The Perm CC would support innovations from the early stages of development to commercialization. Its mission will be to accelerate the commercialization of discovery-driven innovations from universities and to foster and accelerate the exchange of ideas between researchers on campus, through better access to informational, financial, technological, and human resources.

Perm National Research Polytechnic University is well suited for the design and implementation of a CC. In 2009 the university received a status of a “national research university,” one of only twenty-nine other universities in Russia to achieve this status. Thus,

Perm is an ideal location for an entrepreneurial center blending technology, engineering, applied science, and education. The center will become a catalyst for innovation through the integration of resources, and it will focus on launching innovative projects by utilizing state and regional programs and promoting entrepreneurial activity. CC initiatives will be focused on generating cross-disciplinary solutions, creating interdisciplinary knowledge, and developing new technologies and processes. We strongly support the implementation of a CC at Perm National Research Polytechnic University, as it will represent a significant step towards economic development and successful competition in the region and beyond. Innovation, science, and human capital will serve as the cornerstones of the new innovative system designed to serve social and economic needs.

Center of Competence as an ecosystem for innovation development

The Center of Competence (CC) will become a tool for integrating knowledge, expertise, and supporting entrepreneurial activity. Designed as a flexible system, and managed to ensure competitive growth, the CC will assist with the implementation of innovative strategies for creating competitive companies in the Perm region.

The CC will help to pool the following components within an integrated management system for innovation development: business, government, academia, professional associations, and the local community (figure 1); within the CC a flow of qualified specialists, active entrepreneurs, creative youth, and government agencies, together with science and education, will define the innovative development of economic sectors.

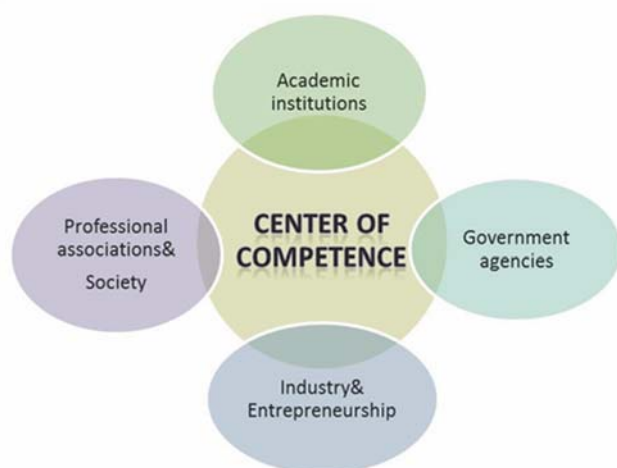


Figure 1. The CC as an ecosystem for innovation development

The Center of Competence will link industry and the university as well as assess public/private resources for mutually beneficial needs (e.g., facilitate tech transfer and start-ups; administer industry contracts and out-reach efforts; provide innovation services to internal and external researchers/organizations; utilize industry retirees to promote innovation and entrepreneurship; increase research funding and seed capital opportunities;

train and mentor start-ups and small businesses; and facilitate collaboration between large companies and recognized researchers). These efforts should intensify technology transfer and commercialization, and attract venture capital and other private investment resources, leading to the creation of a vibrant technology and innovation-driven ecosystem in the Perm region.

The objective of the CC as the core of communication between these different elements is ensuring the integration of knowledge and processes, and stimulating the emergence of an innovative culture. The CC will help companies in the Perm region strengthen their competitive edge, build dedicated teams of specialists with new comprehensive competencies, and drive the shift to an innovative management model.

The suggestions below provide examples of how we might better position the CC to achieve the goals stated above:

1. Create an executive advisory board to advance the reputation and capabilities of the center. Work with the advisory board to identify potential cooperation with enterprises in the region and to establish partnerships with those entities.
2. Motivate faculty members to lead research in the area of their expertise with connections to market needs.
3. Pursue funding through the local and federal governments to sponsor research initiatives of faculty and graduate students.
4. Organize business plan competitions for university students to build entrepreneurial skills and develop an innovative culture. Create cross-disciplinary teams to compete such as engineering, science, information systems, etc., in which interdisciplinary student teams will be required to write business plans focused on new technologies.
5. Develop a focused strategy that includes leading areas of expertise for the university such as mechatronics, nanotechnologies, aerospace, energy, and information systems technology.

Long-term collaborations made through the CC will give rise to new technologies helping to transform industries while modernizing the role of the university. However, collaboration is not going to be easy. As a rule, for most universities, partnering with industry does not come naturally. Most Russian academics are not engaged at all in collaborations with industry. When Russian universities do form partnerships with industry, too often the potential for synergy is thwarted by communication failures.

The most productive collaborations are strategic and long-term; they are built around a shared research vision and may continue for a decade or beyond, establishing deep professional ties, trust, and shared benefits that work to bridge the cultural divide between academia and industry. The collaboration requires strong university leadership, faculty who understand business, academics who have worked in industry, and making industry-university partnerships a clear priority.

The key recommendations for universities to foster successful collaboration with industry are the following:

- Make industry-university partnerships a strategic priority and communicate the message regularly to the entire academic community.
- Create an advisory board of executives from selected industry sectors and the highest level from the university who will develop an understanding of the key scientific and technological questions companies are seeking to answer. As a first step, a joint steering group including senior academics and company executives should be formed.
- Assess the core academic strengths of the university and the core research competence of local companies to identify promising opportunities for collaboration.
- Design incentives for university faculty and provide resources to manage a cultural shift that puts a clear priority on engaging with industry for mutual benefits.
- Encourage industry involvement. The university must utilize people capable of building and managing partnerships. Collaborations only work well when they are managed by people who cross boundaries easily and who have a deep understanding of the two cultures they need to bridge.
- Create opportunities for academics, company researchers, and executives with shared interests to come together and develop a dialogue. For example, informal exchanges over lectures or seminars can bring both sides together to spark conversations and lead to new relationships.
- When a partnership has been launched, have an executive board meet regularly to encourage strong two-way communications between academics and senior company officials. The chair should follow up regularly with members to keep the dialogue flowing and encourage impromptu feedback on the project from both sides at any time.
- Develop two-way exchanges to build a substrate of academics who understand industry. The university should encourage professors to get internships in industry and invite industry researchers to teach.

- Create long-term strategic partnerships that focus the university's creativity and talent on future innovations that can be taken to market by industry and deliver economic benefits within five to ten years.

- Encourage diversity. Innovation works when there is diversity. Invite to the projects individuals from different disciplines to contribute to the whole process. Collaboration of ideas, people, and places should be systematic.

- Redefine the role of the research university as a source of competence and problem-solving for society. Julio A. Pertuze, Edward S. Calder, Edward M. Greitzer and William A. Lucas, in their “Best Practices for Industry-University Collaboration” (2010), propose a set of seven guidelines that companies should follow to get the most out of their research collaborations with universities. The guidelines partly correlate with the key recommendations for universities stated above: longer-term projects, continuing relationships, assigning project managers who make the contract feel like a partnership, and enabling these managers to invest the time and effort to generate effective knowledge flows between the university and the company.

Conclusion

In the end, we emphasize that bold, visionary partnerships between industry and university are able to accelerate innovation and help deliver solutions to pressing economic and social challenges. Universities should collaborate with industry, and the role of the research university should be redefined for the twenty-first century as one that goes beyond teaching and public service to tackling key social challenges and helping drive economic growth. The university in the twenty-first century should be viewed not just as a generator of ideas but as a source of knowledge and competence that can benefit society.

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INTEGRATED MANAGEMENT MODEL OF “LEAN PRODUCTION” CONCEPT IMPLEMENTATION IN ENTERPRISE

Viktor Popov – Galina Ostapenko

Abstract

The paper is based on a systematic literature review and examines the variety of approaches and different models of the Lean Production/ Manufacturing Concept implementation. Similar to a management philosophy, Lean must be understood and valued at the top managerial level involved in the company's strategy. Lean principles might be interconnected by a coherent management system. The authors present an Integrated Management Model to implement a Lean Manufacturing System, which is developed on the basis of usage and transformation of known models/ approaches. Organization Development (OD) Model, Systems Intervention Strategy (SIS), Project Management Approach, Resistance to Change Management Approach are among them. The model is recommended for use at the initial stage to implement the Lean Concept within enterprises.

Key words: lean production concept, integrated model, implementation, organizational development, project management, resistance to change.

JEL Code: D 200, M 110, O 320

Introduction

Innovative development of the enterprise can occur in two fundamentally different from each other ways: through investing in innovation and through incremental improvements without significant investments. In the first case, the successful implementation of the planned measures is expected to cause leap in the development of the enterprise; in the second case smooth and continuous improvement of company's activities can take place. The second trend in management fits into the concept of Lean Production/Manufacturing, TPS, Lean Management, simply Lean. Developed as a production system of wastes elimination in the Toyota's plants in the 1960's, Lean is evolving into a management approach that improves all the processes at each level of an organization. Nonetheless not all of lean implementation

programmes are successful. The failure in lean implementation process is often consolidated to poor mind-set and inadequate understanding of the lean concept itself as well as improper management of Lean's implementation process. There are plenty of good research and practical works on this subject, but simplified and comprehensive implementation frameworks became a necessity.

In this paper through analyzing the different lean implementation frameworks we are particularly interested in the questions of: how might be the implementation of Lean management being structured through the usage of known management models and approaches, including Management of Change and Organizational development Model, Systems Intervention Strategy, Project Management Approach, Resistance to Change Management; how management models can correlate and work together? By answering these questions the authors tried to generate propositions on lean implementation and build their own structured comprehensive integrated management approach which can help managers and consultants to increase the probability of successful lean implementation.

1 The conceptual framework

Lean is a philosophy of manufacturing that incorporates a collection of principles, tools and techniques into the business processes to optimize time, human resources, assets, and productivity, while improving the quality level of products and services to their customers (Ronald, 2001). Bhasin and Burcher (2006) noticed that Lean primarily is a philosophy rather than a set of tools. They have noticed that only less than 10% of UK organizations have accomplished successful Lean implementation because they perceived it as a process, but not as a philosophy. Reger et al. (1994) suggest that Lean implementations often fail due to the cognitive dissonance of the members of the organization who have to work in the new, Lean organization. Organizational challenges include all obstacles in the path of the Lean implementation process such as executive, culture, management and technical issues (Taleghani, 2010)

The implementation as a process of adoption involves the necessity of innovation and adaptation of the organization, not just following a certain sequence of steps from a preliminary designed plan. If managed effectively, Lean can be the major philosophy uniting the organization in a relentless drive for improvement (Atkinson, 2010)

J. Womack (2003) believes that the successful implementation of the concept needs a leader, the knowledge, the conditions for implementation, value curve analysis, rapid

acquisition of positive results and continuous improvements based on Kaizen system. Womack and Jones (2003) described a time framework for a lean leap. It includes four phases: get started, create a new organization, install business systems and complete the transformation.

Dennis P. Hobbs speaks of the need for strategic and project management, a thorough description of the processes, the use of the stretching scheme, balancing the production line and appointment of a project manager (Hobbs, 2003).

Smeds (1994) proposed a generic framework for the management of changes towards lean enterprise. This framework consists of five phases such as analysis and model of the present state, identification of problems and opportunities, experimentation and selection of future state, implementing the change and establishing the new mode of operations.

Considering Lean primarily as a philosophy, the process of implementation - as a decision making process on how to create, properly manage and implement changes, authors believe that organizational development (OD) Model can play an important role in a Lean transition. Moreover, through the Organizational Development function Lean should actually begin. Lean concept at first meets top management commitment, the vision, setting goals and objectives addressing then to all staff towards creation a new thinking, developing new organizational culture going in a way to Lean organization. Using OD like a 'soft' organizational technology it is important to deal with behavioural aspect of change, HR functions, when the main focus is on people, when the points of middle management and employee's resistance to change are identified, then overcoming resistance through training, team building, facilitation, support and other technologies.

OD Model uses a range of change approaches and techniques. Systems ideas can be used to structure the process of understanding, planning and managing change. Systems Intervention Strategy (SIS) is one of a family of systems approaches. Although many of these systems approaches are 'hard' methods, because they focus on 'things', SIS also has an appreciation of the importance of 'process', which is a feature of the most 'soft' methods. Meanwhile this approach involves facilitator's, the OD consultant's participation. As rules they are from outside, they are knowledgeable, experienced and skilled over change procedures persons. SIS as a structured organizational technology has three overlapping phases (diagnosis, design, and implementation) and 9 (from zero stage) clear steps. For each step, there is a set of appropriate actions that can be taken and a number of tools to use.

In a project management context, change management may refer to a project management process wherein changes to the scope of a project are formally introduced and approved. When Lean has been chosen as the philosophy, becomes a part of organization strategy and every day management, and Lean implementation process begins. To overall Lean Plan's implementation we recommend to do it on a project oriented basis, using PM approach. It is like a Pilot Project with creation and implementation the portfolio of specific different improvement projects.

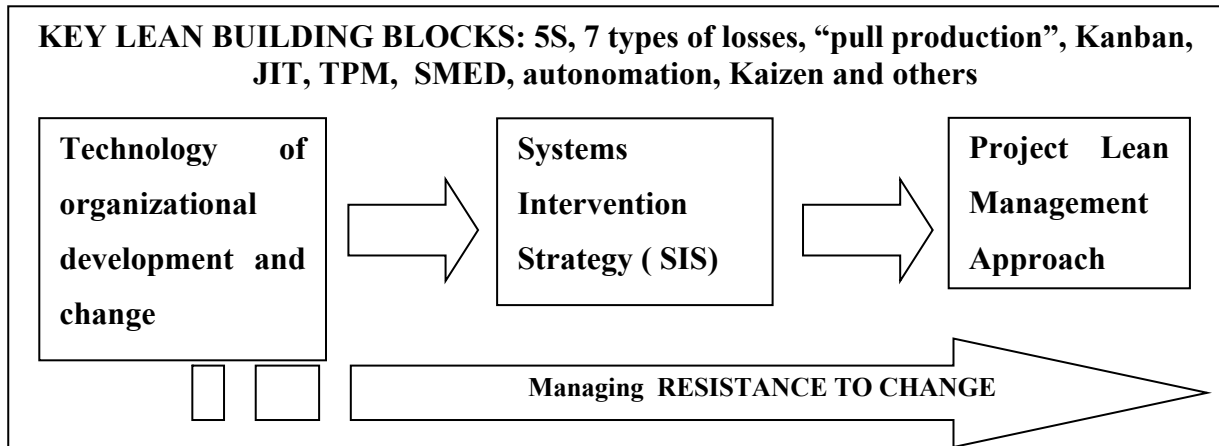
Organization Development and Project Management Approaches reinforce each other, but do not work without managing resistance to change, without paying the attention on behavioural aspects of Lean concept implementation.

2 Model Description

The most common tools and methods of lean production are: "5 S"; value stream mapping; Kanban ("pull" system); Single-Minute Exchange of Dies (SMED); Total Productive Maintenance (TPM); system "just in time" (JIT); automation (the principle of jidoka); continuous improvement, kaizen and many others. These methods and tools are represented in our model as the key Lean building blocks of Lean System. All of them while introducing to the enterprise are fall into the arms of organizational and project management tools and models on the way to becoming a Lean enterprise.

Graphical component of integrated model of organizational change management during the Lean production concept implementation in the enterprise, developed by the authors, can be presented in three blocks of famous approach: the technology of organizational development; systematic technology of intervention, project management approach; it is also include and behavioural - counter resistance to change from the staff (Figure 1).

Fig.1: Scheme of integrated management model of implementation of lean production



SIS has been around since the 1970's. It is a “systems” or “hard” approach to managing change

We have tried to specify the relationship between the elements of the model. The correlation between the elements is as follows (Table 1).

Table 1: The content of Integrated Management Model of Lean production concept implementation

№	Lean production concept implementation: the main stages of activities within the known Models/Approaches		
	Technology of Organizational Development and Change (OD Model)	Systems Intervention Strategy (SIS)	Project Management Approach/ Managing the projects of implementation
1	Defining the mission to change	Entry	Project Integration Management
2	Evaluation of external and internal conditions	Description of the system	Project Content Management
3	Collecting of data	Identify objectives and constraints	Project Time Management
4	Ensuring the involvement of staff	Formulate measures for your objectives	Cost Management Project
5	Setting the goals for changes	Generate a range of options	Project Quality Management
6	Implementation of changes	Model options selectively	Human Resource Management projects, Team project
7	Assessment and consolidation of changes, measurement of the results achieved	Evaluate options against measures	Communications Management Project
8		Design implementation stages	Risk Management Project
9		Carry through planned changes (realization of the project)	Supply Chain Management Project
10			Management of Interested Parties

Technology of Organizational Development (first column) examines global issues of change and is usually within the competence of senior management level; and is characterized by blurred boundaries. Connection with the systematic technology of intervention and project management is most clearly seen when the steps 5, 6, 7 are implemented (setting goals, the implementation of changes and results' measurement).

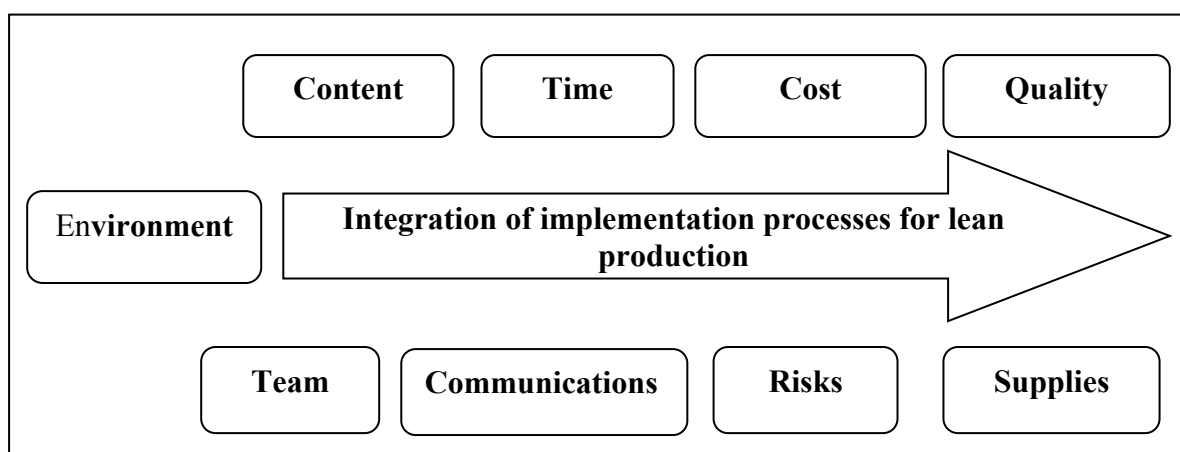
Overcoming the resistance is encountered while the implementation of 3 and 4 (data collection and ensuring the involvement of the staff) steps, when the level of staff loyalty to upcoming changes is being determined, and measures to ensure the involvement of staff in the change process are being implemented.

Systems Intervention Strategy (column 2) initially implies ensuring the involvement of staff in the change process, and connection with project management is carried out for all positions, especially in step 9 (Realization of the Project). Points 1-4 are grouped under the name of "diagnostics"; 5-7 under the name of "designing" and points 8-9 - "implementation".

Project management as a structured technology of change management (column 3), is most clearly associated with overcoming the resistance in the points 6 and 7 (Human Resource Management and Project Communications Management).

Effective management of the Project «Implementation of Lean Production » is crucial for achieving the goals. Project management (PM) - is a process of planning, organization, coordination and control of resources and tasks aimed at achieving these goals. International standards of Project Management give a description of the environment and project life cycle, provide recommendations to build the organizational structure of the Project, describe groups of processes in PM, concretize the field of knowledge in PM. The structure of the applicable fields of knowledge is shown in Figure 2.

Fig.2 Knowledge areas managing a project of implementation of lean production



Fields of knowledge (competence) is convenient to consider using the format of the American National Standard for Project Management PMI PMBOK or the International Standard ISO 21500-2012. Content management of the project of implementation of the concept lean production may require high-level professionals with unique competencies. In the absence of such professionals, team invites external experts using the principles of outsourcing. This practice is quite common for companies working in the field of IT. When planning and tracking time and costs of implementation of projects, good results are obtained by using information systems for project management, built, for example, on the platform of Microsoft Project.

Effective quality management of Lean concept implementation Project requires usage of principles of process approach to management, formalized in a series of International Standards ISO 9001, ISO 10006. The most effective ways to control the current members of the project team and communications are the Gantt charts and operational meetings. Project for implementation of organizational changes in a field of lean production is a chain of risky activities, so the team must consist of people, which are ready to take calculated risks, capable to identify risks, make qualitative and quantitative evaluation of risks and to develop countermeasures for those risks. Finally, organizational projects are always accompanied by a lot of changes, so in the area of integration it is necessary to create effective change management system. If to follow recommendations of the American National Standard for Project Management PMI PMBOK or the International Standard ISO 21500-2012, then the life cycle of a project for implementation of the concept lean production in the enterprise can be represented in four stages (PMI, 2008): the beginning of the project; organization and preparation of the project; execution of the project; completion of the project. At the first stage is recommended to develop Project Charter; at the second stage - Project Management Plan. Developing the Project Management Plan for implementation of the concept lean production is a process of identifying, preparing and coordinating all Subsidiary Plans and their integration into a comprehensive Project Management Plan. Thus, it is a central document, foundation for all Project related activities. These activities should also be carried out on a project basis. Project Management Plan defines how the Project must be implemented, monitored, controlled and completed. The basic Plan may include Subsidiary Plans:

1. Integration Management Plan (Project) is needed when processes interacts to identify, combine, unify and coordinate various processes/activities and manage interdependencies;

2. Contents Management Plan (Project) that must describe the basic works, execution of which is necessary to achieve the objectives of the project;
3. Time Management Plan (Project), which give the requirements to govern the order for changes in the basic parameters of the project and in addition to Gantt's diagram, it has the list of necessary measures for controlling and adjusting the plan;
4. Cost Management Plan (Project), which regulates the assessment activities regarding work processes and allocation of resources;
5. Quality Management Plan (Project) is needed both for a product of the Project, and for the process of project management;
6. Plan for human resource management, (HRM Project) including the selection of project team members and the current management of the performers;
7. Communications Management Plan (Project) is to define the communication requirements for the Project; it provides in-time and accurate information to all participants of the Project.
8. Risk Management Plan (Project), including identification, qualitative and quantitative risk evaluations and the development of measures to manage the risks;
9. Logistics and Supply Chain Management Plan (Project). It is needed during the purchase process to plan, control and monitor « complex and dynamic supply and demand networks».
10. Plan for managing interested parties, primarily internal (employees) and external customers, consumers, other agents.

In addition, the Project Management Plan for implementation of the concept Lean production may include the following: the project life cycle (PLC) for each selected lean building blocks and the processes that will be used in each phase of PLC; details of solutions for adaptation of the Project; the order of works execution to achieve the objectives of the project; Change Management Plan, documenting the order for monitoring and controlling of all changes during the project implementation including time, scope, cost; Configuration Management Plan, documenting the order of configuration of parts, specification, subsystems, and systems for effectively controlling system change; addresses the composition of a Project, the documentation defining it and other data supporting it; description of the procedure of maintaining the integrity of Basic Plan; requirements and methods of communication between the interested parties; key activities on the analysis of management regarding the content, boundaries, time issues and solving of project's problem.

The Project Management Plan of the implementation of the concept Lean production can be prepared in the upper tiered form, as well as in detail, and may consist of several

Subsidiary Management Plans. Each of the Subsidiary Management Plans is detailed to the extent required for the specific Project.

3 Managing Resistance to Change and Implementation of Lean Project

The above Models of Organizational Development and Project Management Approach are appropriate to use in steps of creating change and managing change. During the implementation of organizational changes, including the introduction of the concept of Lean production inevitably appears a resistance to change, which is one of the major problems faced by developing organizations. Resistance affects the feelings and opinions of employees at all stages of the adoption process. It affects productivity, quality, and relationships. There were identified several reasons for resistance to change, among them: the potential threat of wage reduction; unwillingness to change the existing system of production and personal relationships; personal inertia; reluctance to take on new responsibilities, etc. There are following reasons for resistance to implementation of the concept Lean production at the start: lack of employees' understanding of what is expected from them; lack of employees' understanding of the objectives of Lean project; lack of employees' awareness of the progress of work; undefined period of time for the corresponding events.

The most well-known models of implementation of organizational changes are three-step change model of Kurt Lewin and a model of John Kotter. Lewin (1947) conceptualised social change as occurring in three phases: (a) unfreezing, (b) changing, and (c) refreezing. Eight steps Kotter's model (Kotter 1946) envisages the creation of a coalition and some of the actions of a psychological nature. Furthermore, the reforms' initiators must choose one from two well-known approaches: the theory of the "E" or the theory of "O", authored by Michael Beer and Nitin Nohria. The theory of "E" is based on the priority of economic value and is therefore preferable for the company's shareholders. The theory of "O" sees the company as a self-developing system, focused on corporate culture, goals and motives of employees. Considering usually tight schedule of changes during the implementation of the concept of lean production, as well as the specifics of enterprise management, the reformers should select theory "E" as a basic. This means the usage of rather stringent methods, the emphasis for change from top to down and the focus on the creation of structure and systems. However, sometimes the elements of the "O" theory are being used, allowing to involve staff in the

process of organizational change. Japanese companies also prefer to use the theory of "O", betting on the development of corporate culture.

When implementing the concept of lean production, the difficulties of each enterprise are unique, and of course they depend on several factors: the scope of the company (industry), the size, number of employees, management style, the economic situation and other contextual factors. In all cases the correct transition to Lean production is accompanied by a proper understanding of its philosophy and the readiness of management for significant changes. The key milestones during the implementation of lean production are: a thorough analysis of the problems, experienced assistance in this area, the emphasis on strengthening the vulnerable parts, focus on long-term outcomes, continuous changes and the awareness that the implementation cannot be done once, but the process should be constantly developed.

Conclusion

Lean is a management philosophy more than a tool and requires significant changes in the way of thinking and strategy. We believe that Lean is philosophy of change; the process of implementation is a decision making process on how to create, properly manage and implement changes. The Lean must be understood and rated at the top managerial level, involved into the company's strategy.

Through analyzing different Lean Concept implementation frameworks and usage of known management models and approaches, including Management of Change and Organizational Development Model, Systems Intervention Strategy, Project Management Approach, Resistance to Change Management an integrated model of Lean Concept implementation was proposed. It is shown the logical interrelation between these approaches; it is described how the main stages of activities within these autonomous models (approaches) correlated with each other, it is proved that they even force each other. The model is structured, simplified and is applicable to use for all types of enterprises in various industries. We recommend to managers and consultants use it at the initial stage of Lean Concept Implementation.

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INNOVATION AS A FACTOR OF REGIONAL ECONOMIC GROWTH: EVIDENCE FROM RUSSIA

Svetlana Rastvortseva

Abstract

The aim of this research is to determine which factors of innovation are relevant to generate economic growth at the regional level and which to reap the benefits. The new growth theories suggest that the source to increase returns may be agglomerations as geographical concentrations of knowledge. The paper analyses the concentrations of knowledge as agglomerations of expenditure on Research and Development, and on science and technology. It entails the number of scientists and engineers, scientific and technological personnel of innovation enterprises in the various Russian regions. The Exploratory Factor Analysis method is used to examine the structure of the innovation inputs and outputs. The paper empirically evaluates the impact of innovation factors on the economic growth in the regions and proposes a strategy to improve the efficiency of the regional innovation system.

Key words: innovation system, economic growth, regions of Russia

JEL Code: O32, O41, R12

Introduction

The Russian economy strongly depends on natural resources. Any changes in the world state of affairs put in jeopardy the stability of neither economic, nor social development. Change in conducted policy in the direction of innovation should fix this situation.

Russia has a significant scientific, research, innovative potential, efficient use of which will improve the competitiveness of the economy. Exactly this innovative development must be a key factor in the economic growth of the country, including regions. It is important to reveal which aspects of innovative development impact on the economy. How soon can appear the effect of R & D, of innovations' implementation, the aggregate of which innovative components allows to achieve maximum success in the economy.

The aim of the research is to determine which factors of innovation system are most relevant to generate economic growth at regional level and which factors are needed if regions are to reap the benefits of innovation system.

1 Theoretical background

The regional innovative potential is represented by resources, mobilized to achieve an innovative purpose, institutional mechanism. As a structural element of the economic potential it is close to the concept of "scientific and technical potential." His purposeful orientation is the production of new knowledge, ideas, discovering new technologies and search of ways for their implementation. Functional orientation of innovative potential consists in providing with conditions, under that other potentials: labor, natural resources, financial, information – could be realized in the most completely way.

Recent studies show that in the modern economy, based on the use of the achievements of STP, the formation of a sufficient innovative potential is the starting point for improving development effectiveness in the region. We can explain this relationship in the following way. In market conditions innovative technologies are in demand only in the presence of competition. It forces companies to create new competitive advantages, including related to innovations. Using the innovative potential can be compared with qualitative shift production possibility curve, as in this case real prospects for improving the quality of products arise, the rational use of human and material resources, improve productivity and efficiency in general.

F. Kvatraro attempt to supplement Schumpeter studies. He conducts an empirical analysis of changes in the development efficiency of the 20 Italian regions for the period 1981-2003. The analysis shows, that the efficiency depends on the regional transition to the knowledge-based economy. At the same time, scientist has discovered the following pattern. Early industrial territories are fully involved in the global movement towards an economy based on knowledge. In the late industrial regions due to slow expansion of production efficiency growth and active implementation of innovations occurs within the industrial economic sectors (Quatraro, 2009).

A. Skiba considers regional innovative development as the main direction of increase the efficiency. He analyzes the different views on the problem of determining the efficiency of scientific and technological progress (Skiba, 2008). B. Cherkovets thinks that socio-economic development of the national economy is determined by its efficiency. Efficiency, by

turn, depend on "... the height of productivity in the public material production. We can assume, that the main resource (or resources) of innovative economic development in the country lies in the sources and factors of labor productivity growth" (Cherkovets, 2009, p. 30).

Theoretical research on the geographic and economic dimension of innovation divided into some streams. The first stream of research considers the distribution of innovation activities and employment. A second stream of literature is papers about regional innovation complexes or clusters. The third one deals with the role of geographic agglomeration in technological innovation and economic development (table 1).

Tab. 1: Basic economics approaches deals with innovation and economic development

Theory	Authors
Differences in growth rates may result from increasing returns to knowledge	Romer, 1986; Lucas, 1993; Grossman and Helpman, 1990
Convergence of countries depending on their steady-state level which in turn is conditional on savings, population growth and the production function. Diminishing returns to capital imply that in the absence of technological change, growth would stop. As empirically long-run growth does not stop, technological progress was assumed to be exogenous.	Solow, 1956; Swan, 1956
Technology is considered to be exogenous, it should be excluded from the models	Barro, 1997
Technology should be brought into the models through the inclusion of R&D theories	Romer, 1990; Grossman and Helpman, 1994; Barro and Sala-i-Martin, 1995
Holding constant expansion, in absence of technological progress, diminishing returns to scale will bring about convergence	Aghion and Howitt, 1998
Discoveries immediately spillover to the entire economy as knowledge is non-rival	Arrow, 1962; Sheshinski, 1967

The new growth theories suggest the source of increasing returns may be agglomerations as geographic concentrations of knowledge. The agglomerations of knowledge provide a means to facilitate information searches, increase search intensity and ease task coordination (Rastvortseva, 2014). Geographic location may provide knowledge

spillovers and the generation of innovation and yields higher rates of technological advance and economic growth (Feldman, 1999).

2 Geographic concentrations of innovations and economic growth

National competitiveness, by Porter, is determined as a result of the country's ability to innovate in order to achieve and preserve the advantageous position in comparison with other nations. The level of competitiveness and economic efficiency of the Russian regions development is different. So, in 2013, the maximum value of GDP per capita was in the Nenets Autonomous District - 4003 353.8 rubles per head, the minimum - in the Chechen Republic - 88 462.4 rubles per head (Fig. 1).

Fig. 1: GRP per head in Russia in 2013



Source: Calculations based on *Russian Federation Federal State Statistics Service*

To analyze the agglomerations of expenditure on research and development, expenditure on science and technology, amount of scientists and engineers, amount of scientific and technological personnel, output of innovation products, amount of innovation enterprises in Russian regions I am going to use Herfindahl-Hirschman index and Gini index (table 2).

Tab. 2: Methodological tools for assessment of the geographic concentration of innovations

Index	Calculation	Notation
Herfindahl-Hirschman index of innovation concentration (<i>HHI</i>)	$HHI = \sum_{i=1}^n x_i^2$	x_i is share of region i in total indicator of innovative development
Gini index (<i>G</i>)	$G = 1 - 2 \sum_{i=1}^k dx_i dy_i^n + \sum_{i=1}^k dx_i dy_i$	where dx_i is share of group i in the total population size; dy_i is share of group i in the total feature size; dy_i^n is an accumulated share of group i in the total feature size.

Source: (Rastvortseva, 2014).

Internal costs on R & D - the actual cost of performing R & D within the country in monetary terms (including funded from abroad, but excluding the payments made abroad). Their assessment is based on the statistical accounting of costs for R & D on organizations' own forces during the reporting year independently by source of financing¹⁵. Let us consider the dynamics of internal expenditures on R & D in Russian regions in 2005-2013 by assessing Herfindahl-Hirschman index and Gini index (Fig. 2-3).

Fig.2: Dynamics of Herfindahl-Hirschman index on indicator for internal expenditures on R & D in Russian regions in 2005-2013

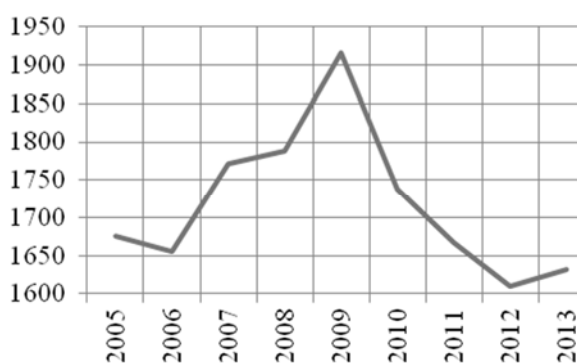
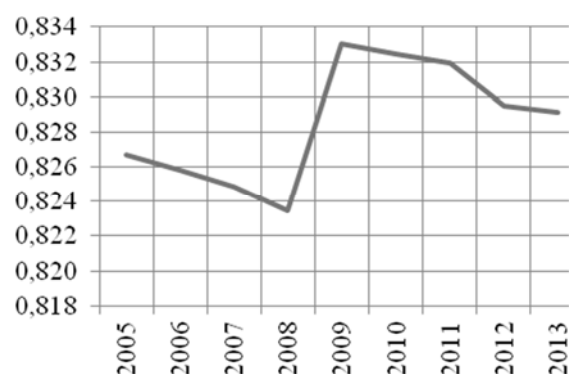


Fig.3: Dynamics of Gini index on indicator for internal expenditures on R & D in Russian regions in 2005-2013



Source: Calculations based on *Russian Federation Federal State Statistics Service*

¹⁵ Methodological notes in *Regions of Russia. Economic and Social Performance*. 2014: Stat. book / Rosstat. - Moscow, 2014. - 900 p., p. 738

Fig. 2-3 show a high degree of concentration of expenditures on R & D in certain regions of Russia in 2009. In the same period maximum stratification of regions on this indicator was also observed (Fig. 2). In general, the graphics have a similar dynamics, except for the period 2006-2008 and 2012-2013. Let us note that in 2007, 2008 and 2013 there was an increase in the degree of concentration of R & D expenditures in the presence of the general decline in regional inequality in terms of similar indicator. Thus, in 2007 the shares of the Khanty-Mansi Autonomous District (with the growth of R & D expenditures by 2 times), the Krasnoyarsk Territory (by 1.62 times), Irkutsk region (by 1.61 times), Volgograd region (by 1.61 times), Republic of Bashkortostan (1.46 times) and some other regions have significantly increased.

Let us consider the dynamics of technological innovative (food, process) costs in Russian regions in 2005-2013 by assessing Herfindahl-Hirschman index and Gini index (Fig. 4-5). Expenditure on technological innovation - actual expenditures in monetary terms, related to the implementation of various kinds of innovative activity, carried out within the organization (branch, region, country). Current and capital expenditures are taken into account as part of the cost of technological innovation¹⁶.

Fig. 4: Dynamics of Herfindahl-Hirschman index on indicator for technological innovative (food, process) costs in Russian regions in 2005-2013

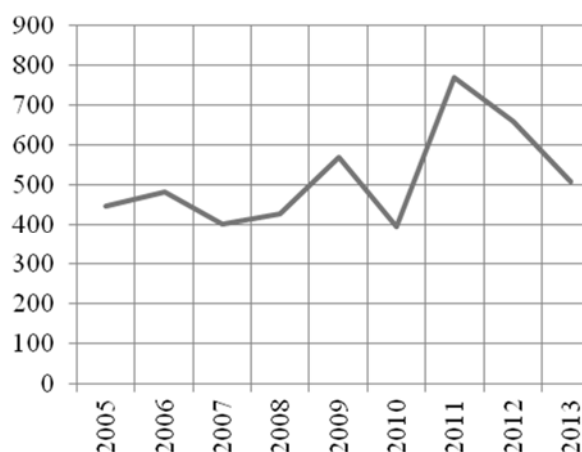
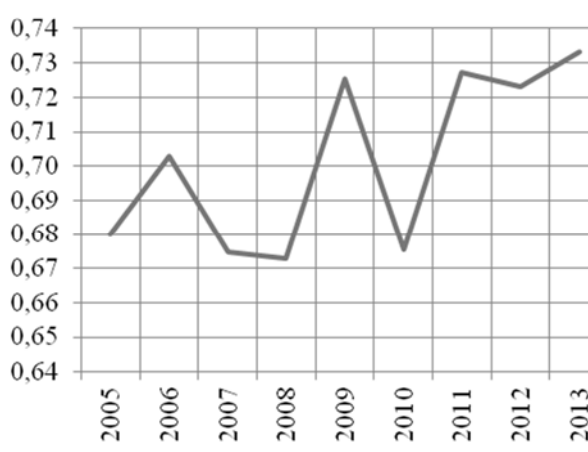


Fig.5: Dynamics of Gini index on indicator for technological innovative (food, process) costs in Russian regions in 2005-2013



Source: Calculations based on *Russian Federation Federal State Statistics Service*

The dynamics of the two indicators, which are shown in Figures 4-5, prove that the concentration of technological costs in certain regions of Russia is almost always

¹⁶ Methodological notes in *Regions of Russia. Economic and Social Performance*. 2014: Stat. book / Rosstat. - Moscow, 2014. - 900 p., p. 738

accompanied by growth of divergence. The exception is 2008 (the growth of expenditure concentration was accompanied by a decrease of inequality) and 2013 (decrease of concentration took place amid growing Gini index). In general, the technological expenditures are less concentrated in the regions, than cost of R & D.

Let us consider the dynamics of R & D staff in Russian regions in 2005-2013 by assessing Herfindahl-Hirschman index and Gini index (Fig. 6-7).

Fig. 6: Dynamics of Herfindahl-Hirschman index on indicator for R & D staff in Russian regions in 2005-2013

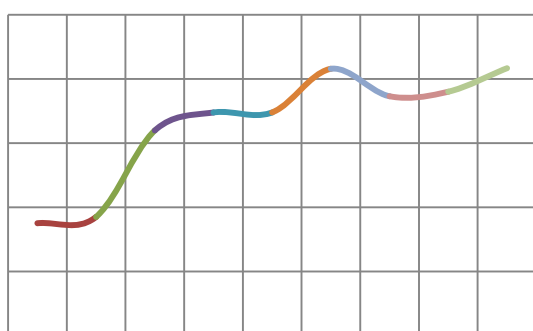
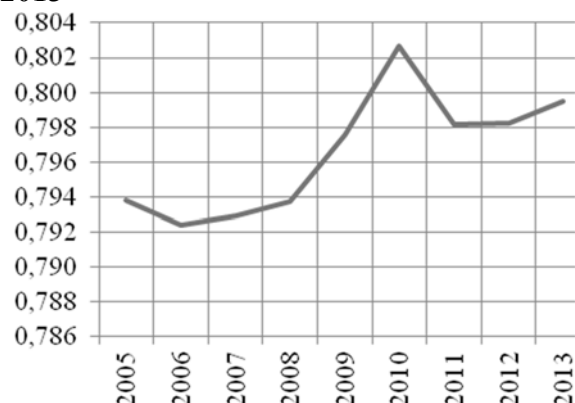


Fig.7: Dynamics of Gini index on indicator for R & D staff in Russian regions in 2005-2013



Source: Calculations based on *Russian Federation Federal State Statistics Service*

The concentration of R & D staff is high enough in the Russian regions and has a tendency to grow. 61% of all scientific staff works in the four leading regions on this indicator: Moscow (32.66% in 2013), Moscow region (11.81%), St. Petersburg (10.84%) and Nizhny Novgorod region (5.71%). Let us consider the dynamics of Herfindahl-Hirschman and Gini indices for the release of innovative goods and services in the regions of Russia in 2005-2013 (Fig. 8-9).

Fig. 8: Dynamics of Herfindahl-Hirschman index on indicator for innovative goods and services in Russian regions in 2005-2013

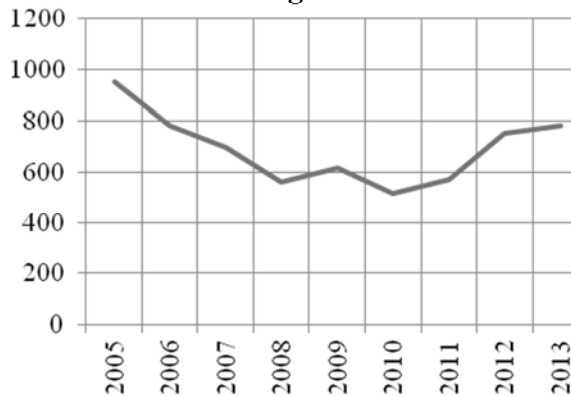
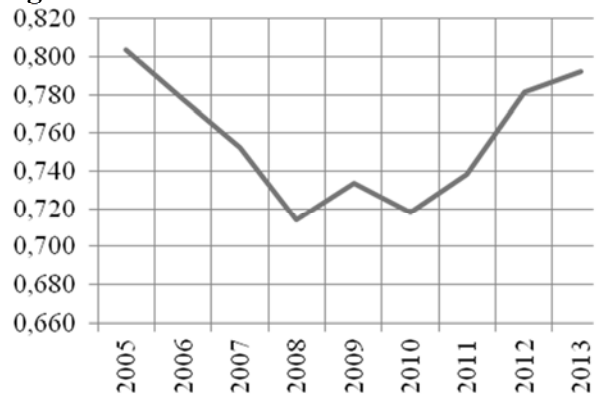


Fig.9: Dynamics of Gini index on indicator for innovative goods and services in Russian regions in 2005-2013



Source: Calculations based on *Russian Federation Federal State Statistics Service*

Another tendency is observed in the analysis of the concentration dynamics of the innovative goods and services' release. In the period up to 2008 and in 2010 there was a process of dispersal of production - peripheral regions have been actively involved in the production of innovative products. However, since 2010 production has been moving towards the central regions of the country, and increase in regional disparities on this indicator is observed.

3. The data and the estimation procedures

The data used in this study comes mainly from a Russian Federation Federal State Statistics Service, Statistical Data Book *Regions of Russia. Economic and Social Performance* for 2005-2014. The data has been collected in 83 regions, with the exception of the Republic of Crimea and Sevastopol.

To assess the impact of innovative factors on regional economic development, we will use a power-mode regression model with constant elasticity:

$$\hat{Y}_t = \alpha \prod_{i=1}^m x_{i,t-1}^{b_i}, \quad (1)$$

where \hat{Y}_t is GRP, predicted in the time period t ;

α is absolute term of equation;

x_i is innovative factors, included in the regression model;

b_i is equation parameters - regression coefficients, particular elasticity coefficient of GRP on investigated factors;

i is serial number of the factor;

m is number of factors, included in the model.

In linear representation the model looks in the following way:

$$\ln \hat{Y}_t = \ln \alpha + \sum_{i=1}^m b_i \ln x_{i,t-1} . \quad (2)$$

As a productive indicator we denote the gross regional product for 2013. Taking into account the fact, that the effect of innovative factors appears after a time, we consider the factor indicators for the previous period - 2012. In the course of the sample some emissions have been eliminated: in terms of internal expenditures on R&D - Moscow, the Moscow region, St. Petersburg, Nizhny Novgorod region; in terms of GRP - Khanty-Mansi Autonomous District, in terms of other indicators - the regions with their zero values due to limitations of the linearization of the power-mode model.

4. Empirical results

The results of the conducted analysis regarding modeling pair regression are presented in Tab.3.

Tab.3: The results of the empirical analysis-characteristic of pair regression models

	Internal expenditures on R & D	Expenditures on technological innovations	The number of staff engaged in R & D	The volume of innovative goods, works and services	Innovative activity of organizations
<i>b</i>	0,441*	0,394*	0,469*	0,227*	0,298
<i>R</i> ²	0,538	0,702	0,502	0,488	0,024
<i>Adj R</i> ²	0,532	0,698	0,496	0,481	0,011
<i>F</i>	85	172	73,7	69,7	1,8

* Significant at the 5% level

The results of the empirical analysis prove that the most significant factors for the development of the economy are the costs of technological innovations and internal costs of R & D. In order to determine the best combination of effective factors, we carry out a stepwise regression (Table.4).

Tab. 4: Results of the empirical analysis (stepwise regression)

	Model 1	Model 2	Model 3	Model 4
Internal expenditures on R & D	0,112	0,112	0,096	0,118
Expenditures on technological innovations	0,325*	0,325*	0,250*	0,270*
The number of staff engaged in R & D	–	-0,004	0,037	0,010
The volume of innovative goods, works and services	–	–	0,058	0,057
Innovative activity of organizations	–	–	–	-0,232
R^2	0,715	0,715	0,728	0,741
$Adj R^2$	0,707	0,703	0,713	0,722
F	90,3	59,4	46,9	39,5

* Significant at the 5% level

Results of the analysis, presented in the table, show that all innovative factors have a positive effect on the regional economic development (GRP), except for the innovative activity of enterprises, whose influence on the GRP is not statistically significant. Moreover, for a given volume of observations inclusion in the regression model the cost factor for technological innovations only is justified, while the inclusion of other factors is surplus. These results could be interpreted in two ways. On the one hand, the regions, spending more money on research and development and technological improvements, get great effects for economic growth. On the other hand, the more successful regions can afford themselves to spend more on the development of science and technology. We tend to keep the second position. In regions with a high level of competitiveness and economic efficiency the best conditions for the occurrence and development of modern technologies and innovative enterprises are created. This is confirmed by the negative influence of the factor *innovative activity of the companies* - in the more successful regions, the share of innovative active enterprises lower, because region does not develop due to them, but relying on industry, service sector and ... the extractive industry.

The study allowed us to identify positive trends in Russian regions' development. We conducted a similar analysis for the previous periods, what showed that the correlation between the innovation development and economic development indicators is very weak or non-existent. Thus, we see, that in 2012 appears a stable relationship between the development of innovative and economic sectors. We hope that this forebode the transition from the development of the Russian economy, based on the performance to the development, based on the innovative growth.

Conclusion

Growth of innovative resources concentration is not always accompanied by increase of inequality among regions on relevant indicators. It testifies the occurrence in certain regions in new centers of innovation. Innovations are being the most actively implemented in such regions as Moscow and St. Petersburg, Moscow region and Nizhny Novgorod region. The crisis impacts negative on the development of innovation in non-central regions. Consequently, only the stable development of the economy will contribute to the dispersal of innovations in all regions of Russia. The most significant factors for the development of the economy are the costs of technological innovations and internal costs of R & D. The more successful regions can afford themselves to spend more on the development of science and technology. A stable relationship between the development of innovative and economic sectors in Russian regions appears in 2012.

The findings of the article are useful for policy applications and policy-makers by providing them with a better understanding of the impact of key innovative determinants of regional growth, the length of time needed for these factors to generate growth and which combinations of factors are most successful.

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PROVIDING THE INNOVATIONAL POTENTIAL OF CHEMICAL INDUSTRY ENTERPRISES

Nataliy Sharafutdinova

Abstract

This article presents a tested methodology to assess the innovation potential of enterprises within the chemical industry, and considers regional and sectoral characteristics. The management and analysis model of innovative potential to improve the use of existing resources and potential reserves of the enterprise in conditions of competitive market is offered. The content of the category of innovative potential of the enterprise is clarified. It includes the existing innovative resources and potential reserves of the company to achieve and maintain competitive advantages in conditions of competitive market.

Key words: innovation potential, innovation, industry

JEL Code: L82, Z1, O31.

Introduction

In the modern economic theory the innovation-based development of industrial enterprises that are the main source of added value generation is considered to be mainstream and often the only possible way to ensure strong long-term economic expansion of industrial production. Innovativeness as an inherent feature of a businessman is not present yet due to specifically Russian market relations. The transition to market economy gave momentum to the development of a number of export-oriented primary and extractive industries; however it did not determine any notable growth in the volume of high-technology products. As a result, Russia, where 10-12% of scientists of the world work, exports less than 1% of competitive high technology products. The goal of the study is to develop the methods of formation and implementation of a balanced innovation policy of an industrial enterprise and to design practical guidelines on comprehensive assessment of the effectiveness of innovations.

Questions of creating potential, particularly innovational potential, have been addressed quite often in academic literature – however, the existing information is often of a fragmentary and contradictory nature. This is proven by the fact that the notion of “innovational potential”

itself, which beginning from 1980s have become a “conceptual reflection of the innovation activity phenomenon”, and a popular matter of discussion for both Russian and foreign scholars, has no conclusive interpretation. The issues of innovational development of an industrial enterprise are complex and multi-faceted. A significant contribution to their solution was made by the following Russian researchers: V.M. Anshin, L.S. Baryutin, P.I. Vaganov, S.Y. Glazyev, P.N. Zavlin, S.V. Ildemenov, S.D. Ilyenkova, V.S. Kabakov, A.K. Kazantsev, V.G. Medynsky, A.V. Mislavsky, Y.P. Morozov, A.I. Prigozhin, K.F. Puzynya, M.I. Razumovskaya, V.G. Sokolov, A.A. Trifilova, R.A. Fatkhutdinov, K.S. Chernykh, A.I. Shcherbakov, Y.V. Yakovets and others. Among foreign scholars the following authors deserve a mention: I. Ansoff, G. Clark, J.J. Lambin, A. Little, C. McMillan, G. Mensch, A. Mansfield, B. Santo, S. Tatsuno, C. Freeman, J. Schumpeter and others.

1. Theoretical Basis of the Study

In the following definition of innovational potential – “capability of various industries of the national economy to produce high technology products that meet the requirements of the world market”(Kravchenko SI, 2013). the category in question is associated with a certain level (national economy), which also narrows down the sphere of its application; besides, in this case organizational innovations and innovative services fall out of consideration.

Taking the above into consideration, the category of “innovational potential” can be interpreted as a capability of a system to transform the actual course of events into a new shape in order to satisfy the existing or emerging needs (of the innovator, the customer, the market, etc.). Additionally, the effective use of the innovational potential makes it possible to move from a latent possibility to the actual reality, i.e. from one condition to another (namely, from tradition to innovation). Consequently, innovational potential is some sort of a characteristic capability of a system to alter or adjust itself, to improve and progress.

Innovational potential defines the position of a given enterprise on the technological level of the production output. Here are the main goals of creating a company’s innovational potential: development of innovational projects, models and plans for promotion of competitive ability and leadership;

introduction of new developments in the given industry; designing progressive norms that facilitate manufacturing competitive products;

improving the conception of the products according to the market requirements.

The author offers a conceptual model of the innovational development of an industrial

enterprise, whose graphic interpretation is in the form of a spiral referred to the time parameter, market possibilities and knowledge management (fig. 1).

An organization, once it steps onto the innovation trajectory of development (IT^*), can rely on an “innovation bonus” (ΔI), which basically is an aggregative effect achieved by saving the working time (Δt) while fulfilling all the intended objectives as a result of marketability increment (ΔPB) on the basis of knowledge management while conducting a balanced innovation policy. The innovation bonus can be estimated by calculating the area of the shaded figure.

The innovational development model of an enterprise should be considered in conjunction with the industrial innovation process. The innovation process is a process of transformation of academic knowledge into an innovation, which can be presented as a successive chain of events resulting in the innovation maturing from an idea into a definite product, technology or service and is distributed I actual practice.

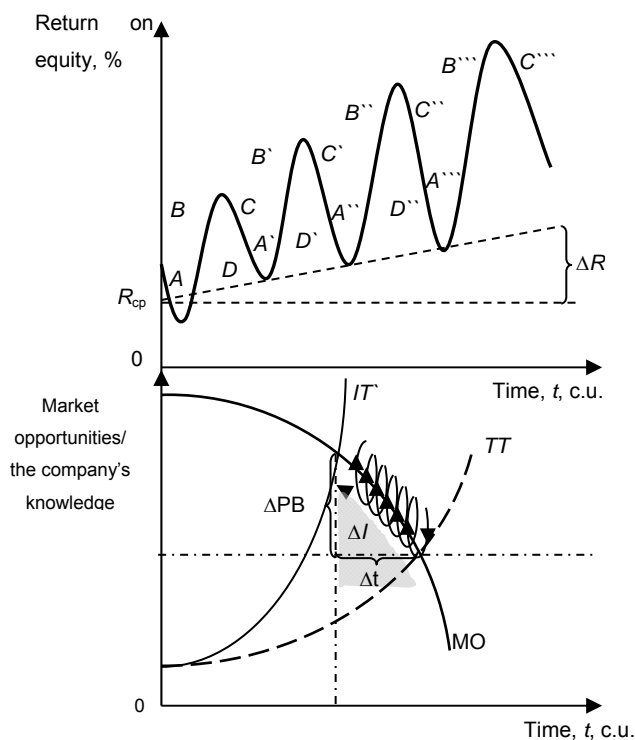


Figure 1 – Model of innovational development of an industrial enterprise

The innovation process is usually examined from three points of view: as a parallel/serial implementation of certain types of activity, as stages of the innovation's lifecycle and as the process of investment of the development of the innovation. The analysis of the models drives

us to the following conclusion: innovation process does not end with the creation of a new product; this process has feedback and it is of continuous nature. To conduct effective innovation policy one must answer the question: what is the reason of the enterprise's commitment to innovation? By analyzing various typologies the author has designed a comprehensive classification of factors that determine the innovational activity of an industrial enterprise.

2. Methods of Research

The effectiveness of the innovation potential can be characterized by many indicators, such as: the increase of sales volume, the improvement of the customer appeal of products, the relative share of innovational reforms, the economic feasibility of norms.

Table 1. Technical and economic factors influencing the development of innovation processes

Factors of innovational work	
Deterrent factors	Contributing factors
Absence or insufficiency of funding resources for financing innovation projects; High loan interest rates; High rate of inflation; High economic risk; Insufficiency of the customer's financial resources; Absence of demand for the product; Insufficient information on market outlets; Difficulties with raw materials; poor material infrastructure; Lack of experimental capability; Lack of reserve capacity; Prevalence of the current production interests.	Availability of financial and material reserves; Availability of necessary scientific, technological and economic infrastructure; Marketing research; Financial rewards for innovational work.

The choice of the type of innovational strategy depends on a whole number of factors: the global goals of the company, the industry it belongs to, the prevailing conditions of the external and internal environment, the level of innovational potential evaluation. The most important thing for an enterprise when performing this procedure is to foresee the repercussions awaiting upon choosing this or that strategy.

Table 2. The characteristic of innovational strategies of an enterprise

Types of strategies	Characteristic features	Application conditions	Repercussions
Actively aggressive	Conducting the company's own research and development in the sphere of innovation. Use of new technologies, manufacturing a competitive product.	Presence of risk-generating capital investments, highly trained innovative professionals, effective marketing.	Leading company in terms of innovation, increase in the level of sales, high degree of risk.
Mildly aggressive (второй самый лучший производитель)	Purchasing technologies from others, fast mobilization of capital investments, prompt performance of RTD tasks	Focus on the wide range of customers, good knowledge of the market and marketing, flexible management system.	Increase in the level of sales, medium degree of risk, searching for niches.
Stabilizing	Commitment to the improvement of quality of the product. Conducting nonessential improvements.	Standard	Temporary improvement of the technological level and indicators of production and commercial operations. In prospect – lagging in the innovational sphere
Residual	Trying to catch on at an already tapped market with medium-level or dated technologies and products	Is applied when closing down the production	Потери при сбыте продукции

Innovational potential of an enterprise is a combination of scientific, technological, infrastructural, financial, legal, social, cultural and other capabilities to promote the reception and implementation of innovations. The innovational potential consists of four parts.

1. The reserve of scientific (technological) developments and inventions, both the company's own and the ones purchased from others. What is more, this also takes into account the possibility and capability of an enterprise or organization to find and purchase the rights to use the necessary developments, as well as to order new scientific and developmental works in any relevant sphere.
2. The condition of infrastructural possibilities of the company itself – these ensure that the innovation in question undergoes all stages of the innovation cycle.
3. External and internal factors that reflect the interrelation of the innovational potential with other parts of aggregate potential of the industrial enterprise or a research and development organization and influence the success of the innovation cycle.
4. The level of innovational culture which shows the degree of receptibility of innovations by the company's personnel, its readiness and ability to accept these innovations and put them into practice.

In its turn, the innovation potential can also be divided into man-oriented and technology-oriented. The first type is the potential of an object (system) with human capital assets playing a defining role in its structure, the human capital being the first priority while solving various tasks. As a rule, it is typical of start-up companies that are only entering the market. By

having the main goal to secure a market footing, these companies enhance and pursue opportunities of a personality (the manager or leader, regular personnel), by using a creative approach to solving the problems and “democratic” management techniques. Whereas the second type, the technology-oriented innovational potential, is the potential of an object (system) with its structure dominated by materials and technology, which implies the presence and use of various materialized resources (including processed and materialized information) as the company’s main competitive advantage. As a rule, this type of innovational potential is common to “old timers” at the innovation market which, having sufficient experience and financial possibilities, can resist the competition – mainly by enhancement of the existing material resources.

For instance, some authors also single out absolute potential (which has existing resources ensuring the implementation of the innovational function to the full extent), relative potential (which characterizes an effectively possible use of resources that depends on their recycling and consumption), highest possible potential (when the best possible innovative product is practically not increasing due to additional expenses, and the marginal costs for its increase rise sharply), effective potential (when the marginal profit from the innovational work is equal to the marginal costs with the respective demand and offer), optimal potential (when the innovational goals are achieved with minimum expenses), etc.

Mathematically, the model of establishing an innovation policy of an industrial enterprise can be presented as follows (see formula 1):

$$V = \sum_{i=1}^N r_i V_i \quad \text{и} \quad \sum_{i=1}^N r_i = 1 \quad (1)$$

where V_i is the value (volume) of the i -th element of the innovation policy of the enterprise;

r_i is the weight coefficient of the i -th element of the innovation policy.

N is the number of elements of the innovation policy.

Every element of the innovation policy can be characterized by the portfolio of its target values (see formula 2):

$$V_i = f(P_j^{t+f}) \quad (2)$$

where i is the number (name) of the element of the innovation policy ($i = 1, \dots, N$);

j is the number (name) of the respective target value of the innovation policy ($j = 1, \dots, K$);

f is the value of the respective time lag;

P_j^{t+f} is the j -th target value of the i -th element of the innovational of the enterprise in the year $(t+f)$.

The set of the target values depends, primarily, on the element and the chosen type of innovation policy, as well as the tasks of the conducted research. The following values can be considered target values: sales volume; market share; profit; coefficient of the product renewal; quality coefficient; cost of goods sold; capital/labor ratio, etc.

The results of the establishment of innovation policy are the volumetric indicators of the elements development and the overall investments.

To secure competitive strengths it is recommended to establish the innovation policy relying on the resources and market driven approach.

The development of the innovation policy of an industrial enterprise should be performed stage by stage. The author names 7 stages of the establishment of a balanced innovation policy:

1. Defining the goals and tasks.
2. Analysis of the external and internal environment (IPS (innovational problem situation) diagnosis).
3. Concept development (synthesis of the information and identifying the areas of the innovational work of the company).
4. Estimation of the innovational potential of the company.
5. Creating portfolios of innovations and innovational projects.
6. Definition of the innovation policy.
7. Implementation of the innovation policy.

The starting position is identifying the goals and tasks of the company, including its “innovational creed” which reflects the company’s attitude to innovational work. The goals should be balanced, because, on the one hand, they are an expected result of the forecasts, but on the other hand they basically serve as limitations for innovational measures.

At the second stage the analysis of the external and internal environment is conducted with the innovational problem situation (IPS) diagnosis, which is to be understood as a discrepancy between the processes of functioning and development of an enterprise expressed in the contradiction between various economic entities’ interests. The goal of the diagnosis is assessing the situation and identifying the main problems in the innovational sphere and the potential solution possibilities.

The IPS diagnosis relies on the analysis of the external environment and the internal condition of the company. The main methods of the analysis are: activity-based costing; financial analysis (horizontal, vertical, comparative and the analysis of financial coefficients);

econometric methods (the correlation method, the regression method, the dispersion method, the factor analysis); economic and mathematical optimization methods (linear and nonlinear programming, network planning); system analysis; analytical marketing methods (SWOT-analysis, etc.).

After the IPS diagnosis the general concept of the enterprise's innovation policy is designed. For that it is necessary to conduct information synthesis and to identify the main areas of the innovation policy, for instance using a morphological classifier.

Most often it is impossible to simultaneously work with different areas of the innovation policy due to a lot of reasons. For instance, some areas can be mutually exclusive, while other areas may not be suitable for social reasons, etc. This is why, by dividing the areas of the innovation policy, it is necessary to choose the best possible option out of the many existing ones. The choice depends on the value of the innovational potential, whose assessment is a very important step.

The innovational potential of an enterprise is understood as its highest possible abilities to generate high innovational activity. The innovational activity here is viewed as the intensity of the innovational work performed by the company.

3. Analytical Part of the Study

The author offers a system of indicators for the assessment of the innovational activity of an industrial enterprise, including determining the intellectual property use factor; the rate of the personnel involved in R&D; the rate of the property designed for R&D; the new technology and new products adoption rate; innovation-driven growth rate; innovative products survival rate; effectiveness of investments into R&D; innovational income rate per one employee and profitability of innovations. The specific feature here is the calculation of the indicators based on the period of adopting the innovations.

According to the author, when developing the innovation policy of an enterprise it is necessary to evaluate not only the possibilities of the innovational sphere but also the sufficiency of resources for the current production and the adoption of innovations. The method of innovational potential assessment must involve the analysis of the financial stability with due consideration of the expenditures for innovations.

Alt-Invest-Prim allows for the assessment of an innovation project conducted with provision for the current production. In this case the NPV of the project and the current production for the period from the 2nd quarter of 2010 to the 1st quarter of 2014, including credit activities, amounted to 24366 thousand rubles, with IRR exceeding 62.8%. The simple payback period is 1.2 years and the discounted payback period is 1.3 years.

The income of the bank in the form of the total interest from granting credit to KZSK for three years, including the repayment period, will be equal to 8.9 mln. rubles based on the interest rate of 15% per annum. Thus, the innovation project is effective for both the company and the bank.

Taking the results into consideration we can come to the conclusion that the establishment and implementation of a balanced innovation policy is an objective necessity to ensure the company's high competitive ability and the improvement of production efficiency. Additionally, using the tools suggested by the author leads to the acceleration of innovations adoption in the industrial production.

The analysis of the establishment of the innovation potential of several chemical industry enterprises has been conducted. The place of the chemical industry in the development of the national economy is defined by its important role as one of the major basic elements of the Russian national economy. There are about 8 thousand enterprises working in the chemical and the petrochemical industries of Russia (less than 10% of them are big and medium businesses), which possess about 7% of the key assets of all the industries in the country. According to experts, at the present moment over 60% of the products manufactured by petrochemical companies are still noncompetitive at the world market – the low level of technologies does not allow for the production that would meet important economic and ecological requirements.

The algorithm of the management of the chemical enterprises' competitiveness potential has been developed, the strategies of competitiveness potential management have been proposed, involving the use of reengineering tools. Reengineering makes it possible to identify the problem aspects in the company's work. Measures have been proposed to increase the potential level of the enterprise. These measures include: the development of system of authority distribution between different levels of the company's management; the improvement of the material encouragement and control system based on individual motivating evaluations; the improvement of the product quality based on improving operational capacities, etc.

Conclusions and Recommendations

The article analyzes the formation of the potential competitiveness of the petrochemical industry, identified the existing problems of enterprises: obsolete equipment; changing quality requirements by consumers; insufficient own capital for the modernization of production activities; rapid increase in prices and tariffs for products and services of natural monopolies, because of what the increased cost of raw materials. Diagnostics of the potential competitiveness of the petrochemical industry of "KZSK" in accordance with the proposed methodology, formulated conclusions. The algorithm for the effective management of potential konkurentospsobnosti petrochemical industry, which consists of the following steps: analysis of the environment, evaluation of internal capabilities of the enterprise; determining the level of use of the potential of competitiveness; strategy development management potential competitiveness of the petrochemical industry with tools reengineering. Reengineering approach is used to determine the unused reserves, allocation of "critical locations" functioning of key business processes, as it is based on creative vision of the management of potential competitiveness. The proposed algorithm has been tested in the company of "KZSK" The basic business processes specialist business group makes proposals for the effective management of potential competitiveness.

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INNOVATION POTENTIAL OF THE SOUTH BOHEMIAN REGION

Jiří Sláma – Ladislav Skořepa – Kamil Pícha – Lenka Chrobočková

Abstract

The investigation of this monograph is established on the selection of companies from the modified database, which includes active companies in the South Bohemian Region. The survey was conducted with the participation of students of the Faculty of Agriculture, University of South Bohemia in České Budějovice and students of the College of European and Regional Public Service Studies. The authors describe the main points of the innovation potential in terms of the South Bohemian Region and have consulted with the South Bohemian Technology Park. The aim of the survey is to determine the perception of innovation by different entities, requirements, or the implementation innovation and economic aspects of this issue.

Key words: company, enterprise, implementation, innovation, region

JEL Code: D01 – Microeconomic behavior

Introduction

Companies can gain knowledge and technologies from many external sources, such as competing firms, research organizations, government laboratories, industrial research associations and universities. Universities are unique to their potential (SANTORO, CHAKRABARTI, 2002).

Their specificity based inter alia on the extent of the scope of their research potential and diversity of focus and composition of scientific research teams. They are also the engine of the dissemination of knowledge, thanks to its strong influence on regional innovation system by creating interactions with local businesses and other economic factors (JANEIRO, PROENÇA, GONÇALVES, 2013). This is confirmed by the results the research of Cowan and Zinovyeva which analyzed the impact of the establishment of new higher education institutions in Italy in the years 1985-2000 on innovation in the region. Their study showed a significant influence on the formation of the university workplace on innovation activity in

the region. The resultant effect of which depends on the initial overall economic situation of the region. The worse the economic situation was, the more pronounced the effect of the launch of the university. One of the roles of universities in innovation can therefore be filling gaps in infrastructure, research and development (COWAN, ZINOVYEVA, 2013).

Cooperation between universities and businesses can contribute to reducing the costs of research and development, risk distribution and promotion of the actors involved to share resources and provide additional capabilities (GUAN, ZHAO, 2013).

Location highlights the importance of integrating the South Bohemia Region into the European Economic Area, as documented by the influx of foreign investment, especially from countries bordering Austria and Germany. Although the region has a significant presence in the scientific research sector and commercial organizations with innovative potential, our economy is growing more slowly than in the neighboring regions of Central Europe. The main causes include insufficient interconnection between academic and production sector, the promotion of basic science before the usability of the results, failure to use the results of research by firms, the lack of private investment in research and development and slow development of innovative entrepreneurship.

1 Methodology and resources

The survey involved to order the South Bohemian Technology Park *joint-stock company*, which utilized the results of the survey as part of an analytical feasibility study of project for science and research. When selecting respondents were used database of enterprises from Czech Statistical Office and the South Bohemian Chamber of Commerce. These databases have been purged of inactive enterprises. A database was created in 1274 enterprises, which comply with the quotas set by the contracting authority. From this database could interviewers (from students) choose some enterprises. The interviewer had a chance to mark the chosen company that was not available to other interviewers. If interviewers respected selection rules, it could not happen that the same company was visited or spoke to multiple interviewers.

The questionnaire survey was carried out in 2012-2013 with the participation of students of Faculty of Agriculture, University of South Bohemia in České Budějovice and students of the College of European and Regional Studies *Public Service Company*.

Characteristics of the sample:

- Sample represents a total of 305 businesses that were randomly selected from a database prepared numbering 1,274 active enterprises. The questionnaire survey was

geographically focused mainly on the South Bohemian Region (only 17% of respondents were from other regions which active operate or have a workshop in the South Bohemia Region).

- Most respondents had 0-10 employees (34%) and 11-50 employees (34%). Group of companies with 51-250 employees were represented 22% of enterprises and with more than 250 employees were 10%. Most respondents in this sample are therefore small and medium-sized enterprises.
- Most respondents (91%) were trading companies.
- The size of the entity according to the turnover / budget is more differentiated than was the case with the number of employees. 18% of respondents have sales to 5 million CZK. 23% reports their revenues in the range 5-20 million CZK, 15% have revenues totaling CZK 21-50 million and 29% above 50 million CZK. 15% don't answered this question.

2 Results and discussion (*with South Bohemian Technology Park joint-stock company*)

This chapter divided in three subchapters. First subchapter describes sample in details (it is building on the characteristics of the sample), especially for needs of better understanding applications innovative measures. Second subchapter deals with research of application innovations in sample. Results of the survey reflect the opinion of companies on innovation, the type of innovation implemented and its share in total sales. In third (last) subchapter is described in detail measures of South Bohemian Technology Park *join-stock company*, which helped to companies with applications of innovations. In this section are all details about this measures.

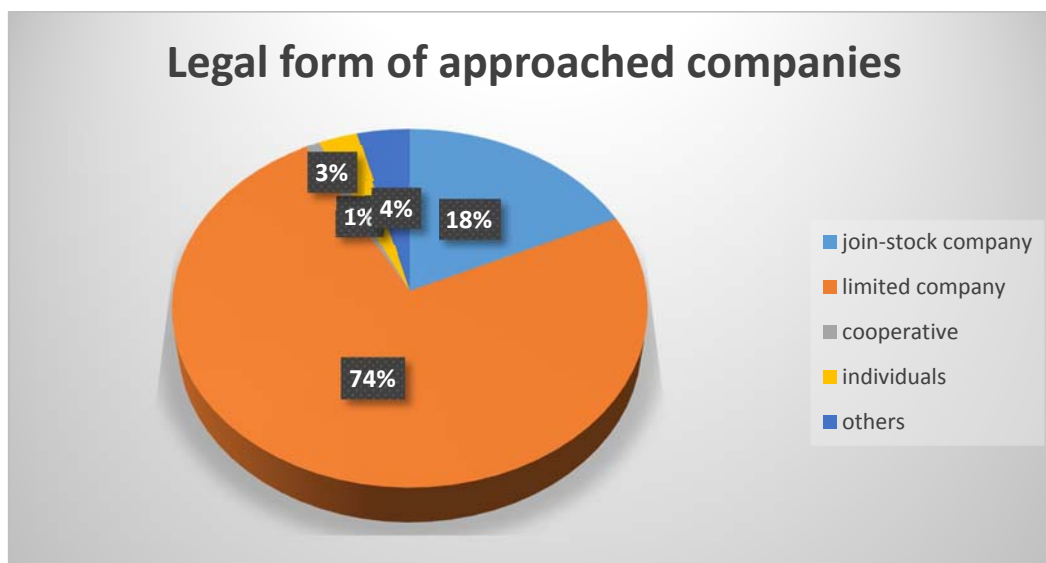
Below each graph is then a short summary (1-2 sentences) that illuminate the results, which he represents.

2.1 Description of sample (results)

First, on the graphs shows the structure of the interviewee sample (n = 305). Specifically:

- legal form of approached companies,
- headquarters structure of companies in the South Bohemian Region,
- number of employees in sample of companies,
- structure of companies in terms of revenue.

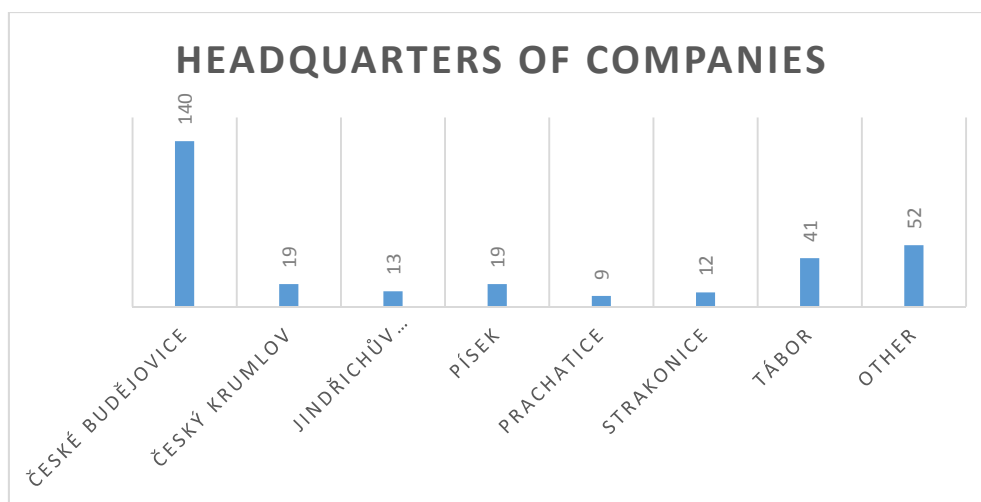
Graph 1: Legal form of approached companies



Source: own processing

The legal form of approached companies shows outclassed of limited company. Limited company and join-stock company are the most common type in the Czech Republic.

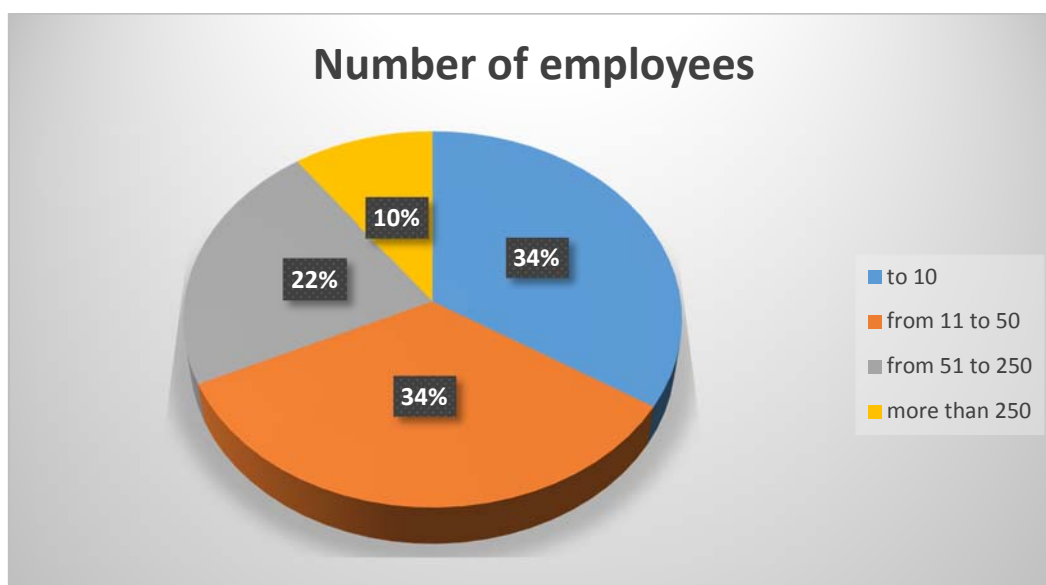
Graph 2: Headquarters structure of companies in the South Bohemian Region



Source: own processing

Second graph shows that two largest city in the South Bohemian Region host the most headquarters. Other cities have approximately equal number of headquarters.

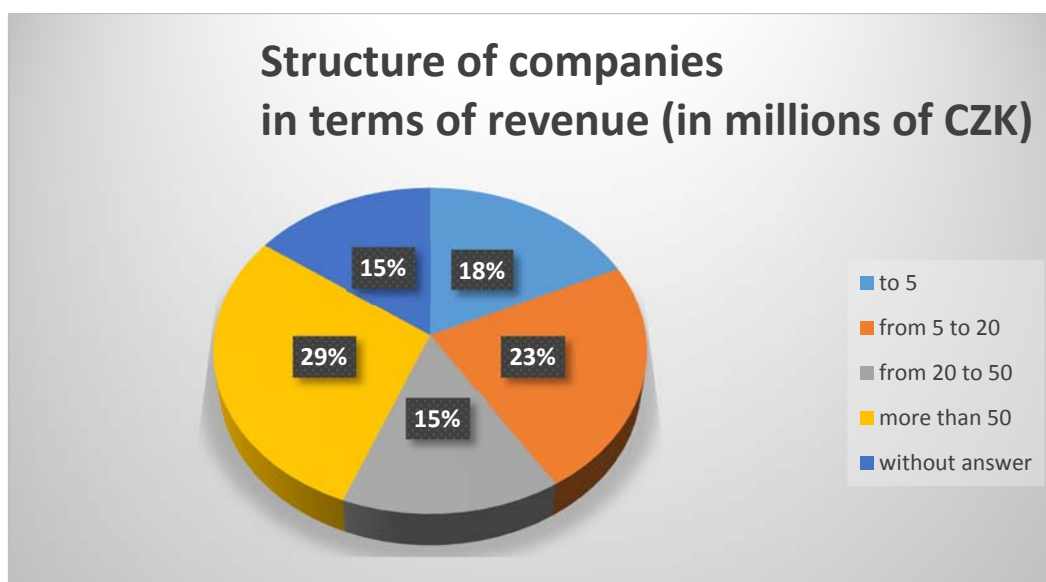
Graph 3: Number of employees in sample of companies



Source: own processing

Number of employees for selected categories is relatively balanced. Sample contains the small and medium enterprises.

Graph 4: Size structure of companies in terms of revenue (in millions of CZK)



Source: own processing

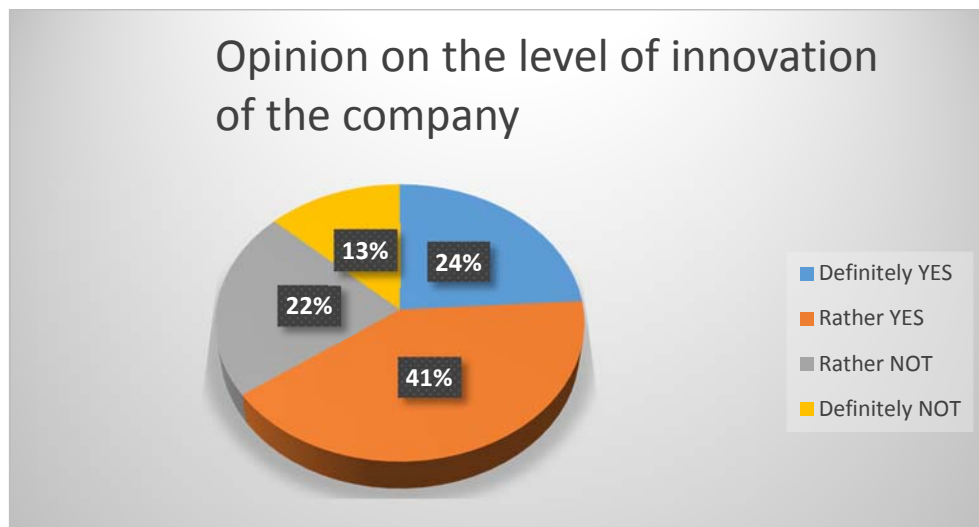
This graph is connected with Graph 7. Graph shows total revenue and Graph 7 adds innovations to share on the total sales.

2.2 Sample versus innovation (results)

Now it can proceed to the actual innovation. The following charts with the theme of innovation are:

- opinion on the level of innovation of the company,
- the type of innovation implemented,
- the share of new / innovated products in total sales.

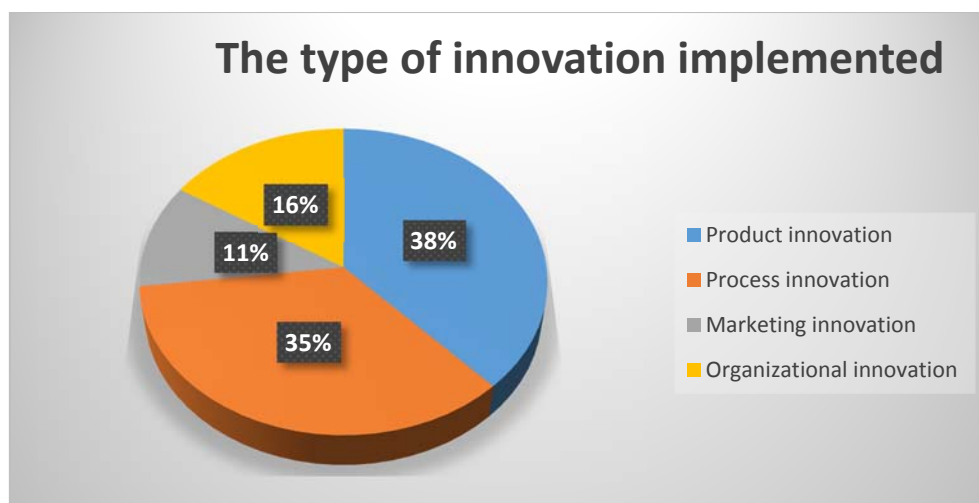
Graph 5: Opinion on the level of innovation of the company



Source: own processing

But not every company receives innovation with open arms. Get used to the change and capturing system may not always sing and requires a high level of flexibility.

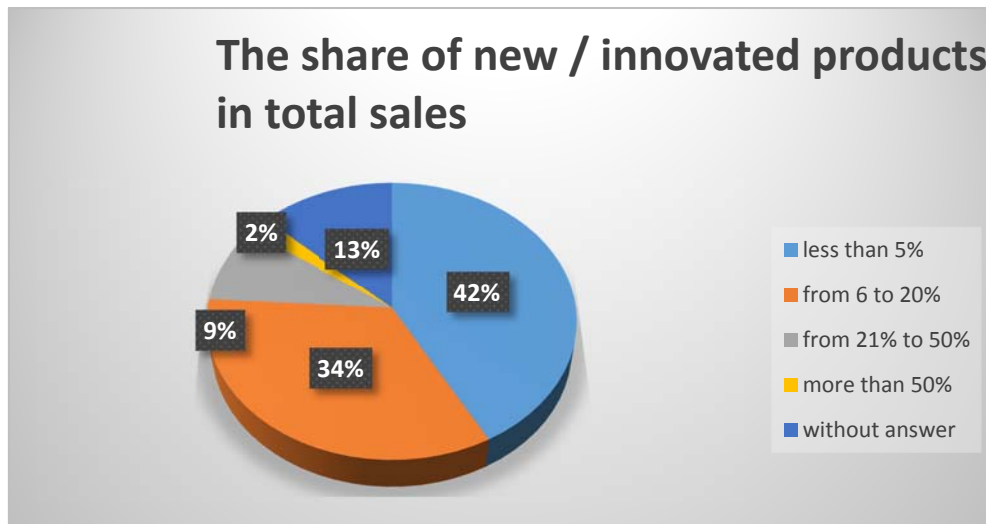
Graph 6: The type of innovation implemented



Source: own processing

The type of innovation implemented is a key concern. These four basic types of innovations were determined after consultation with the South Bohemian Technology Park *joint-stock company*.

Graph 7: The share of new / innovated products in total sales



Source: own processing

Here it shows that innovation contributes significantly to total sales. Specifically, in this case for innovative products.

2.3 Discussion results with South Bohemian Technology Park *joint-stock company*

This third part deals with research findings and subsequent measures. The following Graph 8 shows the limitations of innovation and practical measures, which now works to help overcome barriers.

The most critical points are the financial and human resources. Regarding human resources, you will always be difficult, but crucial. South Bohemian Technology Park *joint-stock company*, which is 100% owned by the South Bohemian Region, take measures in the financial aspect.

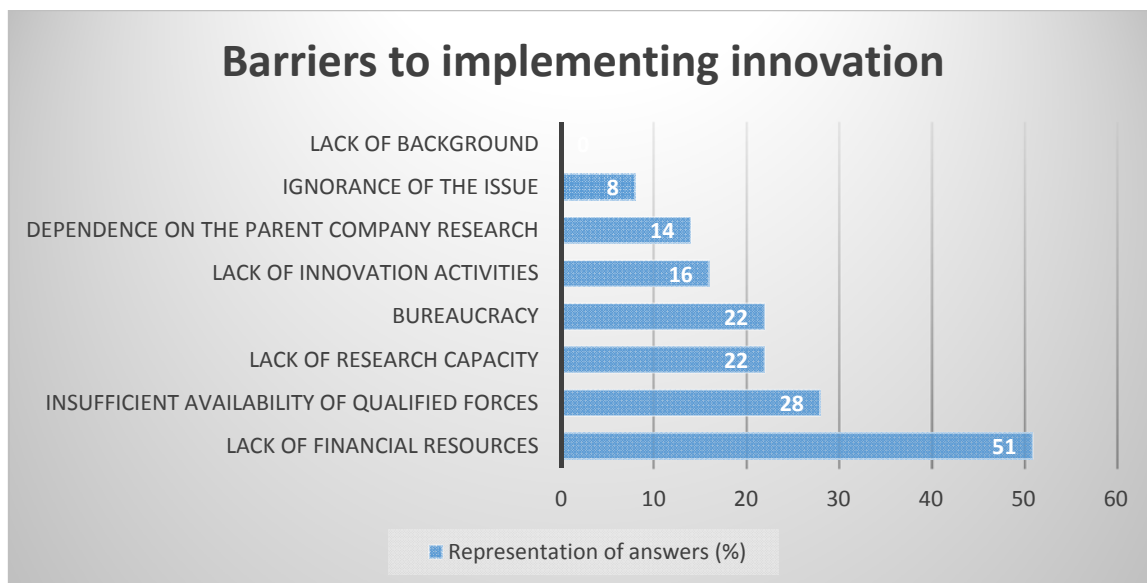
This measure is South Bohemian business voucher: <http://www.inovoucher.cz/>. In this program, the entrepreneur is to participate in 25% participation, and the rest 75% is funded by the South Bohemian Region (respectively South Bohemian Technology Park *joint-stock company*). South Bohemian Region on behalf of South Bohemian Technology Park *joint-stock company* is the guarantor of this program. 75% subsidy is limited to 150 000 CZK. The minimum eligible costs of the application itself are then 50 000 CZK.

As the main advantages of states official website:

- the simplicity of the application,
- the speed of administration,
- the effectiveness of individual projects,
- further development of cooperation between regional SMEs and research institutions,
- improving the region's image.

The aim of the South Bohemian business vouchers is primarily to initiate cooperation between business and academia, to teach both sides how to implement this cooperation, support them in building mutual trust and let them experience that mutual cooperation can be beneficial for both sides (SOUTH BOHEMIAN REGION, SOUTH BOHEMIAN TECHNOLOGY PARK JOINT-STOCK COMPANY, 2015).

Graph 8: Barriers to implementing innovation



Source: own processing

51 % barriers forming by lack of financial resources. It is one of the barriers that goes through the easiest to solve the above-mentioned measure.

Conclusion

This article provides evidence of close cooperation between the private sector and academia. The research itself arose from demand South Bohemian Technology *Park joint-stock company* to South Bohemia to University of South Bohemia and College of European and Regional Studies *Public Service Company*, whose students participated in the research.

The research was carried out in 2012-2013 and already in 2015 there is a functional outcome countermeasures to barriers innovation. It is thus seen flexibility entity South Bohemian Technology *Park joint-stock company*, which is the link between the university and the private sector.

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ORGANIZATIONS' INNOVATIVE ACTIVITY: FACTORS TO INCREASE AND ENCOURAGE STRATEGY

Gulnaz Suzdaleva

Abstract

The paper studies the problems to increase organizations' innovation activity. The results of the theoretical analyses issues of innovation management, as well as the results of an empirical study of 179 companies in the Perm region are presented. The analysis of innovation activity factors and the generation of innovative processes led to the conclusion that the interaction of functional subsystems of organizations' management levels can be considered as one of the factors to increase innovation activity. Based on this conclusion, the author developed a model for the organizations' innovative activity and the mechanism of its application in various companies; testing of which is presented in the article.

Key words: organizations' innovative activeness, expert interviews, strategic level management indexes, the indicators of operation level management, innovative activeness indicators.

JEL Code: L200, L220, M310

Introduction

In the context of achieving the strategic goals of Russia's innovative development the formation of organizations' sustainable competitive advantages by encouraging their innovative activity is becoming of special importance. However, according to Russian statistics agency, in 2014 the level of organizations' innovation activity in Russia amounted to only 10.1%, while the growth of this indicator was unstable. The proportion of organizations engaged in technological development, was 8.9% in 2013, instead of the projected in the "Strategy of innovative development of the Russian Federation for the period up to 2020" level of 9.6%. This indicates that the current measures of stimulating organizations' innovation activeness are non-systemic, often, not taking into account the specifics of the organization, especially an innovation-active one.

One of the main reasons for incentive ineffectiveness is the impact of a number of factors on the formation of a stable innovative activity, including both external to organizations (increased global competition, stricter customers' requirements) and internal (functional subsystems of organization and their consistency, the interaction of strategic and operational management levels, organization's openness to changes). Here it is necessary to analyze the factors of innovation activity in order to identify the methods and tools to encourage and improve it.

The system integration of processes and functions in the enterprise, and establishing long-term partnerships, self-development of the organization as a whole and its subsystems have become of current interest. The methods have received the recognition due to a number of advantages: faster decision making and information sharing, optimizing the allocation of resources (time, financial, material, information, personnel), the formation of long-term sustainable competitive advantages, an increase in the organization's flexibility in relation to the external environment. Therefore, the aim is to examine the factors of innovation activeness and identify the role of strategic and operational management's levels integration.

To achieve this goal a number of problems were set:

- 1) to examine the essence of "innovation activity" concept and signs of innovation activity of the organization;
- 2) to systemize the factors of innovation activity;
- 3) to formulate the principles of innovative activity management for its improvement;
- 4) to confirm the results of theoretical research by analyzing the empirical data on the innovative activity of organizations.

1 Theoretical foundations analysis of innovative activeness management

The study of innovation activity theoretical issues has allowed to identify the main areas of research and key researchers in this sphere. On this basis the following conclusion was formulated: the problems of management organizations' innovative activity through improving the management levels interaction are at the intersection of several fields: such as innovation management, strategic management of the organization, innovation management; marketing; management. The main approaches to defining the essence of innovation activeness are the following.

Innovation' activeness is integrated characteristics of industrial enterprises' innovative activity. It includes the intensity and timeliness of head-innovator's actions, the ability to mobilize obvious and hidden potential of the required quantity and quality, the ability to ensure the validity and progressivity of methods, rationality of technology composition and sequence. Organization's innovative activeness characterizes the degree of organization's involvement in the implementation of innovative activities and its aspects within a certain period of time. Organization's innovative development is aimed at creating the required market products, technologies or services. And it is carried out in interaction with the environment: focus, growth and development depend on the socio-economic environment in which the organization operates and develops. Innovative development is carried out through the implementation of specific steps and business processes within the innovation process. Also it involves an extensive complex of scientific, technological, organizational, financial, marketing and commercial activities. Innovative development is possible with the appropriate level of the enterprise's innovation activity. Only innovatively active companies can support innovative development.

We can formulate a definition of "innovatively active organization" according to the analysis of studies on innovation development. So, innovatively active organization, firstly, creates or has already completed any type of innovation; secondly, timely implements innovation in its activities or on the market and is open to change; thirdly, has the ability to mobilize resources (internal and external) for implementation of innovation. In other words, innovatively active organization has signs of complexity, dynamism and openness.

Complexity is the ability to mobilize and integrate the intellectual, material and financial resources in response to the changing conditions.

Dynamism means striving for continuous development, taking into account changes in the external and internal environment, that is, the ability to predict the market development and competitors' actions.

Organization's openness includes two aspects. On the one hand, it is open to change and willing to implement them. On the other hand, it ensures information availability for consumers to accelerate the diffusion processes at the stage of innovation promotion.

The author has systematized innovation activity factors in six areas based on the literature review. It is integrated approach to the classification of factors, separation factors on management's levels, consideration of internal and external factors, and so on. Twelve criteria for the classification of innovation activity factors are suggested within the six framework

areas. The list of criteria for the classification includes emergence's source, environment level (macro-, micro-, meso-environment), objectivity level, institutional affiliation, management level; the nature and degree of the impact; activity direction; incorporation form; the number and availability of subjects; the attitude to the innovative process (effect duration), the cyclical influence (frequency). The criteria are systematized and discussed in detail in the works of Vasiliev I., Makina S., Maximova Y., Valeyeva E. et al (Suzdaleva G. R., 2014). The list of these criteria is added by the criteria of universality. Innovation activities factors are divided into two groups according to this criterion. They are specific factors (they affect single organization or a small group of organizations) and universal factors (they affect entire industry or all organizations in the country).

Organizational factors are usually considered by the criterion of "institutional identity" as a whole. We propose to detail the factors at the organizational level (entire organization's level, departments' level, employees' level).

Innovation activity factors analysis led to the conclusions:

- division of the factors on management levels is the least explored area;
- most of the authors consider the factors in the context of organization's functional subsystems;
- issues of cooperation between management levels as a factor of increasing innovation activeness are rather poorly explored.

Effect of management levels interaction on innovation activity has been studied given that the organization is made up of different functional subsystems. The strategic and operational management levels functioning principles have been substantiated being based on the evolutionary system-integration approach and the theory of self-development. These principles ensure management levels' consistency. The hierarchy principle is to allocate different management levels according to certain criteria. The self-development principle is the relative autonomy of the strategy and operational decisions. The implementation of feedback principle means information interchange between management levels. It is to accelerate decision-making processes and to be able to adjust the decision.

Levels' harmonization process has been clarified being based on these principles. Namely, each stage of the innovation process has been described in view of exogenous and endogenous environment and used tools.

Hierarchical analysis of management levels interaction revealed a relationship between their elements. Namely, eight types of interaction have been identified: between objects, features, performance (levels within and between levels).

It should be noted that most of the management models are algorithmic nature, only a few combine consideration of steps and elements. Application of the developed models' mechanisms are proposed by the authors extremely rarely. System-integration management model of innovative activeness has been developed in view of the innovative activeness organization's signs mentioned above, innovation activity factors, principles of interaction between management levels. These aspects have been discussed more detaily in (Potocan, V., 2000). This model is based on the evolutionary system-integration theory and the theory of self-development principles.

Systematic means the overall integrity of the proposed management model's elements. Integration implies calculation of integral index, which characterizes the overall of the organization's innovation activeness level. The analysis of innovative activity management theoretical foundations have allowed to do the following. Innovation activity factors' typology and innovation activeness organization's signs have been specified; principles of interaction between management's levels, that enhance innovation activity, has been substantiated; system-integration innovative activity management model has been developed; this model's application mechanism in various types organizations has build on the basis of the analysis.

Empirical study is necessary to clarify the developed management tools and check the results of theoretical research.

2 Investigation of strategic and operational levels' interaction effect on the improving the organization's of innovative activity

Testing of the proposed model and the mechanism of its implementation was carried out in two stages. In the first phase, exploratory study on a sample of 49 companies was conducted, in which the mechanism of model application was tested and verified by the model itself. In the second stage 179 companies were analyzed, based on which the functioning of the model in organizations with different levels of innovation activeness and different character of the management levels interaction were shown. Effectiveness of management model is estimated by monitoring indicators, so the essence of the study was to allocate indicators' strategic level, the operational level indicators and indicators of innovation activeness; and - to

establish the relationship between them in order to identify factors of increasing innovation activeness.

We describe the study methodology. The purpose of research is identifying the level of innovation activeness, depending on the nature of interaction between management levels, the determination of the factors increasing the innovation activeness due to the strategic and operational management levels interaction. That is, checking the effectiveness of system-integration management model.

The objectives of the study:

- 1) to identify the relationship between indicators of operational level, between indicators' strategic level, between indicators of innovative activeness;
- 2) to determine the relationship between different level's indicators and innovation activeness indicators;
- 3) to arrange the organization depending on the innovation activeness level and the nature of the interaction management levels;
- 4) to identify the innovation activeness increasing factors, depending on the type of organization;
- 5) to identify innovation activeness increasing strategies on the basis of the typologies.

The object of study is organizations with different innovation activeness level. Subjects of research are the innovation activeness level and the nature of the interaction management levels.

The study consisted of two stages. The first stage was methods testing (November – December 2013); the second stage was the specifics of model application (January - March 2014).

The expert interview form was developed as a research tool. This form comprised 29 claims based on Likert scale. In addition, the questionnaire included four questions to identify the type of enterprise: the number of employees, sales volume, industry, sphere of activity, the main obstacles for increasing innovation. The research method in this paper has become an expert interview.

The description and calculation of the sample. Perm and the Perm region enterprises were involved in the study. Business executives, marketers, development managers, the staff involved in innovative activities responded to the questionnaire. Calculation of the sample was made on the confidence interval and for the proportion of trait (share of innovatively

active organizations in the Perm region in 2012 - 14.1%) basis, with a sampling error of 5%. As the general population number of Perm Region organizations was taken in 2013 (75,168 enterprises). The final sample consisted of 179 enterprises due to the limited time resources, as well as the rejection of the questionnaires. This fact does not affect the representativeness of the data. Sample is available, is organizations that were willing to disclose information (including commercial nature) as well as respondents who had time to answer the questionnaire involved in the study.

The location and the time of contact with the respondents. Interviews with respondents were conducted in their offices, as well as through email and social networks. They were conducted on weekdays.

The methods of data analysis. Software packages MS Excel 2007, Statistica 10, SPSS were used for data analysis. Comparative analysis, correlation analysis, regression analysis and cluster analysis were used.

The hypotheses of the study:

- 1) all organization's functional subsystems figures can be divided into two levels - indicators of strategic and operational management levels;
- 2) they are relationships between the operational level indicators, between strategic level indicators, between indicators of innovative activeness;
- 3) strategic figures can be controlled through the operational performance. Strategic and operational processes' harmonization is provided through this control in organization' functional subsystems;
- 4) organization's innovative activeness indicators depend on the organization's functional subsystems performance; innovation activeness indicators are controlled and ensured through strategic and operational performance;
- 5) the innovation activeness level depends on the interaction of nature management levels and on the different innovation activeness' increase factors;
- 6) model's functioning provides processes of strategic and operational level's harmonization. That is model contributes to innovative activeness increase, and creates conditions for its stimulation.

That allows to denote the obtained results of the empirical research.

- 1) Positive trend in Russia is observed in the technological, environmental and product innovation according to statistical data on innovation activity in Russia in 2000 – 2013. Organizational and marketing innovations show slight growth or stability. Negative dynamics

and decrease in the share of enterprises implementing innovation are true for all types of innovation in the Perm region. Out of the fourteen organizations' innovation activeness indicators only six ones grow.

2) The average value of the integral innovative activeness indicator was 1.79 (out of 5 points) in the sample. Correlation of integral indicators led to the conclusion that interconnection there are between the organization's functional subsystems development and the innovation activeness level. An organization doesn't have an opportunity to develop and improve innovative activeness or an organization is able to achieve the level of innovation activeness which is not above average if strategic and operational levels' interaction is inconsistent. It should be noted that a large proportion of organizations have a high or average subsystem of marketing and the low level of innovative activeness (82 and 54 companies, respectively), in total - is 76% of the sample.

3) Complexity in the promotion of innovative products on the market, the lack of partnerships, insufficient provision of information, the lack of cooperation from the administration, the lack of qualified professionals, problems with market expansion, finding new customers and other factors are identified as the barriers to stimulate innovative activeness on the basis of responses.

4) An organization can be classified by type and level of innovative activeness (high, medium, low; external and internal innovation activeness). Thus, the author identified nine types of solutions depending on the type and level of innovation activeness on the one hand, and on the nature of management levels interaction on the other. The sample was divided into groups (clusters) in terms of correlation between innovative activeness and management levels' performance. These indicators include the presence of completed innovations, timely innovation, the relative level of innovative activeness, the rate of implementation of new ideas, the coefficient of new ideas, the qualification's level of personnel engaged in innovation, the resource potential of innovative activeness. The economic meaning of this separation is that these figures differ in meaning between selected groups (clusters). These indicators have different levels depending on the organization concerned.

5) Indicators of innovative activeness depend on the interaction parameters of the strategic and operational management. Relationship between indicators was constructed, average values of innovation activity were calculated, the optimal strategy of innovative development and the most efficient mechanisms to stimulate innovative activeness were proved for each cluster on the basis of regression and cluster analysis.

6) The analysis showed that depending on innovative activeness level organizations needs to design a strategy of innovative development considering innovative activeness factors. The author suggests strategies such as harmonization of interaction between management levels, the application of traditional and innovative tools for improving the innovative activeness, maintenance of harmonious interaction of all management levels. Strategies of innovative activeness improvement, taking into account innovative activeness increasing factors translate into a number of mechanisms in practice. The author proposes organizational, managerial, financial, economic, technical, technological, institutional, informational, psychological mechanisms.

Conclusion

System integration model of innovative activeness management was tested on the example of Perm and Perm region's organizations. The research helped to confirm the feasibility of measures aimed at improving the interaction between management levels to stimulate organization's innovative activeness. The influence on innovative activeness of various strategic and operational levels' factors within the clusters was confirmed during testing. With the increase of both the innovation activity is higher than with the increase of one of them. The clarification of innovative organizations' characteristics, the introduction of new classification criteria of factors influencing innovative activeness, the justification of interaction principles between levels of management, providing the increase of innovative activeness were used in the preparation of training courses in the field of innovation management and strategic management of the organization. Developed system integration model of organization's of innovative activeness management is based on the improvement of interaction between management levels and the calculation of the integral indicator of innovation activity. The obtained results are applied by enterprises and organizations in developing strategies and specific activities aimed at increasing the innovative activeness.

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OPEN INNOVATION AS A CHALLENGE FOR CZECH PROFIT AND NON-PROFIT SECTOR

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Abstract

Notwithstanding the fact that Open innovation was introduced as a new concept by Henry Chesbrough as late as in 2003 some companies have already found this concept vital for boosting their further development. In the face of existing paradigm of closed innovation open innovation may offer more flexibility in the utilization of company's intellectual property, better utilization of company sources and prompt reaction to changes in business environment. Research questions to be raised in the context of open innovation should deal with the depth of involvement of Czech companies in open innovation and the scope within which academic institutions are able to address this topic. Pursuant to aforementioned research questions systematic research to be performed on selected Czech industrial companies and academic institutions is being completed. As far as the outcomes are concerned both industrial companies and academic institutions underrate significance and importance of open innovation for their further development. Problems to be at the bottom of this situation as well as the set of remedial actions to rectify this unfavourable development were presented. The implications of this article should be conducive to both improvement of the perception of open innovation in industrial sector and elaborating curricula for open innovation in academic branch.

Key words: open innovation, closed innovation, intellectual property, innovation management, strategic surprise.

JEL Code: 030, 031, 034

Introduction

Open innovation is a relatively new concept. Although some researchers tend to use different definitions, the area became one of the hottest topics in innovation management (Huizingh, 2011). A clear distinction from open source is perceived and traditionally open innovation are compared to the closed innovation, meaning limited interactions with external environment

(Lichtenthaler, 2011). After Henry Chesbrough (2003) has introduced the term and concept in his book, many researchers traced different concepts of open innovations back to previously introduced terms such as absorptive capacity, complementary assets and the exploitation versus exploration discussion (Huizingh, 2011). Despite this description more as an evolution, than revolution, open innovation gained substantial popularity from both academics and practitioners (Lichtenthaler, 2011) based on four reasons provided by Huizingh (2011). First, open innovation was assigned as a single term to a variety of developments, as an umbrella encompassing a range of previously unconnected activities. Second, right timing coinciding with current interest in networking, collaboration and the internet. Third, opportunities for further development of the concept, building upon and developing measurement tools and management toolboxes. Fourth, open innovation, by the definition of Chesbrough (2006), encompasses external knowledge acquiring and internal knowledge external utilization: (open innovation is) “the use of purposive inflows and outflows of knowledge to accelerate internal innovation and expand the markets for external use of innovation.” External knowledge exploration, inflows, means acquiring of knowledge from external sources, external knowledge exploitation means commercialization of internal knowledge. It was quite a new approach since not long ago, internal research and development was considered strategic asset which at the same time constitutes barrier to competitive entry to many industries (Chesbrough, 2004).

Why is OI interesting for managers? Early adopters of OI reported achieving great benefits, but experienced severe challenges as well (Lichtenthaler, 2011). For many companies it is not a matter of choice to be adopters of OI, because they cannot develop everything in-house, this is valid especially for complex product development (Van De Vrande, Vanhaverbeke, & Gassmann, 2010).

Three substantial issues (characteristics) for OI research are described by Lichtenthaler (2011); integration of inward and outward knowledge transfer, simultaneous internal and external organization of critical knowledge-management processes, integration of technology management research and innovation management literature. The aforementioned author distinguished four lines of open innovation research: technology transactions, user innovation, business models, and innovation markets. The four lines of OI research are linked to the three characteristics.

Previous research pointed out some problems connected with OI adoption – organization might be reluctant to organizational change, success stories cannot be merely copied to other

environments, not all lessons learned are applicable to other firms (Lichtenthaler, 2011). Some studies reported no effects of external idea and knowledge sourcing on SMEs (Van De Vrande et al., 2010).

Innovation management education is greatly impacted by OI. The cross-functional nature of OI makes it suitable for implementation in various courses, such as technology and innovation management, marketing, strategy, and organizational behaviour (Lichtenthaler, 2011). Further, the aforementioned author has identified six insights for management education: innovation is increasingly inter-organizational and for some firms it is not a choice but a must to adopt OI; students must understand the competitive advantage based on firms inter-organizational relationships; cross-functional character of OI which goes beyond R&D needs to be highlighted; organizational capability of firms is needed for successfully manage OI; students need to understand the differences between value creation and value capture in inter-firm collaborations; and the important role of intellectual property, especially patents, in facilitating open innovation must be pointed out by educators.

1 Open innovation as a new concept of value added creation

The very existence of OI is substantiated in such a case when it brings value to all parties concerned. Value added by OI should be perceived in larger context, it means not only as value to be calculated by financial formulas but also value to be identified through behavioural indicators. The former set of indicators encompasses NPV, EVA, and CFROI while the latter set of indicators may involve boosting pro-innovative corporate culture, raising employees' satisfaction and identification with a company, creation of goodwill, enhancing company prestige or better perception by customers. From aforementioned assumptions can be deduced that OI is a powerful tool which may bring benefits to organizations operating both in profit and non-profit sector. As far as utilization of OI in profit sector is concerned there are recent examples which substantiate using OI for maximizing profit. Tesla Motors Company decided to open up its patents for electric cars. The reason is to be conducive to penetration of electric cars as a transportation standard. Main benefits from this open innovation is the contribution of other companies to the advertisement, marketing and building charge stations, which enables further development of Tesla Motors. On top of that Company CEO Elon Musk decided to unveil batteries capable of powering a home or a business, giving consumers with solar panels a chance to generate and store their own energy, and to potentially cut the cord with traditional power providers.

Following up Tesla Motors Japanese car producer Toyota Motor now offers freely 5680 patents which bear relationship to hydrogen fuel cells. It happened for the first time that Japanese car producer released its patents to its competitors free of charge. Company wants to boost spreading hydrogen propelled cars (Inagaki, 2015). As opposed to industrial companies non-profit organizations seek to incorporate OI for the sake of processes or products improvement, enhancing reputation and organization behaviour. OI has strong strategic impact on the company as well (Chesbrough & Appleyard, 2007). Traditional business strategy has guided companies to develop defensible position against the forces of competition and power in the value chain, implying the importance of constructing barriers to competition rather than promoting openness. Recently companies and even whole industries are experimenting with novel business models based on harnessing collective creativity by means of open innovation. Achievement to be registered in this respect put in question some of obsolete approaches to strategy. By challenging former strategic approaches we arrive at a new concept to be called *open strategy*. Open strategy examines various factors like innovation communities, ecosystems, networks and their impacts to competitive advantage.

OI became also a topic for universities which search for opportunities to become instrumental in collaborations with industrial subjects (Perkmann & Walsh, 2007; Padilla-Melendéz & Garrido-Moreno, 2012). Both universities and companies enter collaborative network which generates value for all parties concerned. These networks takes the form of research & development alliances or innovation centres. It has become commonplace that these form of collaboration are usually promoted by government bodies. Relationships among universities and companies might be of different nature and purpose. Typology of these links may consists of research partnership, academic entrepreneurship, research services human resource transfer, commercialization of property rights, scientific publication and others. The importance of various types of links usually differs based on industry. Typically for pharmaceutical sector generating intellectual property by universities is of highest importance. In addition OI network between academia and industry is considered an imperative for breakthrough therapies. Pharmaceutical companies realized that enormous sum of money to be spent in R&D including the costs for pharmaceutical products that failed to meet criteria must be compensated for. That is why pharmaceutical companies need to look beyond their own wall of innovation (Melese, Lin, Chang, & Cohen, 2009). On the other hand companies are in preference motivated for engaging in university-industry links by generic benefits such as accessing students, gaining up-to-date knowledge about emerging technologies or

enhancing company knowledge base. Padilla-Meléndez et al. (2012) accentuate the role of universities in knowledge transfer from universities and research centres which is evidently crucial for economic development of regions and countries.

1.9 Penetration of Open innovation in Czech academic sector and its comparison with European standards

International academic project *LLP - Erasmus project "European Academic Network for Open Innovation"* which was executed in 2013-2016 came out of uneven and partly confused perception of OI by European academic community. The objectives of this projects can be broken down into following areas:

- Fill the gap in terms of structured open innovation in Higher Education.
- Demonstrate the integration of the European open innovation curricula.
- Develop a European Community of Practice on open innovation observatory/think-tank.
- Implement support actions to open innovation in Higher Education.
- Build sustainability, shape the future of Higher Education.
- Implement dissemination & supporting facilities from the very start and promote open approaches.

Within the framework of this project the examination of understanding OI concept by Czech academicians was performed. The search was aimed at academic institutions which declared some engagement in professing innovation management. Nine subjects which put innovation management lessons on stream in Czech academic sector were asked to provide information on addressing OI topic. Among this group University of Economics in Prague (VŠE), College of Economics and Management (VŠEM), University of Thomas Bata in Zlín, Masaryk University in Brno, Silesian University in Opava, VŠB-Technical University in Ostrava, Czech technical University in Prague and West Bohemian University in Pilsner.

As expected none of them has already established full-frame OI subject. As long as OI is mentioned in university curricula it represents only a minor part of the subject. Typically College of Economics and Management points out the significance of OI with relation to low cost marketing communication while University of Economics in Prague and West Bohemian University in Pilsner introduced OI as a part of innovation management subject. In contrast to situation in Czech Republic West European universities are far ahead with the implementation of OI curricula. The concept of Open Innovation has been taught in European higher

education institutions in a variety of academic offerings ranging from very specific courses to whole academic programs focusing generally on innovation management. The existing curricula on Open Innovation focus on this subject in the following contexts: strategic innovation, innovation management, technology transfer, intellectual property issues, patents, assessment of innovation projects, R&D development in firms, creativity, (innovative) problem solving. Typically University in Lappeenranta in Finland is one of leaders in teaching OI since this university has already executed courses exclusively dedicated to OI.

A distinctive characteristic of the OI-focused academic offerings reported by almost all universities is the existence of an interdisciplinary approach, which is not usually found in undergraduate programs. This indicates another important objective of these offerings, which is to bring together the perspectives of different disciplines in order to achieve healthier innovation processes. The disciplines blended for this purpose are usually management, engineering and sometimes design. It has also been seen that some courses link the perspective of open innovation with other strategic fields such as sustainability, product design/development, entrepreneurship, education (e-Skills curriculum: using digital skills in the business context) so as to create an innovative outcome in terms of academic offerings. One course interestingly explores the impact of social media and collaborative technologies on open innovation oriented companies.

1.10 Adoption of Open innovation by Czech industrial sector

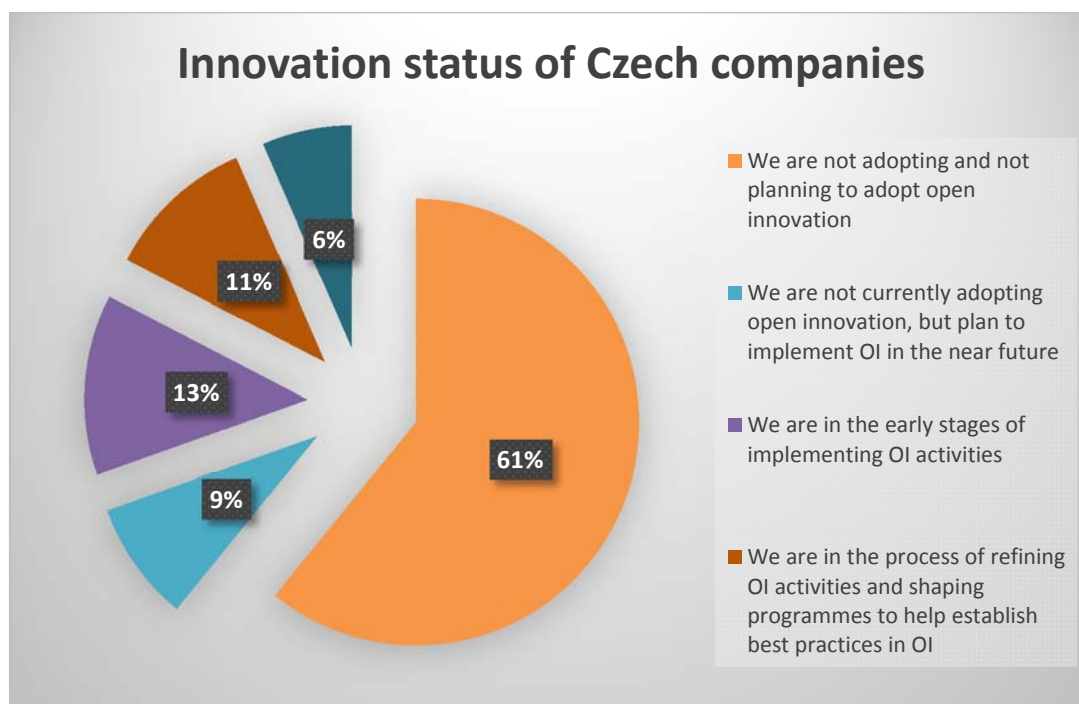
Practices adopted by Czech companies consist mainly in customer and consumer co-creation in R&D projects where large size companies tend to adopt the practice more intensively. Scanning for external ideas has been also identified as an approach of choice where medium size companies tend to adopt the practice more intensively. Last but not least collaborative innovation with external partners proved to be attractive for most of companies. In this respect large and medium sized companies adopt the practice more intensively while small sized companies adopt this practice the most.

More than a half of the respondents don't adopt any of following approaches:

- Crowdsourcing
- Idea & start up competitions
- IP out-licensing
- Selling unutilized / unused technologies

The reasons of low application of aforementioned innovative tools can be attributed to little awareness of benefits of these tools in Czech Business environment. It is worth mentioning that there are signals that the situation is developing to better perception of advantages of these approaches. For instance Czech subsidiary of Austrian Raiffeissen Bank launched crowdfunding portal to support start-ups. In addition there are non-profit agencies like South-Moravian Innovation Centre of Czech Innovation which were purposefully established to support start-ups by means of professional guidance at early stages of entrepreneurship. IP out-licensing is very rare in Czech Republic because of exploiting internal know how preferably in originator's company or within a group of affiliated companies. Some indices of IP out-licensing were recorded in commodity chemical business where transportation of chemical products to remote part of the world is proven to be economically ineffective. Active licensing aniline production from BorsodChem MCHZ Ostrava to Japanese partner (TOSOH Aniline Plant) in 2009 can be set as an example. Currently more than 10% of worldwide aniline production is produced under BorsodChem MCHZ license.

Fig. 1: Adoption of OI by Czech companies



Source: own research

2 Results and discussion

The scope of addressing OI in Czech academic sector proves that this topic is addressed either very superficially or not at all. Due to fact that OI is a relatively new concept there is no common understanding this concept. Czech universities almost vaguely present this topic to students who understandably perceive this concept as a marginal thing. The implication of research presented it is inevitable to set up curricula on OI which would be freely spread across Czech academic sector. Moreover it is instrumental to establish specific OI dedicated courses which would address this topic in its full complexity. Poor situation is mirrored in industrial sector where companies are puzzled with the nature of the concept which is based on free sharing valuable company asset. Up to present 61% of Czech companies haven't tackled OI approach and will not plan to implement OI in the near future. Only minority stake of companies adopted OI in some way or plan to do so in the near future. In order to rectify this situation it is worth recommending to organize seminars, conferences colloquies and workshops where experts both from industry and academia take part. During these events OI topic should be thoroughly discussed including addressing pros and cons of this concept. Notwithstanding current development of OI concept which indicates that OI will not probably become a leading idea in innovation management it is necessary to demonstrate benefits and values which can be generated from OI.

Conclusion

Recent publications indicate that establishing links between industrial and academic sector is of highest importance for both parties. Notwithstanding that the motives to entering collaborative relationships may differ both companies and universities can reap benefit from mutual collaborative links. Companies tend to assume intellectual property and research know-how generated by universities while universities see the main benefit in getting better chance to fructificate their R&D results, enabling students to gain access to industrial technologies etc.

The research which examined establishment of Open innovation curricula in selected Czech universities proved that Czech universities have general notion about Open innovation but they do not address this topic in details. OI is mostly a small part of a bit extensive subjects like innovation management or innovation techniques. OI is still perceived as a curious approach which contradicts well established techniques of closed innovation. As far

as industrial sector is concerned Czech companies are hesitant to adopt OI concept due to distrust in functioning of such a system.

Acknowledgment

This research was carried out with the support of *LLP - Erasmus project "European Academic Network for Open Innovation."*

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INNOVATION AS A FACTOR TO IMPROVE TRADE ORGANIZATION IMAGE

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Abstract

The paper analyses the factors that affect the formation and improvement of the public image, and the competitive ability of a trade organization, and defines the role of the intensification of innovative activity for its further successful development. The study reveals the interconnection between the public image and its innovation activity. The strategies of practical implementation of innovations in the activities of trade organizations are summarized. Attention is paid to the development of classification of typical innovations in the practice of retail networks in conjunction with the planned economic effect.

Key words: competitive ability, innovational activity, innovations, service sector, retail trade chains, public image

JEL Code: O31, O47

Introduction

The research of the public image and innovation activity as a development tool makes it possible to evaluate the level of intensification of development for a given retail trade chain, as well as to work out some strategic approaches. Due to that it is necessary to create an approach to the management of retail trade chains development on the basis of introducing innovations and perfecting the public image. The vector of development of the trade industry is defined by retail trade chains, whose share in the structure of this industry has increased from 10.5% in 2005 to 37% in 2014. Retail trade chains perform important economic and social functions (for the state, as well as for customers and manufacturers) by attracting foreign investments to the economy, developing trade infrastructure, satisfying the customers' needs by improving the quality of trade service and developing business relations. The relevance of the research topic can be explained by the fact that before the present retail trade chains have mostly developed at the expense of expanding sales premises and – consequently – increasing the trade staff size. All of the above helped to determine the goal of the study –

the development of theoretical and methodical aspects of the interrelation in introducing innovations as a factor of perfecting the public image of a trade organization. The object of the study is chain retail trade enterprises. The subject at hand is organizational and economic relations emerging in the image-making process for retail trade chains based on innovational activity.

3. Theoretical Basis of the Study

The conceptual framework for the research is a number of fundamental and applied works on economical, organizational and social development problems and services industry management, applied to retail trade enterprises. This range of problems can be found both in the practice of Russian companies (over 78% of Russian organizations specifically work on image-making strategies) and in the studies by the following scholars: I.A. Druchevskaya (Druchevskaya, 2013), F. Kotler, K.L. Keller (Kotler, 2006), C. Schoenfeld (Schoenfeld, 1963), D.A. Grewal, K.L.B. Ailawadi, D.C. Gauri, K.D. Hall, P.B. Kopalle, J.R.E. Robertson (Grewal, Ailawadi, Gauri et al., 2011), Qingning Cao, Xianjun Geng, Jun Zhang (Cao, Geng, Zhang, 2015), Ryan Hamilton and Alexander Chernev (Hamilton and Chernev, 2013), Leyland F. Pitt, Peter A. Dacin, Tom J. Brown (Leyland, Dacin, Brown, 2010).

Today many such terms as “public image of an organization”, “corporate public image”, “public image of a company”, etc. can be found in academic literature. Public image is an artificial image formed in social or individual conscience by means of mass media and psychological impact. The goal of its creation is to form a certain attitude to a given object.

Besides traditional areas of the steady development of companies, complexes and the region (i.e. economical, ecological and social development), another important sphere is innovations. This area of work not only provides the effectiveness and competitive ability of a trade organization at the current moment, but also creates the potential of a steady development in the future (Pungina, 2014). The process of introducing innovational transformations into the practice of a retail chain should begin with the process of planning innovations: detailed elaboration of the goals of the innovational work and bringing them to certain structural units and executives; establishing the set of innovational activities; the allocation of tasks between investment projects’ participants; determining the necessary resources, the arrangements about the order of priority and time limits for certain activities and setting up favorable conditions for performing tasks set for each period of time. The introduction of innovations should be performed by the use of a suitable method. Innovations

should be controlled with respect to their effectiveness, and the innovational activity should be evaluated in order to assess the innovational development of the retail trade chain, which is one of the factors of its competitive ability.

Innovations can be significantly different from each other depending on the parameters their classification is based on. Researchers distinguish between technological and commercial innovations. The technological ones are related to changing physical properties of the product in the process of its production – for instance, introducing new ingredients, or using new production technology to get new products. The commercial innovations are any alterations of the arrangements, sales and communication when selling the product. For the trade sphere this involves the new design of the product's package, new type of advertising or the presentation of the product to the customer. Such innovations are related to the product's movement from the manufacturer to the customer (Bovin, Cherednikova, Yakimovich, 2006).

In terms of the place of origin of the innovations in relation to the trade company, we suggest the following distinction. Internal innovations are the innovations occurring inside a trade company. They are related to improving its activity and lead to increasing the effectiveness of its functioning. In broad strokes they can be divided into three subtypes: research and engineering innovations; trade and technology innovations; management and administration innovations. External innovations are the ones occurring outside the given trade company, but they concern the trade in general. These innovations can appear at foreign markets, the domestic market or within a certain trade form (vending form, outlet form or such new forms as “casket” and “culinary market”, vending machines selling umbrellas, live lobsters, hot dogs, automatic vending of a wide range of digital devices, or a discount store format in pharmacy retail) (Smolovshchikova, 2011).

The result of the innovations in retail trade chains is usually the perfection of the trade technology, which basically is a set of operations that provide the implementation of the trade process using the most useful techniques according to the given economic conditions. Introduction of innovations allows developing the services of retail trade chains by effectively using the resources: maintenance of fixed assets, perfecting the usage of working assets and optimization of circulation expenses, constant personnel development, etc.

4. Methods of Research

Based on the methodical approaches to the evaluation of the level of intensive development of economic entities we have determined that it is viable to perform computation by comparing

the indicator values to the established basic values. Practical examples of the application of innovations in the retail trade chains work and their correlation to the planned economic effect are presented in table 1.

Tab. 1: Innovations in the work of Russian retail trade chains

Innovations introduced	Effect	Intensive development indicator
<ol style="list-style-type: none"> 1. Personnel development, improvement of information technologies of labor automation, etc.; 2. Imitation of well-known brands; 3. Electronic trade system, online shopping, new emerging forms of shopping; 4. Using new, advanced information technologies to communicate messages to target demographic as well as new, unconventional platforms for their (the messages') publication; 5. Specific outdoor advertisement; 6. Keeping the company's own kitchen and preparing food before the eyes of the customers; 7. Active interaction of retail trade chains with such innovational organizations as: technological parks, high-tech incubators, technology centers, innovation unions, project management associations, etc.; 8. Marketing management system – Profi-T promo-server. 	<ul style="list-style-type: none"> - Increase in labor productivity - Gain in sales - Entry into new markets 	labor productivity
<ol style="list-style-type: none"> 1. Factoring transactions; 2. Use of energy-saving technologies; 3. Radically new management schemes; 4. Introduction of new production equipment. 	Optimization of circulation expenses	working capital turnover
<ol style="list-style-type: none"> 1. Using new generation products (food products with bioadditives, vitamins, etc.); 2. Drawing the customer as close to the product as possible and reducing the sales time as much as possible (the “window shopping” form of sales, when the decision about buying some product is made during a walk around the shops and examining the shopping windows, vending). 	Quality of service	return on expenses
<ol style="list-style-type: none"> 1. Putting the innovative equipment into the production in order to be able to perform operations related to sales and serving customers; 2. Equipping the stores with state-of-the-art trade equipment with a relatively large layout area, using various approaches to the layout depending on the types and composition of the trade equipment; 3. Using intelligent fitting-rooms; 4. “Smart” shopping trolleys; 5. Information product screens; 6. RFID tags on the products; 7. Each product having a price label (RFID); 8. Using biometric payment by means of fingerprint identification; 9. Consulting about the products and settlement of transactions using holographic shop assistants; 10. “Shopping social network” and cooperative purchases; 11. Using other forms of sales for enterprises – for instance, via traveling agents, consignees (“membership clubs”), etc.; 12. Technological innovations (introduction of new cash registers with additional innovative functions, or using advanced intelligent devices such as self-service terminals, using modern trade and technology equipment (shop windows, self-service cabinets)); 13. Using “virtual fitting-rooms”; 14. Introduction of parcel terminals; 15. Technologies that make it possible to view the list of stores selling the 	Perfecting the material and technological resources	returns on assets, sales per square meter of retail space

product at a lower price upon scanning the bar code; 16. Automation of warehouses, production, stores, introduction of digital shop windows (lantern shop windows that imitate a city street and show information about the campaign product); 17. Introduction of screens in the checkout area with the information about associated goods; 18. Introduction of advertisement screens; 19. Introduction of photodiode video walls (sizes 3x5m, 3x3m, 7x1m), which can also be used outside; 20. 3D video counters; 21. Barcode self checkout system; 22. Antitheft systems; 23. New innovative modules based on EVI compressors.		
1. Viral marketing (viral internet-technologies); 2. Promotional offers; 3. Reduction of prices of certain types of products for a definite period of time (a week or a month); 4. Active product-line expansion of private brand products; 5. Training the sales assistants to use certain psychoanalysis skills and using it in their work with customers; 6. Carefully chosen lighting, music and smells; 7. Various marketing polls related to the range of products, service conditions, as well as questionnaires focused on researching the customers; 8. Customer retention map.	Customer retention increase	working capital turnover

All these innovations will allow the stores not only to provide fast and comfortable shopping, thus increasing the loyalty of the customers, but also to reduce the number of employees and the length of the shopping queues, attract more visitors and offer them quality service (Konovalov, 2011).

3. Analytical Part of the Study

Let us consider the analysis of expenses for innovations in the retail trade chains. First, we will perform a ranking score of the innovational activity of several trade chains. We have chosen retail trade chains of a regional market of the Republic of Tatarstan as the subjects of our study. These chains are OOO Bakhetele, OAO Edelweiss, OOO Ak Bars Torg (Pyaterochka retail chain).

Tab. 2: The dynamics of indicators resulting from innovations in trade chains

Accession rate for the returns on assets					
	2009	2010	2011	2012	2013
Bakhetle	12.81	0	0	4.44	0.71
Edelweiss	0.81	3.27	0	0.51	4.34
Pyaterochka	1.8	94.4	0	0	0
Accession rate for the labor productivity					
Bakhetle	11.18	5.22	7.78	5.56	4.33
Edelweiss	0.81	2	1	3.28	2.34
Pyaterochka	2	0.51	0.5	2.5	0.20
Accession rate for the return on expenses by means of innovation					
Bakhetle	4.19	0	7.02	0	4.5
Edelweiss	4.76	0	0	0	0
Pyaterochka	8.71	7	0	9.45	3.5
Accession rate for the working capital turnover					
Bakhetle	0	0	0.4	28.64	7.02
Edelweiss	0	0	2.98	3.47	16.07
Pyaterochka	1.15	0	3.78	0.06	0
Accession rate for the sales per square meter of retail space by means of innovation					
Bakhetle	10.12	2.68	6.83	3.8	2,08
Edelweiss	0	18.3	0	0	2.37
Pyaterochka	0.73	172.4	0	157.7	0

Then, according to the method of a ranking score of innovational activity, we need to define a rank for each trade chain based on the indicators of intensive economic growth calculated above. We will need to calculate a rank for every trade chain using the following formula:

$$R_j = ((1 - X_{1j})^2 + (1 - X_{2j})^2 + \dots + (1 - X_{nj})^2)^{1/2}, \quad (1)$$

The highest rank (1) is given to the trade chain that gets the bottom value of R_j . The matrix of ranking score calculation for integral intensive development indicators for trade chains of Tatarstan in 2014 is shown in table 3.

Table 3 shows the results of the ranking evaluation of the intensive development level of the trade chains in question for the period of 2009-2013.

Tab. 3: Ranking evaluation of the intensive development of OOO Bakhetle, OAO Edelweiss, OOO Ak Bars Torg (Pyaterochka retail chain) retail trade chains

Trade chain/year	2009	2010	2011	2012	2013
Bakhetle	1.98	1.72	1.77	3.00	0.68
Edelweiss	3.44	4.61	3.21	3.88	1.54
Pyaterochka	2.30	2.53	4.00	3.00	3.95

Upon analyzing the ranking indicators presented in table 4 and their dynamics, presented in figure 1, we can conclude that the intensive development level ensured by the innovations in Bakhetle retail trade chain is higher because its ranking score indicators in 2009-2013 are the lowest. Based on this evaluation of the intensive development level and the escalating competition at the local market the managers of trade enterprises will have to improve the management process by the intensive development of the trade chain on the basis of the innovational activity.

The results of the calculations show that:

- Bakhetle trade chain has the highest indicator of the innovational activity; it is recommended that this chain should follow the strategy of maintaining the innovational positions – preserving the attained level of innovational activity and its constant improvement by means of constant introduction of new developments;

- Edelweiss and Pyaterochka trade chains have a low level of innovational activity and consequently these trade chains should follow the innovation imitation strategy. The innovation imitation strategy boils down to the retail trade chain borrowing (copying) innovations from third parties. The implementation of this strategy is possible using the benchmarking technology.

When issuing recommendations on improving the innovational work it is necessary to consider the fact that within the intensive development evaluation method proposed in this study this development is appraised based on the development indicators. Thus, the innovational activities should be focused on increasing these indicator values.

We have done an econometric analysis of innovation expenses for a trade chain. The results of the correlation analysis allow us to come to the following conclusions: the biggest correlation is the one between the sales turnover and the sales premises (90%), the smallest one is between the sales turnover and the technological innovations.

By using the regression analysis method we came up with the following formula that can be used to calculate the sales turnover of a trade chain:

$$Y = -1047.96 + 71.90X_1 + 264.4X_2 + 145.6X_3 + 0.07X_4 + 0.102X_5, \quad (2)$$

where X_1 – expenditures for marketing innovations, X_2 – expenditures for management and administration innovations, X_3 – expenditures for technological innovations, X_4 – number of trade employees, X_5 – sales premises.

The high value of the free coefficient is equal to -1 047.96, which shows that the analytical model does not take several significant factors into account. The determinacy coefficient of this model is 95 %. This indicator shows how the trade chain turnover values attained by formula evaluation match the actual indicators. The achieved value of 95% bespeaks of a high degree of this model's correlation with the actual turnover indicators of a trade enterprise. The "sales premises" indicator has the biggest impact on the turnover index (its t-statistics coefficient is 3.95), next comes a group of other indicators: the indicator of "expenditures for management and administration innovations" (its t-statistics coefficient is 2.51), the indicator of "expenditures for marketing innovations" (its t-statistics coefficient is 1.34), etc.

Thus we have developed a regression model for forecasting the trade chain turnover based on the evaluation of both intensive and extensive factors. We have established that this model, by the set of its characteristics that we have studied, meets the requirements sufficient for using the practical application of this model.

Upon considering the possible ways of intensive development of trade chains based on the innovational activity, we will provide the results of our research in regard to the innovational development of retail trade chains. 100 representatives of trade enterprises of the city of Kazan participated in the questionnaire – these are managers and professionals from various company departments, senior executives, mid-level executives, other employees and assistants. The main bulk of the respondents were professionals from sales departments (58.8%).

The overwhelming majority of the respondents consider "innovations" to be the introduction of advanced technologies, using achievements of science and technology (88.2%), as well as various new developments (23.5%).

The level of the trade professionals' satisfaction with the existing level of innovations usage in the activity of trade enterprises can be described as low. The majority of the respondents (48%) are dissatisfied with the current use of innovations in their companies, a

little less than a third of the respondents (27%) expressed a neutral attitude and about the same number of the respondents evaluated the current level positively.

However, 20% of the respondents see the necessity to introduce innovations into the workforce management system, 30% - into the sphere of the technological infrastructure of the trade, 15% - into the system of purchasing and logistics, 15% - into the system of accounting and control of the merchandise movement, 12% - into the sales promotion, 8% - into the safety control system of the company. Although the professionals realize the significance of innovations for improving the competitive ability and social-economic effectiveness of trade companies, the actual implementation of innovations leaves much to be desired. Namely, over a half of the respondents (62%) could not give an answer about who is responsible for innovations in their company. In our opinion this can be explained by the absence of any system of controlling innovations in retail trade chains.

The overwhelming majority of the respondents (80.3%) expressed their interest in receiving information about the experience of introducing innovations of the leading Russian and foreign companies. As the results of the poll show, today the main sources of information about the existing Russian and foreign innovation experience for retail trade professionals are Internet resources (58.8%), exhibitions (35.3%) and business magazines (29.4%). About the quarter of the respondents (23.5%) receives the information on innovations directly from their management at production briefings. Besides, 17.6% of the respondents receive such information at business seminars and 11.8% of them – during their advanced vocational training.

In other words, the attained data show that, on the one hand, trade chains have an actual need in various types of innovations, but on the other hand there is no innovational infrastructure in the trade industry.

Conclusions and Recommendations

The development of retail trade based on the innovational activity can be considered intensive in our opinion. As for the notion of “activity” we can say that, on the one hand, activity is a characteristic of some work, but on the other hand work is a form of activity.

Introducing innovations into the work of trade enterprises should be based on the current internal and external needs and should be implemented according to several definite stages to ensure their effectiveness. The changing factors of external and internal environment of the enterprise determine the directions of its development: in the conditions of fierce

competition, the company's growing rate in the total volume of sales within a certain locality and working in trade formats of high quality the relevance of intensive development increases. The evaluation of a trade chain development with regard to its innovational activity was based on the ranking method of integrated index calculation. The developed method was tested on the example of Bakhetele, Edelweiss and Pyaterochka retail trade chains. The tactical actions should be undertaken according to the stages of introduction of new developments into the trade and technology process.

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SELECTION OF STRATEGIC ZONES OF MANAGEMENT BY AGRARIAN ORGANIZATIONS IN THE CONDITIONS OF INNOVATIVE DEVELOPMENT OF THE RUSSIAN AGRICULTURAL COMPLEX

Gulnara Valeeva, Leisan Khammadeeva

Abstract

The article suggests techniques of strategic zones of management selection by agrarian organizations based on the evaluation of the economic zone attractiveness and identification of an organization's competitive positions in each. This technique enables organizations to opt for such an activity zone in which they can meet market requirements and make innovative strategic decisions to improve the organization's effectiveness and competitiveness.

Key words: agribusiness, a strategic zone of managing, strategic positions, competitiveness

JEL Code: M 11 , Q 13

Introduction

The aggravation of the Russian agricultural business organizations problems at the present stage is influenced by an entire complex of external and internal factors among which increasing consumers' requirements, price disparity, increased competition, errors during production arrangement and management, high risks related to unstable external environment factors and others are worth mentioning. A necessary condition for sustainable growth and development of agricultural organizations, influenced by these factors, is improving the system of agricultural organizations management based on introduction of innovative techniques and strategic management tools enabling to timely consider the influence of external environment factors in an organization's activity and adapt to market conditions. In our opinion, in the conditions of growing competition and economic independence of business entities, research and forecasting of market conditions, an organization's competitiveness and a choice of strategic zones of managing on this basis is one of the key factors of successful functioning and development of the Russian agricultural organizations.

The problem of wide application of innovative technologies and techniques of strategic managing zones selection by agricultural organizations is insufficiently solved in the modern domestic economic research works due to strategic management tools being new for the Russian agrarian economy.

Our study aims at developing an adapted technique of strategic managing zones selection for the Russian agricultural organizations considering an organization's peculiarities and national and regional agricultural markets functioning.

1 Theoretical and Methodological Basis of the Research

Theoretical and methodological aspects of strategic managing zones selection by business entities are covered in a number of specific studies. An enormous contribution to the theory formation and development in this area of research has been made, for example, by I. Ansoff (Ansoff, 1989), M. Porter (Porter, 2007), A. A. Thompson, A. J. Strickland (Thompson & Strickland, 2007), and others. Significant developments in the area of methodology are those suggested by the Boston Consulting Group, McKinsey, DPM, and ADL (Hanger & Willen, 2013).

The results of our theoretical and methodological study of identifying and selecting strategic managing zones and agribusiness environment have enabled us to draw certain conclusions.

A strategic zone of an agricultural organization management is a promising area of agricultural market in which it operates or plans to operate to achieve desired results by ensuring high competitiveness.

When selecting strategic zones of managing the following principles should be observed:

- first, a strategic zone of managing should be promising, containing opportunities for an organization to develop and grow;
- second, a zone of managing is strategic for an organization only if it has sufficient potential and competitiveness to achieve its goals in the zone.

Thus, an area for an organization's activity is strategic only if its opportunities coincide with the targets of the organization and when the organization strictly complies with its requirements.

These principles formed the basis for the development of the adapted technique of strategic managing zones selection for the Russian agribusiness.

Our research is based on widely applicable scientific methods of knowledge, such as analysis, synthesis and modeling.

The analysis of the existing methodological approaches to evaluation of attractiveness and selection of strategic areas of managing showed that the existing techniques in "pure" form and guidelines on the choice of competitive position of an organization in strategic zones developed on their basis cannot be applied in the Russian agribusiness (Petrov, 2005; Valeeva & Khammadeeva, 2010).

The results of the analysis of the most famous techniques of evaluation of an organization's attractiveness and competitiveness are presented in table 1.

Table 1: The profile of the basic methodological approaches to evaluation of attractiveness and the selection of strategic managing zones

Name	Profile	Limitation in agriculture
Models of «growth – share» type [BCG matrix] (Efremov, 2001, p.18)	An organization's position is determined against all other organizations functioning in the market already. The attractiveness of strategic zones of managing is determined by the indices of market growth (growth rates), competitiveness is determined by a relative share of the organization in the market.	1) the matrix application is restricted to high-volume production branches where economy of the scale is evident; 2) conclusions based on the matrix are often general and indistinct; 3) besides we think this matrix to consider only one competitive advantage – low expenditures, with such competitive advantage as differentiation staying out of an analyst's sight; 4) the rates of market growth, especially in agriculture (as most agricultural markets grow slowly), and a relative share of an organization in the market are not the only indicators of the attractiveness of the market and competitive positions of an organization in it respectively.
Models of “market attractiveness — competitiveness of a company” type [GE/McKinsey matrix, Shell/DPM matrix] (Efremov, 2001, p.37)	The position of an organization is determined by a relative estimation of its advantages in the market in combination with a relative estimation of attractiveness of the market itself.	These models are inapplicable in agriculture as strategic positions of business are developed mainly for companies acting in oligopolistic markets (Shell/DPM). Moreover, there is a strong synergetic connection among various agricultural areas which needs to be considered when assessing the attractiveness of managing zones and developing competitive positions of organizations in them.
Models of “Market life cycle (product life cycle) — business strength» type [Hofer-Shendel model, ADL matrix] (Petrov, 2005, p.177)	An organization's position is identified by estimation of its position compared to that of competitors' depending on the market evolution stage (or product life cycle stage).	These models are inapplicable in agribusiness because agricultural production life cycle differs from the classical model.
Ansoff's technique of attractiveness evaluation (Ansoff, 1989, p.49)	The factors of attractiveness of strategic managing zones are: 1) prospects for growth in a certain zone of managing. They should be expressed by potential rates of production growth simultaneously connected with the phases of the life cycle of the demand for production, 2) prospects of production profitability in a certain zone of managing, 3) expected level of environment instability.	This technique in its “pure” form is inapplicable in agribusiness as agricultural production life cycle differs from the classical model. On top of that estimation of an organization's environment instability, in our opinion, is extremely relative and doubtful. This technique does not take account of their possible influence on the studied effective performance (predictable sales volume and profitability level); the level of instability is considered to be an equitable parameter of attractiveness of a strategic managing zone and is subtracted from or added to the sum of prospects of profitability and growth depending on the character of the influence.

2 The Analysis of the Research Results or Scientific Problem

In developing a technique to assess the attractiveness and select zones of managing as well as guidelines on selection of competitive positions in them, in our opinion, the following specific peculiarities of agriculture and its products should be taken into account:

- agricultural products are staple goods lacking for identical substitutes and having low price elasticity of demand;
- the life cycle of agricultural products differs from the classical model;
- the majority of national markets for agricultural products are in the maturity stage and grow at a slow pace;
- there is strong synergy among various agricultural activities;
- a considerable part of products is used within organizations to meet on-farm needs;
- most products produced by agricultural organizations is a raw material for other economic sectors and have a long logistics chain on the way to final customers.

Given the aforementioned characteristics of agriculture and its products, we have adjusted and tested a technique of evaluating the attractiveness and choosing strategic areas for agricultural organizations managing on agribusiness entities.

The suggested adapted technique to select strategic zones of agribusiness management is presented in figure 1.

This technique allows for and implies solving three main tasks:

- evaluate the attractiveness of strategic managing zones;
- determine the level of competitiveness of an agribusiness in each of them;
- select the most attractive strategic zones of managing for the agribusiness.

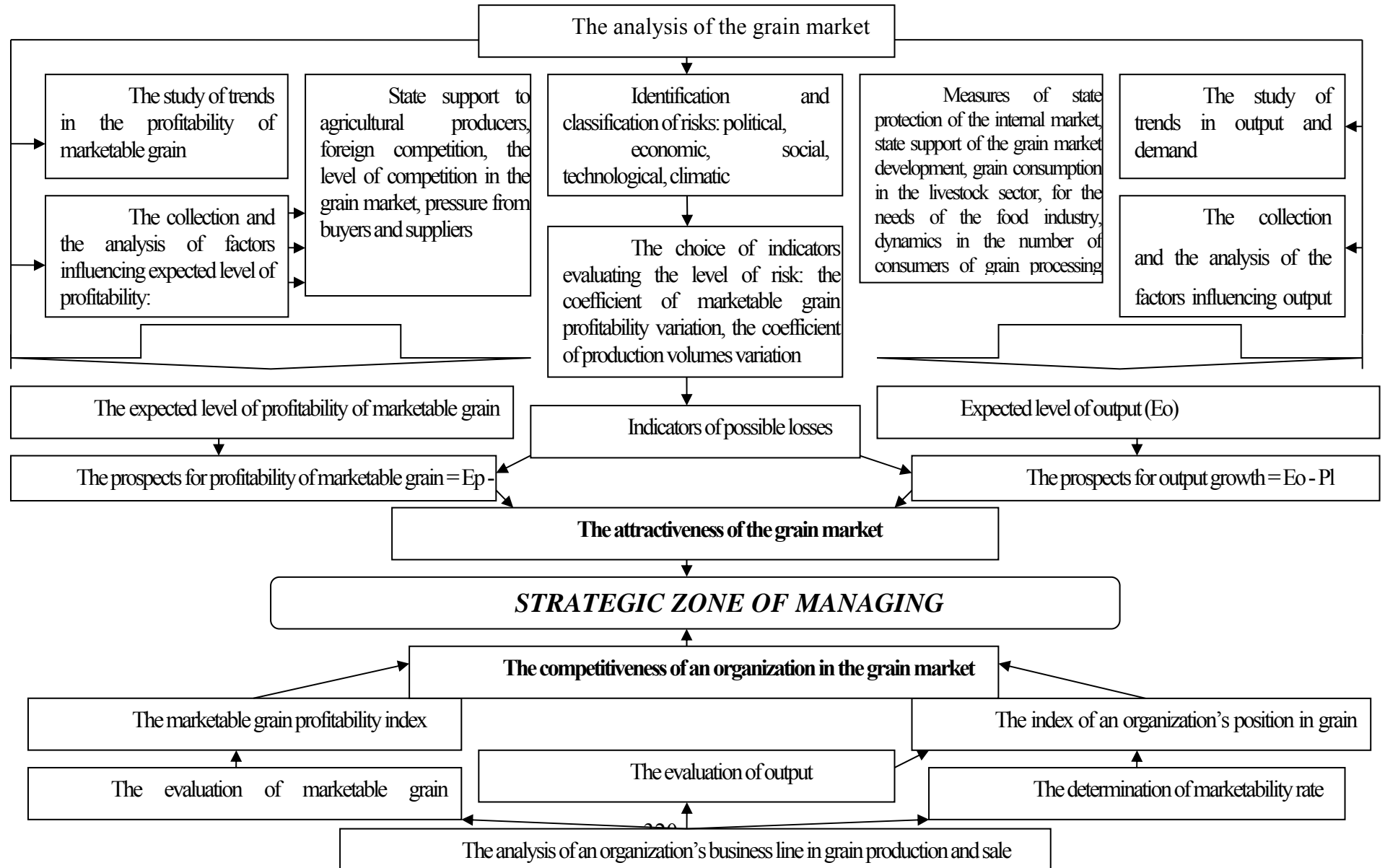
The first stage of the analysis is to assess the attractiveness of strategic zones of managing at the regional and the national levels (Casillas & Acedo, 2013).

Having studied the theoretical basis for assessing the attractiveness of strategic zones of managing and peculiarities of agriculture, we have concluded that the primary indicators of the attractiveness of agribusiness activity zones are: the prospects for growth in production volumes and in profitability of marketable products.

Overall assessment of managing zones attractiveness can be obtained by combining the prospects of production volume and the prospects of profitability taking into account possible losses:

$$\text{The attractiveness of SMZ} = \alpha (Ep - Prp) + \beta(Eo Plo) = \alpha Pp + \beta Po \quad (1)$$

Fig. 8: The Scheme of the Selection of Strategic Managing Zones by Agribusiness (by the Example of the Grain Marke



where:

E_p is the expected level of profitability,

E_o is the expected level of output,

P_{lo} and P_{rp} - indicators of possible losses in output and reduced profitability of marketable grain,

P_o - the prospects of output growth in a selected strategic zone of managing;

P_p - the prospects of marketable products profitability in a strategic managing zone (SMZ);

α , β are the coefficients of relative importance of each parameter for an organization.

The expected level of output (profitability) is estimated by extrapolation of past trends of output (profitability) of agricultural products taking into account expected changes which are determined on the basis of the analysis of the factors influencing production and demand (profitability).

Possible changes in trends of production are evaluated by the analysis and the forecasting of the main factors influencing demand by expert estimates. For example, our studies have shown that the prospects for output growth in the grain market depend on several factors (Adelman, 1999; Ghafoor, Badar & Hussain, 2010). The main ones, that is, factors which, in our opinion, need to be investigated and predicted when determining the attractiveness of the market, as is seen in figure 1, is the state support of the grain market development, grain consumption in the livestock sector, grain consumption for the needs of the food industry, dynamics in the number of final users, geographical expansion of food markets, the degree of technologies modernization, and measures of the domestic food market protection.

We think factors influencing prospects of profitability growth are the level of competition among grain producers, pressure from suppliers, pressure from customers, government support to agricultural producers, and foreign competition.

To quantify the level of risks impacting markets attractiveness the following parameters may be applied: dispersion, variation range, variation coefficient, standard deviation.

To determine possible loss of production volumes and profitability reduction the coefficients of variation of these indicators is suggested.

The second stage of managing zones selection is to assess the competitiveness of an agribusiness in each strategic managing zone to be.

Studying the theory of agribusiness competitiveness and the existing methods and techniques of its assessment, it was concluded that the main indicators of competitiveness of the Russian agribusiness in the agricultural market can be the following parameters (Dean & Harper, 1998; Pudil, Blazek & Somol, 2013):

- profitability of marketable products,
- an organization's position in the market.

A company can be competitive only if its performance is higher than that of competitors or the industry average level.

As during competitiveness index calculation various indicators are synthesized, each indicator is presented as an index and takes on values from 0 to 1. The indices show the deviations of the data from the minimum and the maximum values of the relevant indicators in the studied complex of organizations–competitors (market participants).

Thus the index of agribusiness competitiveness is calculated by the following formula:

$$I_c = (I_{pos.} + I_{prof.}) / 2 \quad (2)$$

where :

I_c - the index of an agribusiness competitiveness

$I_{prof.}$ - index of marketable products profitability,

$I_{pos.}$ - the index of the organization's position on a market.

To determine the position of an organization on a market, scientists offer such indicators as the share of an organization in a market, a relative share of the organization and others the calculation of which is based on sales and market capacity performance. Agricultural sales volume is known to depend on the production volume and business marketability percentage. When determining the capacity of agricultural market and the share of agricultural organizations in it, the amount of products used by organizations for internal use also needs to be considered. Therefore, we suggest supplementing the share of an organization in a market, as its position, with indicators of output and percentage of merchantability and calling it an indicator of an organization's position in the market. The volume of production is a key indicator of an organization's share in a market and the percentage of merchantability testifies to its competitive strategy. The conducted research of a number of agricultural enterprises' activity has shown the ratio of these shares to be 0.3 to 0.7 respectively.

The index of an organization's position in a market (I_p) is calculated by the following formula:

$$I_p = 0.7 I_o + 0.3 I_m \quad (3)$$

where:

I_o is the index of output,

I_m is the index of finished goods marketability.

The competitiveness index takes on a value from 0 to 1.

If $I_c = 0$, then an organization is noncompetitive (if $I_{prof.}$ or $I_{pos.}$ is equal to 0); if $0 < I_c \leq 0.333$, the organization has low competitiveness; if $0.333 < I_c \leq 0.666$, the organization has average competitiveness; if $0.666 < I_c \leq 1$, the organization has high competitiveness.

Having assessed the attractiveness of managing zones and evaluated an organization's competitiveness in them, strategic areas of management are selected according to the organization's goals.

Conclusions

Thus, in accordance with the purpose of the study we have developed the technique of selecting strategic managing zones adjusted for the Russian agribusiness. The technique applied for selecting strategic zones of managing, proposed by us, based on the evaluation of their attractiveness and selection of strategic zones of managing will enable agribusiness enterprises to develop an optimum combination of the organization's business lines ensuring profitability both in short- and long-term prospective.

This technique is adapted to the conditions of the Russian agribusiness embracing the world theoretical and practical tools of strategic management and planning taking into account the peculiarities of the agricultural production itself and the factors creating dynamic environment on the modern domestic and world agricultural markets.

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PROJECT PORTFOLIO MANAGEMENT AS A NEW MANAGEMENT TOOL

Daniela Vysloužilová – Petr Fiala

Abstract

Project Portfolio Management (PPM) is a management system based on numerous key characteristics. It includes a selection of suitable projects or programs that reflect corporate strategy. The authors introduce an updated view on the evaluation of the project portfolio. The discussed methodology uses approaches of operations research that include the DEMATEL, the ANP method and the linear programming model. These methods include risk assessment, dynamics and multiple criteria. This permits a high degree of flexibility in problem resolution.

Key words: project portfolio management, criteria, operations research, investment

JEL Code: C44, O22

Introduction

According to standards (ISO 10006, 2004), project is unique process comprising of whole range of coordinated and managed activities which are performing to achieve a goal. Each project is limited by time, costs and resources. So the project is described relatively large extent of risk which is accompanying the project all life cycle. We are including all above mentioned under the term project management.

Nowadays companies manage many projects in different level of development. The number of project, we can call portfolio. It is necessary to oversee the entire project portfolio, take into account the previous experience, on current projects, on organizational environment and future organizational plans (Engwall, 2003). For this reason, information exchange, resource management and coordination of project selection became even more important for the portfolio of projects rather than for an individual project. Projects are selected in compliance with objective criteria. The chosen projects compete between themselves for available resources. One of the most important parts of PPM is therefore redistribution of resources between single projects (Blichtfeld & Eskerod, 2008).

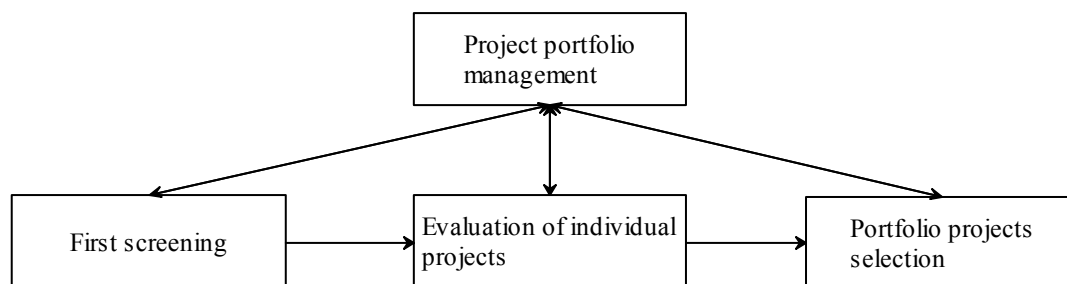
It is important to include the success of a project corresponding with the compliance time, quality, budget and customer satisfaction, as well as use of relations (dependencies) between projects within the portfolio in PPM (Meskendahl, 2010). Portfolio provides greater benefits, when a set of projects is controlled in coordinated way (Platje, et al., 1994). The variety of portfolios requires higher coordination due to their potential interdependencies and sizes, but also leads to better utilization of synergies, e.g. regarding knowledge, or sharing among customers (Teller et al., 2012; Voss & Kock, 2013).

Objective article is presentation of modern methodology of project portfolio selection corresponding with theoretical foundations of PPM. First chapter describes a new concept of methodology. It closes particular phases of process including activities description and used methods. The next section devotes important inputs covered in evaluation especially project interactions and multiple criteria. The last chapter introduces in short employed methods from field of operational research which brings new approach in project selection. The status of work on the methodology and future outlooks are summarized in conclusion.

1 The concept of innovative project's selection

The quantity of projects suggesting into portfolio could be considerable. Complexity of decision process and the necessary time to portfolio selection increase alongside with the increasing number. So the part of methodology is unification and simplification of information about projects. The project evaluator should have all information to use in available and simply form. The concept of proposed methodology is shown in Fig.1.

Fig. 1: Scheme to build portfolio



Source: Own work, 2014

In stage First screening, we are defining the general framework of the project. It includes below mentioned activities: collection of information about the project; determining the project costs; determining project revenues over the lifetime period; creating a project card;

verification of compliance with the corporate strategy, identification variants of project; projects rough valuation; assessment of the projects necessity. We suggested using the logical framework method and method of the scenarios creation.

In phase Evaluation of individual projects, we are selecting suitable candidates to Portfolio. It comprises these activities: identification and analysis of risks; creating a risk register; effectiveness evaluation with help of financial criteria; adding a project card; assessment variants of project. We recommend implementation of following methods: net present value, checklists, brainstorming, FMEA (Failure Mode Effects Analysis), Pareto analysis.

In Portfolio projects selection, we are deciding about the inclusion or non-inclusion of project into portfolio. We provides: criteria identification and determining their weight in the overall assessment; identification of the linkages and factor them in the assessment; projects selection in the portfolio according to sufficiency of resources; projects classification through portfolio. We are using ANP method, DEMATEL method and linear programming model.

All above mentioned phases come under the Project portfolio management. It secures besides others aftercare and management of project portfolio. We can find out there: the breakdown of larger projects into more stages; resource management; monitoring and reporting; information management; financial management; monitoring the development of risk; coordination of projects, including their dependencies and relations; quality control process; the change management process; election of the members of the expert team; the introduction of the position of project manager; the introduction of the position of manager of the project portfolio. In this phase come into consideration for example decision trees method, Ishikawa diagram or network analysis. The methodology is introduced in detail in (Vysloužilová & Fiala, 2015).

The goal of our methodology is to choose the best projects into portfolio and to consider all source distribution among project to achieving excellent efficiency.

2 The important inputs of methodology

The methodology concentrates on creation complex system project portfolio selection. This chapter focuses mind on inputs with important influence on decision making. By methodology formation it is putting emphasis on mutual interactions among all inputs especially projects and on criteria selection.

2.1 Project interactions

Each project is considering individually and independently the project management. But today's companies have a few projects in different lifetime periods and with mutual relations. (Killen & Kjaer, 2012) distinguishes the source dependence (if it is necessary resource sharing), market interdependence (complementary or competitive effects), dependence on the outcome of previous projects (technical or otherwise), teaching addition (when it is necessary to integrate knowledge and understanding of another project) and financial dependence. (Verma et al., 2002) divided projects according to the source dependency, market interdependencies and technological dependency.

We are defining these project linkages for the needs of our methodology:

Technological linkages. We have to take into consideration, if the project isn't initial stage of another needed planned investment. We have to identify relations between projects and to define its importance.

Linkages through shared sources. We have to find out, which sources and in which dimension need each projects and if the required quantity of them is available. In the case of sources shortage is necessary to choose among projects the most advantageous project of them. The sources we can sort on human, material, energy and financial. In human sources, we are looking for disposal labour force and its redistribution among projects. By material sources, we are establishing accessible amount of feedstock for project realization and its redistribution. Next is available quantity of energy resources such as electricity, gas, water, fuels. Another factor are financial sources, we have to compile costing for all projects and compare them with budget.

2.2 Criteria entering in methodology

Set of criteria is result of studying professional literature, questionnaire research and structured interviews with academic staff and managers at several companies in Ústí nad Labem region. We can take these set like starting point. Each company sets up its own set of criteria using DEMATEL method according to their needs. They can change selected criteria by every change of environment or their requirements. Chosen criteria subsequently enter into evaluation like cluster Criteria of ANP model.

We identify sixteen basic criteria affecting projects selection in portfolio. These criteria are divided into five types: financial, technical, economical, social and project criteria. The classification of criteria, which are used in methodology, is shown in Tab. 1.

Tab. 1: Set of criteria

Financial criteria	Net present value Labour costs saving Energy and material saving Possibility of grants
Technical criteria	Device exploitability Increasing of producing capacity Requirements of assortment changes Reducing of reject rate
Economical criteria	Economic efficiency increasing Labour productivity increasing Improving performance Innovation potential
Social criteria	Labour safety increasing Ecological criterion Working environment's improvement
Project criteria	Consistency with strategic and tactical plans Necessity of project Type of project Project risk

3 The modern evaluation's methods

This chapter presents operations research methods. The use of these methods in portfolio projects selection brings new possibilities. They were selected according to their advantages and methodology requirements.

3.1 The DEMATEL method

The DEMATEL method (the Decision Making Trial and Evaluation Laboratory) is an effective method to evaluate many factors entering into portfolio assessment and to identify their relations and importance. It analyzes relations (direct and indirect) between different parts of the system in relation to the type and severity). Solution procedure is based on knowledge of literature such as (Fiala, 2013).

The method proceeds from comparison scale to find influence and direction among system parts with respect to experts opinions. The comparison scale includes four levels of influence; no influence, low influence, medium influence and high influence. Paired evaluation of individual criteria carried out by each appointed experts. The resulting data entering the paired comparisons are given by the arithmetic average of all experts.

We are using the DEMATEL method for determination and quantification of direct and indirect links among projects in methodology. Simultaneously is method successfully applied to analyze criteria in the system. The result is the impact-relations-map. We can determine the importance of criteria from the map. The most important criteria are used like input data for the evaluation of the project within the portfolio.

3.2 The ANP model

The analytical network process (ANP) is suitable for expressing dependencies within the network structures. The method includes all possible interdependence and feedback of system into evaluation. Structure of ANP model is described by clusters of elements and their interdependencies. Solving the model is described in (Saaty, 2008).

The ANP model is composed of four basic clusters: criteria, resources, time and projects, based on the use of (Fiala, 2014). Constitution of model is clearly illustrated in Tab. 1.

Tab. 1: Clusters and nodes ANP model in proposed methodology

Criteria	Resources	Time	Projects
Financial criteria	Energy resources	Project lifetime	Project A
Technical criteria	Financial resources	Duration of the realization	Project B
Economical criteria	Human resources		Project C
Social criteria	Hardware and infrastructure		...
Project criteria	Material resources		

Source: (Vysloužilová & Fiala, 2015)

The relations among projects and criteria are created according to the results of DEMATEL methods. Other relations come out of company situation and its requirements. Responsible experts perform then pairwise comparisons. The advantage of using the method is, that company could on the fly as required change not only weights (priority) in evaluation but individual nodes of clusters (like e.g. criteria). We can add or take mutual relations according to the current situation in company or market environment.

3.3 The Linear Programming model

It is necessary to confront projects with available sources, for it is used linear programming. It solves problem of maximizing or minimizing a linear function under fixed constraints. For more information read e.g. (Lewis, 2008).

Linear programming is used to formulate the task finding the optimal solution projects with resource limits in methodology. Mathematical model is created from available resources, which are not disposal in enough quantity. We have to subtract value of resources of necessary projects from these resources. The necessary projects are integrated into portfolio automatically, it means they don't come under the selection of portfolio, because its realization is for company's functioning indispensable.

In proposed methodology, we use the size of the net present value of the selected projects as coefficients of the objective function. In this case we will maximize linear function.

Conclusion

From research we found out that companies do not use complex process of project portfolio selection very often. They concentrate their decision mostly on financial evaluations methods. The proposed methodology comprises the most important factors affecting decision process, e.g. project interactions, resources limits, criteria and their mutual relations etc.

The methodology is constructed on methods from the field of operations research. They include risk, multiple criteria and dynamics. The procedure has high rate of flexibility. Each company can modify it according its needs. The DEMATEL method allows to identify and quantify effects receives and received to other parts of system. According to the effects intensity is practicable to establish magnitude sequence. Method is applied for mutual relations analysis in cluster projects and in cluster criteria. Also it is used for determination of criteria importance. The ANP method permits to include all linkages counting feedbacks and their significance into evaluation. The projects are chosen and subsequently implemented on the grounds of a set of factors from the fields all over which have the impact on the decision. The linear programming model is in methodology used to redistribution limited resources among chosen project to maximize profitability.

The suggested methodology is currently tested on information altogether ten projects of engineering company in Ústí nad Labem region. According to sensitivity are data modified.

On the basis of practical verification of methodology will be revised theoretical grounds of portfolio project selection.

For simplification the methodology's use, we are preparing with help of experts the best criteria selection for three basic model situations according company life cycle: start up company; company in maturity; company in decline or rebirth. The result will be pairwise comparison matrix for that situation which should be directly usable like input in cluster criteria for ANP model.

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