Proceedings

Faculty of Business Economics and Entrepreneurship

FiLO diritto editore dal 2008

INSIGHTS AND POTENTIAL SOURCES OF NEW ENTREPRENEURIAL GROWTH

PROCEEDINGS OF THE INTERNATIONAL ROUNDTABLE ON ENTREPRENEURSHIP, 4 DECEMBER 2016. BELGRADE

Editors: Mirjana Radovic Markovic, Zorana Nikitovic, Linjie Chou Zanadu

PROCEEDINGS

INSIGHTS AND POTENTIAL SOURCESOF NEW ENTREPRENEURIAL GROWTH

Editors
Radovic Markovic Mirjana; Nikitovic Zorana;
Zanadu Linjie Chou

FILODIRITTO
INTERNATIONAL PROCEEDINGS

FiLOdiritto
dal 2008
editore

Log in to find out all the titles of our catalog
Follow Filodiritto Publisher on Facebook to learn about our new products

ISBN 978-88-95922-84-3

First Edition April 2017

filodirittoeditore.com
inFOROmatica srl, Via Castiglione, 81, 40124 Bologna (Italy)
inforomatica.it
tel. 051 9843125 - Fax 051 9843529 - commerciale@filodiritto.com

Publisher:
Faculty of Business Economics and Entrepreneurship, 8 Mitropolita Petra Street, Belgrade, Serbia

For publishers:
Jovan Zivadinovic, director, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia

Reviewers:
Raghu Bir Bista, Faculty of Economics, Tribhuvan University,Nepal
Aidin Salamzadeh, Faculty of Entrepreneurship, University of Tehran,Iran

Printed by
"ValjevoPrint" Valjevo

INDEX

Index

Index

Index

FOREWORD

In the past decade, has given new venues for the studies on entrepreneurship.

Literatures have been raised from the Born Global small enterprises to international entrepreneurship. Such changes in business academic inquiries will eventually lead to a more narrative based, entrepreneur centered approach.

The new economic structure is now under it's formulation due to the steady transformation of our traditional economic layout and the labor sectors. Such transformation is also spontaneously accompanied by a shift of the scientific paradigm. Natural science based positivist thinking is now experiencing more challenges from otherwise seldom recognized scientific approach like hermeneutics and phenomenological inquiries.

To study the individual experiences of the entrepreneurs is a way to put our agenda back to the human kind, which in the past decades has been replaced by the so-called institutional approach in social science. Such endeavor however has ignored the very essential role of human, as a core player within the entrepreneurship activities. MNC studies perfectly fits into the agenda of globalist view on human destiny. However, this is starting to change under the recent new political arrangements. The personal characters, individual family background and ambitions are becoming ever more popular in the interests of researchers worldwide. One example is the theory of corporate responsibility, in which corporations are treated as if they are individuals with feelings and emotions, while in my view, the realistic focus point should be the entrepreneurs. A sense of responsibility out of selfish-less charitable characters should be examined within individual unit. Institutions and society can't take care of all if the individual responsibility is given away.

Such development is indeed interesting and necessary. The focal point of any business and commercial activities is to better the lives of mankind. Any research direction derived away from this noble aim will eventually leads to dead end.

Last but not the least, this book will provide an overview of the current development of entrepreneurship and it's special linkage within the society at large. From a practical point of view, any scholastic work must also fulfill

the curiosity of the practitioners. In this case, I hope through the examples and cases set forward by this work, more and more individuals will start to foresee themselves within the exciting arena of the entrepreneurship. Creativity, individuality and social responsibilities can all be integrated.

13th of December, 2016
Dr Linjie Chou Zanadu

Part I
ENTERPENEURSHIP DEVELOPMENT

Analysis of Stages and Laws of Small and Medium Enterprises Development: Institutional Approach

ALIKAYEVA Madina[1], GVARLIANI Tatiana[2], KSANAEVA Madina[3]

Introduction

Small and medium enterprises (SMEs) are one of the essential elements in terms of reindustrialization of the national economy, that enables to achieve sustainable economic growth, promotes the development of innovative technologies and reduce innovation gaps, provides the formation of tax revenues.

It is known that the success of any transformation, including economic one, depends on the effectiveness of the institutional structure and changes in the institutional architecture of the sector of small and medium enterprises and the economy as a whole.

Currently there are about 5.6 million entities in the sphere of small and medium business, providing 18 million working places and about one-fifth of Russia's GDP (Development strategy of small and medium entrepreneurship, 2016). It should be noted that the status of small and medium enterprises and the problems of its development in modern Russia are largely due to the history and conditions of its formation. Systematization of the stages of development and the emergence of SMEs in Russia is based on study of system of theoretical and methodological works in the field of modern institutional science, namely those sections that explore the theory of transformation of economic systems, institutions, mechanisms of their interaction, etc. Institutional theory implies a dependence of further development of the object on its past development; it allows predicting its further development and improvement.

The underestimation of the functional role of SMEs, ignoring its considerable socio-economic potential in modern conditions acquires the character of large-scale strategic miscalculation and requires the diagnosis of its condition at different stages of economic development and impact analysis of the institutional causes of the SMEs' development dynamics.

[1] Kabardino-Balkar State University. Nalchik, Russian Federation, Alika123@rambler.ru
[2] Sochi State University. Sochi, Russian Federation, antana-tata@mail.ru
[3] Kabardino-Balkar State University. Nalchik, Russian Federation, ksanm@yandex.ru

The theory

The complexity and diversity of processes of institutional changes determine the special importance of methodological issues, among which the study of the economic nature and content of the phenomena are of undoubted interest, which represent the basic components of the structural organization of the emerging system of small business. Equally important is the study of fundamental dependencies between separate elements of system and institutional factors with a variety of manifestations in the reproduction process (Ksanaeva, Alikaeva, 2013). System interaction in the sphere of SMEs considered in the framework of the reproductive process ensure implementation of the complex of socio-economic functions through a system of institutions in which and through which these interactions are carried out.

The works of S.G.Kirdina, I.Rubinstein, V.Tolmacheva, S.N.Novoselov, V.V.Bokov, S.N. Parukhin should be noted as the papers of Russian economists, where attention was focused on the development of the theory of institutionalism (Kirdina et all, 2016; Kirdina, 2016; Novoselov, and Bokov, 2016; Parukhin, 2002). Institutional environment and factors of effective small business development are studied by such Russian economists as A.N. Degtyarev, S.N. Parukhin, and others (Degtyarev, 2001; Parukhin, 2002).

The basics, the essence and organizational and economic features of the phenomenon of "small business" are covered in the works of many foreign scientists such as S. Brue, C. McConnell, K. Marx, M. Peters, R. Hisrich, A. Hosking, and the Russian professors such as S.S. Kamberdieva, G.V.Khetagurov, K.A Kabisov, A.Shulus (Shulus,1997; Kamberdieva, et all, 2012).

The stages of formation and development of the Russian small business are disclosed in the works by B.N. Ichetovkin, V.A. Vilensky, A.A. Orlov, and others (Ichitovkin, 1991; Vilensky, 1996; Orlov, 1999).

The Methodology

Classic works of the representatives of institutionalism, namely, such scholars as T. Veblen, E. Durkheim, R. Coase, D. Clark, J. Commons, D. North, K. Polany, S. Williamson etc. became the basic framework that formed the methodological outline of this work.

Various questions affecting both economic evolution as a whole, and separate provisions of the evolutionary theory found reflection in works of these scientists – the competition, selection, adaptation and were used in our study. The methodological approaches as institutional and evolutionary of T.

Veblen, E. Durkheim, S. Williamson allowing to consider development of regional systems in unity of factors of heredity, variability, the competition, cooperation, adaptation, and also taking into account the principle of a multilevelness were used.

The methods of institutional analysis, designed J. Commons, D. North, R. Coase, D. Clark, were used to establish linkages between the processes of development of small and medium-sized enterprises, the legal regulation of the economy and business, the extent of state influence on the economy and the tax burden on business in the region.

A variety of tools typical for many economic schools and trends (economic theory, institutionalism, new political economy, evolutionary economic theory) were used in the research process, which allowed to follow the logic of SME development in Russia, to describe and analyze the status of SMEs at the present stage.

The methodological basis of this work is a systematic approach to the unity of its functional, structural and subject-object aspects, institutional, evolutionary, historical and logical approaches. The methods of comparative, structural and system analysis were used at different stages of the research with application of economic-mathematical apparatus and methods of statistics, unity of objective and subjective issues in the formation and development of economic processes.

Research and results

The nature of the business largely depends on the type of development of society characterized by not only economic but also historical, social, cultural, ideological factors. The relationship of the economy to the specifics of a particular country determines the uniqueness of the economic models, which have a significant effect on the nature and development of entrepreneurship, including small one (Kamberdieva et al., 2012).

In the history of the modern Russian small business development many domestic researchers distinguish different stages based on different aspects of small businesses and the state of the economy. In our view, the periodization of development of this sector logically can be based on the dynamics of the number of small enterprises and the institutional environment, and only then can be compared with the state of the economy. Based on the proposed principle, in our view, it is possible to allocate following stages of the development of small entrepreneurship in the Russian Federation.

Phase I (1987 – 1990) *– the emergence of small business*

This stage was marked by significant innovations in the legislation. Thus, the Law "On state enterprise (association)" (1987) introduced a new form of economic calculation and stimulated the emergence of new forms of lease relations. The law "On individual labor activity" has lifted a ban on the practice of handicraft, folk arts and crafts, domestic service, home-based work. These institutional innovations helped the mass creation of new organizations, most of which had the smallest size (Degtyarev, 2001).

This period created the initial private capital of the citizens, increased the number of people involved in entrepreneurial activity and formed cooperatives.

The highest rates of growth of the cooperative movement were noted in 1988, when the number of cooperatives has increased more than 46 times, the total number of employees has increased 11.5 times, and the volume of their production increased threefold (table. 1). The peak values of the number of cooperatives and workers were reached in 1991, however, this occurs after the collapse of the cooperative movement and its rebirth in other forms.

A sharp reduction in the number of cooperatives appears to have been caused by the abolition of the privileges granted to cooperatives (The Civil Code of the Russian Federation, 1994). The disruption of logistical supply, the instability of tax policy, the high degree of criminalization of business, the oppression of criminal organizations have further accelerated this process.

Cooperatives re-registered in 1992 and opened in the form of limited liability partnerships or joint stock companies (open or closed).

Table 1. *Development of cooperation in 1988 – 1993 (at the beginning of the year)*

Indicators	1988	1989	1990	1991	1992	1993
The number of operating cooperatives, thous	7,3	338,9	1102,2	1134,6	778,4	443,8
The number of employed, thous. people	669,7	7708,2	22688	33512	22665	994,0
The volume of sales, mln rub	1168,2	3326	224875	442801	449425	1183759

Source: Author, 2016.

Major changes in the political, economic, ideological, and social spheres of Russia have taken place in this period, which created the necessary conditions for the emergence and rapid development of small business.

Phase II (1991 – 1994) *– the dynamic development*

Phase II is characterized with fast dynamic development of the small business enterprises, institutionalization, isolation, and decoupling of this sector from other types of businesses. At this stage a legislative and financial framework for small business was formed under conditions of the backdrop of the degradation and significant reduction in activities of medium and large enterprises. At this stage an increase in the total number of small businesses was noted. So, in 1991 the number of small businesses amounted to 268 thousand, and by the end of this phase it reached its peak – 896,9 thousand, the number of employed amounted to more than 8.5 million people.

The first Institute of the state support of small business was the Committee for the development and support of small business, established in 1991 by the Council of Ministers of the RSFSR "On measures for support and development of small enterprises in RSFSR" in which for the first time in the history of Russia special privileges (tax profit, the possibility of accelerated depreciation of the active part of production funds) were granted. In addition, the regulation obliges different state agencies to assist small businesses.

With the introduction of the Resolution of Council of Ministers of the Russian Government dated on the 11th of May, 1993, № 446 "On priority measures for the development and support of small entrepreneurship" was established the other criteria for the selection of firms in the category of small ones – industry affiliation and number of employees. The category of small enterprises includes organizations of all the existing forms of ownership, the average number of employees in which amounted to: in industry and construction – at least 200; in the field of science is less than 100; for other industrial enterprises – less than 50; in the non-manufacturing sectors, retail trade and public catering – at least 15 people (The RF Government decree of 11 may 1993, 1993).

Since 1993 the Ministry of the Russian economy became the main coordinator of the system of state support for small enterprises. However in 1994 these functions were transferred to the State Committee of Antimonopoly policy, which was established by the Federal Fund for the support of small enterprises on the base of budget allocations for its development.

These institutions were the main developers of the first Federal program of state support of small business in 1994-1995. The main purpose of which consisted in the following: improvement of normative legal base of small business, development of measures for financial and personnel support of small entrepreneurship, engagement of small enterprises in foreign trade turnover and etc. The main disadvantage of the program was its underfunding

(20 billion rubles was allocated instead of 210 bn). Later, on the basis of this program new Federal law "On state support of small entrepreneurship in the Russian Federation" was developed and adopted, it marked the beginning of a new stage in the development of small business.

The peculiarity of this stage was that at this stage there have been legislative (formal) selection of small entrepreneurship as a separate sector of the economy, building the infrastructure of its state support began, criteria were formulated for classifying enterprises to small created the initial basic conditions for the existence and development of small business. New subjects of small businesses failed to form a base for further development of the national economy, to prevent the development of the crisis, to compensate for the collapse of old economic ties new, despite the large number and rapid development, but they helped to alleviate the major social problems of society.

Phase III (1995 – 1996) *– the decline in the number of small businesses*

This phase is characterized by the reduction in the number of small businesses. This was due to a number of reasons. In our opinion, primarily to the reduction in the number of SMEs has led the process of re-registration of enterprises established before 1991, which adopted a new legal form or dissolved. Closed businesses that were registered but actually were not carried out. Because of their large specific weight in the total number of organizations the impact of this factor was very important.

Affected the number of enterprises and more stringent economic policy of the state that has had a negative effect – a reduction in the number of small businesses and positive, it has improved the quality of its composition (gone broken businesses, the number of semi-criminal associations which could not continue its activities in the conditions of strengthening of state control over entrepreneurial activity).

The possibility of obtaining super-profits in new fields of activity have been exhausted, which served as the main incentive to open new businesses in previous periods, since almost all new market niche was already occupied.

During this period strengthened the position of medium-sized and large businesses, stabilized and was streamlined legislative and regulatory framework of entrepreneurship, its taxation.

The main institutional change in the field of small business largely predetermined its future status and development was the adoption of the new Federal law № 88 "On state support of small entrepreneurship in the Russian Federation" dated 14.06.1995 G. This law was significantly amended criteria

for the allocation of small businesses. Remained the industry criterion, but for most industries decreased significantly the limit values of the workforce.

So, the figure for construction and industry have decreased from 200 to 100 people in scientific and technical sphere – 60 to 50 people, in agriculture (other sectors of the production sphere) – from 100 to 60 people, and for the trade industry has set two limit criteria for retail it was increased from 15 to 30 people, and for wholesale up to 50 people. In addition, introduced a new condition limiting participation in the Charter capital of other legal entities (25%) (The law of the Russian Federation № 88-FZ, 1995). An important innovation introduced in this law was the classification of small business entities individual entrepreneurs and farm households.

This period is characterized by increase in the activity programs of Bank crediting of small entrepreneurship supported by the state and donor organizations. The most important directions of state support of small entrepreneurship were established by the government, namely: 1) formation of infrastructure of support of MP; 2) simplification of licensing, registration, certification, record-keeping and reporting; 3) support of foreign economic activity; 4) provision of concessional public resources (financial, technical and technological, information, scientific and technological development); 5) assistance in the training and retraining of personnel.

The second Federal program of state support of the small business was developed in 1996-1997, whose main objective was the sustainable development of small business in innovation and production spheres. However, its adoption was long delayed by long discussions in the State Duma, so the effect of its implementation was affected only in 1997.

Despite the fact that the dynamics of small enterprises was negative in this period, in our opinion, in these years the foundations were laid for further development and expansion of this sector, accumulated economic potential, well-established and has gained the stability of the new production and economic ties, and the small business sector has firmly taken its niche in the economy. The most important in the development of the institutional framework of small business was the creation of a new law on state aid, the division and coordination of powers of state bodies in the sphere of regulation of entrepreneurial activities, development of programs of state support of small business.

Phase IV (1997 – 2000) *– the stagnation*

At this stage, the number of enterprises has varied slightly, but the overall results were positive. This period was relatively favorable for small business: slowed down the rate of inflation; increased funding by credit institutions to the real sector; there has been economic growth; reduced the level of criminal pressure on business, including small.

August crisis of 1998 took place at this period, the impact of the crisis on small business was initially positive, as small businesses were less dependent on the banking system, almost was not involved in the primary sector and in the period of weakening medium and large businesses and significantly strengthened its position. During this period, increasingly revealed the dependence of the Russian economy on raw material sectors and the situation on the world oil markets and precious metals, which traditionally provided only by large and multinational companies.

However, the financial crisis led to the outflow of capital from Russia, which has undermined the financial base of enterprise development. According to some estimates about 30% of small businesses were forced to temporarily or completely suspend their operations, and the imbalance in small business in the sphere of trade and circulation even more intensified.

Those small businesses that were focused on regional markets, on the contrary, its position strengthened due to a significant rise in imported products and falling demand for them. Strengthening of state regulation of activity of small enterprises was partly one of the reasons restraining the development of small business in this period.

An important institutional change in this period was the adoption of several Federal laws "On unified imputed income tax", "On licensing certain types of activities", "On leasing".

Infrastructure of support of small business in this period has been mainly formed, but in many regions the development of institutions to support small enterprises was slower. The consulting system did not correspond the challenges and opportunities of small business development, making it ineffective (Mingaleva, 2013).

In the Federal program of state support for 1998–1999 one of the main tasks of the system of state support was the coordination of instruments and measures Federal, regional and local levels (*The Federal program of state support…, 1998*). It provided for the establishment of conditions for the development of small business (socio-economic, legal) and integral system of its state support.

At this stage, intensified the development and implementation of regional

programs of support of MP, the effectiveness of which is largely determined by the degree of activity and the availability of financial resources of regional authorities.

Phase V (2001 – 2004) *– the crisis*

This phase is characterized by economic growth and stabilization of the macroeconomic situation in the country. Reducing the price gap between domestic and imported goods was due to the strengthening of the national currency and a more flexible pricing policy of foreign firms.

An increase in overseas and foreign investment took place predominantly in the primary sector, in which small business was not represented practically.

During this period, significantly changed the taxation of small enterprises has decreased the number of activities subject to licensing, simplified system of accounting and reporting of small businesses to unify and simplify the registration procedure of legal entities that eliminated additional administrative barriers in business development.

Negative impact on the development of small business reduction of tax incentives provided by the state, and as a consequence – increase of the tax burden on small businesses (The Tax Code of the Russian Federation, 2000).

On the one hand, the emergence of special tax regimes provided entrepreneurs with the right choice of the taxation system, which, despite some shortcomings, has allowed to achieve the main goal – to simplify accounting and reduce the tax burden on small business. Their negative influence on the development of small businesses is manifested in the fact that the increased control over the activities of the enterprises from the tax authorities, and tax exemptions, became much narrower range of businesses. The first factor has had a positive effect on the state of the MP – entrepreneurs who were not ready to work more hard and clear conditions have ceased their activities. The negative impact of the second factor – the disparity of criteria for classification of enterprises to small and criteria for application of special tax regimes – is still preserved.

The Federal program of state support of small entrepreneurship main challenges put the elimination of administrative barriers, streamlining the work of government agencies in regulating the activities of small business and the optimization of its industrial structure through the development of production and innovative spheres. These problems were not solved and at present remain valid.

The most favourable trend in state regulation and support of the MP in that period was the intensification of efforts of regional authorities, the results of

which showed themselves in the next stage of development of small business.

Phase VI (2005 – 2007) *– the moderate growth*

This stage is characterized by moderate growth, stabilization. According to Rosstat, the number of small businesses at the end of this phase exceeded 1.1 million enterprises, and the number of individual entrepreneurs amounted to 3.4 million. In 2007, increased turnover and investments in fixed capital in small business (*Rosstat, 2015*).

This period is characterized by stabilization of the economic and political situation, the improvement of the General conditions of entrepreneurship development. In 2007, Russia's GDP grew by a record for the post-socialist economy, the value of 8.1% (according to Rosstat). The growth was largely due to the growth of spending (almost 13% compared to 2006), and also positive dynamics of investments, including foreign.

In 2006-2007, the government adopted measures to create favorable conditions for entrepreneurship development at the Federal and regional levels. So, it adopted a new law on development of small and medium enterprises (medium-sized enterprises for the first time became the object of state protection), was approved by the regulations, facilitating access of small and medium firms to receive financial and material support of the state, aimed at removing administrative barriers.

State tax policy in this period was the most liberal, saw an increase of tax revenues of the state with above-average growth in the tax base. This was due to the change of the order of recognition of expenses for income tax, increased tax privileges, and also with application of the regressive scale of UST.

Tax increases resulting from the growth of the economy, revenues of enterprises and population, and a favorable situation on the world energy markets. Negative factors for the development of small business and the economy as a whole during this period can be called the increase in inflation (especially of housing services), rapid growth of imports, growth of interest rates on loans because of high inflation expectations, increasing the national debt.

The growth of small business in this phase of development occurred against the backdrop of economic growth and was largely due to lower volatility of its external environment, adaptation to existing economic conditions in the country, the growth of incomes and domestic demand for goods and services.

This trend continued until the beginning of the global financial crisis, marked the beginning of the next period of development of Russian small business.

Phase VII (2008 – mid 2014) *– the rapid growth*

This stage of development of the small enterprises occurred during another financial crisis in the Russian and world economy. The causes of the crisis, according to experts, were serious geopolitical and geo-economic imbalances.

The state managed to avoid global socio-economic problems, however, completely compensate for the negative effects of the crisis failed.

If before the crisis (in the first half of 2008), the rate of economic growth was high and stable, and the business environment is very favorable, in the post-crisis 2010, despite a slight growth in most national economies, including Russian, predictions and expectations were much less optimistic. This is due to the fact that recovery from the crisis was due to a significant infusion of financial resources and rising costs of the state and not the recovery of the economy through market mechanisms. Such active government intervention in the economy was necessary and a necessary measure to prevent the worst of developments in the economy. However, the temporality of these measures and the impossibility of overcoming the crisis at this stage, through market regulatory mechanisms do not allow to build more optimistic prognosis and say that the crisis has been overcome completely. In addition, a number of foreign economies (Greece, Italy, Spain, Portugal) are still at risk.

The slowdown of economic growth in 2008 and decline in the following year was caused by the fall in external demand and a simultaneous decrease in domestic demand.

The main factor contributing to the country's exit from the crisis in 2008 (as of the August 1998 crisis) has been the improvement in the external economic environment and the stabilization of the situation on world commodity markets.

From the last quarter of 2009 began to grow exports, and from the second quarter of 2010 has increased domestic consumer demand. However, in contrast to 1998, in 2008, despite the significant decrease in imports of goods (about 30%) of Russian enterprises have not received a great competitive advantage, and increased business growth caused by growth in domestic demand, did not happen.

The unified social tax, which was paid by entrepreneurs since 2001, ceased to apply in 2010 in connection with the introduction of the new Federal law.

Insurance contributions to state extra-budgetary funds, which replaced the ESN, increased the tax burden on entrepreneurs from 26% to 34% (later it was reduced to 30%) of the payroll. However, for the enterprises of some branches was provided a temporary decrease in interest rates at the expense of mandatory contributions to the Pension Fund by 8% for the period 2010-2011.

Accounting work and reports for companies and entrepreneurs has significantly increased and complicated. So, starting in 2013, all taxpayers, applying STS, required submitting the balance sheet and statement of profit and loss, which actually means the accounting in full. The legislation provides for the possibility of a simplified accounting procedure, however, neither the methods nor the specific instructions in what form this simplified form of accounting has, the regulations do not specify. The only legitimate manner of accounting is a general order, established by the Law "On accounting".

Reporting on social insurance has also increased. Now entrepreneurs need to pass information about a personalized account on a quarterly basis.

In 2009-2010 changes were made to legislation that has significantly reduced as the grounds for conducting field audits of SMEs and their dates, and some services that are provided by small businesses was abolished compulsory licenses. The development of the Russian economy in 2011 (budget surplus, the minimum level of inflation over the past two decades, low but stable GDP growth) showed that the country has overcome the consequences of the 2008 crisis, the Main factors that contributed to economic growth in 2011 steel: higher prices for oil and gas on the world market, the revival of the business sector, the decline in official unemployment, the reduction of debts to the budget. However, the global financial crisis has shown the vulnerability and insecurity of a stable state of the domestic economy that determines the particular relevance of its modernization and further stability of sustainable development. The most important changes in external economic policy was the accession of Russia to the WTO (it has become its 156th member), functioning of the Customs Union and the agreement on the common economic space of Russia, Kazakhstan and Belarus.

In 2008-2010 in the framework of anti-crisis measures regional programs of subsidies to promote the development of small enterprises and self-employment with financial support from the Federal budget in the amount of not more than twelve-times of the maximum value of unemployment benefit (not more 58800 rubles) were developed and implemented.

Phase VIII (the second half of 2014 to the present time) *– the fall*

This stage is characterized with negative dynamics of SME development.

According to the Federal statistics service, the share of SMEs in turnover for the economy as a whole steadily decreases. The drop in operating income in 2014 compared to 2013 was 1.8 points (Rosstat, 2015). There is reduction in the share of exports of SMEs in total exports of the Russian Federation;

it amounted, according to the Federal customs service, of about 6%. This is due to the adoption of the regulatory decisions which introduced additional requirements to increase the financial burden on SMEs. Changes were made to the tax component of doing business (repealed privilege tax on the property for entrepreneurs-payers of the simplified tax system and the taxation system in the form of unified tax on imputed income; introduced sales tax; production changes of the non-stationary trade objects placement, etc.), as well as in the sphere of compulsory insurance payments (increased fixed insurance premium for individual entrepreneurs). In August 2015 changes were made in the marginal values of revenues for SMEs, while the limits were prescribed for each category of economic entities individually (micro enterprises – 120mln RUB.; small enterprises – 800 million rubles; medium-sized enterprises – 2 billion rubles). Double increase compared to the 2013 limits was supposed to lead to the expansion of the list of small and medium enterprises. However, the onset of the financial crisis has created a favorable financial environment for business development. Negative impact on the profitability and cost of production of the enterprises of small and medium enterprises, investment plans and financial stability of SMEs had an increase in interest rates and liquidity crisis.

The increase of fiscal burden, unfriendly system of administrative-legal regulation, ignoring the specifics of doing business in SMEs leads to the fact that the enterprise that is just starting out do not have the opportunity to increase the market share and thereby enhance its profitability, and this in turn allows you to move them from the category of microenterprises to small or medium.

This approach undermines the level of trust of entrepreneurs to the state and creates the conditions for business to go to the informal sector of the economy

A feature of this stage is the formation of a new ideology to support SMEs, the main provisions of which are: the development of the social functions of small business; guarantee the stability of fiscal and regulatory conditions for the development of SMEs; support social and economic activity of young people.

Conclusion

SMEs at the present stage of their development are not working effectively, and their role in the economy has a pronounced negative trend. The state's efforts in this direction up to the present period did not allow to achieve the main goal – to provide a large-scale expansion of the sector of small and medium enterprises – despite the scale and focus of the regional and Federal authorities. Moreover, the challenge is not the absolute increase in the number

of SMEs, but the qualitative growth of the sector and the involvement of wider population in entrepreneurial activity. Institutional analysis carried out in the paper allowed to formulate the basic problems of SMEs in Russia: the limited internal market, including low demand for goods and services provided by small enterprises, due to the reduction of state and municipal orders, the lack of funds of client companies and reduce the purchasing power of the population in the face of growing pressure of imports; the predominance of large organizations in the national economy (economic and financial), the monopolization of their productive resources and markets; excessive rigidity of the state economic policy (fiscal, monetary), which exacerbates the problem of reproduction due to the shortage of factors of production that give it the current activity of small enterprises that encourages entrepreneurs to use gray schemes activities and concealment of their income; regional polarization of the economy and the domestic market because of the disproportionate transportation costs and the appreciation of the cost of shipping the products, the imbalance and underdevelopment of the infrastructure in the regions and impact of intraregional issues that lead to uneven development of the SME sector in different regions; the imperfection of the normative-legal base of functioning of small businesses and the opacity of property relations and, consequently, the exclusion of small businesses from the process of institutional improvement of the economy and the inability of strategic planning in this sector.

The practical significance of the results of the study is that it focused on the solution of an important problem and represents a search of approaches to creating conditions and selection of tools that will improve the efficiency and effectiveness of the functioning of SMEs and its role in sustainable economic growth and reindustrialization of the national economy through the impact of institutional factors.

REFERENCES

1. Degtyarev, A.N. (2001). Institutional framework of small business development in XIX - XX centuries: On the example of Bashkortostan: dis..doctor of econ. sciences: 08.00.01. M.:322 p.
2. Development strategy of small and medium entrepreneurship in the Russian Federation for the period till 2030 [Electronic resource]. Mode of access: http://base.consultant.ru
3. Ichitovkin, B.N. (1991). Small businesses: patterns, possibilities and limits of development in the context of the str (On the example of industrialized capitalist countries): dis. doctor of econ. sciences: 08.00.01. SPb, 325 p.
4. Kamberdieva, S.S., Khetagurov, G.V., Kabisov, K.A. (2012). Problems of small and medium enterprises in modern conditions. *Sustainable development of mountain territories,* 3 (13).

5. Kirdina, S.G. (2016). Institutional matrices and development of Russia [Electronic resource]. – Mode of access: kirdina.ruhttp://www.intelros.EN/pdf/doklad_kir.pdf (date of access - 30.09.2016)
6. Kirdina, S.G., Rubinstein, I., Tolmacheva, V. (2010). Some quantitative assessment of institutional change: a study of the Russian legislation. TERRA ECONOMICUS, 8 (3), 8-22.
7. Ksanaeva, M.B., Alikaeva, M.V. (2013). Modern trends in the development of small business. Economics and entrepreneurship, 3, 410 -412
8. Mingaleva, Zh. (2013). Ethical Principles in Consulting. Procedia-Social and Behavioral Sciences, 84: 1740-1744. Doi:10.1016/j.sbspro.2013.07.024
9. Novoselov, S.N., Bokov, V.V. (2016). Transformation of the institutional framework: key definitions, factors of influence, meso-level specificity. Economics: yesterday, today and tomorrow. 2.
10. Orlov, A. (1999). Entrepreneurship in Russia (origins and stages up to 1992). Questions of economy, 12, 79-89.
11. Parukhin, S.N. (2002). Institutional framework of small business: dis. cand. of econ. sciences: 08.00.01. Kostroma, 168 p.
12. Rosstat, 2015. http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/publications/catalog/doc_1135087342078
13. Shulus A. (1997). Formation of system of small entrepreneurship support in Russia (special course). Russian economic journal, 5-6, 7.
14. The Civil Code of the Russian Federation (part one) № 51-FZ dated 30.11.1994. [Electronic resource]. Mode of access: http://www.consultant.ru (accessed 01.07.2016)
15. The Federal program of state support of small entrepreneurship in the Russian Federation for 1998–1999 (app. The resolution of the Government of the Russian Federation from July 3, 1998 № 697). [Electronic resource]. Mode of access: http://www.consultant.ru (accessed 01.07.2016)
16. The Federal program of state support of small entrepreneurship in the Russian Federation for 2003–2005. [Electronic resource]. Mode of access: http://www.consultant.ru (accessed 01.07.2016)
17. The law of the Russian Federation № 209-FZ "About development of small and medium entrepreneurship in the Russian Federation", dated 24.07.2007. [Electronic resource]. Mode of access: http://www.consultant.ru (accessed 01.10.2016)
18. The law of the Russian Federation № 88-FZ "On state support of small entrepreneurship in the Russian Federation" dated 14.06.1995 [Electronic resource]. Mode of access: http://www.consultant.ru (accessed 18.06.2016)
19. The RF Government decree of 11 may 1993 "On priority measures for the development and support of small entrepreneurship in the Russian Federation". [Electronic resource]. Mode of access: http://www.consultant.ru (accessed 20.07.2016)
20. The Tax Code of the Russian Federation (part second) № 177-FZ dated 05.08.2000. [Electronic resource]. Mode of access: http://www.consultant.ru (accessed 01.06.2016)
21. Vilensky, A.V. (1996). Stages in the development of small business. Questions of economy. 7, 30-38.

Legal and Financial Impact on Micro Entrepreneurship Development

DIMITRIJEVIC Vladimir[4], VUKADINOVIC Predrag[5], GROZDANIC Radmila[6]

Introduction

In Serbia, one of the main problems facing micro enterprises is capital required to finance their activities (Fatai, 2009) as they are financed either by debt, equity or a combination of the two, derived from either the formal or informal financial sources. In the formal sector, microfinance institutions (which do not have a legal framework for their work) and commercial banks are the main sources of financing for micro businesses, while the informal sector comprises of loans from friends, relatives (Ewiwile, 2011). Nevertheless, a lot of commercial banks are no willing to finance micro businesses because of the risks and uncertainties involved insufficient availability of modern technology by small businesses. Because of that, the attention is paid to the microfinance (Khandker, 1998), as a clear improvement over the development banks that emerged in the 1960s.

In lack of the access to efficient and reliable financial services at affordable interest rates in many countries by micro enterprises and entrepreneurs, as well as agro sector too, this paper is an effort to look to the future debates in microfinance (particularly about legal framework and financial opportunities, as well as the role of subsidies in Serbia, as an candidate EU country).

Literature framework

Definitions

- *Micro entrepreneurship*. To define small business very often are use yardsticks such as: number of employees, sales volume, and value of assets. A lot of sources define micro enterprises to have between 0-29 employees (Ayyagari, 2005), with the employment creation potential and low capital requirement as its main benefit (Serbia Low of enterprises follows that too).

[4] PE Post of Serbia, Belgrade, Serbia, vdimitrijevic@jp.ptt.rs
[5] Singidunum University, Belgrade, Serbia, pvukadinovic@singidunum.ac.rs
[6] Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, sme_rada@hotmail.com

- *Micro-credit* can be defined as the provision of small loans to those, to small businesses known as micro-enterprises that have no access to formal financial institution (John, 2013, pp. 48) or who would not typically be able to borrow due to a lack of collateral. Micro-credit can be provided by a number of sources, non-governmental organizations, family, commercial banks, and pawnshops.

Theories

Two theories of development frame the phenomena of micro credit:

- *Neo-liberalism* – concept fundamentally about economics, support individuals in making rational decisions that are in interestsof the growth and the market. This market should be as detached from the state as possible, with the state regulating rather than initiating economic activity; and
- *Participatory development* – concept focused community and power,assumes a greater value than individual welfare, local culture and tradition, and the environment in development proposals. Micro-credit does not initially appear as an area in which neo-liberals would be interested.

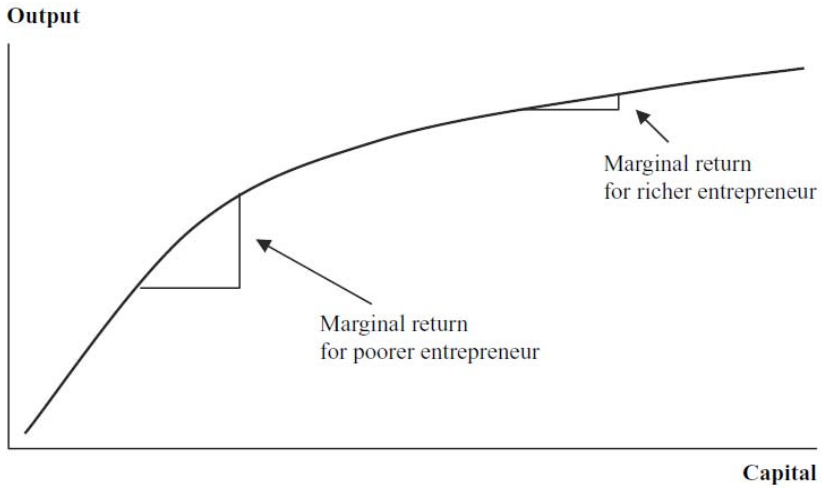


Figure 1. *Marginal returns to capital with a concave production function.*
Source: According to the Model of Armendáriz de Aghion (Armendárizet al., 2005)

Calculating the impacts of microfinance requires disentangling its role from the simultaneous roles of all of these attributes. The challenge is made harder by the fact that the decision to participate in a microfinance program – and at what intensity – will likely depend on many of those same attributes.

Thus, there is likely to be a high correlation between microfinance

participation and, the age and entrepreneurial ability. Since researchers can record your age, there are simple ways of controlling for age-related issues.

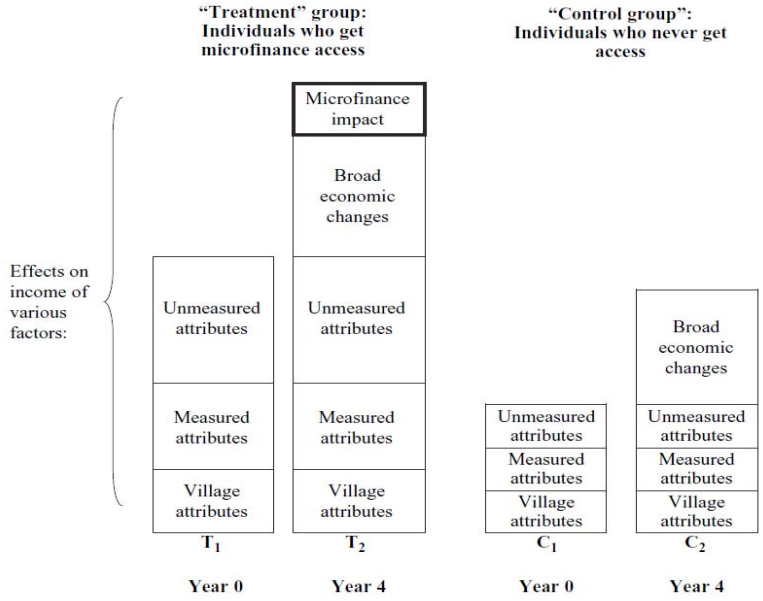


Figure 2. *Sources of income for treatment and control groups*
Source: According to the Model of Armendáriz de Aghion (Armendárizet al., 2005)

The main characteristics of trade theory – anti-protectionist sentiments (Bhagwati, 1988) are now giving way to more nuanced approaches to globalization, with mainstream and extended protection in the name of economic and social development (Krugman, 1994; Rodrik, 1997). The similar with microfinance: Serious arguments are accumulating that suggest a role for on-going subsidies if thoughtfully deployed. The microfinance movement is thus populated by diverse institutions, some large and many small, some urban and some rural, some more focused on social change and others more focused on financial development (Zeller et al., 2002).

Pecking order theory – The theory states that businesses usually would use internal funds, and in the case of unavailable resources consider debt financing before going for equity financing as an external financing source (Akpan, 2015, pp. 20). Holmes (1991:145) discovered that small businesses follow the pecking order mainly because it is not easy for them to obtain funds externally.

Bank capital channel theory – This theory states that banks borrowing behavior with regards to small businesses is majorly a factor of the adequacy of capital requirement. Obamuyi (2007) stated that an alteration in interest rate would motivate the banks to lend to small and micro businesses although

it could minimize banks' profits and capital (Akpan, 2015, pp. 22). The banks may on the other hand be more enthusiastic about giving out loans in situations when the interest rate is favorable.

The *classic microfinance theory of change* concerns small company, or future micro entrepreneur going to a microfinance provider and taking a loan, saving the same amount to start or develop an micro company which have earnings for repay the loan with major interest, with a sufficient profit to increase income enough to raise. It is clear that micro-credit can be motivated along a line where neo-liberal concept is at one extreme and participatory development at the other.

Materials and Methods

The approach used in this paper was cross-sectional survey of SMEs in Serbia on loans, types of financing, banking system and characteristics of the beneficiaries by size. For data-gathering desk research was used in 2013/2014 individually in each bank and microfinance institution of the survey with a standardized instrument in Serbia. The following results are divided into three, first, Country context, than offerings in micro entrepreneurship financing are presented, and micro-financing institutions are specified.

Results – Evidences from Serbia

Country Context

The main goals of the Serbian government in 2014 were speeding up the EU accession process, modernization and economic development, and the fight against unemployment and corruption. In 2014, the EU council of ministers agreed to open accession talks with Serbia, however the first meeting is to be later than initially proposed and might be subject to further review. The current situation in the national economy is very challenging, especially for Micro entrepreneurship, and specifically hard for agro entrepreneurs and households.

Serbian economy is characterised as 99,8% economy of SMEs, out of which 95% make micro entrepreneurs and enterprises. IMF Mission in 2014 has made a number of preliminary conclusions, considering that National bank should relax its monetary policy, especially in the case of fiscal consolidation.

Financial system has remained stable, however, recent cases of downfall of a few state-owned banks point to the need of the strategy for the banks owned by the state.

The legal framework for microfinance improves, with higher amounts of

resources through debt and equity finance, in the form of donations, grants, technical assistance through JASMINE) and funding from international agencies and development financial institutions. MFIs can also attract Tier I and Tier II capital from international and national investment funds directed to SMEs. The MF sector is seen as a financially rewarding market due to the performance of MFI portfolios.

International social investors active in South-Eastern European MF sectors expressed interest in investing EUR 40 to 60mn into Serbia's MF sector.

The problem makes the current legal framework (which forbids direct lending by MFIs to targeted micro-credit beneficiaries). Micro entrepreneurship sector in Serbia could benefit from some EUR 30mn under specialized EC/EIF microfinance programs that will be made available within the current 2014-2020 programming period.But, in order to attract investments MFIs need to achieve standards that will allow them to attract investor funds e.g.

According to the UNDP Report (Doiciu, 2014, pp. 3) micro entrepreneurs sector which is most financed from internal sources (friends, family), is estimated at 31,393 micro loans (22.4%), and the estimated value of external sources of Technical Assistance (TA) and capacity building is EUR 0,5 mn5.

A mix of external sources, including EU Technical Assistance programmes (such as JASMINE); EU MF networks (such as MFC and EMN); equity investor contributions, especially to newly-established MFIs; and internal resources (such as reinvested surplus/profits, etc.) should be made available to ensure sustainable growth of the MF sector. The following chart presents estimated the inflow of funds into the Serbian MF sector based on the assumptions of USAID report (Doiciu, 2014, pp. 4).

The total inflow of funds in the form of investment into the MF sector and medium-/long-term credit lines provided to existing and newly-established MFIs is estimated to reach EUR 91mn over the next four years. Due to the revolving nature of this funding and the multiplying factor of 1.3 (for extension of short-term microcredit), the investment into the MF sector portfolio and the inflow of micro-credit finance into the Serbian economy will increase from the current EUR 14mn to EUR 138mn in year four, for a grand total of EUR 352mn.

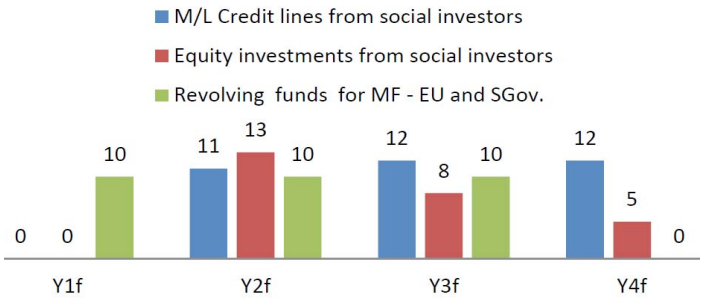


Figure 3. *inflow of funds into the Serbian micro-finance sector in mn EUR*
Source: Doiciu, 2014, pp. 5

The cumulative inflows of microfinance funds from MFIs, SME banks and EU financial instruments into the Serbian economy over the following 4 years are estimated to stand at EUR 869mn. It is estimated that, during the four years covered by the projections, a cumulative total of over 230,000 jobs, both full-time equivalent and self-employed, will be created with the contribution of the MF sector (Non-Bank Non-Depository MFIs and SME Banks), and savings to the social assistance budget may reach a cumulated value of EUR 149mn, with an average of EUR 37mn per year.

Legal Framework

According to current Serbian regulation (Law on Banks), banks are the only financial institutions allowed to engage in acceptance of deposits and granting loans. As a result of this, there are no non-banking financial institutions, FIs or any other creditors on the market besides the banks. This kind of regulatory approach is a consequence of negative experience from the 1990s and a number of pyramid schemes that were present on the market during that time.

In 2005, the Republic of Serbia adopted three laws that collectively represent major steps forward in the intention to establish a stable and reliable banking sector: Law on Banks (amended in 2010); Law on Bankruptcy and Liquidation of Banks and Insurance Companies (amended in 2008 and 2010), and Law on Deposit Insurance (amended in 2008 and 2010). Since 2009 and the beginning of the harmonization process with Basel II standards and further harmonization with EU directives in Serbia, National Bank of Serbia (NBS) has been implying the possibility of introducing the new Law on Credit Institutions which would replace the current Law on Banks and set the regulatory environment for non-banking financial institutions as well. However, in 2013 the NBS and competent Ministry have not yet presented even a draft of the new Law. Until then the

Law on Banks remains the supreme law when it comes to credit institutions i.e. banks and banking business. The most significant impact on the banking sector in 2011 and 2012, with regard to regulatory requirements, was related to introduction of Basel II standards and the Law on Protection of Financial Services Consumers. Compliance with Basel II requirements in the banking sector in Serbia is regulated by several special decisions of the National Bank of Serbia. Beginning from December 31, 2011 all banks in Serbia was obliged to adhere to these decisions and fully implement Basel II standards.

The main goals of introducing Basel II standards in Serbia were:

- Introduction of Law on Protection of Financial Services Consumers was a result of the need to further harmonize domestic legislation with EU legislation (EU Directive 2008/48/E3), need for more transparent banking services and efficient mechanisms for customer protection. The law is applicable only to natural persons as consumers and therefore had the impact only on the retail segment of the banking industry. The aim of the law was to promote good business practices and fair dealing with customers and to create a regulatory framework that ensures customer protection, implying: equal position of the contracting parties and right to protection against discrimination.

The NBS has adopted, in 2013, new, or amended existing decisions and rules regulating risk management of banks, classification of balance sheet assets and off-balance sheet items, capital adequacy and others, in order to make further steps towards harmonization with EU standards Stabilization and Association Agreement entered by and between the Republic of Serbia and EU came into effect on 1st September 2013 and as of that date Serbia has become associate member of EU. Serbia will begin to harmonize laws and regulations regarding financial institutions and capital market with EU directives. However, current lack of regulatory framework for non-banking financial institutions restricts possibilities for more efficient financial inclusion process and development of small businesses.

The potential impact of sustainable MF sector development under an enabling *legal framework* and foreign direct investment into the sector is presented through the following indicators:

- Market penetration rate/access to MF services (Mainly due to the low number of MF providers, the MF market penetration rate/access to MF services indicator reveals the need for policy intervention to properly

exploit the potential growth of the MF sector, and decrease in the market gap, between demand and supply for micro loans; and

- Greater turnover and profitability of targeted beneficiaries and job creation/ greater self-employment, and savings in social costs (unemployment benefits).

If the legal framework for micro-lending does not improve to an extent that enables the sustainable growth of the Serbian MF sector and the inflow of funds from international social investors and EU/Government MF funds, the market gap, currently estimated to stand at 54% (EUR 161mn), is projected to increase to 63% in the following four years, reaching EUR 233mn and affecting the contribution of the MSMEs sector to the Serbian economy.

Microfinance has a direct impact on job creation and promotion of self-employment, but economic policy and the legal environment, especially taxation and administrative policies may influence the number of jobs created.

According to USAID BEP's 2013 Business Survey, the Serbian Government has been making progress in reducing tax and administrative burdens faced by business, but general administrative procedures and the burden of regulatory compliance remain a significant constraint on business. The potential impact of sustainable development of the Serbian MF sector in terms of supply of microcredit, new jobs and self-employment opportunities created, and savings in social expenditures, is presented in the tables below.

Table 1. *The potential impact of sustainable development of the Serbian MF sector (Years 1 to 4 following enactment of MF legal framework)*

	Indicator /Period (2014-2017)	2014 f	2015 f	2016 f	2017 f	Total 2014 - 17
1	Supply of microcredit in the Serbian economy from MFIs/ SME banks and EU/ MC portfolio (EUR MN)	149	199	246	276	869
2	Supply of microcredit with inflow of social development funds from MFIs	27	73	114	138	352
3	Supply of microcredit with inflow of social development funds from SME banks	120	121	127	133	501
4	Supply of microcredit from EC-EIF/ SME development programs	2	5	5	5	17

5	Total number of micro-loans extended/year (average micro-loan amount: EUR 2,076)	71,767	95,705	118,367	132,868	418,708
6	Number of full-time/self-employed jobs created (2 micro-loans create one full-time job)	35,884	47,853	59,184	66,434	209,354
7	Number of part-time jobs created (5 micro-loans create one part-time job at 1/3 working hours) in full-time equivalent	3,588	4,785	5,918	6,643	20,935
8	Total number of jobs created and sustained by micro-companies (full-time and part-time equivalent)	39,472	52,638	65,102	73,077	230,289
9	Savings in social transfers for unemployed/socially assisted (EUR 180/person/60% of median salary) (EUR MN)	25.2	34	42	47	149

Source: Doiciu, 2014, pp. 5

*Legend:

2 = represents a sum of existing MFI portfolio and reinvested surplus/profit from operations plus new MFIs and increased portfolio due to investment/ equity and debt (multiplying factor 1.3 -1.5) formula: 1.3*(inflow of funds to the Serbian MF sector) cumulated with the

Previous years.

3 = In the region of Central and South Eastern European countries, the suppliers have recognized clear need for small-scale sensible loans and additional support for enterprising individuals, making financial services more accessible to previously 'under banked' individuals and businesses.

In that sense, commercial banks have established new commercial non-bank non-deposit financial institutions to develop innovative solutions for breaking down the barriers to financial inclusion across the region.

9 = For purposes of estimating the financial impact on the unemployment/ social assistance budget, the average social transfer is considered to amount to 60% of the median salary in Serbia (EUR 180), while 60% of the new vacancies are assumed to be filled by those previously unemployed or receiving social assistance from the Serbian Government.

Financial Services Demand and Supply

The cause of high poverty level and low start up activity, mostly in the South of Serbia may be found in the lack of appropriate lending products offered by the commercial banking sector due to the small size, absence of collateral and perceived high risk associated with the microcredit borrowers. Microcredit demand is high due restrictive central bank requirements as well. Government subsidized credit programs have a beneficial impact on the target population, but come at a large cost to the state budget and are insufficient. Therefore, enhanced microcredit provision would (Grozdanic et al., 2015, pp. 10):

- Segment of population which faces daily survival difficulties
- Segment that can afford more expensive products
- Ease financial burden on the state because microcredit providers would be funded by social investors and international donors
- Result in higher credit access for job creation and entrepreneurship activities
- Encourage a more competitive and efficient credit market for micro and small businesses
- Enable low-income borrowers to access finance
- Enable banks to gain new clients as micro-entrepreneurs graduate to the formal banking system
- Reduce the extent of unregulated private money lenders

The biggest obstacle to the above-mentioned developments is the lack of a regulatory framework that allows non-bank and non-depository microcredit which would increase the level of foreign direct investment into the sector and increase access for those who lack access to bank credit in Serbia. At the end of Q2 2013, inter-annual growth of credit activity in Serbia barely reached 1%, which brought it very close to the stagnation zone. Factors that limit credit activity demand-wise were slow economic recovery, high unemployment and interest rates. At the same time, at the supply side, deteriorated creditworthiness of the private sector and more risk-averse banking behaviour coupled with limited funding sources, did not help either. In the first half of 2013, 8% less new loans were disbursed as compared to the same periods in 2012 and 2011 (loans to businesses which have much bigger share in total loans dropped by 15%, while retail loans grew by 20%).

Total net loans in Serbian banking sector at the end of Q1 2013 amounted to 1,737 billion RSD, with dominating loans disbursed to state-owned and private companies (share of 53.9%), followed by retail loans including private individuals and farmers (30.3% share). 72% of loans are in foreign currency (of which 62% are EUR-indexed). Share of loans with remaining term over one

year is 62% (28% with term over 5 years). Total deposits amounted to 1,677,505 billion RSD at the end of Q1 2013, 48.7% of which are retail deposits. 76.9% are foreign currency deposits i.e. 70.1% are EUR-indexed deposits. Sight and short-term deposits (up to 1 year) represent over 90% of deposit structure in Serbian banks, while 7.1% are deposited for periods exceeding one year.

Table 2. *The structure of bank credit clients*

Type of loans	No. of active loans	Outstanding amount (in mill. RSD)	Average loan amount (in EUR)
Loans to companies	95,183	1,577,460	144,112
Loans to entrepreneurs	71,852	111,841	13,535
Loans to farmers	52,439	32,437	5,379
Retail loans	1,234,229	577,426	4,068
TOTAL	1,453,703	2,299,164	13,753

Source: Credit Bureau data, 2013

Data on bank loan clients reveals a significant potential of the Serbian lending market are presented in Table 3.

Table 3. *Active and potential loan users*

	No of active loan users as per official data	No of active loan users as per Credit Bureau	Untapped market potential	
			%	No.of potential clients
Companies	105,000	36,909	65%	68,091
Entrepreneurs	218,000	43,900	80%	174,100
Farmers	631,000	39,513	94%	591,487
Salary receivers + pensioners	2,097,103	1,006,126	52%	1,090,977

Source: NBS and Credit Bureau data, 2013.

Banks

There were 32 banks in Serbia by the end of first quarter of 2013 (21 in majority foreign ownership, 8 state-owned and 3 owned by private individuals).

One state-owned bank was closed in Q1 and one more during second quarter of 2013, (Agro Banka and Razvojna Banka Vojvodine) due to the large indebtedness/losses. By the end of first quarter, there were 28,279 employees in the banking sector while total capital reached 606 billion dinars (approx. 5 billion euros). At the same time, net financial result of the entire banking sector (reduced by losses of some banks) during the period 2008-2010 reached over 250 million EUR on average (Roe 5 to 6%). In 2011 however, banking sector

has marked significant losses and a modest net financial result, which was mostly a consequence of extremely poor performance of state-owned banks, especially Agro Banka (the bank which was closed during Q1 2013), which amassed losses nearing 300 million euros in 2011, but the affair is potentially doubly damaging to Serbia because of international arbitration initiated by foreign investors. Net financial result of banking sector in 2012 reached RSD 11.65 billion. In the first three months of 2013 banking sector net financial result was RSD 10.84 billion, a bit lower than realized profit in four quarters of 2012 (mainly as a consequence of exclusion Agro Banka losses). Biggest risks for the Serbian banking sector include bank losses, growing share of NPLs (about 19.9% currently) and negative economic trends as well as decreasing inflow of foreign currency into the country and high fiscal deficit. Also, the EURO zone crisis makes the withdrawal of foreign bank capital a possibility. Industrial sectors with highest absolute amounts of NPLS are processing industry (RSD 73.8 billion) and trade (RSD 53.2 billion), while sectors with highest shares of NPLs in total loans are construction (46.6%), real-estate business (34.9%), processing industry (22,7%), trade (19%) and agriculture (17.8%).

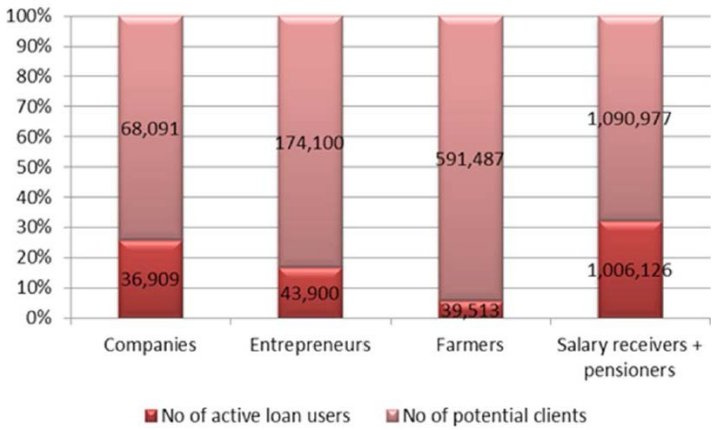


Figure 4. *Number of active and potential loan users*
Source: NBS and Credit Bureau data, 2013

Microfinance Institutions

According to Yunus (2008), microfinance involves making financial services available to the poor, who are usually not served by traditional financial institutions. These informal credit institutions offer loan and savings services to their members. Kirkpatrick (2002), Microfinance is broader than micro-credit as it comprises of savings, credit, insurance amongst others.

Okpara (2010, pp. 180) stated that unofficial financial services comprise of rotating savings and credit associations (ROSCAs), thrift associations, savings enlistment groups, day-to-day savings. According to Onaolapo (2011) the non-conventional formal Microfinance Institutions are providing finance similar as the informal institutions (Jegede et al., 2011, pp. 101). Microfinance banks are heavily regulated. Microfinance institutions incur higher operating cost because of their business model which is the door step service delivery model which they incur because of staff training and smaller loan sizes (Bi, 2011, pp. 115). The possibility that microfinance institutions may not get the money given to borrowers is a widespread and usually the most critical weakness of a microfinance institution (Bi at al., 2011, pp. 112). A loan default arises when the debtor fails to make the necessary payment or fails to conform to the terms of the loan (Murray, 2011).

Agro Invest, Micro-Development Fund, Micro Fins are non-bank microcredit institutions in Serbia, which had a combined total portfolio of approximately EUR 12 million in loans to over 18,500 borrowers at the end of 2012 (last data available by Mix Market). Credit activity of MFI in Serbia in last three years was declining mostly due to declining credit activity of Agro Invest as the biggest Serbian MFI Institution. The main problem for MFI in Serbia is NBS decision on retail lending which prescribes that retail loan can be given only if the installment is up to certain percentage of registered income (salary, pension, etc.) In order to bypass strict banking regulations in the country, all three institutions are registered as consulting companies and have contracts with a bank registered in Serbia (Privredna Bank Belgrade, and Societe General Bank) which actually disburses loans to MFI clients, while MFIs secures the loan with 100% cash deposit amount.

Conclusions

This paper deals with relationship between legal and financial framework of commercial banking and microenterprises and entrepreneurs in Serbia on microcredit issue. Considerable growth of microcredit in the world and in European Union and miss balance between supply and demand for micro financing are evident. It can be concluded that microfinance presents an answer to the problems and challenges for micro entrepreneurship development and the potential for innovative contracts and institutions to improve conditions in low-income communities.

According to the Serbian evidence this is not just a minority of those who lack access to efficient and reliable financial services at affordable interest

rates. In looking to the future, it would be needed to try to dispel microfinance "myths" and revisit ongoing debates in microfinance (particularly about how it works, which customers can be profitably served, and what is the appropriate role for subsidies), setting out ideas that could help evaluate experiences to date, frame debates, and point to new directions and challenges and improvement the relationship between commercial banks and SME sector and entrepreneurs.

The conclusions of the market impact assessment in the context of micro financing in favour of micro enterprises and entrepreneurship development in Serbia may be seen positive. Some of further reasons are supportive to that statement. The unmet demand for microfinance in Serbia is substantial.

This market gap is estimated at 54% (EUR 161mn); in the absence of appropriate and affordable microcredit and associated business development services, the market gap will increase to 63% over the following four years to reach EUR 233mn.

The current legal framework that prevents existing MFIs from lending directly to businesses should be amended. Alternatively, a new legal framework for MFIs should be created to allow sustainable development of the MF sector.

The draft should consider the European Code of Good Conduct for Microcredit Provision, the EU quality standard, especially its Chapter I: Relationship with Clients and Investors, as well as SMART client protection principles in order to ensure social and development impact of MF activities in the targeted market.

With a new legal framework, the Serbian MF sector itself may attract up to EUR 90mn in investment. Specialized social investors have already committed to investing EUR 40 to 60mn into Serbia's MF sector along with technical assistance for MFIs and their clients. We expect another EUR €30mn of EC/EIF MF programs e.g. the EASI program, Serbian Government and Donors funds for SMEs development, and microfinance, to be invested. In the context of an enabling legal framework for micro-lending, the estimated cumulated inflow of microfinance funds from MFIs, SME banks and EU financial instruments into the Serbian economy over the following four years, after the legal framework is enacted, is estimated to stand at EUR 869mn. It can be assessed that the main impact of development of the Serbian MF sector will be creation of 230,000 full-time and self-employed jobs over the following four years; the estimated amount of savings in social transfers may reach an average of EUR 37mn/year. Micro businesses in Serbia need access to funding for their businesses to flourish on a sustainable basis.

REFERENCES

1. Akpan, E., Nneji, D. (2015). Contribution of Microfinance Banks to the Development of Small and Medium Scale Enterprises in Nigeria, Research Journal of Finance and Accounting 6: 19-28.
2. Armendáriz de Aghion, B., Morduch, J. (2005). The Economics of Microfinance, The MIT Press Cambridge, pp. 205. Massachusetts, London, England.
3. Ayyagari,M.,Beck,T.,Demirguc,K.(2005).SmallandMediumEnterprisesacrosstheGlobe. available at: http://siteresources.worldbank.org/DEC/Resources/847971114437274304/SME_globe.pdf
4. Bhagwati, J. (1988). Protectionism. Cambridge, MA: MIT Press.
5. Bi, Z., Pandey, S. (2011). Comparison of Performance of Microfinance Institutions with Microfinance Banks in India. Australian Journal of Business and Management Research 1: 110-120.
6. Doiciu, M. (2014). Market impact assessment of introduction of no deposit-taking micro-financial institution (NDMFIS) in Serbia, USAID, pp.1-7
7. Ewiwile, S., Azu, B., Owa, F. (2011). Effective financing and management of small scale businesses in delta state, Nigeria: a tool for sustainable economic growth, International Journal of Economic Development Research and Investment 2: 94-101.
8. Fatai, A. (2009). Small and medium scale enterprises in Nigeria: the Problems and prospects, retrieved from: http://www.thecjc.com/Journal/index.php/econ
9. Grozdanic, R., Vukosavljevic, D., Beslac, M. (2015). Complementarities Between Microfinance and job creation, International Review, No. 1-2, pp. 7-16.
10. Holmes, S., Kent, P. (1991). An empirical analysis of the financial structure of small and large Australian manufacturing enterprises. Journal of Small Business Finance: Vol. 1: Iss. 2, pp. 141-154. Available at: http://digitalcommons.pepperdine.edu/jef/vol1/iss2/4
11. Jegede, C., Kehinde, J., Akinlabi, B. (2011). Impact of Microfinance on Poverty Alleviation: An Empirical Investigation. European Journal of Humanities & Social Sciences, Vol. 2. No.1. pp. 97-111.Available at: http://www.journalsbank.com/ejhss.htm
12. John, N., Onwubiko, N. (2013). Problems of Microcredit among Microenterprises, Research Journal of Finance and Accounting , Vol 4, No 6, pp. 49-56., available at: www.iiste.org/Journals/index.php/RJFA/article/viewFile/5648/5760
13. Khandker, R., Shahidur, R.(1988). Fighting Poverty with Microcredit: Experience in Bangladesh. New York, NY: Oxford University Press for the World Bank.
14. Kirkpatrick, C., Maibo, S. (2002) The Implications of the evolving Microfinance agenda for Regulatory and Supervisory Policy. Development Policy Review.
15. Krugman, P. (1994). Rethinking International Trade. Cambridge. MA: MIT Press
16. Murray, J. (2011). Default on a loan, United States Business Law and Taxes Guide National Credit Act.
17. Obamuyi, T. (2007). An exploratory study of loan delinquency among small and medium enterprises (SMEs), Land and management in development (LMD) Journal
18. Okpara, G. (2010). Microfinance banks and poverty alleviation, Journal of Sustainable Development in Africa 12: 177-191.
19. Onaolapo, O. (2011). Impact of cooperative financing on MDGS of poverty eradication, Journal of finance and accounting.
20. Rodrik, D. (1997). Has Globalization Gone Too Far? Washington, DC: Institute for International Economics.

21. Zeller, M., Meike, W., Ahmed, S. (2003). Do microfinance and social safety net programs reach the poor? The International Symposium on Sustaining Food Security and Managing Natural Resources in Southeast Asia—Challenges for the 21st Century, Proceedings.
22. Yunus, M. (2008). Creating a World without Poverty; Social Business and the Future of Capitalism. Public Affairs, New York.

Past Development of Serbian Enterpeneurship: the Case of Privately-Owned Banking Corporations

ALEKSIC Vesna[7], MALOVIc Marko[8]

Introduction

Amidst XIX century, Principality of Serbia was still a country of small landowners with 73% of territory dedicated to agriculture, divided into fiefs up to 5 hectars in size. Owing to her geographic position, Serbia was simultaneously a transit area for trade caravans coming from South and Central Balkans as well as for those travelling from outhwest via N. Pazar. Therefore, trade has always played a rather important, vital role in development of the Principality of Serbia. Hence, thriving and ever richer class of merchants quickly supported passing the Trade Bill for Principality of Serbia with authorisation of "Miloš Obrenović the First Serbian Principal along with agreement of the Council following proposal of the National Assembly" 26th of January 1860 A. D. The fact that this bill had been passed three years ahead of the Austrian and full fifteen years before Hungarian Trade Bill is definitely noteworthy (Niketić, 1923, pp. 147). Serbian Trade Bill strongly drew from the French Code Commerce, especially in articles regarding establishment and day to day functioning of business entities, but also from the Civil Code of the Principality of Serbia (brought about 1844) whose author was Jovan Hadžić (Đorđević, 2008, pp. 62-84).

The very passing of the Trade Bill for the Proncipality of Serbia indicated gradual build-up of political atmosphere which enabled breakthrough of fresh ideas in all aspects of social life. So, for instance, backed by §38 of the Trade Bill, in February 1869 Ministry of Finance issued licence for founding the first private money fund in Serbia. The *First Serbian Bank* was projected to start with capital of one million ducats. Nevertheless, once opened for business, on the 2nd of October 1869, it turned out that it's IPO managed to amass only 120,000 ducats (1,440,000 French francs at the time) [Mitrović, 2004, pp. 33].

As it happened, legislation in the Trade Bill was insufficient for establishment of such complex business entities. Therefore, already in 1871 not only its shareholders went bankrupt, but also its creditors and the state itself - demise

[7] Institute of Economic Sciences, Belgrade, Serbia, vesna.aleksic@ien.bg.ac.rs
[8] Institute of Economic Sciences, Belgrade, Serbia, marko.malovic@ien.bg.ac.rs

having been speeded up by the bank's attempt to act both as a comercial bank and engage in a purely speculative investment.

Bankrupcy of the *First Serbian Bank* was an important if stressful financial experience for the young Serbian state. The downfall of Prva Srpska bank was an important financial experience for young Serbian State. That is supported by the fact that in 1871 during incorporation of first joint-stock banks with domestic capital (Beogradski kreditni zavod, Smederevska kreditna banka i Pozarevacka banka) the State decided to enact special decrees, specifying their activities, as well as their rights and responsibilities. Given that in number of existing provisions of Serbian commercial law relating to incorporation of public companies (31-38, 41 and 44) there had been no provisions sanctioning unconscionable business dealings, it was decided that a special Decree on trading of banks dated 24 September 1871 will in its first provision state that 'false creation as well as imitation of any document which the mentioned institutions would issue, will be punishable equally as false creation or imitation of public documents. During following years, until creation of Privilegovana Narodna banka 1884, apart from the mentioned three, only four additional (mainly local) banks were formed with the total founding capital of modest 3.2 million dinars.

On the other hand, until the beginning of the 1880s, Serbia did not have either a private or a public financial institution for poorest classes of tradesmen and craftsmen. The only source of loan capital was loanshark capital from rich city tradesmen and high public servants. As well as Serbian peasants, small tradesmen and craftsmen used to paid yearly interest to loansharks between 24% and 50%, with lower amounts on short term carrying a yearly interest of up to 120%. The Serbian authorities on number of occasions attempted to create publicly managed funds to address the issues of lending and loansharking, mostly without success. The more serious attempt of the State to secure lending capital for public was the creation of the Funds Directorate at the Ministry of Finance, in 1862 commencing with work in 1864. Funds Directorate provided long term loans with 6% annual interest by taking a mortgage over up to 50% of estimated value of immovable property. Tradesmen and craftsmen could grant a mortgage over their houses and land, which meant that loans were available only to relatively better off tradesmen and public servants.

Newspaper "Belgrade Daily" ("Beogradski dnevnik") wrote in 1882: "It is known to every Belgrader that money is very scarce. However, our people, as everywhere else, often need money. What happens? Richer tradesmen and capitalists easily help themselves, as in case of need, on their land and on their signatures, they secure money with moderate interest. What happens when a

poorer tradesman, craftsman or a public servant gets into the financial need? What? Let's be honest and say the truth: less well-off class can only turn to loansharks, who, seeing him in the need, fleece his skin off, charging 20, 30, 40, often 50% interest. What is the consequence of that? That class becomes overindebted and goes under" (Aleksić, 2012, pp. 108-133).

Legal regulation of joint-stock companies

Incorporation of Privilegovana Narodna Banka Kraljevine Srbije 1884 created the conditions for trading in securities, providing a stimulus to trade and resulting in more dynamic development of other commercial areas.

Its incorporation represented a big turning point and a strong momentum in development of Serbian entrepreneurship. Significantly increased financial funds created the conditions for more dynamic credit dealings, resulting in creation of as many as 62 financial institutions. Modest provisions on 'no-name corporate bodies'of Serbian Commercial Law (1860) could no longer satisfy the growing need for regulatory overhaul of join-stock companies in Serbia. Due to turbulent political situation, only the appointment of Nikola Pašić as the Serbian Prime Minister in 1889, securing for his party two key government ministries, Ministry of Finance and Ministry of Foreign Affairs, the political preconditions were created for passing of the Law on Joint-Stock Companies (Aleksić, 2012, p. 116).

The lawmakers found a special inspiration in the provisions of the Hungarian Trade Law (1875) as well as supplements to the French Trade Law (1867). With respect to provisions dealing with composition and creation of shareholder meetings, quorum and shareholders' powers, the Serbian Law was more advanced and more complete than Hungarian and Austrian trade laws that basically had no reference to shareholders' meetings. On the other hand, borrowings from the French Law have not been successful enough as the Serbian Law was criticized for having too many provisions and very few sanctions, creating a risk that the rendered without effect (Zebić, 1928, p. 7).

During the following two years after the Law on Joint-Stock Companies came into force, it became obvious that certain provisions need to further elaborate while certain provisions need to be deleted. The Law dated 17 November 1898 deleted the two contentious provisions (7 and 55) that had previously caused a heated debate in the Parliament. Article 7 stipulated that foreigners may participate in formation of a joint-stock company, however provided that foreigners do not comprise more than one quarter of total number of founding members. This effectively meant that Serbia does not allow

formation of foreign joint-stock companies on its territory.

Sima Lozanic, Serbian Minister of Economy at the time, urged Serbian MPs to repeal the provision, stating that 'foreign capitalists will not allow for somebody else to govern their business dealings'. Article 7 proved as unhelpful, as joint-stock companies in some important areas of commerce (that needed were in the need of further improvement) never came to be established (Zebić, 1928, p. 22). After the Parliament repealed Article 7, it was left to the Minister of Finance to estimate how many foreign founding members there can be among founding members of a joint-stock company.

While repealing Article 7 made way for unhindered entrance of foreign capital into Serbia, repealing Article 55 proved to be disastrous for many joint-stock companies. Namely, this provision of the Law on Joint-Stock Companies prohibited members of executive and supervisory boards (as well as officers) to take out loans from its own financial institutions. Minister of Finance Lozanic, as well as prominent politician Pera Todorovic, tirelessly insisted to prove that repealing this Article would be very dangerous as it would prejudice the position of small investors who are in greater need of credit and who would have much more difficulties in obtaining loans if rich individuals from the board would keep bigger credit amounts to themselves. However, the government majority from the Radical party was of the view that the boards are comprised of 'persons with money and integrity' and if they are excluded 'there is nobody else to guarantee to a financial institution' (Zebić, 1928, p. 81). Repealing the article proved fatal for many joint-stock companies.

Essentially, this laid foundations for false payments of capital, considering that members of executive and financial boards were simultaneously opening their savings accounts. As many people in Serbia wanted to obtain cheap loans of the National Bank of Serbia, they were forming joint-stock companies with minimal capital, increasing the prevailing lack of confidence towards joint-stock companies.

In the period from passing of the Law until the WWI, 270 joint-stock companies were formed, out of which 255 banks and only 4 trading, industrial or insurance companies. It is clear that even the system of previous consent by the Minister of Economy, mandated by the Law on Joint-Stock Companies did not influence the formation of such a large number of new banks.

Until 1914, it was required that founding capital for banks in Belgrade is at least 500,000 dinars, in other cities in Serbia 200,000 dinars and for banks in small towns 100,000 dinars. This capital needed to be paid no later than two years from incorporation of a company (Zebić, 1935, pp. 4-5). It is apparent that the new State striving to catch up to economically more developed neighboring

countries easily consented to formation of joint-stock companies, due to which many provisions of this otherwise exceptional law remained as 'on paper only' black letter law.

The problem of regulating operations of financial-credit institutions appeared soon after the end of WWI and formation of the Kingdom of Serbs, Croats and Slovenes (SHS). It turned out that companies in the new State operate on the basis of different laws on joint-stock companies. Serbia had the mentioned Law on Joint-Stock Companies (1896) with amendments from 1898. The application of this law extended to Montenegro in 1922.

On former territories of the Austro-Hungarian monarchy, special trade laws applied, within which existed provisions on joint-stock companies.

In Slovenia and Dalmatia, Austrian Trade Law (1863) was in force, while Hungarian Trade Law (1875) was applied in Croatia and Vojvodina – also in force with minor amendments in Bosnia and Hercegovina since 1883 (Aleksić, 2002, pp. 31-36). That is the reason why the Ministerial Council of SHS in November 1919 rendered a decision that all joint-stock companies that are formed or expand their business activities over the whole territory of SHS shall obtain the consent of Ministry of Trade and Industry (Official Gazette of the SHS Kingdom, 1919, p. 161).

This decision was in 1922 the basis for adoption of the Law on formation of joint-stock companies in Croatia, Slavonia, Banat, Bačka and Baranja when the formation of all joint-stock companies was conditional upon the Ministry's consent and oversight. The Ministry issued special permits in cases where joint-stock companies were affiliates of foreign companies or banks (Kohn, 1937, p. 16).

Implementing the system of prior consent by the Ministry which was already in place in some parts of the country was of crucial national interest with respect to protecting development of SHS economy. Immediately after the war ended in Croatia and Vojvodina (where the system of prior consent did not exist) a large number of foreign companies appeared. These companies were forming small joint-stock companies with minimal initial capital of only 25,000-30,000 dinars. This was the case of foreign company branches with the façade of a domestic company that exclusively selling foreign goods and endangering business operations of many reputable domestic companies. Hence the system of prior consent was the first successful undertaking in harmonization of SHS legal framework with respect to joint-stock companies.

However, the following stages of this large and significant process were not implemented neither swiftly not with ease. The next change did not occur until 1930, with passing of the Law on Amendments to Joint-Stock Companies Law

dated 10 December 1896, addressing harmonization of shareholders' voting rights (Official Gazette of Kingdom of Yugoslavia, 1930). In SHS joint-stock laws excluding Serbia and Montenegro there was a provision that each share equals one vote and that there are no limitations with respect to number of votes.

In Serbia and Montenegro Articles 65-66 provided that three shares provided one vote, under the condition that no shareholder is allowed to have more than ten votes, irrespective of number of shares. Considering these provisions in the light of time when this Law was passed, these provisions served an economic and political purpose.

This primarily served to protect interests of small shareholders, as provisions of the law prevented a joint-stock company from becoming a mere formality with dominant interests of large shareholders taking precedence. Also, joint-stock companies were forced to have greater number of shareholders whose controlling function in that sense was much more serious, hence information on business dealings were more transparent. However, even during the Kingdom of Serbia period, large shareholders were forced to adjust holdings of its shares by introducing fictitious shareholders, so to secure influence (National Welfare, 1930, p. 6). Thus public falsifying of the shareholders' will was committed, although according to the Law on Joint Stock Companies, Article 65 stipulated that if such irregularities are established, the work of shareholders can be cancelled, the aggrieved shareholders may file a criminal complaint for damages and the members of the board who knowingly allow this kind of forgery can be punished with prison sentences of up to 5 years and fines up to 10 thousand dinars. However, according to the respected journal National interwar economic prosperity "this was something taken for granted, so life was broke this unreasonable regulation and made it impossible, outdated and a hindrance to development". But this resulted in difficulties and often drove scrupulous people away from joint stock companies. However, Articles 65 and 66 of the Act at the same time were very troublesome for entry of foreign capital in Serbian joint stock companies as well. Foreign representatives are not able to and did not want to deal with fixing up so not be outvoted by a small minority. Therefore, they are looking for 100% of the shares in one company, or otherwise do not want to enter. This prevented cooperation of foreign and domestic capital (*Ibidem*). The problem has become even more evident with the establishment of a new, larger country in which more and more foreign capitalists, in order to avoid this kind of legislation, instead of Belgrade, established its joint-stock companies in Zagreb. After years of appeals by certain Serbian economists and businessmen to amend these provisions of the

Law on joint stock companies, that was finally done in 1930.

In this way two significant changes were made, the first of which was that each shareholder has the right and impact on current work and existence of a stock company in proportion to his participation in shareholder equity, while the other was that each shareholder may at Shareholders' meeting represent number of shareholders. This was another important step towards harmonization of legislation on joint stock companies in the Kingdom of Yugoslavia.

Encouraged by this new endeavor to harmonise national legislation on joint stock companies, the Ministry of Trade and Industry, in charge of banking-credit operations of financial institutions in the country, took measures for the adoption of a special law on banks, which would legally regulate their work. However, due to the great crisis of the Yugoslav banking since 1931, as a result of severe credit crisis which at that time prevailed in Germany and Austria, this law was never enacted.

Association of banks and development of serbian enterpreneurship

Association of banks Belgrade was founded 4. XII 1921 at initiative of bankers from and owners of three biggest financial intermediaries of that time: Turnover bank (Serbian: Prometna banka), Export bank (Serbian: Izvozna banka) and Belgrade credit institute (Serbian: Beogradski kreditni zavod).

Thus, the chair of the Governing and Executive boards became none other than CEO of Turnover bank Mihailo Dragićević. It had been decided that management should name two vice-presidents: Milan Stojadinović, PhD, at the moment CEO of English merchant bank (Serbian: Engleska trgovinska banka), who practicaly supported interests of shareholding banks with foreign capital within the Association, while Radivoje Glumac, as CEO of the Belgrade-based subsidiary of the First Croatian savings bank (Serbian: Prva hrvatska štedionica), was supposed to shield interests of Vojvodina's monetary funds. The two of them were simultaneously members of the Executive board, together with CEO of Export bank Vlada T. Marković, PhD and CEO of the Meet industry bank (Serbian: Mesarska banka) Nikola Stanarević. The founders apparently had similar motives in regard to choosing Governing and Supervisory board.

Hence, Mihailo Gutman, Solomon Baruh and Bencion Aron were elected as representatives of Jewish financial capital (Aleksić, 2011, pp. 70-94). Beside them, as the most respectful members, appointed were Jezdimir Đokić, CEO of the Belgrade credit institute, Rudolf Pilc, CEO of the Franco-Serbian bank and not least unavoidable Luka Ćelović, long time president of the Belgrade

cooperative and the wealthiest man in Serbia. Luka was considered very well versed in financial circumstances of the day while his political connections in the newly formed state were especially valuable to young Association of banks (Spomenica, 1931, pp. 84-95).

Although the work of the Association of Banks Beograd was mostly reflected by mediation between the joint-stock banks and various state authorities including the Ministry of Trade and Industry, the Ministry of Finance and Justice and the National Bank of KJ, its great achievement, especially during the first ten years of work, was a successful appeal to all Serbian banks for the subscription of new 40 thousand shares of the National Bank of the Kingdom of SHS. The National Bank announced the subscription of new shares in 1920 but the response was extremely weak.

After the appeal of the Association in February 1922, after only a month, all share of the National Bank were paid. Also, by its intercession the Intelligence credit bureau at the National Bank of KJ was formed, followed by passing of the Law on Promissory Notes. In 1929, again due to its appeal to financial institutions, the subscription of shares of the newly established Privileged Agrarian Bank KJ was completed in a quite short period of time.

The Association had also offered its interpretation of the draft law on: direct taxes, fees, forced settlement, the industrial bonds, Economic Council and bankruptcy proceedings. In particular, it actively participated on drafting laws on banks and a unified law on joint stock companies of KJ, which as we have seen, never came to be adopted (Spomenica, 1931, pp. 69-74). Celebrating in the hall of the Belgrade Stock Exchange the tenth anniversary of the Association, its then chairman Dr. T. Markovic emphasized very well the mission of the association and the importance of developing local entrepreneurship by words: "Banks are not the aim and the purpose in themselves, but they have to carry out their national economic function. Neither a modern economy can be without valid credit institutions, nor can credit institutions improve if the economic situation is bad and unhealthy. Therefore, the professional interests of financial institutions are identical with the interests of the entire national economy.

One cannot be separated from the other, because only jointly these make up one higher economic community of interest". (Mutual house, 2006, p. 22) Indeed, pioneers of Serbian banking have recognized from the onset the importance of relationship management – and corporate social responsibility even – for customer satisfaction index, innovation and marketing of bank products, i.e. concepts and methodologies formally developed much later in modern banking theory and practice (Vukosavljević et al., 2015).

Shareholding law and its abuses

In context of analyzing the development of entrepreneurship and parallel work on the harmonization of the Law on Joint Stock Companies and its adaptation to the spirit of new age , special attention should be paid to the analysis of individual efforts of certain interwar economists to point to the emergence of 'bankocracy' in Yugoslavia and Serbian society in general.

Thus, the famous economist Nikola Stanarević in 1924 wrote in the prestigious Zagreb magazine "Banking", that the influence of banks and bankers on the policy, or the dependence of politicians on plutocracy is so great that it could not have been contemplated ten years. "Banks in Zagreb fund daily newspapers and implement their policy here as well. Our ministers, former and active, publicly participate in the establishment and administration of joint stock companies, even where written laws exist to prohibit that... There are ministers who have direct connections, as well as members of management boards in a dozen financial institutes and large joint stock companies… Lately, there is not one big deal without involvement of a prominent politician, an MP or a high state official. Forest and mining companies take gentlemen from this sphere, the others turn to influential people of the Board of Funds, state monopolies, etc. It seems to me that even in the Management Board of the National Bank people come based on a famous pattern agreed between the Radicals and the Democrats for seats in the cabinet, including number of police officials. The interventions of the MPs, lobbying of the Ministers, engagement of the Prime Minister's relatives on completing business in various government departments, all that at the expense of the general interests of the state budget" (Stanarević, 1924, p. 398). It turned out that not even the Law on Introduction of National Accounting, neither the Law on the Election of Deputies nor the Civil Servants Act were able to prevent this. According to him, 'bankocracy' had a twofold impact. First of all, it worked its way aided by high-ranking politicians such as ministers, deputies and high-ranking government officials in the boards. With the State's assistance, they enabled the bankers (in most efficient and most convenient way) to finalize leasing transactions of goods, removing sequestration or obtaining concessions for best arable or industrial land, transport and the like. At the same time, with the assistance of such banks and the media influenced by banks, the votes were bought and the voters misled.

There were many proposals on combating this harmful phenomenon in the economy and politics of the country. Thus, the Association of Banks in Belgrade and Dr. Janko Hacin, Director of the First Croatian Savings Bank pointed to the need to introduce measures that would allow the credit circumstances,

especially in Serbia, be established on a healthier basis, reducing the risks and losses of financial institutions an indispensable condition for reduction of interest rates on bank loans (Hacin, 1929, pp. 6-8).

In fact, due the statutory confidentiality and the National Bank lacking control over Serbian joint stock banks, it turned out that many businessmen who were left without funds requested and received loans in as many as five or more banks simultaneously". There it suddenly shows that a company, which is considered good for 100,000 dinars, enjoyed a loan in that amount not in one, but in five, ten and in one case in as many as eighteen banks . And each bank had lived in the belief that it is the firm's only financier" (Hacin, 1929, pp. 6-8).

To Serbian banks brought in contact with each other in order to successfully defend their interests, it was pointed out, for example Ljubljana's banks that are sent every month branch of the National Bank of state obligations to its borrowers and from it received reports on the status of their obligations in other Ljubljana's financial institutions. Thanks to these committments, in 1929 they introduced credit intelligence departments with the National Bank, which greatly contributed to the improvement of credit conditions in Serbia.

In order to seriously approach the corruption in Serbian banks it was necessary to change the provisions of the Law on Joint Stock Companies of 1896 (as amended in 1898), which were related to operations control over monetary institutions. The fact was that joint stock companies were organized in such a manner that shareholders individually had neither legal nor factual possibility to control operations of the Boards. Therefore, the only recourse left was to rely on the Supervisory Boards, whose members, contrary to the practice in developed countries, were elected by the Boards' members.

Thus a paradoxical situation emerged that instead of the control function being exercised by leading experts with most business experience, to the Supervisory Boards came those who were "too young and too weak" to be on the Boards. Often we find in the Board a father and an uncle and a son or a nephew in the Supervisory Board. Particularly for joint-stock banks, we see directors in the Boards and in the Supervisory Boards their subordinate officers who then should supervise their bosses. This paradox has become such an established rule in which we no longer feel the paradox. A request to amend this strange, incomprehensible practice will be considered as a paradox (Hacin, 1929, pp. 51-53). However, this practice was changed after full thirty years since the adoption of the Law on Joint Stock Companies. New Commercial Law of the Kingdom of Yugoslavia (1937), in addition to the fact that it allowed establishment of joint stock companies with limited liability across

the country, clearly specified duties and responsibilities of the Supervisory Board as the controlling authority. In addition, the Law introduced institution of the Commissioner and established external supervision (Tauber, 1933, pp. 627-629), (Mirković, 1940, p. 52). For many Serbian banks new *Commercial Law of the Kingdom of Yugoslavia* came too late, demonstrated by large number of insolvencies and forced liquidations, especially in period 1931-1936. The WWII that started four years later did not leave enough time for this legislation to demonstrate its efficiency to the full extent and impact on Serbian entrepreneurship.

Conclusion

One of the crucial results of this research is finding that already during the mid-XIX century Serbia had not only monetary strength of the wealthiest, but also political, economic and intellectual circles which understood importance of entrepreneurship in socio-economic development of the state. Early appearance of private incorporated banks in Serbia, courtesy of the Trade Bill for the Principality of Serbia passed in 1860, represents the case in point.

However, due to the weak accumulation of capital, their financial means were insufficient to meet the growing needs of Serbian businessmen. They saw the solution in establishing the Privileged National Bank of the Kingdom of Serbia, as the central credit institute which kept gold and silver in its vaults against which fiduciary banknotes in certain proportion were issued. Finally, the key role of Serbian entrepreneurs in establishment of the central bank was of immense importance for further development of Serbian entrepreneurship itself. By issuing paper money in greater quantity of the specie-backed equivalent, national bank provided loans at lower interest rates than otherwise possible, which soon enough increased domestic capital two to three times.

This in turn led to additional amendments of the Trade Bill to the new zeitgeist that brought about explosive growth of private bank corporations.

However, domestic entrepreneurs held the view that for further development Serbia required new law on corporate entities instead of amending a long outdated Trade Bill. Authors of this law found inspiration in the very best European pieces of legislation of that time and made effort to additionally enrich it in segments particularly cumbersome for domestic implementation.

Nonetheless, too many rules and acclamations, yet very few sanctions, proved to be a serious weakness of this law in times of Serbia's transition into the Kingdom of Serbs, Croats and Slovenians. Serbian economic and political elite, faced with new, big and relatively well organised goods- and

financial markets, at first caught up with new realities rather slow and almost involuntary. By limiting its business operations mostly to the territory of what was Kingdom of Serbia, Serbian entrepreneurial class more or less failed to timely address the economic challenges of the day. Those who believed in Serbian entrepreneurial potential didn't hesitate to both point out all the social inadequacies and offer good enough corrective prescriptions which were gradually deployed through new legal framework. From second half of 1930s it seemed that Serbian entrepreneurship finally overcame all challenges of new economic space and fierce competition. Ever more organized domestic market as well as extraordinarily good governmental trade agreements made possible for Serbian entrepreneurship to reach its maximum potential and impact for the time being. Alas, WWII and new socialist regime completely annulled several decades of entrepreneurial efforts and forced the next generation of Serbian enterpreneurs at the turn of the millennium to face the latest transition and start all over again.

Acknowledgment

This paper is a part of research projects numbers 47009 (European integrations and social and economic changes in Serbian economy on the way to the EU) and 179015 (Challenges and prospects of structural changes in Serbia: Strategic directions for economic development and harmonization with EU requirements), financed by the Ministry of Science and Technological Development of the Republic of Serbia.

REFERENCES

1. Aleksić, V. (2002), Bank and Power, Belgrade: Stubovi kulture.
2. Aleksić, V. (2011), Association of banks – Belgrade and Serbian financial and political elite between the two world wars, Banking, Year. 40 (5-6): pp. 70-94.
3. Aleksić, V. (2012), Belgrade cooperative and its role in economic development of Serbia at the end of XIX and beginning of XX century, Banking, 41(6): 108-133.
4. Đorđević, M. (2008), Legal transplants and Serbian Civil Code from 1844, Foreign legal life, 1: 62-84.
5. Gnjatović, D. (2010), Zelenaši, prvi kreditori zemljoradnika u Srbiji. Banking, 39(1-2): 48-71.
6. Hacin, J. (1929), Nadzorni odbori akcionarskog društva u teoriji i praksi. National Welfare, 4: 51-53.
7. Hacin, J. (1929), Obaveštajni kreditni odseci kod Narodne Banke. National Welfare, 1: 6-8.
8. Kohn, F. (1937) Trgovački i pravni leksikon, Osijek.
9. Mirković, Đ. (1940), Pravna priroda pravila trgovačkih društava (s posebnim osvrtom na

akcionarska društva s.o.o), Beograd.
10. Mitrović A. (2004), Strane banke u Srbiji 1878 – 1914, politika, progres, evropski okviri, Beograd: Stubovi kulture.
11. Niketić, G. (1923), Trgovački zakonik i Stecišni postupak Kraljevine Srbije, Beograd, 1923.
12. Stanarević, N. (1924), Bankarska hronika, Banking, 8: 398.
13. Tauber, L. (1933), Kontrola kod akcionarskih fruštava (po nacrtu trgovačkog zakonika). National Welfare, 40: 627-629.
14. Vukosavljević, D., Djurović, J. and Radojičić, S. (2015), Customer Satisfaction Impact on Banking Services and Relationship Management Innovation, International Review, 1-2: 83-93.
15. Zebić, M. (1925), Zakoni i raspisi o akcionarskim društvima s uputstvima i objašnjenjima, Beograd: Štamparija Savić i Komp.
16. Zebić, M. (1928), Akcijsko pravo Kraljevine Srba, Hrvata i Slovenaca, Komentari zakona, Beograd.
17. Zebić, M. (1935), Prestanak i likvidacija akcionarskih društava, Beograd.

Non-authored publications:
National Welfare, Zakon o izmeni zakona o akcionarskim društvima od 10. decembra 1896, br. 6, Beograd, 08. 02. 1929.
Official Gazette of the Kingdom SHS, No. 161, 13. 12. 1919.
Official Gazette of the Kingdom of Yugoslavia, No. 29-X, 07. 02. 1930.
Spomenica desetogodišnjice Udruženja banaka Beograd (1931), Beograd.
Mutual house of all banks. (2006) Beograd: Udruženje banaka Srbije.

Labour Factor of Business Activities in the Regions of Russia

GAYFUTDINOVA Oksana[9], ZHULANOV Evgeny[10], OBORIN Matvey[11]

Introduction

Today, one on the pressing challenges that impends the effective development of business activities in the Russian regions is the shortage of labour force which is concentrated in the major cities depleting the peripheral areas. On the one hand, technically (for number of cities and proportion of the urban population) Russia is one of the highly urbanized countries (as at 1 January, 2016, Russia had 15 cities with the standard residential population exceeding one million, and proportion of the urban of 74.15% (Rosstat, 2016).

Table 1 provides a list of Russian "million-plus" cities indicating the region and population change in 2015.

Table 1. *List of "Million-Plus" Cities in Russian in 2015-2016*

#	City	As at 1 January, 2016	As at 1 January, 2015	Dynamics, persons	Dynamics, %	Territorial Entity of the Russian Federation, that Incorporated the City
1	Moscow	12 330 126	12 197 596	132 530	1.09	Moscow
2	Saint-Petersburg	5 225 690	5 191 690	34 000	0.65	Saint-Petersburg
3	Novosibirsk	1 584 138	1 567 087	17 051	1.09	Novosibirsk Region
4	Yekaterinburg	1 444 439	1 428 042	16 397	1.15	Sverdlovsk Region
5	Nizhny Novgorod	1 266 871	1 267 760	-889	-0.07	Nizhny Novgorod Region
6	Kazan	1 216 965	1 205 651	11 314	0.94	Republic of Tatarstan
7	Chelyabinsk	1 191 994	1 183 387	8 607	0.73	Chelyabinsk Region
8	Omsk	1 178 079	1 173 854	4 225	0.36	Omsk Region

[9] Perm National Research Polytechnic University, Department of Economics and management in industrial production, Perm, Russian Federation, milada@mail.ru

[10] Perm National Research Polytechnic University, Department of Economics and management in industrial production, Perm, Russian Federation, zeepstu@yandex.ru

[11] Perm Institute of the Russian economic university named after G. V. Plekhanov, Perm, Russian Federation, recreachin@rambler.ru

9	Samara	1 170 910	1 171 820	-910	-0.08	Samara Region
10	Rostov-on-Don	1 119 875	1 114 806	5 069	0.45	Rostov Region
11	Ufa	1 110 976	1 105 667	5 309	0.48	Republic of Bashkortostan
12	Krasnoyarsk	1 066 934	1 052 218	14 716	1.40	Krasnoyarsk Krai
13	Perm	1 041 876	1 036 469	5 407	0.52	Perm Krai
14	Voronezh	1 032 382	1 023 570	8 812	0.86	Voronezh Region
15	Volgograd	1 016 137	1 017 451	-1 314	-0.13	Volgograd Region

Source: Rosstat, 2016

Business activities continually develop in the major cities that have significant human resources, creating new workplaces and thereby increasing the difference in population between the major cities and towns (see Table 2).

Table 2. *Key Indicators of Business Activities in the "Million Plus" Cities at the Beginning of 2014*

##	City	Number of Enterprises and Organizations	Average annual number of people employed	Accrued nominal monthly average wages, RUB	Territorial Entity of the Russian Federation, that Incorporated the City
1	Moscow	1173170	4.700.5	55.485,0	Moscow
2	Saint-Petersburg	354354	2.042,9	36.848,0	Saint-Petersburg
3	Novosibirsk	164152	425,8	33.040,0	Novosibirsk Region
4	Yekaterinburg	119080	453,1	37.266,6	Sverdlovsk Region
5	Nizhny Novgorod	91948	465,5	31.988,0	Nizhny Novgorod Region
6	Kazan	63969	351,7	29.555,0	Republic of Tatarstan
7	Chelyabinsk	66271	353,6	29.297,0	Chelyabinsk Region
8	Omsk	38648	320,1	28.064,0	Omsk Region
9	Samara	58686	381,9	29.460,7	Samara Omsk
10	Rostov-on-Don	43543	297,2	31.609,0	Rostov Region
11	Ufa	53755	325,4	32.293,2	Republic of Bashkortostan
12	Krasnoyarsk	50734	303,7	35.874,5	Krasnoyarsk Region
13	Perm	53862	303,3	32.801,1	Perm Krai
14	Voronezh	42084	296,9	26.977,1	Voronezh Region
15	Volgograd	32405	279,8	26.351,1	Volgograd Region

Source: Regions of Russia. Social and Economic Indicators of the Russian Cities and Towns in 2014, 2015

On the other hand, the growth of the urban population makes it necessary to provide conditions for more efficient use of the available human potential, including potential of those who live in small and company towns. The issues of socio-economic development of territories are relevant within the context of increasing self-sufficiency of territories, their participation in the global

processes of urbanization and de-urbanization, as well as of socio-economic and innovation development (*Mingaleva and Mingaleva, 2013*).

In particular, it is essential to identify the opportunities of small and medium-sized cities neighbouring largest and major cities to develop the local business activities independently and effectively. Urbanization processes dismantled many traditional relationships and deprived many medium-sized and small cities of their capacities to develop, which slowed down the development of entire regions and significant areas. In addition, increase of economic self-sufficiency of some regions involves the change of their functional roles and geopolitical importance in the structure of a part of the Russian territory.

This results in significant increase of the significance of the northern territories with extreme conditions of residence and economic activities, but with high production potential.

These processes make it possible to evaluate the opportunities to level the density of population over the territories, as a whole, and within certain regions having the "million-plus" cities, which would allow for maximum efficient employment of human resources in productive and other activities.

The enhanced de-urbanization process and increased interest of people in live in suburban areas also determines the issues identified previously.

Theory and Methodology

With regard to the issues of territorial development the Zipf law is an analytical tool as model to compute the population of city or country, and to construct the hierarchy of cities on the basis of the "rank-size" relationship (*Hierarchy of Cities, 2016*). According to the Zipf law (*Zipf, 1949*), if an area is an integral economic region, the population of the n^{th} biggest city is 1/n of the population of the largest city.

$$N_r = \frac{N_1}{r},$$

where N_r is population of the selected city, r is the rank of this city, and is population of the biggest city.

This simple relationship perfectly accommodates the data on US cities where it was tested (*Axtell, 2001*). Subsequent application of this model to cities in other countries showed very large deviations in its use (*Gabaix, 1999; Li, 1991; O'Sullivan, 2002; Kali, 2003; Zanadvorov and Zanadvorova, 2003; Kechedzhy and Usatenko, 2004; Jiang and Jia, 2011; Lelu, 2014*). Therefore, later more general form of the relationship represented as the following linear

regressive model was proposed:

$P_n = C - qN + e_n P_n = C - qN + e_n$,

where $P_n = \ln N_r P_n = \ln N_r$;

$N = \ln rN = \ln r$;

$e_n e_n$ – actual value deviation from the base; C, qC, q – some constants typical for that territory and for that time.

In most cases, $\mathrm{C} = N_1, q = 1\mathrm{C} = N_1, q = 1$, however, the estimated values of these parameters will result in more accurate computations of population of cities on the territory under study.

According to this model, the most significant deviation from the "ideal" settlement is noted in developing countries. When the main industrial facilities, care settings, educational, cultural and entertainment facilities, and finance institutions are concentrated in the largest city that attracts the residents of the territory seeking for higher wages and better living conditions.

One method to reconstruct urban systems is the method through urban growth (*Rozenfeld, et all, 2008; Rozenfeld, et all, 2011*). As economies of the territory grow, the system of urban settlement of population gets more identical to the Zipf curve. Diagram constructed in accordance with the Zipf law is used to draw conclusions on the distribution of cities and the level of formation and development of urban settlement system which incorporates big cities and medium-sized and small town. Moreover, the statistical data for a long period of time makes it possible to estimate the dynamics of urban population of the territory under study.

If the territory under study has one major city where the most part of turban population is focused, the Zipf curve will have the form of so-called "primate" distribution of population. This is characteristic of the region with short history of the development of modern-type economy, and undeveloped urban system with the dominant role of the major city, which activities are oriented at the external other than internal socio-economic relations.

If the territory has high population density, and is "full" active cities, the actual curve will go above the estimated Zipf curve.

The methods of historical and factorial analysis were used to give explanations in the course of analysis and evaluation of the main aspects of modern transformation of spatial development of Russian region.

Specific features of territorial organization of the Perm Krai economy were taken into account to justify the basic trends of urbanization and agglomeration.

Our calculations were based on the statistical data presented on the web-site of the Perm Krai Statistics Committee (*Statistical Annual Report of the Perm Krai, 2016*).

Results

The Zipf law was applied to evaluate migration streams and trends of urbanization and agglomeration in particular region – the Perm Krai. The capital of the Perm Krai is the city of Perm, one of the Russian cities with the population exceeding one million ("million-plus" cities), which plays an important part in the socio-economic development of the country.

Administratively, the Perm Krai incorporates 8 urban districts; 40 municipal areas (raions), which in turn comprise 29 urban localities and 262 rural localities; 25 towns; 27 urban-type communities; and 3578 villages.

To analyze specific character of urban settlement of population within the territory of the Perm Krai, we selected the urban districts and municipal areas (raions) with population exceeding one thousand. Initial statistical data presented on the Permstat web-site and used for the calculations, as well as the dynamics of population in the selected administrative units are given in Table 1 attached (Annex). Table 2 in the Annex shows the population growth rates in selected urban districts and municipal areas computed for the analysis of population changes in the dynamics.

The calculations indicate that the population of the territories under study decreases, and that the positive dynamics is observed in some areas, including: Perm Urban District, Perm Municipal Area, Krasnokamsk Municipal Area, Kungur Urban District, Barda Municipal Area, Usolje Municipal Area, Kudymkar Urban District, and Tchaikovsky Municipal Area.

The population settlement in the territory was analyzed with the use of the Zipf law, and is presented in Table 3 below.

Table 3. *Analysis of Population of the Regions of the Perm Krai in 2015 Calculated by Simple Zipf Formula*

Rank	Regions	Actual Population in 2015	Estimated Population	Deviation of Actual Population from the Estimated Value	
				Persons	%
1	Perm Urban District	1039180	1039180	0	0
2	Berezniki Urban District	106515	519590	-371799	-251.58
3	Perm Municipal Area	73582	346393	-239879	-225.21
4	Tchaikovsky Urban District	8996	259795	-155021	-147.96
5	Solikamsk Urban District	16188	207836	-112484	-117.97
6	Lysva Urban District	56513	173196	-98531	-131.96
7	Krasnokamsk Municipal Area	42404	148454	-74873	-101.76
8	Tchaikovky Municipal Area	66459	129897	-61019	-88.59
9	Kungur Urban District	42590	115464	-49006	-73.74
10	Dobryanka Municipal Area	22756	103918	-47406	-83.89

11	Chernushka Municipal Area	21556	94470	-43877	-86.72
12	Kungur Municipal Area	15101	86598	-44008	-103.33
13	Nytva Municipal Area	12104	79936	-37533	-88.51
14	Vereshchagino Municipal Area	15756	74227	-33476	-82.15
15	Gubakha Urban District	19704	69278	-33821	-95.39
16	Kudymkar Urban District	40751	64948	-34076	-110.37
17	Aleksandrovsk Municipal Area	12810	61128	-32007	-109.91
18	Osa Municipal Area	68879	57732	-28703	-98.88
19	Oktyabrsky Municipal Area	29029	54693	-26166	-91.72
20	Kueda Municipal Area	14223	51959	-26489	-104.00
21	Barda Municipal Area	24995	49484	-24490	-97.98
22	Gordozavodsk Municipal Area	74666	47235	-22768	-93.05
23	Kudymkar Municipal Area	19138	45181	-21678	-92.23
24	Ocher Municipal Area	24468	43299	-20543	-90.28
25	Karagai Municipal Area	10630	41567	-20011	-92.83
26	Kizel Municipal Area	11812	39968	-18492	-86.10
27	Cherdyn Municipal Area	147791	38488	-17102	-79.96
28	Krasnovishersk Municipal Area	12831	37113	-16126	-76.83
29	Suksun Municipal Area	9512	35833	-16130	-81.87
30	Iljinsky Municipal Area	14258	34639	-15501	-81.00
31	Yusva Municipal Area	28528	33521	-15189	-82.85
32	Solikamsk Municipal Area	30873	32474	-15949	-96.52
33	Okhansk Municipal Area	35458	31490	-15302	-94.53
34	Berezovka Municipal Area	18333	30564	-14808	-93.98
35	Orda Municipal Area	95353	29690	-14590	-96.62
36	Usolje Municipal Area	23504	28866	-14608	-102.46
37	Siva Municipal Area	25470	28085	-13863	-97.47
38	Chastyie Municipal Area	50594	27346	-14516	-113.13
39	Bolshaja Sosnova Municipal Area	16525	26645	-13836	-108.01
40	Gainy Municipal Area	21477	25979	-13651	-110.73
41	Kishert Municipal Area	29121	25345	-13242	-109.40
42	Gremyachinsk Municipal Area	8732	24742	-12931	-109.48
43	Yinskoje Municipal Area	10417	24166	-13537	-127.35
44	Kochevo Municipal Area	104775	23617	-13201	-126.72
45	Elovo Municipal Area	21387	23092	-13581	-142.78
46	Zvezdny Urban District, ZATO	20988	22590	-13595	-151.14
47	Yurla Municipal Area	6669	22110	-13378	-153.21
48	Kosa Municipal Area	12329	21649	-14981	-224.63

Source: Statistical Annual Report of the Perm Krai 2015 (2016)

Based on Table 3, we can conclude that in 2015 the population settlement in the Perm Krai Territory was far from ideal, and that the deviations of the actual data from the estimated values differ drastically and range from 73% to 251%.

The deviations of actual values from the estimates indicate that the available human resources are not sufficient for effective social and economic

development. On the one hand, the structural transformations that took place in the country over 10 years ago resulted in the decay and closure of many enterprises and migration of population to the major cities. On the other hand, in the modern context, development of production, including agricultural production, in small and medium-sized towns is undermined by lack of labour force. Therefore, the business activities and migration processes are fundamentally connected and are under the influence of changes occurring in each other. For instance, the number of enterprises in Perm grows every year, as well as the average number of their employees, which has a positive impact on the growth of wages which, in turn, attracts new human resources for further development of the region unlike other territories which population significantly lags behind the estimated values. Information on the number of enterprises is presented in the Annex in Table 3. The dynamics of the number of enterprises in Perm which forms the basis for the calculation of the population of all other towns, and in Berezniki and in Solikamsk which actual population shows the biggest deviation from the estimated value, are shown for comparison in figure 1.

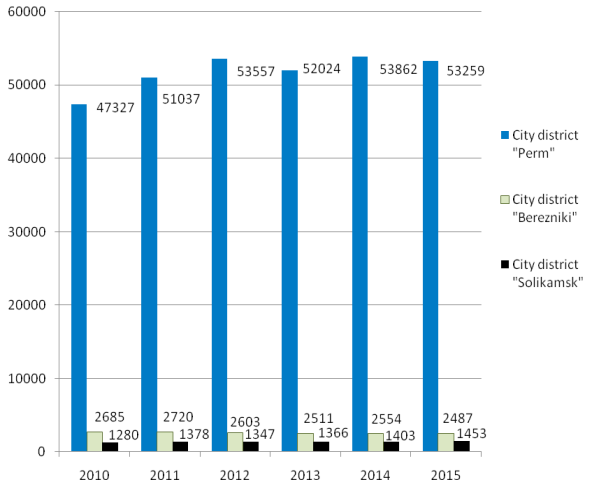


Figure 1. *Number of Enterprises and Organizations in Perm, in Berezniki and in Solikamsk in 2010-2015. Source: Authors, 2016*

The diagram shows that the quantitative structures of enterprises are much different. Even taking into account the different sizes of the cities, it is obvious that the business activities in Berezniki are significantly lower.

The Zipf curve illustrates the mismatch of the estimated value and actual population. To determine this fact, we made additional calculations based on logarithms which results are presented in a graphical form (see figure 2).

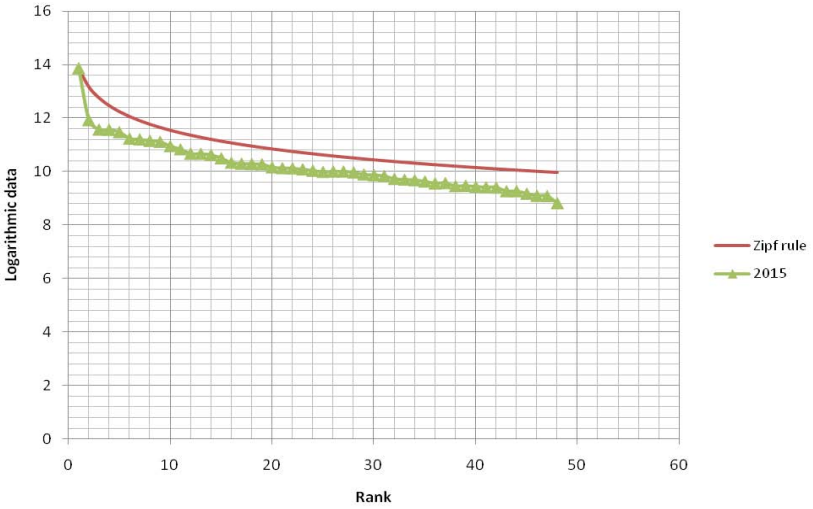


Figure 2. *Zipf Curve*
Source: Authors, 2016.

Diagram 2 shows that the Zipf curve is above the curve constructed on the basis of the actual data, which proves ineffective settlement of the population in the territory of the Perm Krai in 2015. The Perm Krai is characterized by the presence of one major city where all cultural, social, labor and economic resources are concentrated, and therefore other towns have fewer possibilities of socio-economic development, which compromises the population's existence and living conditions in the entire region. There are many reasons why the population is less than the estimated value, and decreases over the time. More detailed analysis of the factors affecting the population requires the study of social and economic conditions of each territory (see Table 4).

Table 4. *Key Indicators of Business Activities in Urban Districts and Municipal Areas of the Perm Krai in 2014*

	Urban Districts and Municipal Areas of the Perm Krai	Turnover of Enterprises, million RUB	Turnover of Enterprises Per Capita, thousand RUB	Average monthly wages, RUB
1	Perm Urban District	1.098.918,0	1.065,381	36.027,8
2	Perm Municipal Area	27.115,8	256,816	27.358,9
3	Krasnokamsk Municipal Area	18.636,7	255,378	26.924,3
4	Zvezdnyi Urban District, ZATO	-	-	29.456,6
5	Okhansk Municipal Area	657,8	40,405	18.403,1
6	Dobryanka Municipal Area	47.644,9	840,765	34.332,2
7	Nytva Municipal Area	10.636,1	249,873	21.751,6
8	Kungur Urban District	16.076,7	241,082	26.151,0

9	Kungur Municipal Area	8.068,6	188,283	19.603,2
10	Ocher Municipal Area	3.074,9	135,158	25.476,1
11	Karagai Municipal Area	1.039,2	47,928	21.989,7
12	Orda Municipal Area	4.973,1	327,339	21.758,0
13	Kishert Municipal Area	547,5	44,690	21.289,0
14	Berezniki Municipal Area	478,5	29,920	23.812,3
15	Suksun Municipal Area	1.830	92,726	20.535,6
16	Vereshchagino Municipal Area	5.102,7	124,450	21.852,0
17	Bolshaya Sosnovo Municipal Area	200,8	15,502	21.363,6
18	Chusovoi Municipal Area	10.954,2	158,034	24.146,9
19	Osa Municipal Area	14.522,0	498,336	29.881,9
20	Siva Municipal Area	1.005,9	70,017	18.918,6
21	Barda Municipal Area	8.648,3	346,820	24.317,5
22	Lysva Urban District	25.030,2	332,526	21.952,5
23	Iljinsky Municipal Area	1.429,8	74,277	21.476,6
24	Gornozavodsk Municipal Area	7.004,4	282,778	25.724,6
25	Uinskoye Municipal Area	6.179,9	583,670	20.311,6
26	Gremyachinsk Municipal Area	785,2	64,764	24.385,3
27	Berezniki Urban District	18.2560	1.218,484	31.120,3
28	Chastyje Municipal Area	11.117,3	868,743	24.313,3
29	Elovo Municipal Area	1.188,9	1.230,682	20.712,1
30	Usolje Municipal Area	40.868,4	2.886,696	40.279,2
31	Oktryabrskoye Municipal Area	14.992,4	519,649	23.277,8
32	Kudymkar Urban District	1.942,2	63,404	25.209,8
33	Gubakha Urban District	22.686	628,796	23.567,1
34	Yusva Municipal Area	613,7	32,919	18.231,1
35	Solikamsk Urban District	23.756,8	248,318	28.490,4
36	Kudymkar Municipal Area	303,4	12,704	16.346,8
37	Kueda Municipal Area	34.671,5	1.348,351	20.219,4
38	Chernushka Municipal Area	26.408,3	524,115	26.831,7
39	Solikamsk Municipal Area	6.084,9	364,627	24.918,1
40	Kizel Municipal Area	1.527,8	69,184	20.641,8
41	Aleksandrovsk Municipal Area	12.048,6	407,598	21.746,1
42	Yurla Municipal Area	31,0	3,510	19.443,7
43	Kochovo Municipal Area	183,1	17,335	28.147,3
44	Tchaikovsky Municipal Area	84.743,5	810,063	29.360,5
45	Cherdyn Municipal Area	410,2	18,594	21.454,7
46	Krasnovishersk Municipal Area	9.715,8	455,073	22.623,9
47	Kosa Municipal Area	20,7	3,067	23.254,5
48	Gainy Municipal Area	219,7	17,615	24.782,7

Source: Statistical Annual Report of the Perm Krai 2015 (2016)

The data in the table show that the turnover of enterprises is much higher in the major cities, and therefore the number of workplaces and job opportunities are higher. Besides, it is necessary to consider that wages in big cities are much more attractive than those in the peripheral towns. However, when making such analysis it is important to bear in mind that all regions have their own specific character. For example, the Usolje District has the highest turnover per capita, because of small population and the large enterprise of international importance, and since this is the enterprise of extractive industry, the wages there are high. So far, the turnover of enterprises is high mainly through the enterprises of extractive industries, while high-tech enterprises are located mostly in Perm.

Additional research of the causes and factors of migration processes in the Perm Krai has shown that they are the same as those in the whole country.

Over the last decade, migration streams to the capital city of the region (Perm) are provided through the outflows of population from town of "middle" and "low" strata. Most of the migrants are young people who go to Perm to get higher professional education or job. In this case, more than 85% school-leavers coming to Perm for education do not plan to return to the places where they were born and where their parents live. As to Perm school-leavers, about 25-30% of them go to study in bigger cities of the country (Moscow, St. Petersburg, Yekaterinburg, and Nizhny Novgorod) and do not intend to come back after graduation.

This is an impediment to the socio-economic development of the region and its municipal entities. In order to be able to speak about the socio-economic development and business activities, it is essential to think how to provide sufficient human resources, which are population.

As to the study of urban settlement in Russia according to the Zipf law, the Russian researchers of this problem have revealed the following patterns that are typical of the current decade (*Fattakhov, Stroyev, 2015*).

Firstly, most of Russian cities are above the ideal Zipf curve, and therefore the depopulation trend in medium-size and small town is expected to persist through migration to major cities in seeking better job and living conditions.

Secondly, 7 "million-plus" cities (Saint-Petersburg, Novosibirsk, Yekaterinburg, Nizhny Novgorod, Kazan, Chelyabinsk, and Omsk) are below the ideal Zipf curve, and have a significant population growth reserve.

Third, there are risks of depopulation of the first rank city (Moscow), as the second rank city (St. Petersburg) and lower cities are much lower than the ideal Zipf curve due to lower demand for manpower and simultaneous increase in the cost of living, including, above all, the cost of property to rent or buy.

That is reflected also in the key indicators of business activities. The number of enterprises in the large cities grows, but we cannot say the same for Moscow (see Table 2). Investment and innovative processes in other cities become more active, while the growth rates in the capital of Russia are slowing down.

Conclusion

Our study with the use the Zipf law has revealed that the current settlement of the population within the Perm Krai is ineffective. The Perm Krai is characterized by the presence of one major "million-plus" city where all cultural, social, labor and economic resources are concentrated, and therefore other towns have fewer possibilities of socio-economic development, though the Perm Krai is a highly industrialized region of Russia, which plays an important part in its socio-economic development, and most of the medium-size towns are company town, and their industries have monopolistic position in the country and in the world.

Analysis of trends and factors of settlement of the population in the territory of the Perm Krai has revealed new quality of the present-day migration processes in the region. The population growth in the major city of the region is provided through young, healthy, ambitious and rather skilled groups of population coming from the "medium" and "low" strata. On the other hand, there is an overflow of young highly qualified personnel to bigger cities of the country (Moscow, St. Petersburg, Yekaterinburg, Nizhniy Novgorod, Samara, Kazan, or Novosibirsk) which contributes to fast (within one generation) creation of highly urbanized, technically and economically, zones and territories within the country, and fuels the trend of higher-than-anticipated-growth of big cities. This provides conditions for special "growth zones" that can provide manpower of appropriate quality needed to ensure the innovative level of economic development and high-tech industries.

In conclusion, it should be noted that in the process of analysis and evaluation of aspects of modern transformation of the spatial development of regions of Russia, as well as study the basic trends of urbanization and agglomeration it is necessary to take into account features of the territorial organization of the economy of individual regions.

Acknowledgment

The work is carried out based on the task on fulfillment of government contractual work in the field of scientific activities as a part of base portion

of the state task of the Ministry of Education and Science of the Russian Federation to Perm National Research Polytechnic University (the topic "Sustainable development of urban areas and the improvement of the human environment").

REFERENCES

1. Axtell, R.L. (2001). Zipf distribution of US firm sizes. American Association for the Advancement of Science.
2. Fattakhov, R.V., Stroev, P.V. (2015). Spatial development of Russia: challenges of today and the formation of points of economic growth. Financial University under the Government of the Russian Federation. URL: http://fa.ru/projects/forum24/discussion/Pages/Prostranstvennoe-razvitie-Rossii-vyzovy-sovremenno.aspx.
3. Gabaix, X. (1999). Zipf's Law for Cities: An Explanation. Quarterly Journal of Economics, 114 (3): 739-767.
4. Hierarchy of Cities. Zipf's Law (2016). URL: http://www.geogcentury.ru/gecents-83-1.html
5. Jiang, B., Jia, T. (2011). Zipf's law for all the natural cities in the United States: a geospatial perspective. International Journal of Geographical Information Science, 25 (8), 1269-1281.
6. Kali, R. (2003).The city as a giant component: a random graph approach to Zipf's law. Applied Economics Letters, 10: 717-720.
7. Kechedzhy, K.E., Usatenko, O.V. (2004). Yampol'skii Rank distributions of words in additive many-step Markov chains and the Zipf law (Eng.) Phys. Rev. E., 72, 046138 (1)-046138 (6). - ArXiv: physics/0406099.
8. Lelu, A. (2014). Jean-Baptiste Estoup and the origins of Zipf's law: a stenographer with a scientific mind (1868-1950). Boletín de Estadística e Investigación Operativa. 30 (1), 66-77.
9. Li, W. (1991). Random Texts Exhibit Zipf's-Law-Like Word Frequency Distribution. Santa Fe Institute, 8 p. SFI WORKING PAPER: 1991-03-016.
10. Mingaleva Zh., Mingaleva A. (2013). Assessing Innovation Susceptibility of Regions And Municipal Districts. Procedia-Social and Behavioral Sciences, 81:595-599. doi:10.1016/j.sbspro.2013.06.482
11. O'Sullivan, A. (2002). The city's economy. Moscow, INFRA-M, pp.122-706.
12. Rosstat (2014). Social and Economic Indicators of the Russian Cities and Towns. URL: http://www.gks.ru.
13. Rosstat (2016). Population of the Russian Federation as at 1 January 2016. URL: http://www.gks.ru
14. Rozenfeld, H., Rybski, D., Andrade, J.S., Batty, M., Stanley. (2008). Laws of Population Growth. Proc. Nat. Acad. Sci., 105, 18702-18707.
15. Rozenfeld, H.D., Rybski, D., Gabaix, X., Makse, H.A. (2011). The area and population of cities: new insights from a different perspective on cities. Am. Econ. Rev. 101, 2205–2225. doi:10.1257/aer.101.5.2205
16. Statistical Annual Report of the Perm Krai 2015 (2016). URL: http://permstat.gks.ru.
17. Zanadvorov, V.S., Zanadvorova, A.V. (2003). The city's economy: an introductory course. Akademkniga.

18. Zipf, G.K. (1949). Human Behavior and the Principle of Least Effort. Addison-Wesley Press, pp.484-490.

Annexes

Table 1. *Population of Urban Districts and Municipal Areas of the Perm Krai in 2000-2015*

Urban Districts and Municipal Areas of the Perm Krai	Distance to Perm, km	2000	2005	2009	2010	2011	2012	2013	2014	2015
Perm Urban District	0	1009265	998682	986158	989017	996102	1007285	1020186	1031479	1039180
Perm Municipal Area	35	89985	89694	86892	95034	103263	103858	104785	105585	106515
Krasnokamsk Municipal Area	36	71564	70406	70518	70443	70565	71309	72220	72977	73582
Zvezdnyi Urban District, ZATO	37	9971	9288	9226	9166	9191	9172	9008	8908	8996
Okhansk Municipal Area	72	18668	17569	17029	16617	16395	16486	16398	16280	16188
Dobryanka Municipal Area	73	60719	61810	61444	59234	56887	56808	56820	56669	56513
Nytva Municipal Area	79	51272	46774	45212	44417	43537	43108	42779	42566	42404
Kungur Urban District	91	75931	67996	67987	66972	66202	66397	66622	66686	66459
Kungur Municipal Area	100	47536	46567	46561	44550	42723	43047	43092	42854	42590
Ocher Municipal Area	112	25202	24920	24539	23678	22863	22813	22751	22751	22756
Karagai Municipal Area	114	25831	24503	23655	23216	22726	22342	21918	21683	21556
Orda Municipal Area	113	17641	16642	16134	15866	15567	15492	15342	15193	15101
Kishert Municipal Area	119	14868	14900	14474	13602	12703	12605	12442	12251	12104
Berezniki Municipal Area	122	18709	18211	17832	17415	16816	16513	16253	15993	15756
Suksun Municipal Area	134	22171	21529	20730	20355	20022	19936	19818	19736	19704
Vereshchagino Municipal Area	135	41376	43723	43557	42475	41247	41258	41269	41002	40751
Bolshaya Sosnovo Municipal Area	136	15857	14771	14272	13747	13200	13081	13011	12954	12810
Tchaikovsky Municipal Area	138	78957	75283	72368	71563	70822	70226	69710	69316	68879
Osa Municipal Area	141	36557	32898	31950	30699	29435	29352	29241	29141	29029
Siva Municipal Area	152	18494	17028	16829	15857	14763	14585	14468	14367	14223
Barda Municipal Area	158	28602	27584	27729	26691	25419	25340	24711	24936	24995
Lysva Municipal Area	159	88920	84918	82079	79945	77562	76641	75890	75273	74666
Iljinsky Municipal Area	165	22694	20649	20255	19905	19501	19391	19352	19250	19138
Gornozavodsk Municipal Area	175	31170	29402	25775	26509	25744	25387	25082	24770	24468
Uinskoye Municipal Area	176	13432	13196	12346	11816	11203	10836	10612	10588	10630
Gremyachinsk Municipal Area	178	24774	16343	14581	14136	13521	12948	12484	12124	11812
Berezniki Urban Distrct	185	179963	169910	164486	160201	155468	153799	151831	149826	147791

Chastyje Municipal Area	187	14669	14569	14521	13705	12884	12915	12844	12797	12831
Elovo Municipal Area	195	14535	12742	12100	11392	10554	10250	9948	9661	9512
Usolje Municipal Area	197	13819	14696	13694	13918	14180	14119	14061	14158	14258
Oktryabrskoye Municipal Area	199	37778	35789	34754	32578	30181	29700	29225	28851	28528
Kudymkar Urban District	200	35203	31833	30752	29870	29294	29862	30344	30632	30873
Gubakha Municipal Area	208	47323	43304	38848	38616	38383	37566	36770	36079	35458
Yusva Municipal Area	210	21519	23239	22466	20920	19430	19214	18924	18643	18333
Solikamsk Urban District	212	103903	100443	95704	96197	96984	96533	96067	95671	95353
Kudymkar Municipal Area	219	29809	28735	27490	26548	25489	24980	24380	23882	23504
Kueda Municipal Area	221	32516	31052	30429	28625	26814	26552	26117	25714	25470
Chernushka Municipal Area	228	50816	52937	52220	51405	50646	50548	50405	50387	50594
Solikamsk Municipal Area	230	18319	17671	17610	17333	17121	17010	16840	16688	16525
Kizel Municipal Area	233	49235	33021	30048	27349	24400	23532	22778	22083	21477
Aleksandrovsk Municipal Area	239	38400	35649	34102	32710	31083	30497	30001	29560	29121
Yurla Municipal Area	246	11027	11611	10909	10234	9454	9206	8995	8832	8732
Kochovo Municipal Area	266	13928	12510	12358	11766	11067	10902	10729	10563	10417
Tchaikovsky Urban District	268	112358	108947	108711	106318	103828	103995	104309	104614	104775
Cherdyn Municipal Area	304	36824	34011	31873	28062	23999	23285	22709	22061	21387
Krasnovishersk Municipal Area	311	27359	26954	25964	24145	22312	22004	21689	21350	20988
Osa Municipal Area	345	8493	8094	7593	7384	7139	6986	6846	6749	6669
Gainy Municipal Area	356	18898	16802	15874	14796	13535	13103	12742	12472	12329

Table 2. *Population Dynamics Urban Districts and Municipal Areas of the Perm Krai in 2000-2015*

Urban Districts and Municipal Areas of the Perm Krai	Distance to Perm, km	2005 vs. 2000	2009 vs. 2005	2010 vs. 2009	201 vs. 2010	2012 vs. 2011	2013 vs. 2012	2014 vs. 2013	2015 vs. 2014
Perm Urban District	0	-10583	-12524	2859	7084	11183	12901	11293	7701
Perm Municipal Area	35	-291	-2802	8141	8229	595	927	799	930
Krasnokamsk Municipal Area	36	-1158	112	-75	122	744	910	757	604
Zvezdnyi Urban District, ZATO	37	-683	-62	-60	25	-18	-164	-100	88
Okhansk Municipal Area	72	-1099	-540	-412	-221	91	-88	-118	-92
Dobryanka Municipal Area	73	1091	-366	-2209	-2347	-79	12	-151	-156
Nytva Municipal Area	79	-4498	-1562	-795	-880	-429	-329	-212	-162
Kungur Urban District	91	-7935	-9	-1014	-770	195	224	64	-227
Kungur Municipal Area	100	-969	-6	-2011	-1827	324	45	-238	-263
Ocher Municipal Area	112	-282	-381	-861	-814	-50	-62	0	5
Karagai Municipal Area	114	-1328	-848	-438	-490	-384	-424	-235	-126
Ordai Municipal Area	113	-999	-508	-268	-298	-75	-150	-149	-91
Kishert Municipal Area	119	32	-426	-872	-899	-97	-163	-190	-147
Berezovka Municipal Area	122	-498	-379	-417	-599	-302	-260	-260	-236

Suksun Municipal Area	134	-642	-799	-375	-333	-85	-118	-82	-32
Vereshchagino Municipal Area	135	2347	-166	-1082	-1227	10	11	-266	-251
Bolshaya Sosnovo Municipal Area	136	-1086	-499	-525	-547	-118	-70	-57	-144
Chusovoi Municipal Area	138	-3674	-2915	-805	-740	-596	-515	-394	-437
Osa Sosnovo Municipal Area	141	-3659	-948	-1250	-1264	-83	-111	-100	-112
Siva Municipal Area	152	-1466	-199	-972	-1094	-177	-117	-101	-143
Barda Municipal Area	158	-1018	145	-1038	-1272	-79	-629	225	59
Lysva Municipal Area	159	-4002	-2839	-2134	-2383	-920	-751	-617	-607
Iljinsky Municipal Area	165	-2045	-394	-350	-403	-110	-39	-102	-111
Gornozavodsk Municipal Area	175	-1768	-3627	734	-764	-357	-305	-311	-302
Uinskoye Municipal Area	176	-236	-850	-530	-613	-367	-224	-23	42
Gremyachinsk Municipal Area	178	-8431	-1762	-445	-614	-573	-464	-360	-312
Berezniki Urban District	185	-10053	-5424	-4284	-4733	-1669	-1968	-2005	-2034
Chastyje Municipal Area	187	-100	-48	-816	-821	31	-71	-47	34
Elovo Municipal Area	195	-1793	-642	-708	-837	-304	-302	-287	-148
Usolje Municipal Area	197	877	-1002	224	261	-60	-58	96	100
Oktryabrskoye Municipal Area	199	-1989	-1035	-2176	-2396	-481	-475	-373	-323
Kudymkar Urban District	200	-3370	-1081	-881	-576	568	482	288	241
Gubakha Municipal Area	208	-4019	-4456	-232	-233	-816	-796	-691	-621
Yusva Municipal Area	210	1720	-773	-1545	-1490	-216	-289	-281	-310
Solikamsk Urban District	212	-3460	-4739	493	787	-451	-465	-396	-318
Kudymkar Municipal Area	219	-1074	-1245	-942	-1059	-508	-600	-498	-378
Kueda Municipal Area	221	-1464	-623	-1804	-1811	-261	-435	-403	-244
Chernushka Municipal Area	228	2121	-717	-815	-758	-98	-143	-18	207
Solikamsk Municipal Area	230	-648	-61	-276	-212	-111	-170	-151	-163
Kizel Municipal Area	233	-16214	-2973	-2698	-2949	-868	-754,50	-694,50	-606,50
Aleksandrovsk Municipal Area	239	-2751	-1547	-1391	-1627	-585	-496,50	-440,50	-439,00
Yurla Municipal Area	246	584	-702	-674	-780	-248	-210,50	-163,50	-99,50
Kochovo Municipal Area	266	-1418	-152	-592	-698	-165	-173,50	-166,00	-145,50
Tchaikovsky Urban District	268	-3411	-236	-2393	-2489	166	314,50	304,50	161,00
Cherdyn Municipal Area	304	-2813	-2138	-3811	-4062	-714	-576	-648	-674
Krasnovishersk Municipal Area	311	-405	-990	-1819	-1832	-308	-314	-339	-362
Bolshaya Sosnovo Municipal Area	345	-399	-501	-208	-245	-152	-140	-97	-80
Gainy Municipal Area	356	-2096	-928	-1077	-1261	-431	-361	-270	-143

Table 3. *Number of Enterprises and Organizations in Urban Districts and Municipal Areas of the Perm Krai in 2009-2015*

Urban Districts and Municipal Areas of the Perm Krai	Distance to Perm, km	2009	2010	2011	2012	2013	2014	2015
Perm Urban District	0	42879	47327	51037	53557	52024	53862	53259
Perm Urban District	35	1865	1493	2153	2278	2265	2324	2412
Krasnokamsk Municipal Area	36	1136	1181	1268	1236	1251	1285	1297
Zvezdnyi Urban District, ZATO	37							
Okhansk Municipal Area	72	260	257	252	233	223	225	225
Dobryanka Municipal Area	73	1197	1263	1228	1188	1137	1175	1097
Nytva Municipal Area	79	531	544	572	545	500	519	514
Kungur Urban District	91	890	1024	1024	989	947	955	916
Kungur Municipal Area	100	392	408	423	415	406	393	382

Ocher Municipal Area	112	289	310	317	285	252	250	254
Karagai Municipal Area	114	248	242	240	234	236	231	221
Orda Municipal Area	113	156	153	151	149	155	161	160
Kishert Municipal Area	119	177	182	179	167	161	166	149
Berezovka Municipal Area	122	184	178	177	163	154	158	152
Suksun Municipal Area	134	263	252	247	229	215	218	200
Vereshchagino Municipal Area	135	459	450	447	431	432	433	413
Bolshaya Sosnovo Municipal Area	136	189	177	162	153	154	161	160
Chusovoi Municipal Area	138	876	968	988	922	894	919	920
Osa Municipal Area	141	475	498	518	464	448	446	433
Siva Municipal Area	152	183	164	158	150	147	146	144
Barda Municipal Area	158	366	359	359	331	329	332	328
Lysva Urban District	159	1250	1298	1297	1197	1183	1176	1183
Iljinsky Municipal Area	165	231	242	244	226	217	221	215
Gornozavodsk Municipal Area	175	273	289	293	270	271	282	279
Uinskoye Municipal Area	176	159	147	135	126	122	131	128
Gremyachinsk Municipal Area	178	165	165	158	145	130	138	139
Berezniki Urban District	185	2538	2685	2720	2603	2511	2554	2487
Chastyje Municipal Area	187	170	160	152	147	132	136	134
Elovo Municipal Area	195	143	133	137	125	121	123	126
Usolje Municipal Area	197	251	259	264	245	230	225	211
Oktryabrskoye Municipal Area	199	341	345	334	326	322	329	334
Kudymkar Urban District	200	527	510	486	448	389	379	371
Gubakha Urban District	208	326	339	348	326	317	319	324
Yusva Municipal Area	210	190	167	168	163	160	172	163
Solikamsk Urban District	212	1163	1280	1378	1347	1366	1403	1453
Kudymkar Municipal Area	219	183	187	214	195	161	160	139
Kueda Municipal Area	221	345	339	350	332	313	309	305
Chernushka Municipal Area	228	649	683	715	732	727	751	736
Solikamsk Municipal Area	230	212	219	224	212	209	198	203
Kizel Municipal Area	233	265	275	277	275	256	249	246
Aleksandrovsk Municipal Area	239	318	340	340	316	307	309	301
Yurla Municipal Area	246	123	121	132	125	115	116	91
Kochovo Municipal Area	266	103	102	100	101	99	104	100
Tchaikovsky Municipal Area	268	1907	2114	2291	2252	2296	2448	2531
Cherdyn Municipal Area	304	296	307	304	261	232	227	218
Krasnovishersk Municipal Area	311	286	309	328	308	311	328	330
Kosa Municipal Area	345	78	77	76	72	66	69	69
Gaidy Municipal Area	356	129	126	137	134	140	137	125

Part II
FOSTERING ENTREPRENEURSHIP

Stimulating of Entrepreneurship Through the Use of Hadi Cycle Technology

MINGALEVA Zhanna[12], DEPUTATOVA Ludmila[13]

Introduction

Entrepreneurship gets its development through entrepreneurial initiative.

In 2016, according to InnMind and Global Entrepreneurship Monitor 305 million startups registered in the world, startups offer 100 million annually (*World statistics startups – infographics InMind, 2016*). According to the University of Tennessee, the majority of startups are closed in the first year of operation (*University of Tennessee, 2016*). Petersburg business incubator at ITMO assesses the proportion invested startups closed within the first year in 40%. Even 30% of start-ups cease to exist within two years (*Business Incubator ITMO*, 2016). The main reasons of failures of start-ups are as follows: 42% – lack of demand for products, 23% – conflict with the team, 19% – the competition (*The CB Insights statistiques,* 2016). D. Khajeheian, H. Esmaeilkhoo and S. Yousefikhah determined that the development of a startup depends on the degree of development of customer needs. Media bullet can create new consumption patterns or change old habits (*Khajeheian et al.,* 2012).

Also in studies of D.Khajeheian presented framework for commercialization of innovations in digital media. Components frameworks allow to solve the complex problems of bringing a new product to the market (*Khajeheian, 2013*). Among other problems we can identify a lack of money (29%) and the conflict with the investors (13%), bad marketing or lack of marketing (14%) and problems with the law (8%) (*Salamzadeh,* 2015a, *Salamzadeh,* 2015b).

These challenges in the development of start-ups are responsible for determining the need for approaches to the development and testing ideas in practice.

[12] Perm National Research Polytechnic University, Department of Economics and management in industrial production, Perm, Russian Federation, mingal1@psu.ru

[13] Perm National Research Polytechnic University, Department of Economics and management in industrial production, Perm, Russian Federation, milada@mail.ru

Global restructuring of manufactured goods have taken place in the XXI century. Knowledge and information products have become a major favor and a key resources for social and economic development in the world at the same time. Knowledge and information become more popular exchange and transaction goods. A growing number of start-ups are in the information product market.

The intellectual work is becoming more complex process, requiring a high level of intelligence, professional and comprehensive knowledge, worker culture. However, purposeful and systematic creation of certain conditions necessary for the disclosure of the creative abilities of employees, for increase their interest in intellectual work, the implementation of the exploratory research and the creation of new elaboration for the innovative development of the enterprise, territory, society. In its turn there is a need to create conditions in enterprises, organizations, education and society in general. These conditions should contribute to creative development of the personality and stimulate the intellectual work. In this regard, the study and development of systems of motivation of intellectual workers of different enterprises is an important component of the management system in terms of stimulating their intellectual and innovative activities. This component requires a special complex and multilateral study.

The purpose of the study of intellectual work is defined as the creation of materialized knowledge and intellectual products. Materialized knowledge is the new knowledge reified in products and services. The knowledge may be embodied in various intelligent products. Intelligent product is the result of spiritual, mental, intellectual activity. Intelligent product includes inventions, discoveries, patents, scientific reports and papers, projects, technology descriptions, literary, musical, artistic works. For example, the idea of improving the technological process may be embodied in a report, diagram, patent and invention. Implementation of the materialized knowledge in a variety of intelligent products is intellectual work.

Literature Review

M. Relich identifies three main sources of knowledge for the development of a new product (NPD): customer/market knowledge, technological knowledge, and organisational knowledge (*Relich,* 2015). Customer market knowledge is acquired from customer relationship management system. Technological knowledge and organisational knowledge are acquired from enterprise resource planning system.

D. Korposh, Y. C. Lee, C. C. We, and C. S. Wei developed a mathematical model which can quantify the supporting effects of the existing knowledge on the creation of new knowledge (*Korposh et al.,* 2011). The model evaluates knowledge from the perspectives of complexity and depth.

Z. Q. Jian and G. F. Wang are considering the new product development can be thought as a process of information processing. A survey research from 115 high-tech firms in south China allowed to establish the following relationships: organizational learning has a positive impact on knowledge creation, organizational learning does not have a positive impact on new product development performance, and knowledge creation has a positive impact on new product development performance (*Jian, Wang,* 2010).

H. Tsoukas explores the cyclical creation of organizational knowledge adopting a dialogical approach (*Tsoukas,* 2009). The author defines new knowledge in organizations originates in the individual ability to draw new distinctions concerning a task at hand.

A. Otsuki and K. Okada presented in their work a constructed tool that supports the process of trying to organize knowledge newly created after tacit knowledge has been optimized by applying knowledge management strategies, 3C, a marketing mix, and various enumeration methods (*Otsuki, Okada,* 2009).

This tool was tested through use in an actual administrative project and proved to be more effective than an already-existing tool used for the organization of newly-created knowledge.

A. Schulze and M. Hoegl taking a behavioral perspective on the four modes of Nonaka (socialization, externalization, combination, and internalization), revealed positive relationships between socialization as well as internalization and the novelty of product ideas, whereas admit negative relationships for externalization as well as combination (*Schulze, Hoegl, 2008*). The study is confirmed by approbation on 33 companies.

K. G. Smith, C. J. Collins and K. D. Clark revealed a field study of top management teams and knowledge workers from 72 technology firms demonstrated that the rate of new product and service introduction was a function of organization members' ability to combine and exchange knowledge (*Smith et al.,* 2005).

In his studies C. B. Rao sets classification of firms based on the concept of technology pyramid and articulation of characteristic strategies of innovators, differentiators and followers (*Rao,* 2016). The book develops a distinctive five forces model of technology and proposes three generic technology competitive strategies.

A large part of modern research is devoted to the analysis of the conditions

and opportunities for the creation of start-ups and their successful development (*Khajeheian et al.,* 2012).

The study by A. Nerkar proved that a balance in combining current knowledge with the knowledge available across large time spans is an important factor that explains the impact of new knowledge (Nerkar, 2004). These ideas are empirically tested using patent data from the pharmaceutical industry.

Krenz, P., Basmer, S., Buxbaum-Conradi, S., Redlich, T., and Wulfsberg, J. P. proposed a mechanism for compensating of inter-organizational conflicts that arise with regard to knowledge management goals and objectives of the overall management of the company (*Krenz at al., 2014*).

Studies by I. Nonaka and H. Takeuchi devoted to the development of organizational knowledge and to the processes of its transformation into the company (*Nonaka, Takeuchi, 1995)*. Russian scientist A. I. Tatarkin and E. V. Pylypenko offer the following classification of knowledge in the form of existence: the personal (personal knowledge); codified (in symbols and signs); materialized (in products, services) (*Innovative development of the knowledge economy, 2011*).

Currently, the problem of development and use of intellectual work is studied by scientists such as V. V. Adamchuck, O. V. Romashov and M. E. Sorokin (*Adamchuck, et al., 1999*), A.V. Buzgalin (*Buzgalin, 2008*), B.M.Genkin (*Genkin, 2003*), V. P. Kolesov (*Knowledge Economy, 2008*), L.A. Lebedintseva (*Lebedintseva, 2012*) and other scientists. Zh. Mingaleva and I. Mirskikh were studying the legal regulation and protection of the intellectual product, the knowledge and the new product in Russian company (*Mingaleva, Mirskikh, 2015a, 2015b*). The works by E. Deming are devoted to the study of managerial decision-making process (*Deming, 1993*).

Development of organizational knowledge promotes innovation in existing technologies and the development of new technologies to create products with new features to meet the growing needs of the world market (*Mingaleva et al., 2013*).

Methodology

The study and analysis of the available scientific research on the subject of research conducted with the help of surveillance and analytical methods: formalization, axiomatization, hypotheses.

The formulation of the hypotheses and its test are made using the methods of structuring and complex analysis. The synthesis methods are used to combine the different elements of knowledge management theory, the theory of the

creation of new businesses, the theory of startups and other theories.

Factor analysis as a research method is used to identify and determine the relationships and interdependencies of elements of human resource management system with the company's management system in terms of better involving researchers in the task of innovation. For a visual representation of the mechanism of interaction between the two cycles (cycle of creation and implementation of ideas) methods of graphic reflection were used.

Discussion

Hypothesis 1

Studies of the process of knowledge creation, dissemination, transformation into information and innovations both showed that the creation of new knowledge, intellectual product within the intellectual activity of the process consists of 4 stages (Deputatova, 2013).

These are the stages:

1) creation of personal knowledge;
2) creation of codified knowledge;
3) creation of competency knowledge;
4) creation of materialized knowledge – conversion of knowledge to information which can be transmitted to others for further use (innovations).

In turn, these four groups of knowledge include specific types of knowledge, which differ from each other as well as their preparation and methods of fixation.

Through the process of transformation, from the category of personal skills through encoding are converted into intelligent product capable of placing on the market. Transformation of knowledge is due to the intelligent work of man.

The process of transforming knowledge to create new knowledge which then can be implemented by entrepreneurs in the form of innovation can be simply and at the same time very clearly represented by the example of invention of the bicycle. First, people comprehended the problem of transporting and moving in space and the possibility of wheels and chains, and further identified other necessary parts: steering wheel, the seat, and then there was the idea of the bicycle (personal knowledge). To create a drawing of bicycle (codified knowledge) man first decided on the drawing requirements. Thereafter, based on the drawing (executed idea) people started manufacturing bicycle

(competency knowledge) – innovative activities. The new product – bicycle became the final result of labor (materialized knowledge).

The basic steps for creating knowledge within the intellectual process form a system of circulation of knowledge, including the environment where the new knowledge spreads and people get new information to extend their own personal knowledge (Figure 1).

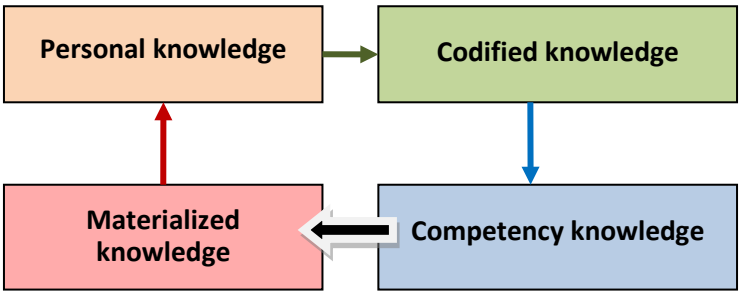


Figure 1. *The cycle of creation of new knowledge*
Source: Author (2016)

Passage of all main stages in the transformation of knowledge provides a circuit of acquired knowledge in the society, in particular social groups and activities (such as research, innovation, invention, rationalization activity, and so forth.), individual enterprises and organizations.

Thus, in the process of circulation of knowledge society becomes the owner of more or less considerable potential knowledge to be used for different purposes.

In the famous work "The Company – creator of knowledge," I. Nonaka and H. Takeuchi (*Nonaka, & Takeuchi,* 1995) proposed a dynamic circuit transition between two forms of knowledge – implicit and explicate, and four ways of knowledge transformation:

- ***socialization*** (creates a user-friendly knowledge that involves the transfer of knowledge in the process of learning through observation, imitation, joint implementation of the work);
- ***articulation*** (creates a dialogue or collective thinking, which occurs with the use of metaphors or analogies that allow to transform the informal knowledge to a formalized);
- ***combination*** (creates a system knowledge resulting from the formation of bonds between the newly created and existing knowledge);
- ***internalization*** (creates a formal knowledge of informal one using gain experience in practice; a new individual experience can be transmitted through socialization, forming a new round of creation of knowledge).

By adapting the methods of transformation of knowledge by I. Nonaka and H. Takeuchi to the steps of creation a new knowledge we determined the following order: articulation, socialization, combination и internalization.

On the basis of combining the two approaches (4 steps of knowledge creation (personal, codified, competency, materialized), and 4 ways to transform knowledge (articulation, socialization, combination and internalization) we obtained the following order and combination forming a cycle of knowledge (Figure 2).

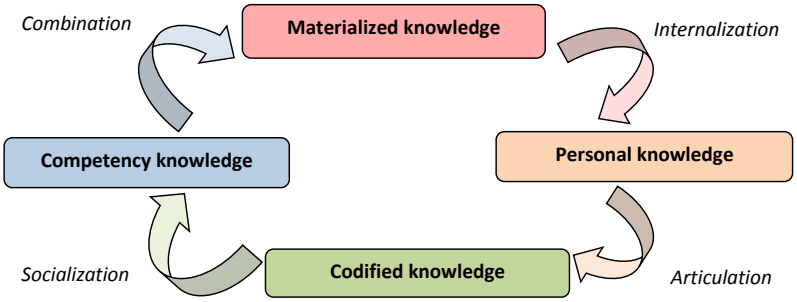


Figure 2. *The cycle of knowledge*
Source: Author (2016)

Transitions presented in Figure 2 indicate:

- articulation – is the transformation of implied personal knowledge into the expressed knowledge which is realized in organizations everyday;
- socialization – is the acquisition of implied competency knowledge based on the codified knowledge;
- combination – is the transformation of implied competency knowledge into the explicate material knowledge;
- internalization – is the process of converting materialized knowledge into the personal knowledge.

The authors developed the elements of intellectual work management systems that contribute to the development of the intellectual capital of the enterprise. Based on the cycle of transformation of knowledge the authors established how elements of intellectual work management systems affect the different types of knowledge (Figure3).

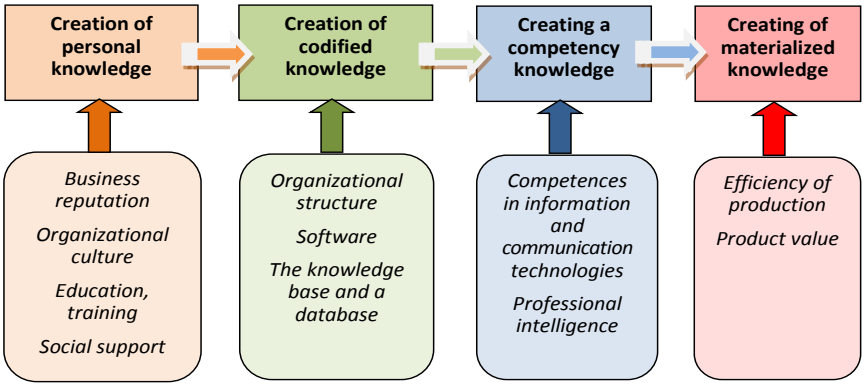


Figure 3. *The impact of intellectual labor controls to different kinds of enterprise*
Source: Author (2016)

On the basis of generalization of the world experience the authors have identified a cycle of transformation of knowledge, including the steps of creating a personal, codified, competency and materialized knowledge, called the standard cycle of knowledge creation.

Hypothesis 2

In practice HADI cycle («Hypothesis-Action-Data-Insights») is used to accelerate the process of testing new ideas in the enterprise (*How to test hypotheses and multiply grow? 2016*). HADI cycle is a cyclically iterative process which checks the ideas influencing the improvement of key indicators of the project, startup, business and innovation. It means testing the hypothesis through the action, subsequent collection of analytical information and relevant conclusions. Revenue, number of customers per month, the number of returning customers, landing conversion may be key check indicators.

Each project requires its own set of key indicators. The hypothesis may be confirmed or not. In IT companies and small businesses hypothesis is tested usually during the week.

This methodology became the basis for educational programs of incubators and accelerators around the world such as: Y Combinator IT-Park "California United States" (*Y Combinator created a new model..., 2016*), Technopark in the sphere of high technologies "IT Park" in Kazan (*Business Incubator Technopark, 2016*), "Southern IT Park" Rostov-on-Don (*The space for the interaction of IT-specialists…, 2016*), "Foundation for Development of Internet-initsiativ" Moscow (*Financial and expert support of Internet projects at early stages of development, 2016*) etc. As members of the "Foundation for Development of Internet-initsiativ" accelerator note, this instrument allows

in 3 months to get the results that others achieve in 3 years (Business space, 2016).

PDSA cycle by Deming is taken as a basis of HADI cycle. PDSA («Plan-Do-Study-Act») cycle is a cyclically repeating decision making process used in quality management (*Deming,* 1993).

Table 1 which lists the planned actions, expected analytics, the relevant conclusions, and actual results is usually applied to use the HADI-cycle instrument in practice.

Table 1. *Plan-fact of HADI cycle*

HYPOTHESIS	PLAN			FACT		
	ACTION	METRICS	EXPECTED RESULT	ACTION	METRICS	CONCLUSIONS
Hypothesis 1	Planned Actions 1	Planned Index 1	Expected Result 1	Actual Actions 1	Actual Index 1	Hypothesis confirmed/not confirmed
Hypothesis 2	Planned Actions 2	Planned Index 2	Expected Result 2	Actual Actions 2	Actual Index 2	Hypothesis confirmed/not confirmed
.....	.....	.....	.....	.....	.....	.....
Hypothesis N	Planned Actions N	Planned Index N	Expected Result N	Actual Actions N	Actual Index N	Hypothesis confirmed/not confirmed

Source: Author, 2016.

Analysis of the content HADI cycle steps showed the following. At the first step of HADI cycle we generate hypothesis, which improves the key performance indicator of the project, business and creates innovation. It is important that this hypothesis is to consistent with the SMART principle, a specific, measurable, achievable, relevant and time-limited. The hypothesis of the project should solve the existing problem and to give a concrete result which improves the economic business indicators. An example of a hypothesis: we assume that if you implement the clutch improving technology to improve the quality characteristics of the bicycle, then it will increase the number of new clients by X per month.

The second phase of the cycle means specific action aimed at changing the characteristics of the project which allows to prove or disprove the hypothesis.

The action ought to be implemented for a certain period. In our example, specific action will release of the bicycle with a new clutch, informing customers about new qualitative characteristics of the product etc.

In the third step of HADI cycle we begin to collect data on key indicators which change will affect. In this example, it is the number of new customers.

At the fourth step of HADI cycle we analyze and summarize. If the hypothesis is confirmed, then innovation will be implemented and scaled for

other entrepreneurial projects.

On the basis of combining the two approaches (4 steps of transformation of knowledge (personal, codified, competence, material), and 4 ways to transform knowledge (articulation, socialization, combination and internalization)) we obtain the circuit of knowledge in the implementation of HADI cycle (Figure 4).

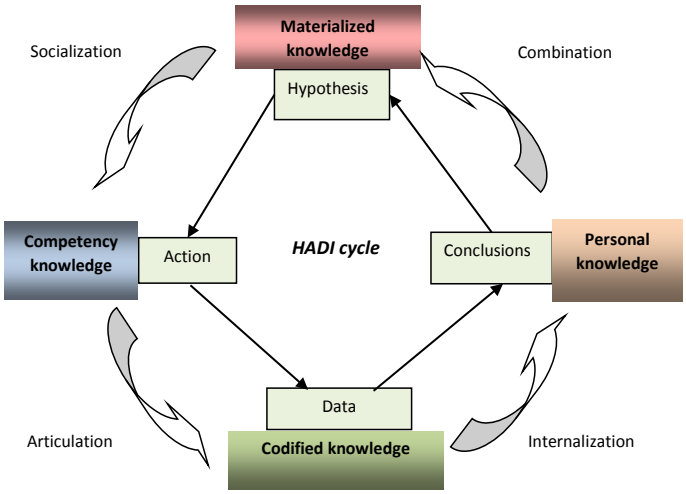


Figure 4. *Creation of organizational knowledge based on the use HADI cycle*
Source: Author (2016).

The cycle begins with materialized knowledge that is necessary to implement in entrepreneurship. Through activities on the introduction of the hypothesis (idea, innovation), by a process of socialization there is a creation of the competence of knowledge. Collection of data, in other words the process of articulation, creates codified knowledge of enterprise. Perception of statistical and analytical information creates a personal knowledge on the results of the implementation of the idea (innovation) of improving the enterprise. Internalization process provides transition of codified knowledge into the personal one.

Obtained as a result of the findings of the project by combining become the basis for a new materialized knowledge, new hypothesis, innovation.

This cycle of creation of new organizational knowledge (innovation) is the reverse motion order compared to the standard cycle of creating new knowledge (innovation), namely the creation of a materialized, competency, codified and personal knowledge. Thus, HADI cycle can be called non-standard cycle of knowledge (innovation) creation, moving counterclockwise.

Hypothesis 3

The mechanism of interaction of standard and non-standard cycle is shown in Figure 5. The control system in intellectual work aimed at creating a new intellectual product innovations, materialized knowledge involves a move from element to element by the standard scheme. HADI cycle aimed at improving key business parameters of the development of business ideas involves a move from element to element in the reverse direction. Nonstandard cycle acts as an important driving force for the standard cycle of creating new knowledge.

At the same speed, evenness and rhythm of the passage of the basic cycle of creating new knowledge depends essentially on the amount, synchrony and coherence of HADI cycles, ensuring the implementation of projects in the enterprise.

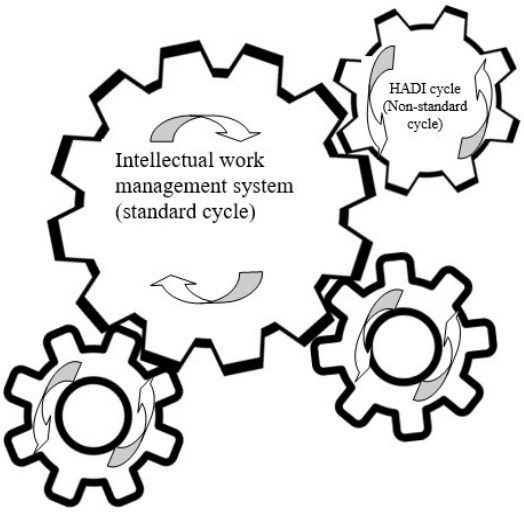


Figure 5. *The mechanism of interaction of standard and non-standard cycle. Source: Authors (2016).*

Thus, for the successful functioning of the cycle of creating new intellectual product, entrepreneurial ideas, innovation, requires a few HADI cycles affecting the competitive key business indicators.

Conclusion

On the basis of theoretical study we identified that the mechanism of interaction between standard and non-standard cycle of creation a new organizational knowledge in the enterprise management system allows to speed the process of creating and implementing innovations, entrepreneurial ideas, improves the quality of the personnel handling, creates conditions for the development of business intellectual capital, improves product quality,

increases marketing effectiveness. This mechanism also explains the need for the project teams for the successful implementation of entrepreneurial ideas, the introduction of innovations. The proposed mechanism of action in the intellectual work management system, accelerates the process of creating intellectual product of the enterprise, innovation, entrepreneurial ideas.

The mechanism of interaction between intellectual work management system and project management system using HADI-cycles are increasingly being used in the practice of business organizations to accelerate the process of testing new ideas. This mechanism, designed on the basis of the research, enables to accelerate the process of creation and implementation of ideas in entrepreneurial environment. Presented in the article approach to the creation and implementation of business ideas, innovation in business, including start-ups can improve the survival and competitiveness of entrepreneurial project.

Acknowledgment

The work is carried out based on the task on fulfillment of government contractual work in the field of scientific activities as a part of base portion of the state task of the Ministry of Education and Science of the Russian Federation to Perm National Research Polytechnic University (the topic "Sustainable development of urban areas and the improvement of the human environment").

REFERENCES

1. Adamchuck, V. V., Romashov, O.V., Sorokin, M.E. (1999). Economics and sociology of labor: Textbook. Guide. M .: UNITY, 407 p.
2. Business Incubator ITMO (2016). URL: http://startup.ifmo.ru
3. Business Incubator Technopark in the sphere of high technologies "IT-park" (2016). URL: http://bi.itpark-kazan.ru/ru/about
4. Business space (2016). URL: startup.iidf.ru/news/Business-space/
5. Buzgalin, A.V. (2008). Russia in the global knowledge economy transformation: the context and alternatives. TerraEconomicus. 6 (1), 27–39.
6. Deming, W.Ed. (1993). The New Economics for Industry, Government, and Education. Boston, Ma: MIT Press. p. 132. ISBN 0262541165.
7. Deputatova, L.N. (2013). Functional model of management knowledge workers in the enterprise. Economy and Entrepreneurship. 11 (40), 804-806.
8. Financial and expert support of Internet projects at early stages of development (2016). URL: http://www.iidf.ru
9. Genkin, B.M. (2003). Economics and sociology of labor: a textbook for high schools. M. Norma, 416 p.
10. How to test hypotheses and multiply grow? Theory. Practice. Tool (2016). URL: http://

habrahabr.ru/company/hopox/blog/297854/
11. Innovative development of the knowledge economy / under general ed. Acad. A.I. Tatarkin (2011). Ekaterinburg: Institute of Economics, Ural Branch of Russian Academy of Sciences, p.79-118.
12. Jian, Z.Q., Wang, G.F. (2010). A Study of the Relationship among Organizational Learning, Knowledge Creation and NewProduct Development Performance. Proceeding of the Fourth International Conference on operations and supply chain management (ICOSCM 2010). 4, p. 80-84.
13. Khajeheian, D., Esmaeilkhoo, H., & Yousefikhah, S. (2012). Information technology and media convergence: An entrepreneurial approach towards media matrix management. African Journal of Business Management, 6(29), 83-95.
14. Khajeheian, D. (2013). New Venture Creation in Social Media Platform; Towards a Framework for Media Entrepreneurship. In Handbook of Social Media Management (pp. 125-142). Springer Berlin Heidelberg
15. Knowledge Economy: monograph / Ed. prof. V.P.Kolesov (2008). M, INFRA-M, 432 p.
16. Korposh, D., Lee, Y.C., Wei, C.C., Wei, C.S. (2011). Modeling the Effects of Existing Knowledge on the Creation of New Knowledges. Concurrent engineering-research and applications, 19 (3), 225-234. DOI: 0.1177/1063293X11418134
17. Krenz, P., Basmer, S., Buxbaum-Conradi, S., Redlich, T., and Wulfsberg, J.P. (2014). Knowledge creation and new product performance: the role of creativity. R&D Management, 44 (2), 107-123. WOS:000332794800001
18. Lebedintseva, L.A. (2012). Smart work: Author. Dis. Of Dr. Sociology. Sciences. St. Petersburg.
19. Mingaleva, Zh.A., Mirskikh, I.Yu. (2015). Pravovoe regulirovanie prav na rezul'taty intellektual'noy deyatel'nosti v Rossii i za rubezhom [Legal Regulation and Protection of Intellectual Property Rights in Russia and Abroad]. Vestnik Permskogo universiteta. Juridicheskie nauki. 3(29). Pp. 62–70. (In Russ).
20. Mingaleva, Zh., Bykova, E., Plotnikova, E. (2013). Potential of the Network Concept for an Assessment of Organizational Structure. Procedia-Social and Behavioral Sciences, 81:126-130. doi:10.1016/j.sbspro.2013.06.400
21. Mingaleva, Zh., Mirskikh, I. (2015). Psychological Aspects of Intellectual Property Protection. Procedia-Social and Behavioral Sciences, 190, p.220–226. DOI:10.1016/j.sbspro.2015.04.938.
22. Nerkar, A. (2004). Old is gold? The value of temporal exploration in the creation of new knowledge. Management science, 49 (2), p. 211-229. DOI: 10.1287/mnsc.49.2.211.12747
23. Nonaka, I., & Takeuchi, H. (1995). The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation. New York: Oxford University Press.
24. Otsuki, A., and Okada, K. (2009). Construction of Optimized Knowledge and New Knowledge Creation Support Tool. Agent and Multi-agent System: Technologies and applications. Proceeding. Lecture Notes in Artificial Intelligence? 5559, p.500-513
25. Rao, C.B. (2016). Technology and Competitive Strategy: Perspectives for Innovators, Differentiators and Followers. Notion Press.
26. Relich, M. (2015). Znalosti pro Trzni Praxi 2015: Zeny-Podnikatelky v Minulosta a Soucasnosti. Olomouc, Czech Republic, p.834-847
27. Salamzadeh, A. (2015a). New Venture Creation: Controversial Perspectives and Theories. Economic Analysis, 48(3-4), 101-109
28. Salamzadeh, A., and Kesim, H.K. (2015b). Startup Companies: Life Cycle and Challenges.

In 4th International Conference on Employment, Education and Entrepreneurship (EEE), Belgrade, Serbia.
29. Schulze, A., Hoegl, M. (2008). Organizational knowledge creation and the generation of new product ideas: A behavioral approach. Research Policy, 37(10), p.1742-1750. DOI: 10.1016/j.respol.2008.07.002
30. Smith, K.G., Collins, C.J., Clark, K.D. (2005). Existing knowledge, knowledge creation capability, and the rate of new product introduction in high-technology firms. Academy of Management Journal, 48 (2), p. 346-357.
31. Tennessee State University (2016). URL: http://www.tnstate.edu
32. The CB Insights statistiques (2016). URL: http://www.cbinsights.com
33. The space for the interaction of IT-specialists of all levels with the support of the state (2016). URL: http://south-itpark.ru
34. Tsoukas, H. (2009). A Dialogical Approach to the Creation of New Knowledge in Organizations. Organization science, 20 (6), p. 941-957. DOI: 10.1287/orsc.1090.0435
35. World statistics startups - infographics InMind (2016). URL: http://spark.ru/startup/innmind-com/blog/16727/mirovaya-statistika-startapov-infografika-innmind
36. Y Combinator created a new model for funding early stage startups (2016). URL: http://www.ycombinator.com

The Account of Innovation Typology when Analyzing Sector Markets Which is Carried Out by the Company-Innovator

GOLLAY Irina Nikolaevna[14]

Introduction

At the present stage of the development of the economy, innovations become an essential condition for improving the efficiency of the enterprise performance. Thus, due to the innovations implementation, there is an increase in the production competitiveness by means of improving the quality of its production and reducing its prime cost; other needs are being developed, sales markets are being expanded, which ultimately has a positive effect on the revenue and profit growth of the enterprise. The innovative activity of the company is also an effective means of the competition on the market.

Statistics show that the development and implementation of technological innovations in developed countries are currently carried out by about 36% of organizations (http://www.gks.ru/bgd/regl/b14_39/Main.htm), there are some positive dynamics of this indicator compared to previous years.

Despite this, according to the experts, only 10% of innovations achieve the commercial success on the market (https://www.gazeta.ru/business/interview/nm/s6110649.shtml). Top places in the ranking of major reasons for the failure of innovative products belong to mistakes related to the insufficient preliminary study of sector markets: “lack of demand” (42%), “high competition” (19%), “mistakes in pricing (18%) and so on (https://www.cbinsights.com/blog/startup-failure-reasons-top). The uniqueness of the innovative product does not guarantee the commercial success of an innovation (ineffective character of an innovation as the cause for the commercial insolvency of an innovative product accounts 17% of cases (Akmaeva, 2012, pp. 7-8)).

A weak point in the innovation process is usually presented by the stage of the introduction of the innovative product into the market, because only at this stage the product quality is studied by consumers slowly, this requires great costs for its promotion and distribution.

[14] South Ural State University (National Research University), Chelyabinsk, Russia, irinahollay@yandex.ru

Thus, a necessary condition of the successful innovative product is to conduct a deep and comprehensive preliminary analysis of a sector market.

Such analysis allows reducing the risk of uncertainty which is inherent in the process of decision making due to the commercialization of innovation at the stage that precedes the introduction of the innovative product into the market.

Under a sector market, in this case, one needs to understand the market which borders depend on the selection of a group of interchangeable products aimed at satisfying the same needs, and they include customers and sellers of these substitute products (Shtapova, 2009, p. 185).

Modern entrepreneurs are forced to build their business on the basis of accounting the demands and needs of consumers, that is, to follow the marketing approach towards doing business. According to this approach, the offered product is considered only as one of the possible solution to the problem of the consumer. Therefore, it is important to study not the market of a particular product (service), but the market that includes a group of interchangeable products designed to meet the same needs of the consumer. In other words, it is required to carry out the analysis of a sector market.

Despite a large number of methods of the sector market analysis, problems that the analyst deals with are still difficult to solve. This is because there is no corresponding technique which would, on the one hand, take into account the specifics of the innovative product that is being introduced into the market (Barancheev, 2007, pp. 10-25), (Sherstabitova, 2009, pp. 11-21), (Shamshilov, 2009, p. 50), and, on the other hand, would take into account the peculiarities of the market where the product is introduced (Tokarev, 2013, pp. 15-61), (Tokarev, 2012, pp. 13-14). The choice of the specific methods of the sector market analysis of the company-innovator should be made taking into account these circumstances.

In order to reduce the time and monetary costs of analytical procedures, and to focus the manager's (decision maker) attention on the most important, key aspects of the researched market it is required to carry out the selection of sector market analysis methods taking into account the type of implemented innovations.

To carry out such selection, it is required to systematize innovations and to set priority directions for the sector market analysis for each corresponding type of innovation.

Methods

The systematization of various analysis market methods was made on the basis of the ordering method for data by categories. Modeling of the innovation process allowed to set priorities of analysis; to develop a tool for determining the appropriate methods for the analysis of sectored markets, depending on the types of innovation of in an innovative product.

The results of the conducted research include the systematization of prevailing market analysis techniques, the development of an effective mechanism for the selection of these methods, with the positions of their applicability in preparing data on the State of the external environment of company-innovator taking into account the type of implemented innovations.

Discussions and results

To date, there has been developed a large number of different analysis methods aimed at the study of particular aspects of the sector market. The results of method systematization are presented in Figure 1.

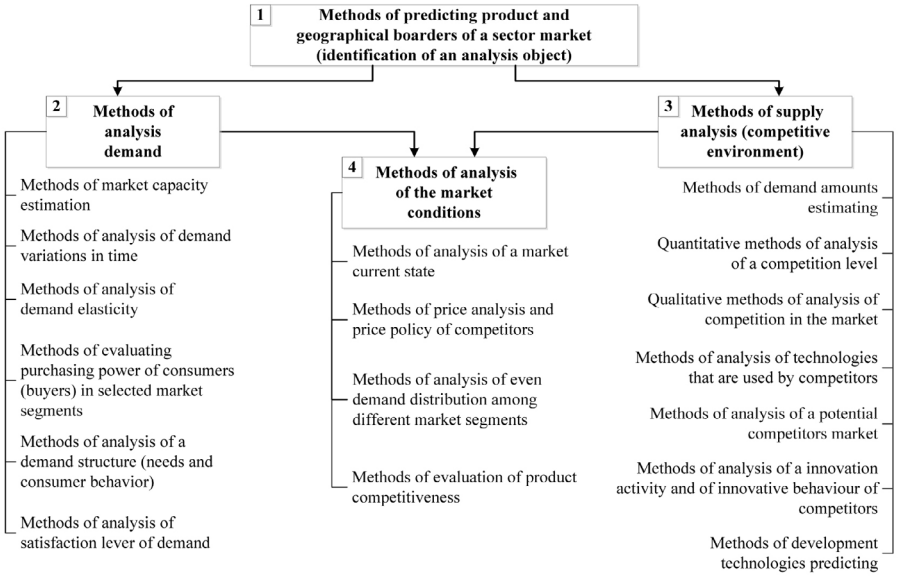


Figure 1. *Systematization of the existing methods of the sector market analysis (the author is Gollay I. N.)*

As one can see, all the selected groups of techniques are combined in 4 blocks:

1. The first block focuses on setting the sector market borders (identification an analysis object);

2. The second block focuses on the study of demand conditions in the market;
3. The third block of analysis techniques encourages a study of a current competitive environment (research of a sector market is held from the view of supply);
4. The fourth block combines the methods of analyzing market conditions – current relationship between supply and demand in the sector market.

This set of methods can be used analyzing sector markets before the introduction of the innovative product into the market. The selection of specific methods of analysis should be carried by analysts taking into account the type of an introduced innovation. It allows to avoid excessive time and monetary costs for analysis and to define priority factors of external environment.

As the basis in the framework of this study, there is a definition and classification of innovations that are presented in the document "Oslo manual" which is a kind of international standard in the field of innovation, dedicated to the measurement and interpretation of data relating to science, technology, and innovations (Oslo Manual, 2006).

According to this document, the introduction and use of a new or significantly improved product (goods or service) or process, a new method of marketing or new organizational method in business practice, the organization of workplaces or external relations are understood under an innovation.

The purpose of the innovation implementation (according to the firm-innovator) is to improve the efficiency of the company and to get market advantages.

"Oslo Manual" distinguishes main "characteristics of innovations" (Oslo Manual, 2006, pp. 46-47):

1. Product, process, marketing method or organization method must be new (or significantly improved) for a firm's practice ("the minimum characteristic of innovations").
2. Innovation has to be implemented (introduced into the market or used in the activities of a company) ("the common characteristic of innovation").

According to the International standard classification, innovations, by their scope of application, are recommended to divide into 4 groups (Oslo Manual, 2006, p. 47): product, process, marketing and organizational. In their turn, the first and the second type of innovation, which are in the previous 2nd edition of this document are known as "technological innovation", are classified according to their degree of newness in "new" and in "those that are aimed at improvement" (Figure 2).

In the 6th paragraph of the 3rd chapter of the "Oslo manual" there are three concepts of newness that can be applied to innovations (based on the effect of the innovation application): new for the company, new for the market, new for the entire world.

Every innovation must contain some kind of newness.

However, among innovations, there can be selected some radical ones that are capable of not only changing the structure of the market, but also creating new markets, and transforming existing products into out of date ones (it is about the so-called "destructive innovations").

Summering up the details about the nature and composition of innovations, we have developed a "model of innovation" (Figure 3).

According to "the Law of increasing the perfection degree of the system" – the development of the system of any kind is aimed at trying to achieve the perfection (Al'tshuller, 1979, pp. 72-73).

The system perfection indicator (perfection coefficient) can be represented as a ratio of the aggregate functions to the total amount of costs for their implementation.

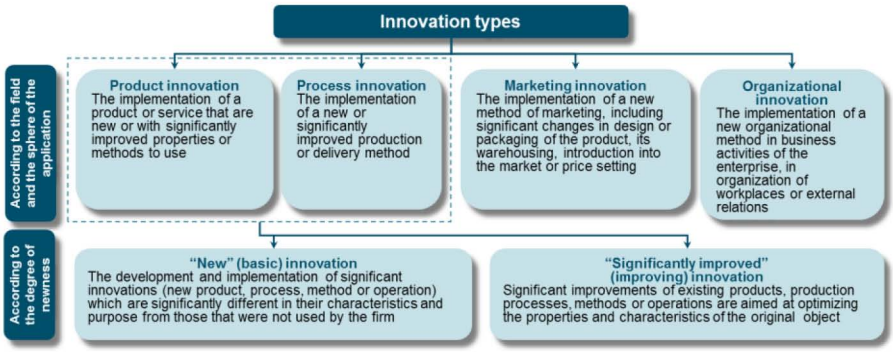


Figure 2. *Types of innovations according to the international standards («Oslo manual») (the author is Gollay I. N.)*

The Innovation is aimed at improving the system perfection because the objectives of its implementation are to get more competitive advantages and to increase the efficiency of firms (Chapter 77 "Oslo manual").

The improvement of the system perfection is done due to the increment of functions of the initial system and/or reducing the cost of its reproduction.

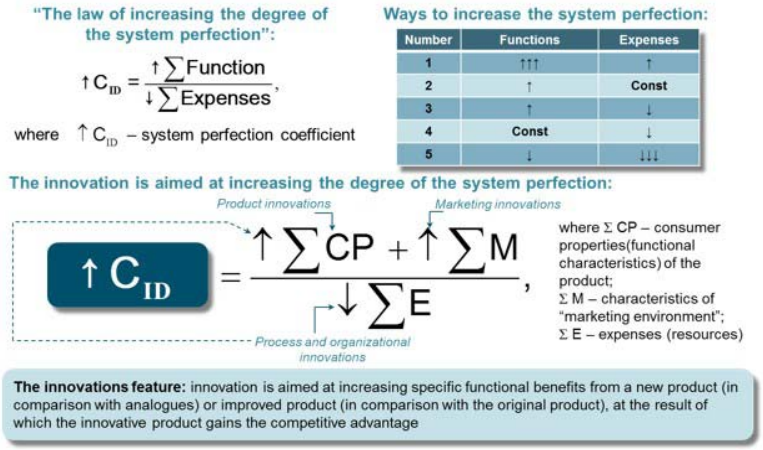


Figure 3. *The developed "model of innovation" (the author is Gollay I. N.)*

The innovation is possible when developments improve the properties according to the following criteria:

Changes towards the improvement: consumer properties of a product (change in the physical and performance characteristics of the produced goods) and/or improvement of so-called "characteristics of the marketing environment" (this term is used in marketing to refer to that part of the product attributes which is not improved by means of the performance characteristics of the original product, but it is able to make the product more valuable for a consumer, for example, the popularity of the brand and its prestige (Bagiev, 2007, pp. 234-237); in some classifications the innovations of this type are referred to as "pseudo-innovations" because they improve only the form or the way the product looks rather than its composition (for example, the classification by G. Mensch (Mensch, 1979, pp. 34-35), the classification by F. Betz (Betz, 1987, pp. 57-58)).

The decrease in costs of the total amount of resources which is required for the production or use of a product (resource and energy saving).

Thus, it is possible to distinguish one more important feature of innovation, which is apparently not mentioned in the "Oslo manual", but which is included there anyway: the innovation is aimed at increasing the functional benefits from the use of a new product (in comparison with analogues) or the improved product (in comparison with the original product), at the result of which the innovative product gains a competitive advantage.

This increase is evident in improved technology, enhancing the usefulness of the product, reducing costs, saving resources and so on, and it is "a source of market advantage" of the company.

The developed model formed the basis for establishing priority directions of

the sector market analysis and selection of the tools (analysis methods) taking into account the characteristics of the innovative product.

Innovation components in this model are a combination of different types of innovation depending on the subject matter and the scope of their application: product, process, marketing, and organizational innovation (according to "Oslo manual").

Priority directions of the sector market analysis depending on the type of the introduced innovation are presented in table 1.

Table 1. *The priority directions of the analysis depending on the type of innovations (the author is Gollay I. N.)*

		Type of innovation		Investigated elements of a sector market				Priority areas of analysis
		according the field of application	according to the degree of newness	Product	Buyer	Competitors	Company-innovator	
C_{ID}=	↑CP	Product innovation	Basic	+	+	+	–	Establishment of sector market boarders; demand analysis; analysis of consumer needs; market analysis; supply analysis (competitive environment)
			Improving	+	+	–	–	Demand analysis; analysis of consumer needs; assessment of innovative product competitiveness; monitoring of the current state of a sector market (macro environment)
	↑M	Marketing innovation	–	+	+	+	–	Demand analysis; analysis of consumer needs; market analysis; analysis of the expected impact of marketing innovations on the demand, analysis of competitors' marketing tools; comparative analysis of competitive advantages; supply analysis based on quantitative methods
	↓E	Process innovation	Basic	–	+	+	+	Analysis of consumer needs; price analysis and price policies of competitors; analysis of technologies used by competitors; comparative analysis of competitive advantages; analysis of the internal environment
			Improving					
	↓E	Organization innovation	–	–	–	+	+	Comparative analysis of competitive advantages; analysis of the internal environment

The boxes marked with the dark colour denote the elements of the sector market which are supposed to be of a great interest for the company-innovator.

Let us study the specifics of selecting key directions of the sector market analysis depending on the types of innovations using the classification according to the "Oslo Manual" (3rd edition).

The priority directions of the sector market analysis when introducing a basic product innovation into the market are presented in Figure 4.

If the company-innovator introduces a basic product innovation into the market, the market remains new and unknown. The company-innovator cannot be regarded as a subject of this market because it is not present in this market.

Under these conditions, at the initial stage of the analysis, it is required to establish the borders of the sector market to identify the consumers who will be interested in the product and the competitors who the company will be forced to compete with.

The objects of the research are consumers with their needs, demand parameters of the competitors' products, competitors and their abilities, current market conditions. Accordingly, the choice of analysis methods will be made taking into account the following priority direction of the analysis: defining the borders of the sector market, demand analysis, analysis of needs, supply analysis (of the competitive environment), analysis of market conditions.

Among the methods of the supply analysis (of the competitive environment) the methods of prediction of the technologies development are of great importance when analyzing sector markets with basic product innovations (Figure 1). This group of analysis methods is aimed at identifying technologies that will be the determining factors in the corresponding market and identifying developments that are not innovations yet (i.e. they have not been introduced into the market), but actual or potential competitors have already obtained a patent on them (https://iq.hse.ru/news/177675215.html), (Syryamkin, 2013, pp. 137-143).

The innovations that are claimed to become breakthrough technologies can be identified through the analysis of the intellectual property of major patent offices, organizations, and bureaux (the so-called "patent analysis method" which is included in a group of technology development prediction methods).

As practice shows, it takes 1-2 years on the average from the patent obtaining on innovations until the commercialization of innovations. Thus, using this method of analysis there is the opportunity to see the nearest future.

For innovative products, it is extremely important to appear first on the market.

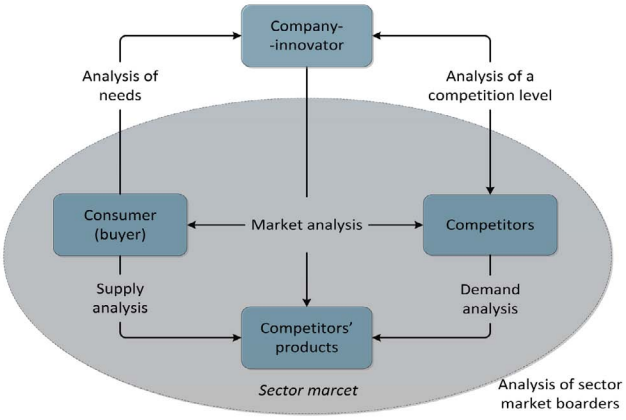


Figure 4. *Priority directions of the sector markets analysis when implementing basic product innovations (the author is Gollay I. N.)*

Thus, let us consider other options for selecting priority directions of the sector markets analysis taking into account the types of introduced innovations for the product improving innovation, marketing innovation, process and improving innovation, and for organizational innovation (Figures 5, 6, 7 and 8 correspondingly).

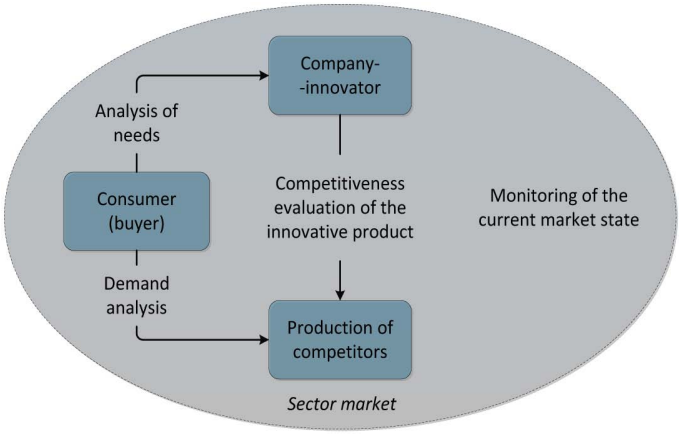


Figure 5. *Priority directions of the sector markets analysis when implementing basic product innovations (the author is Gollay I. N.)*

With the product improving innovation, the company-innovator is a participant in the sector market. The company knows main participants of this market (consumers with their needs and main competitors). During the analysis of the degree of the customer satisfaction and during the study of characteristics of the demand for the products produced by the company, there is an ability to identify possible areas for improvement of the suggested product.

As the result of the implementation of such improvements, the company-innovator develops "the product improving innovation".

When making decisions concerning the commercialization of the innovation there is a need to compare the competitiveness of the innovative product with the competitors' production using the comparative analysis with the original product; to distribute a trial batch of the innovative product for its testing and studying the reaction to changes on the part of consumers (re-analysis of needs and demand analysis).

Moreover, taking into account the dynamic changes that occur in the external environment it is better for the company-innovator to conduct regular monitoring of the current state of the sector market.

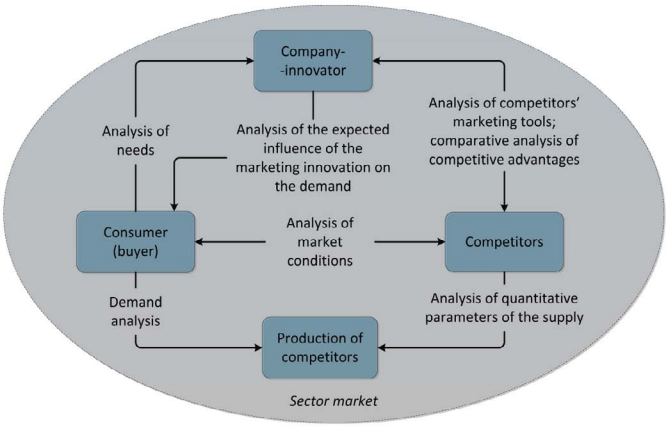


Figure 6. *Priority directions of the sector markets analysis when introducing the marketing innovation (the author is Gollay I. N.)*

Before the introduction of the marketing innovation into the market there is the need to pay attention to the following aspects of the sector market: analysis of the market demand; analysis of needs of consumers; analysis of market conditions; analysis of the expected impact of marketing innovations on the demand; analysis of competitors' marketing tools; comparative analysis of competitive advantages; quantitative analysis of the supply.

Regardless of the degree of newness of the process innovation, when considering its implementation it is required to carry out the analysis of the following key areas: analysis of consumers' needs; analysis of prices and pricing policies of competitors; analysis of technologies used by competitors; comparative analysis of competitive advantages; analysis of the internal environment. Every area except the last one is the area of conducting the sector markets analysis.

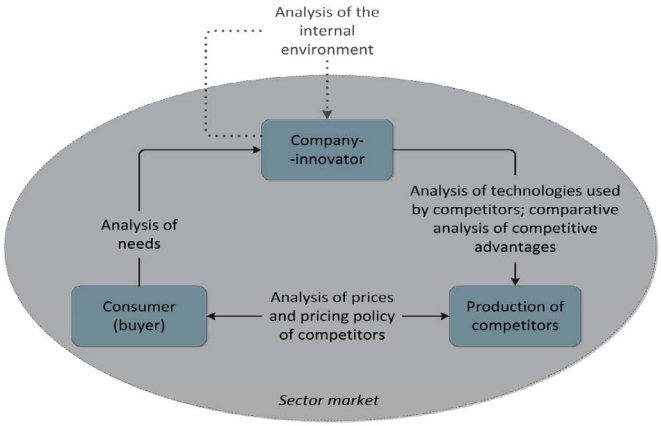


Figure 7. *Priority directions of the sector markets analysis when introducing the basic process and improving innovation (the author is Gollay I. N.)*

The analysis of the internal environment of the firm, in particular the analysis of the strengths and weaknesses of the company activity, comparative analysis of development forecasts (comparison of inertial and program scenarios), business process analysis, costs (prime cost) analysis of production, search for opportunities to increase the effectiveness of the activity – they are beyond the analysis of sector markets, however, all of them are important areas of analysis under these conditions.

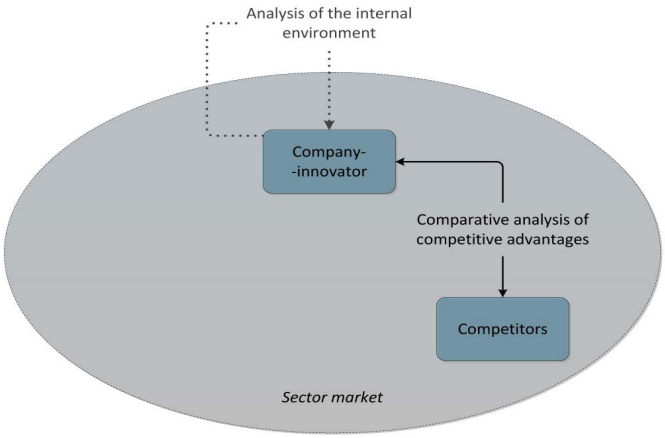


Figure 8. *Priority directions of the sector markets analysis when introducing the organizational innovation (the author is Gollay I. N.)*

When implementing organizational innovations it is recommended to carry out the analysis in the following priority areas: comparative analysis of competitive advantages; analysis of the internal environment.

Among these directions only the comparative analysis of competitive advantages is one of the areas of the sector markets analysis. Such analysis

will allow finding out whether the implemented organizational innovation presupposes an additional competitive advantage in the form of costs reduction (resource saving) and whether it is appropriate and reasonable to implement this innovation or not.

Conclusion

Thus, the developed model of innovation and the suggested mechanism of the selection of methods of the sector markets analysis taking into account the type of implemented innovations which can be applied when preparing data on a sector market state for the purposes of making decisions aimed at the introduction of the innovative product into the market (innovation implementation).

This work can be useful for entrepreneurs who plan the introduction of the innovative product into the market, for managers of innovative companies and for the people who are responsible for making decisions related to the commercialization of innovation.

In general, it can be concluded that the choice of priority directions and specific sector market allows reducing the time and monetary costs of analytical procedures. Collected as a result of this analysis data take into account the specifics of the implemented innovations and particular features of the corresponding market. Besides, it does not contain any unnecessary information which facilitates the process of reasonable management decision making and increases the success of the innovations implementation.

For the further development of the proposed method it is necessary to form the catalog of industry market analysis methods, structured according to the four selected blocks analysis: establishing the boundaries of the market; analysis of demand; supply analysis (analysis of competitive environment); market research (the ratio between demand and supply on the market).

REFERENCES

1. Akmaeva, R. (2012), Innovatsionnyy menedzhment malogo predpriyatiya, rabotayushchego v nauchno-tekhnicheskoy sfere. Rostov-on-Don, Feniks Publ.
2. Al'tshuller, G. (1979), Creativity as an exact science. Moscow: «Sovetskoe radio».
3. Bagiev, G. (2007), Marketing. St. Petersburg: Piter.
4. Barancheev, V. (2007), Innovation marketing (radical and disruptive innovation-high-tech-marketing). Moscow: LLC "Blagovest".
5. Betz, F. (1987), Managing Technology. Englewood Cliffs (N.Y.): Prentice Hall.
6. Mensch, G. (1979), Stalemate in Technology: Innovations Overcome the Depression. Mass.: Cambridge.

7. Oslo Manual. Guidelines for Collecting and Interpreting Innovation Data. (2006), Third edition.
8. Shamshilov, R. (2009), Risks of innovative enterprises and their causes. Transport business of Russia, 10: 49-51.
9. Sherstabitova, T. (2009), Penza innovation marketing: Publishing House of the PSU.
10. Shtapova, I. (2009), The concept of market and its cognitive representation. Economics and management. 5 (54): 185-190.
11. Syryamkin, V., Vaganova, E. (2013), Application of the method of monitoring and forecasting of breakthrough technologies on the example of lighting. The issues of modern economy, 3 (3): 136-152.
12. Tokarev, B. (2012), Object-oriented approach in the analysis of high-tech markets. Marketing, 6 (128): 13-18.
13. Tokarev, B. (2013), Marketing research of market niches and innovative products. Moscow: Magistr, INFRA-M.
14. http://www.gks.ru/bgd/regl/b14_39/Main.htm (30.12.2014).
15. https://iq.hse.ru/news/177675215.html (13.11.2009).
16. https://www.cbinsights.com/blog/startup-failure-reasons-top (07.10.2014).
17. https://www.gazeta.ru/business/interview/nm/s6110649.shtml (15.07.2014).

Identification Method of Intangible Results of Innovation Performance in Case Study of Ao Pnppk (Perm Scientific and Industrial Instrument-Making Company, Joint-Stock Company)

ELOKHOVA Irina[15], NAZAROVA Lyubov[16], MINGALEVA Zhanna

Introduction

Innovation performance is an essential part of modern company management, focused on strategic gains. Advanced technologies, new goods and products, unique organizational decisions, management methods and models determine success of entrepreneurship and provide long-term performance and financial stability for a company.

The analysis of possible scenarios of economy development shows that there is the only one variant of stable and sustainable socially-oriented development, which is based on an innovative scenario of economy development, accelerated formation of innovative infrastructure and creation of innovation and management instruments. The high level of competitiveness and the growth of investment attractiveness within a company can be achieved only by improving management efficiency of innovation performance due to identification, evaluation and application of all results, both tangible and intangible ones.

In this regard, it should be noted that innovation performance and innovation process in the company involve the elements of uniqueness and novelty, which concern not only target-oriented expected results (a new product, a new good, innovation technology etc.), but also related process. It can be argued that in addition to target-oriented indicators of innovation performance (both tangible and intangible) there are indirect accidental non-target-oriented results, which occur during implementation of innovation processes and which essentially can be a source of additional opportunities for a company.

[15] Perm National Research Polytechnic University, Department of Economy and Finance, Perm, Russian Federation, elohova.iv@gmail.com

[16] Perm National Research Polytechnic University, Department of Economy and Finance, Perm, Russian Federation, lyubov_nazarova@hotmail.com

At present the intangible results of innovation performance (hereinafter referred to as 'IRIP') become the resources of a company, which can affect its further development and existence (Elokhova and Nazarova, 2015). That's why, the identification of previously unaccounted results of innovation performance is seen as a possibility for improving company performance.

Therefore, the relevance of identification, evaluation and application of unaccounted results of innovation performance are of interest from both a scientific and a practical point of view. Today there is no identification method of intangible results of innovation performance, which allows to cover all its unnoticeable components, including traditionally unaccounted ones.

Theoretical background

The issues regarding development of innovative environment within a company have been described in scientific works written by A. Habibi and D. Jr. Coyle (2010), K.V. Baldin (2012), V.F. Ukolov (2009), I.T. Balabanov (2005), A.I. Tatarkin and A.F. Sukhovey (2002), G.S.Hamidov (2000), K.P. Yankovskiy and I.F. Mukhar (2001), Zh. Mingaleva, E. Bykova and E. Plotnikova, (2013), G.S. Hamidov (2000). and other scientists. The analysis of works by Russian and foreign authors, which are based on the importance of innovation activity, helps to consider that the concept 'results of innovation performance' has not been sufficiently examined. In particular, the issues regarding IRIP identification and evaluation have not been reflected fully and comprehensively in the scientific literature, and some crucial intangible results of innovation performance remain without sufficient attention and scientific and theoretical basis.

The most of researchers relate the concept of innovation performance to such phenomena, as intangible assets (Bouteiller, 2002; Chugayev, 2004), objects of intellectual property (Kalyatin, 2000; Mingaleva and Mirskikh, 2015) and intellectual capital (Stewart, 2003; Brooking, 1997; Chan, 2010; Bontis, Keow, and Richardson, 2000; Bykova and Molodchik, 2011).

The evaluation of intangible results of company performance involve the estimation of intangible assets; these assets are obvious and on the enterprise balance (Rodov and Leliaert, 2002; Molodchik, Shakina and Bykova, 2012; Wang and Chang, 2005; Sveiby, 2010; Roos and Pike, 2004). We focus on more in-depth analysis and evaluation of intangible results of a company, which are not goal-oriented and have an influence on interim results and later on final results of the company.

The development of identification method of IRIP is impossible without

practical demonstration of their existence and activities of the researchers, which provide the evidence base of IRIP presence in innovation performance of the company. All these actions define a basis of IRIP identification method being developed.

In accordance with this the authors set a goal to carry out a research within an innovative company; such research allows to identify which of theoretically suggested IRIP can exist really and (or) exist in the company. It is necessary to define the facts of IRIP presence and frequency of IRIP occurrence, to compare the results and to see whether it is possible to identify, evaluate and implement IRIP in the management performance for increasing effectiveness of innovation process in the company.

The identification method of intangible results of innovation performance

The experimental database was provided by the innovative company in Perm, named AO (Joint-Stock Company) 'Perm Scientific and Industrial Instrument-Making Company' (hereinafter referred to as 'PNPPK').

The questionnaire was conducted using a method of sample survey. The respondents were heads of organizational units (such as Construction Deputy Director, Development Director, Research & Development Deputy Director, Information Technology Deputy Director, Corporate Management Deputy Director, HR Director, Marketing and Sales Director, Finance Director, Technical Director and Quality Control Director), as well as senior engineers and designers, who are directly involved in one or another stage of innovation process, the process of innovation implementation.

The research results of IRIP identification and accounting within such a rapidly developing research and innovation company had to prove or disprove the theoretical assumptions regarding presence of unaccounted IRIP in the company, as well as, if successful, allow to formulate theoretically and replicate practically applied identification method of IRIP.

Most of IRIP are qualitative and hidden; IRIP cannot be shown by quantitative indicators, contained in the company reports. One of the most common identification (diagnostic) methods of studied IRIP within a company are considered to be different types of questionnaires and interviews (Lipatov, 1994).

The authors used experience of designing questionnaires, proposed within a method 'Rating of Intellectual Capital' and Intellectual Capital Statement for Europe (hereinafter referred to as 'InCaS', 2008): the development of

intellectual capital in accordance with company strategy.

Before starting to design a questionnaire for IRIP identification, the authors had to choose a measurement scale, which ultimately made it possible to analyze the data and a variety of properties that illustrate the object being studied.

In this regard, the authors chose the scale, which presents numeral system, where properties of empirical objects are shown as properties of number series.

The properties of an object can be different – they can be both qualitative and quantitative. Due to the fact that IRIP are mostly qualitative indicators, the authors chose the Likert-type scale, which is a type of ordinal scale and requires more detailed evaluation of studied object or phenomenon (Siegle, 2010). Using this scale it is possible to identify inter-individual differences in social, institutional and economic processes. Despite the fact that a five-level scale is more widely used in the studies on measuring social, organizational and economic processes, the researches by J S. Rotter show that the most appropriate number of scale gradations is equal to seven (Rotter, 1972).

As known, the scales with a small number of gradations are rough, but in case of a large number of gradations the distinctive properties of an object may be not enough.

Within questionnaire development the authors formulated 25 questions (this quantity is considered to be optimal for focusing attention of the participants and receiving sufficient information regarding the phenomenon or process being studied). The statements in the questionnaire suggested identification of IRIP presence and frequency of their occurrence in the company.

So, the respondents were asked to define, how each statement corresponds to the situation in their organization on a seven-point scale, where:

1. point – means that IRIP have never occurred (0%);
2. and 3 points – IRIP seldom occur (depending on frequency of occurrence);
3. points – IRIP sometimes occur (medium frequency);
4. and 6 points – IRIP often occur (regular frequency);
5. points – the studied IRIP always occur in the company (100%).
6.

Accordingly, the next step was the analysis and ranging of received results along the median, which illustrates frequency of IRIP occurrence, with additional characteristic – index of variability. This index allows to compare consistency of respondents' answers to a question. This indicator is calculated as follows:

$CV = \frac{\sigma}{\bar{x}}$,

where σ – standard deviation of a random variable, $\bar{x}$ – expected value of a

random variable.

The ranging involves the separation of IRIP into 5 groups, based on supposed frequency of occurrence.

Table 1 shows the data, received during field testing in PNPPK and ranged on the groups in accordance with their frequency of occurrence.

Table 1. *The results of questionnaire in PNPPK. Source: Author (2016).*

Median	Index of variability (%)	Intangible results of innovation performance	Question No.
ALWAYS			
		No	
OFTEN			
6,0	28	New information technologies were implemented in the company performance	2
5,0	32	There were a new idea, a technical or other solution, a new work-improvement suggestion etc.	1
5,0	27	Employees were able to solve arising conflicts, disagreements and problems themselves	3
5,0	28	There were a new idea, a technical or other solution, a new work-improvement suggestion etc.	5
5,0	29	New partnership relations were established with similar enterprises, competitors, partners and other interested parties	6
5,0	29	There was proinnovative cooperation with partners	6.1
5,0	35	There were positive feedback, notes of acknowledgement and facts of customer satisfaction	7
5,0	34	Company awareness in the external environment was increased	8
5,0	27	New ways of leadership, management, planning and controlling were introduced in the company	9
5,0	29	Employees were able to solve arising conflicts, disagreements and problems themselves	12
5,0	29	Initiative of employees was noticed or supported by management	14
5,0	28	New creative, design and working groups were established	15
5,0	36	There were positive changes in the corporate culture *(cultural events, dress code, communication style etc.)*	22
SOMETIMES			
4,0	32	Changes were made in the organizational structure of the company	4
4,0	26	Management began to transfer (delegate) more authority to employees	10
4,0	40	Employees had an opportunity to build relationships with clients, customers, partners and other interested parties on their own	11
4,0	28	Employees were sent for training on their own initiative	16
4,0	29	Employees got new knowledge, skills and abilities themselves	17
4,0	35	Employees were more willing to become engaged in creative work	18
4,0	27	Employees became more satisfied with the results of creative work	20

Median	Index of variability (%)	Intangible results of innovation performance	Question No.
4,0	32	Employees strengthened the desire to work more efficiently in the company	23
4,0	27	Changes were made in the program, plans and aims of company development	24
4,0	29	There were revisions of ideological and philosophical views of the company on its activities *(vision, mission, principles etc.)*	25
SELDOM			
3,0	54	There were acts of recognition and moral encouragement of employees for innovation performance	13
3,0	30	There were new possibilities and conditions for creative work, development and display of initiative	19
2,0	62	Material motivation for new ideas, changes, improvement suggestions and work-improvement suggestions were increased	21
NEVER			
		No	

The analysis of received data showed that the respondents almost excluded the answers 'never' and 'always'. On the one hand it is the evidence to support the theoretical assumptions regarding presence of reported IRIP, but on the other hand, it proves that studied IRIP have their own dynamics and variability.

Averaging the answers of all respondents allowed also to find out the values for each statement, as well as to aggregate them into the values for every IRIP classification group: *human, infrastructure, consumer and partnership*.

Figure 1 shows graphically correlation of the results on the first stage of IRIP identification within the classification groups in PNPPK.

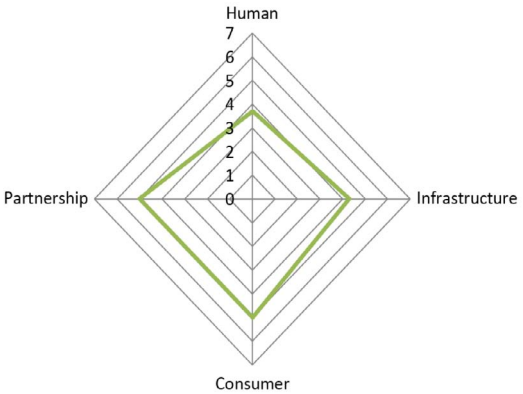


Figure 1. *The correlation of the results on the first stage of IRIP identification within the classification groups in PNPPK.*
Source: Author (2016).

As shown in *Figure 1*, all four groups of IRIP are identified with varying degree of presence in the company. Taking into account these incomplete

indicators it is possible to make some conclusions and to design specific management decisions.

For more reasonable decision-making and meaningful distribution of received data using the proposed options of ranging it was necessary to set the groups in accordance with the degree of research and management attitude.

So, the groups were limited to two values:

1. by median – the value '4 points' was selected; it reflects the frequency of IRIP occurrence greater than the average value;
2. by index of variability – 33% was selected; when it is not exceeded, the sum is homogeneous and distributions are close to normal.

Therefore, based on established frameworks, the following groups can be distinguished:

1. the group *with low frequency of occurrence and very little homogeneity of answers*. In case of PNPPK there are answers to questions No. 11, 13, 16, 18, 21, 25 in this group. For example, No. 16 'Employees were sent for training on their own initiative';
2. the group *with strong homogeneity of answers but low frequency of occurrence*, i.e. those results, which are recognized as master sample of respondents, but are considered to be not frequent. Of course, this group of results, in particular companies and under certain conditions, can be studied, identified and estimated as the results that are suitable for application and further development. They are the answers to questions No. 19, 20. For example, No. 19 'There were new possibilities and conditions for creative work, development and display of initiative';
3. the group *with the highest (maximum) frequency of occurrence and acceptable index of variability*. This group of IRIP requires special attention of researchers and company management; it is a source of additional opportunities and resources, and it can also be used to improve management process. The answers to questions No. 1-9, 10, 12, 15, 17 are in this group. For example, No. 10 'Management began to transfer (delegate) more authority to employees'. This group will be further called 'the group of management attention'.

As known, in order to determine the quality of estimation of measurement instrument it is necessary to define its reliability and validity. The notion of reliability is associated with the stability of the procedure regarding objects for measurement. There are two main types of reliability: reliability – stability (retest reliability) and reliability – consistency (one-time reliability).

The authors decided not to make estimation of retest reliability, as this type of reliability shows stability of the test in time, but for variables, whose true score can change over time, retest is undesirable. IRIP can be related to the variables, whose true value is not stable in time.

One-time reliability is related to internal consistency of measurement instrument, and therefore estimation of one-time reliability is more important to study. To determine the internal reliability the authors used an index of Cronbach's alpha:

$$\alpha = \frac{k}{k-1} * (1 - \frac{\sum_{i=1}^{k} \sigma_i^2}{\sigma_t^2})$$

where σ_i^2- the variance of responses for each questionnaire point; σ_t^2 – the variance of the observed total test score; k – the quantity of questions in the questionnaire (the sum of points).

The value of Cronbach's alpha, which is equal to or close to 1, means that the measurement instrument is reliable.

As a result of made calculations, the value of Cronbach's alpha for applied questionnaire was 0.91. It means that the measurement instrument is reliable, questions in the questionnaire are appropriate for its purpose and received answers provide reliable information regarding the object of research.

The sequence of further actions and the logic of research required answers to the following questions: 'How can the group of management attention (the results with the highest frequency of occurrence and acceptable index of variability) be used later? How can this group of IRIP be applied in the company performance? What impact do the received answers have on each other particularly and on company's results generally?'

To meet these challenges, the authors used extended matrix for continuing the experiment and designing the method; this matrix shows cross impact of one attribute on the other attributes. This instrument has been recognized by InCaS.

Using matrix of cross impact the company management has additional opportunities to study qualitative characteristics of an object or a phenomenon more detailed. This method improves accuracy of data, received by analyzing complex interrelations of the studied object.

As we have already noticed, the object of management attention is IRIP with the maximum frequency of occurrence and acceptable index of variability.

For investigating the interrelations between identified IRIP and the degree of their interrelations it was necessary to define 'focus group' of experts in the company, as at present expert study is considered to be a qualitative method of

data collection.

It is very important to define the quantity, size and membership of 'focus groups', as incorrect formation of groups can have negative impact on the research results. As known, this method does not involve the application of data sample, as its main aim is understanding of the studied object, rather than extrapolation of results to large social communities. The most important principle for group forming is to ensure homogeneity of group membership.

The authors suggested the following criteria, on the basis of which expert 'focus group' was organized:

1. Participants are on the same level of management;
2. Employees take an active part in the innovation performance of the company, and they also have a comprehensive vision regarding both internal and external processes;
3. Positive decision on the inclusion in the expert 'focus group' made by two or more specialists.

For ensuring accuracy and reliability of the results, the authors refused to conduct an open discussion in favor of anonymous filling in of cross-impact matrix.

A necessary and suitable quantity of 'focus group' participants was defined according to the following formula (Polovnikova and Pilipenko, 2007):

$$N = 0{,}5 * \left(\frac{3}{\alpha} + 5\right)$$

where $0 < \alpha < 1$ – the parameter, which sets a minimum error level in the 'focus group'.

For the studied object there was a minimum error level, which was equal to 0,35. It was decided as the majority of participants in the 'focus group' (65%) would make the right decision on the cross-impact of IRIP. Thus, to receive comparable values the calculation was made according to the mentioned formula and it was found out that a necessary and suitable quantity of 'focus group' is 6-7 participants in case of this company.

So, in PNPPK seven participants of 'focus group', who meet all selection criteria, were asked to fill in the cross-impact matrix. Based on an open vote, senior engineers and designers were selected as the experts. There were the specialists of the following divisions: research and development center, information technology department, innovation performance department, engineering and technical center, knowledge management department, process

improvement department and human resources department.

In this case the authors used methodological instruments, developed by Professor Vester (Wolff and Gaffron, 2010). This approach helps to define all factors, which should be considered within the analyzed system. It is important to identify variables which are an object of focus. Besides, this approach allows to define the degree of significance and to describe how variables interact with each other.

Table 2. *The example of filling in cross-impact matrix. Source: Author (2016)*

	IRIP	Group of research attention: 1	2	3	4	5	6	7	…	AS	PS	Relative impact (%)
1	Issued licenses, patents and certificates	X	1	2	2	0	0	0	…	10	16	4
2	Degree of rating recognition	0	X	3	2	2	0	0	…	10	24	4
3	New communications	2	2	X	2	2	1	1	…	19	29	7
4	Proinnovative cooperation with partners	2	2	2	X	2	2	2	…	22	27	8
5	Degree of consumer satisfaction	0	2	3	2	X	2	2	…	19	24	7
6	Employees' initiative was noticed or supported by management	2	2	3	3	3	X	3	…	31	22	11
7	Management began to transfer (delegate) more authority to employees	2	3	3	3	3	3	X	…	32	20	12
	Total	16	24	29	27	24	22	20	…	271	271	100

As shown in Table 2, the analysis of cross-impact was that the participants of 'focus group' had to give the value (from '0' to '3') to each IRIP depending on the impact degree of the indicator to each other. The value'0' means, that there is no impact, '1' – little impact, '2' – strong impact, '3' – exponential impact.

When estimating the impact of each IRIP from the group of management attention, it was necessary to follow the sequence below:

1. at first estimate IRIP, which have no impact (value 0);
2. then estimate IRIP, which have maximum impact on the other IRIP (value 3);
3. finally, interim values are distributed among the remaining objects of analysis.

In this case, it was necessary to estimate impact of IRIP horizontally for each IRIP vertically, but not vice versa.

To interpret the result, shown in cross-impact matrix according to the method, it was necessary to define the following parameters: active sum, passive sum, index of quotient and index of product. Mentioned indicators are defined as follows:

1. *Active sum* (AS, the sum in a horizontal line) reflects the overall level of impact of the variable on the other variables in the system.
2. *Passive sum* (PS, the sum in a vertical line) defines the overall impact all other variables on the particular variable.

The authors of InCaS propose to calculate an index of relative impact. This index is calculated on the basis of active sum and illustrates what percentage of impact on the other variables the studied IRIP have among total data sample:

$$\text{Relative impact } (\%) = \frac{\text{ASi}}{\sum_{i=1}^{n} \text{ASi}} * 100\%$$

where AS – active sum for i-th question.

These indicators help to identify the most active IRIP (the factor, which has the highest index).

Following the research method, developed by the authors of InCaS, on the next stage, basing on the active and passive sums, it was necessary to calculate such indicators, as:

1. index of quotient (Q=AS/PS);
2. index of product (P=AS*PS).

The calculation of these indexes is essential for the research as:

1. Index of quotient Q illustrates the degree of IRIP impact within the studied system. The higher the index of quotient Q, the stronger impact of this IRIP. Such IRIP have strong impact on the other IRIP, but they are not significantly affected by the others. In this case, these IRIP are called active, but in the opposite case IRIP are reactive. They are applied as indicators, because they have little impact on the other IRIP, but they are greatly influenced by the others.
2. Index of product P defines the degree of IRIP integration into the business system, i.e. in the company performance. The higher the index of product P of passive and active sums, the higher the degree of IRIP integration into the system of the company. IRIP are called critical when they have impact

on the other IRIP, but are also affected by the other IRIP. IRIP with low level of integration into the business system are buffering.

In addition, the limits of product index are calculated. They depend on the number of indicators. Within this experiment there were 13 IRIP in the group of 'leaders' ('the group of management attention'). The limits of quotient are fixed (Table 3).

Table 3. *The limits of impact and integration of the variables. Source: Author (2016).*

Degree of impact	Index of quotient Q	Degree of integration	Index of product P	P-value for PNPPK
Highly active	>2,25	Highly critical	> 2,5*(n-1)^2	> 360
Active	1,61-2,25	Critical	1,71-2,5*(n-1)^2	256,24-360
Moderately active	1,31-1,60	Moderately critical	1,21-1,70*(n-1)^2	174,24-244,8
Neutral	0,76-1,30	Neutral	0,81-1,20*(n-1)^2	116,64-172,8
Moderately reactive	0,63-0,75	Moderately buffering	0,51-0,80*(n-1)^2	73,44-115,2
Reactive	0,45-0,62	Buffering	0,16-0,50*(n-1)^2	23,04-72
Highly reactive	<0,45	Highly buffering	<0,16*(n-1)^2	<23,04
(Neutral point)	1,00	(Neutral point)	(n-1)^2	144

Received data helped to identify the degree of integration and impact of particular IRIP in the company.

Along with numerical analysis, the authors of InCaS recommend to use the method of visualization, where each variable can be placed along coordinate axes on the graph according to values of calculated limits. The passive sum is arranged on X-axis, and active – on Y-axis. The variables are place according to classification scale of the degree of integration and impact. Half-oval lines are the limits of integration area of the variable in the business system; and the lines, which come out of the origin of coordinates, show the level of impact of the variable within the particular company system.

According to used classification, the role of studied object (in our case it is IRIP) in the system (business processes) can be distributed to the following zones, relating to our experiment. In accordance with the degree of integration there are the following zones:

Critical: they are needed for getting started any business processes. The management of these IRIP requires caution, as they can get out of control.

They are deeply rooted in the structure of internal relationships of the system.

Buffering: they are very inert; and that is why, they cannot be used for system regulation.

Neutral: they are of no interest for the external management system and

as the indicators of system operation. But they play an important role in self-regulation of the system.

In accordance with the degree of impact there are the following zones:

Active: they have a strong impact on the system; they help to regulate the system.

Reactive: they are the indicators, which allow to define the condition of the whole system. Changing one of these IRIP is ineffective for changing the whole regulation, as these IRIP reflect only the condition of this system.

In Figure 2 there is a graph, which shows the points, arranged on the exes of active and passive sums, and also the levels of integration and impact.

According to received data some factors have high level of integration in the business strategy of AO (Joint-Stock Company) PNPPK:

No. 6.1 There was proinnovative cooperation with partners.

No. 10 Management began to transfer (delegate) more authority to employees

No. 5 New marketing opportunities were created (new sales channels, clients, new sales methods etc.)

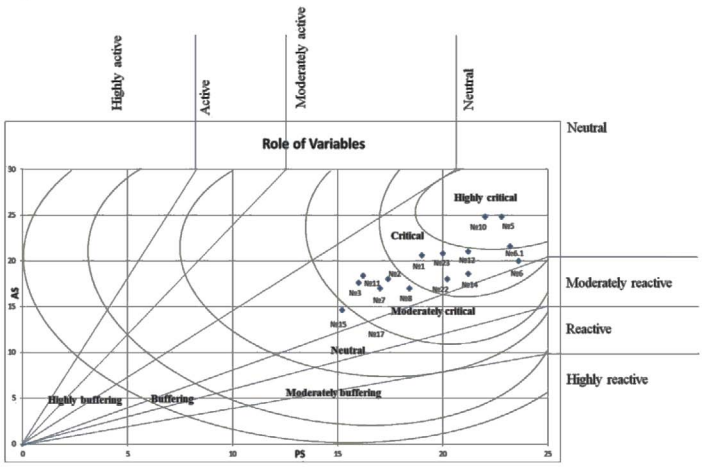


Figure 2. *The distribution of IRIP depending on degree of integration and impact in PNPPK Source: Author (2016).*

The results fully conform to the existing strategy of PNPPK. The key elements of the company are employees, internal infrastructure and high-profile clients.

As a result of conducted experiment, the authors were able to confirm theoretical background regarding the presence of intangible results of innovation performance, having studied them in really existing process of the innovation performance, i.e. within the operating innovative company.

So, the experiment illustrated possibility of identification of unaccounted IRIP and also allowed to estimate degree of their presence and frequency of

occurrence in the company, to find out critically important IRIP, which have an influence not only on other IRIP, but also on final outcome of company performance.

The experiment makes it possible to fix the algorithm of made actions, used methods and instruments, issued tasks and context solutions of their realization as identification method of intangible results of innovation performance, and also it allows to synthesize the model of IRIP identification process, which is shown in Figure 3.

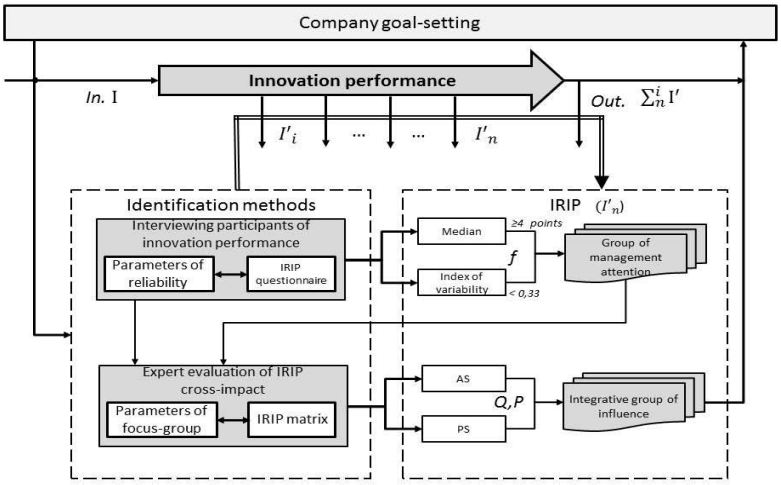


Figure 3. *Model of IRIP identification process. Source: Author (2016).*

I – an idea; I'_j- i-th other form of an idea; *f* – frequency of IRIP occurrence; AS – active sum; PS– passive sum; Q–degree of IRIP impact; P – degree of IRIP integration

The model of IRIP identification process is a step-by-step analysis of identification and accounting of studied phenomenon.

Conclusion

The synthesis of known methods allows authors to develop the identification method of IRIP. This method has been confirmed during conducted research, and it requires further testing within the other innovative companies. Developed method helps company management to find out hidden opportunities and unaccounted recourses in terms of intangible results of innovation performance, which are created and used both inside and outside the company. They are needed to form unique competitive advantages and increase company value.

Acknowledgment

The work is carried out based on the task on fulfillment of government contractual work in the field of scientific activities as a part of base portion of the state task of the Ministry of Education and Science of the Russian Federation to Perm National Research Polytechnic University (the topic "Sustainable development of urban areas and the improvement of the human environment").

REFERENCES

1. Balabanov, I.T. (2005). Innovation management. SPb . Peter, 304 p.
2. Baldin, K.V. (2012). Risk management in innovative and investment activity of the enterprise. Moscow, Dashkov & Co, 420 p.
3. Bontis, N., Keow, W.C.C., and Richardson, S. (2000). Intellectual capital and business performance in Malaysian industries. Journal of intellectual Capital. 1 (1). P. 85-100.
4. Bouteiller, Ch. (2002).The Evaluation of Intangibles: Advocating for an Option Based Approach. VIth Alternative Perspectives on Finance Conference, Hamburg, August.
5. Brooking, A. (1997). Intellectual Capital: Core Assets for the Third Millennium Enterprise. London Thomson Business Press, London, N.Y.
6. Bykova A.A. and Molodchik M.A. (2011). The influence of Intellectual capital on company performance. Vestnik of St. Petersburg University. Management. 1. P. 27-55.
7. Chan, K.H. (2009). Impact of intellectual capital on organizational performance. The learning organization. 16 (1). P.4-21.
8. Chugayev, A.A. (2004). Evaluation of the results of innovation and feasibility of innovative projects in enterprises. 171 p.
9. Elokhova, I. and Nazarova, L. (2015). A New Approach to the Definition of Intangible Results of Innovation Performance. Mediterranean Journal of Social Sciences, 6(5, Suppl. 4), 430-436.
10. Habibi, E. and Coyle, D.Jr. (2010). Nearing the era of a new business. Harvard Business Review, 11.70-76.
11. Hamidov, G.S. (2000). Basics of innovation and innovation, Saint Peterburg: Politehnica.
12. InCaS – Intellectual Capital Statement for Europe. A new approach to make SMEs successful. Brussels, 2008. URL: www.psych.lse.ac.uk/incas/page99/page99.html
13. Kalyatin, V.O. (2000). Intellectual property (exclusive rights). Moscow. Infra M Norma, 450 p.
14. Lipatov, S.A. (1994). Methods of socio-psychological diagnostics of organizations. Moscow: Science, P.171-182.
15. Mingaleva, Zh., Bykova, E., Plotnikova, E. (2013). Potential of the Network Concept for an Assessment of Organizational Structure. Procedia-Social and Behavioral Sciences, 81: 126-130. doi:10.1016/j.sbspro.2013.06.400
16. Mingaleva, Zh., Mirskikh, I. (2015). Psychological Aspects of Intellectual Property Protection. Procedia-Social and Behavioral Sciences, 190, p.220–226. DOI:10.1016/j.sbspro.2015.04.938.
17. Molodchik, M.A., Shakina, E.A., and Bykova, A.A. (2012). Intellectual Capital

Transformation Evaluating Model. Journal of Intellectual Capital, 13 (4), pp. 444-461.
18. Pike, S. and Roos, G. (2004). Measurement Issues in Intellectual Capital – A Review. International forum of Intellectual Capital. Taiwan.
19. Polovnikova, V.A., Pilipenko, A.I. (2007). Financial Mathematics: Mathematical modeling of financial transactions. Moscow: University textbook, 360 p.
20. Rodov, I. and Leliaert, P. (2002). FiMIAM: Financial method of intangible assets measurement. Journal of Intellectual Capital. 3 (3). P.323-336.
21. Rotter, G.S. (1972). Attitudinal Points of Agreement and Disagreement. Journal of Social Psychology. 86 (2). P.211-218.
22. Siegle, D. (2010). Likert scales. University of Connecticut. http://researchbasics. education.uconn.edu /likert_scales/
23. Stewart, T. (2003). The Wealth of Knowledge: Intellectual Capital and the Twenty-First Century Organization. NY: Doubleday Dell Publishing Group. P 416.
24. Sveiby, K.-E. (2010). Methods for Measuring Intangible Assets. Updated 27 April 2010. – URL: http: //www.sveiby.com/articles/ IntangibleMethods.html
25. Tatarkin, A.I. and Sukhovey, A.F. (2002). Keys to the world market: innovative entrepreneurship. Moscow: Economics.
26. Ukolov, V. F. (2009). Innovation management in the state and business: a manual for schools. Moscow: Economics, 400 p.
27. Wang, W.-Y., and Chang C. (2005). Intellectual capital and performance in causal models: Evidence from the information technology industry in Taiwan. Journal of Intellectual Capital. 6 (2). P. 222–236.
28. Wolff, J. and Gaffron, P. (2010). Analysis of the system «Motorway of the Sea». Institute for Transport Planning and Logistics, Hamburg University of Technology. Version 3
29. Yankovskiy, K.P. and Mukhar, I.F. (2001). Organization of investment and innovation. SPb.: Peter-South, 448 p.

Effects of Transformational Leadership on Creativity and Innovation in Organizations

RADIC Vlado[17], POPOVIC Jovanka[18], NOVOVIC Milan[19]

Introduction

Effective leaders are viewed through their ability to become "agents" of change and initiators of innovation, which demands a set of different and complex skills. It is demanded that they conduct successful leadership, have the abilities to create and encourage innovations and the ability to manage strategical changes. All that has been stated, points on dynamic and very complex roles of the modern leaders in achieving successful organizational strategy and long-term competitive advantage. Everyday and unexpected pressures apply a need for leader to have abilities that can respond adequately to dynamic environment. Strong personality, ethics, and also readiness to take on a risk and "find the right way", are needed by every organization.

With the increase of the organizational demands for radical changes, the imperative of business leadership is organizational transformation.

Transformational leadership is based on the ability of leader to inspire followers with the vision, and they need to determine mission, goals, strategies, programs, projects, plans and policies in order to achieve a radical change.

In literature, the interest for the effects that transformational leadership has on creativity and innovation has increased significantly. Transformational leaders increase performance of their followers and strive to change their personal values and beliefs and raise them to the higher level of needs and aspirations. Innovations, flexibility and proactivity mark the modern business environment and represent the imperatives for realization of successful strategy and achieving sustainable competitive advantage.

Leadership

Leadership is a known variable in all the aspects of human life, which has for hundred years back been an interest for researchers across the world and its development has went through several stages. It isn't easy to define leadership and every day it gets even harder. In literature, there is an often mentioned definition that defines leadership as a process of influencing on people to achieve a certain goal or to do that what has been planned by the organization.

[17] Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, vlado.radic@vektor.net
[18] Faculty of Management, Sremski Karlovci, Serbia, jobajcetic@gmail.com
[19] High Business School of Professional Studies "Čačak", Belgrade, Serbia, novovic.milan@gmail.com

Drucker (1995) sees leadership as an act of formulating and clearly designing a goal with consistent behavior of a leader that needs to harmonize his words and behavior. Kouzes and Posner (2003) under leadership imply four compatible aspects: leadership is not reserved for special individuals, but a possibility for every employee; leadership is a relationship between people that choose that relationship; leadership is connected with mutual activities and leadership is primarily personal development.

According to Yukl (2010), leadership is a process of influencing on activity of organized group towards achieving goals, and leaders are people that constantly give effective contribution to social order and people from which it is expected to just that. Newstrom (2008) defines leadership as an interactive and social process whose elements are built in situation, followers and influences of leader, which with his strength determines sense and direction of activity.

As Northouse (2012) noticed, meaning of the word leadership can be different for different people. Yukl and Northouse went with observation of Stogdill in their considerations which states that "there is as many definitions of leadership as there are persons that tried to define the concept of leadership".

Northouse (2012) separated four of the most common traits that characterize almost every definition of leadership. According to him, leadership can be viewed as a process; leadership is a tool for achieving influence; which appears in the context of group and leadership assumes achieving goals.

Overall, leadership can be defined as "process of influencing on others so that they understand and agree with what needs to be done, how it needs to be done and process of enabling and easing individual and collective efforts to achieve mutual goals" (Schermerhorn et al., 2010).

According to House et al. (1999), leadership is "ability of individual to influence, motivate and enable others to contribute in effectiveness and success of organization in which they are employed". Drath and Palus (1994) have defined leadership as a process of creating a meaning for mutual activities of people so that they could understand them and be dedicated to executing them. Similarly, Jacobs and Jaques (1990) see leadership as "process of giving meaning (meaningful direction, goal) to collective efforts, and provoking willing commitment of effort for realization of the given means and goals".

Modern leadership is based on a new paradigm of managing in which differences are reflected in series of parameters connected to doing the job and work atmosphere in which business process are taking place. In new paradigm of leadership, managing the demands of work and knowledge, skills and abilities of employees is one of the most important prerequisites for successful functioning. Also, instead of forcing goals and decisions made by the highest

in hierarchy, taking part, responsibility and autonomy of all the employees is demanded. Besides economical, quantitative goals of organization, qualitative goals are also favorized, especially satisfaction of employees. In new paradigm of leadership it is insisted on creating prerequisites for climate and culture, in which spiritual values have high place on the list.

All definitions have in common that the leadership is activity in designing of vision and behavior of people in organizations so that support for the vision is secured. Leaders shape vision and behavior of employees that realize vision.

Leaders, secure adaptation by shaping vision, and secure internal integration of organization by shaping behavior. Having in mind that adaptation and integration are key activities in creating organizational culture implies that leaders shape culture of organization.

Leadership is a process of guiding other people that is not possible without their readiness for cooperation. Leadership doesn't represent absolute power of leader, but unequal ability of influence of the leader and other associates on activities inside of organization. It can be said that the purpose of leading one organization is get the employees, around a single idea, to direct creative energy, knowledge and abilities in direction of realizing given goals.

Management and leadership are linked processes and are mutually conditioned managerial activities; whereby management is broader, and leadership narrower term, management involves leadership. Management is structured process of managing which includes standard managerial activities, whereas leadership is unstructured process in which non-routine and unprogrammed managerial activities take place. Since it is linked to the human dimension of organization, leadership implies flexible structure and cooperational relationships. Manager with leadership skills replaces hierarchy with teamwork, promotes culture of tasks, change managerial style in a way which delegates authority on employees. Activities of management are directed on a rational use of resources, and activities of leadership are directed on creating organizational ambient and behavior of employees that will support innovations and changes. Because of that it is often said that management favors efficiency, and leadership favors effectiveness.

Leadership is linked to radical changes, and as activity of managing behavior of employees, it has affirmed in the conditions of big changes. It has been shown that leaders are most needed when organization finds itself in a crisis situation; when turning point comes and new direction of development needs to be made. That can sometimes hardly be done even for those managers that proved to be successful. However, there are individuals that can achieve that, because they have abilities to go in front of the time and situation. They go "in

front of others", because they are dedicated to deep changes in themselves and in their organizations.

Style of leadership is a way in making relationships between leaders and associates, as well as other employees inside of organization, a way with which leader directs behavior of subordinates and means that he uses to gain their trust and make them behave the way he wants. Style of leadership expresses nature of the relationship in process of managing the organization or nature of interaction between leader and followers. Characteristics of the styles of leadership are numerous, but criteria for their differentiation are:

- Approach of leader in motivating subordinates,
- Way that manager (leader) uses when he makes decisions,
- Sources of power that leader uses in order to make influence on his subordinates,
- Ability of leader to adjust his behavior in different situations (flexibility).

Leaders tend to make changes to a whole system in order to make fast changes in performance. Leader is not capable of making the changes alone, but he has the ability to gather critical amount of associates for conducting changes.

Leadership is proactive, goal oriented, focused on creating and applying of creative vision. Leadership is a process of transforming the organization from that which it is now to that which leaders wants it to be.

Tarkovsky (2010) develops a system by which leaders attributes are valued in the next order:

1. Trust and respect,
2. Communication,
3. Enthusiasm,
4. Self-confidence,
5. Common sense,
6. Focus on key elements,
7. Motivation and innovation,
8. Improvement of their own skills.

Social circumstances create type of leader that is adjusted to conditions and ambient of business, as Drucker thinks, all successful leaders know four simple things:

1. Only definition of leader is the one that says that leader is a person which has followers. Some people are thinkers, some are prophets. But without followers there can be no leader.
2. Effective leader is not someone who is loved and who is admired. He is someone whose followers do right things. Popularity isn't leadership.

Results are.
3. Leader are highly visible, they give examples.
4. Leadership isn't a position, title, privilege or money. It is responsibility.

Leader and followers

When we talking about leaders, it is always about part of their personality which concerns the way they rule over others, persuade them, effect and lead them. It has to do with the manner in which they think, the speed with which they make decisions, the education and expertise they possess: many things are important. Still, the most important aspect is personality – what we would call character (Milovanovic, Baltazarevic & Milovanovic, 2015).

Why does a person want to follow leader? People want to be guided by the ones that they respect and those who have the right feeling in which way they want to go. Leader that is respected, concentrates on what he is (character), what he knows (job, task) and what he does (motivates, and creates feeling for the direction by expressing strong vision of future).

In modern world leaders achieve influence on behavior of other members with their reputation that they have gained by contributing to the reputation of organization. Power of leader originates from competence and credit for making organization successful. Besides his competence and competence of employees, the goal of leader is to make employees independent in order to make them take on the role of leadership. Leader's evaluation of his associates demands very delicate approach and analysis. Decision and choice of relevant model depends on leader's ability to understand people, to know their needs, emotions and motives.

Motivation and dedication of associates to achieving given goals are a measure of successfulness of the leader. The degree of consent of the associates and their decision to follow leader represents key component in structure of the organization and grade of leaders position as positive and highly positioned and vice versa. Leader must know his own abilities and limits well. If he doesn't have enough self-confidence or if his associates don't have enough confidence in him, inspiration of associates could lack, and that could diminish or jeopardize successful realization of mission. Leader has to convince associates that he is really worth of his own position, and that he is the right man at the right place.

In order to successfully go through transitional processes, leader has to manage whole set of his own potentials, or have the ability to move with ease from general to individual, from analyst to integrator, from tactician to strategist, from builder to architect, from warrior to diplomat (Watkins, 2012).

Successful leaders have to be absolutely capable of making decisions that improve organization as a whole and have to estimate capabilities of teams well.

Leadership process in segment of the leader-follower relationship is based on mutually accepted value code that in segment of communication implies: openness, respecting the personal integrity of every individual, tolerance and respect for the opinion of every participant in the process. Leaders and followers realize leader's process through mutual relations and series of activities that are based on the principle of sharing the knowledge, and the end goal is realization of the given goal. It is considered that followers can be classified in five main categories, formed on the two dimensions: degree of dependence and way of behavior:

- Alienated followers,
- Conformists,
- Passive followers,
- Effective followers,
- Pragmatic followers.

True leadership implies freedom of both sides to be in that relation and look for other way if necessary. Leader is not destined to lead, and follower is not destined to follow. These terms imply freedom and independent thinking of both sides. If this relation is forced, extorted (by force, economical need or contracts), it becomes relation of power, relation of manager and employee, servant and lord, or even master and slave. Purpose of leadership is caused behavior, and extorted behavior is everything else but caused behavior.

Leadership doesn't imply just constructive, ethical and open behavior. It is also possible to cause destructive, deviant and malignant behavior with corrupt methods. Because of that, clear goal and ethical principles should be the main purpose of every relation, every institution.

Transformational leadership

Transformational leadership is a part of new leadership paradigm which dedicates more attention to charisma and feelings. This approach is popular because it highlights internal motivation and development of followers.

Transformational leadership answers the needs of modern work groups and represents a process in which people change. It refers to emotions, values, ethics, standard and long-term goals and it includes assessment of motives of the followers and satisfying their needs.

Purpose of transformational leadership is in the process of managing

transformational changes, radical character changes. In that sense it can be said that the purpose of leaders skill in identifying business trends and vision changes, from which arises the plan of change, transformation and new direction.

There is a predominant belief that transformational leadership leads to superior performance of organization.

Transformational leadership is one of the modern, current and widely used theories of leadership and some authors classify it in the corps of inspirational theories of leadership (e.g., Schermerhorn et al., 2010). According to Graen and Uhl-Biens (1995) nomenclature, transformational leadership has all three domain of leadership – domain of leader, domain of follower and relational domain in certain measure.

Garcia-Morales, Jimenez-Barrionuevo and Gutierrez-Gutierrez (2012) have defined transformational leadership as "style of leadership that increases the consciousness of collective interest between the members of organization and helps them achieve their collective goals". Bass (1990) points out those leaders which practice transformational leadership inspire, empower and intellectually stimulate their employees to achieve outstanding goals. They too inspire and stimulate the development of capacity for leadership at their employees.

According to Bass (1990), "transformational leadership is related to moving the followers by the leader beyond direct self-interests with the help of idealized influence (charisma), inspiration, intellectual stimulation or individualized attention and care". Transformational leadership implies special kind of relation between leader and followers. Hall (2002) point out that transformational leadership is the ability to affect on people in order to make them change, to improve them and to guide them.

All in all, transformational leadership is complex process based on vision of individual, courage, readiness to learn, openness towards followers and values that imply orientation towards better, efficient, based on radical changes and readiness to take on the risk and uncertainty. In transitional conditions, it is the key for additional effects, efficient restructuring and economic recovery.

Transformational leadership can be extremely successful mechanism for increasing creativity and innovations in organizations because it affects on creativity on individual level, and on innovations on organizational level.

Transformational leadership inspires employees to put organizational needs before their personal needs, because it motivates employees in the time of uncertainty. With their creative behavior leaders make working climate that support other than their creativity, encourage followers to seek out complex challenges and question decisions and existing practices.

We also should not ignore the leader's role in a workplace that fosters high employee morale and positive employee motivation. They must use a variety of methods such as modifying the work environment, promoting employee participation and rewarding employees. In this context, leader must play a more supporting rather than supervisory role (Radovic et al., 2014).

Organizational creativity and innovations

Management that doesn't learn to innovate, won't last long. In fact, business and every other organization today must be projected for changes and must generate changes and not only react to them (Drucker, 2008). Innovative effort demands making and conducting different policies, rules and measures in different areas. Organizations that learn and management ability to manage those processes are characteristics of successful – innovative organization.

In order for organization to be successful in those circumstances it needs to build in its structure managing changes, organizing abandonment of everything it works on, but also an ability to create new. Ability of organization to create new, demands permanent improvement of the things it works on and demands organizing innovation as a systematic process.

Term that connects creativity and leadership is change. In time of crisis, uncertainty is condition with which leaders often meet. Spreitzer and Cummings (2001) have noticed that the important task of leader is to permanently watch environment and make meaning. Isaksen and Tidd (2006) identified one of the most important role that leader has inside of organization – creating a climate for innovation. Tidd and Besant (2009) emphasize adoption of strategical decision and support for innovation by the leader.

Innovation represents popular area of study of different disciplines, starting from business, economy, engineering, psychology, public administration and sociology. It is seen as a key concept of economic growth, creating new industries and jobs, competitive advantage and output of companies (Damanpour and Aravind, 2012.) Although most of the research on innovations has contributed towards many new perspectives and theories, integrating those researches in order to develop new theories became very challenging.

In literature, innovation is mostly defined and differentiated from two similar and linked concepts: creativity and change. In fact, term innovation in organization inevitably includes both changes and creativity. Ford (1996) defines creativity as "specific domain, subjective evaluation of new and valuable as an outcome of certain activity". For creative ideas and activities, it is said that "they can affect on process and outcomes that affect multiple

levels of analysis and they can solve dilemmas that arise through innovative process". From this perspective, creativity is different than the innovation and represents part of innovative process. Creativity demands freedom and climate of support in which individuals don't have limitations in search for solutions (Amabile, 1988). West and Richter (2009) claim that innovation, on the other side, demands systematic effort to success.

Researchers of innovations in organizations think of them as product, outcome, or as process. Innovation as an outcome has a goal to create new possibilities and contribute to organizational effectiveness and competitiveness.

Hitt et al. (1996) interprets innovation as an introduction of new products or services on market, or introduction of new systems, programs or processes in organization. Studies that view innovation as process question how can innovation be created, developed, implemented and finally ended through time.

Jung et al. (2003) in their study concluded that transformational leadership is meaningful and positively affect on organizational innovations. Leaders using inspiration motivation and intellectual stimulation are essential for organizational innovation (Elkins and Keller, 2003).

Transformational leaders promote ideas inside organizations, and this kind of behavior reflects "champion role". They possess vision which they use to motivate their followers, increase their readiness to execute tasks beyond expectation and give them challenge to adopt innovative approaches in their work. All of the stated results in increasing the levels of motivation that affects on improvement of organizational innovation. Leaders that manage with strong vision and which express feeling of power and self-confidence, are going to try and secure market success of the innovations. These leaders mobilize their followers in order to secure the success of innovation (Jung et al., 2003).

In the field of creativity, ability to follow vision is seen as one of the primary personal characteristics of highly creative individuals. Intellectual stimulation is directly connected to importance of using the imagination in solving organizational or social problems. In this view, leaders intentionally engage others in creative process in order to make change and innovation.

Pucio, Mance and Murdock (2011) claims that transformational leadership makes clear connection to creativity. Gumusluoglu and Illsev (2009) have noticed that "transformational leadership behavior matches with guidelines of innovation and creativity, which include vision, support for innovation, independency, encouragement, challenge and identification". So it can be concluded that out of all leadership styles, transformational leadership in its essence, representing the purpose of creative management and as that it can have significant impact on creativity of employees and organizational

innovations.

Behavior that arises from transformational leadership is closely matched with determinants of innovation and creativity on work place, such as vision, support for innovations, independency, encouragement, recognition and challenges. These leadership behavior act as strengths that improve creativity: individualized attention serves as a reward to followers giving them recognition and encouragement. Intellectual stimulation improves investigative thinking by giving support for innovations, independency and challenge. Inspirative motivation gives encouragement through process of making and developing ideas by directing followers to follow vision of organization. All of this results in motivation that is felt by employees, and which is an important source of creativity.

Conclusion

Leadership and changes are often highlighted as the key factor which distinguishes successful organizations from the others. In today's circumstances of dynamic business and economic environment, proactive attitude is necessary.

Competitive conditions on global market don't guarantee domination or survival of the organization. Survival and development is only able for the organizations that are not limited with barriers of assumptions and principles from the past. Since the functioning of manager is always in compliance with accepted theories and organizational values, it is necessary that new reality in conducting business becomes starting point of new and more dynamic concept of managing organizations and changes. Leaders as bringers of that process have difficult task do adjust their style and way of leading in new business reality. Improvement of the process of managing organizational changes inside organization implies defining the place and role of the leader in business system and analysis new ways of leadership.

Managing changes demands of employees in organization to adopt new knowledge, gather more information, deal with new tasks, improve their skill and frequently change their work habits, values and attitudes. That also includes changes in the organizational culture – change of values, established traditions, informational relations, influences, styles of leadership. Leadership and changes are highlighted even more as key factor that distinguishes successful organizations from others.

Transformational leadership expanded its boundaries of understanding the phenomenon called leadership, giving it dimension of emotional and symbolical aspects in leader-followers relation. It is not coincidence that

concepts of charismatic and transformational leadership in developed countries in recent years have such a significant impact in academic and popular dealing with leadership. Nowadays, its characteristic for frequent changes which modern organizations need to take in order to stay competitive, emotional and symbolical aspects of leadership are considered especially important. Constant changes create feeling of insecurity in people and need of greater emotional bonding and "indulgence" to the leadership of extraordinary, charismatic individuals that know how to inspire and awake the attitude towards change, as something which is desirable, and not necessarily unpleasant and traumatic experience.

It is obvious that leaders need to have some kind of power to be effective.

That effectiveness depends on right choice of tactics for realization of influence and on right use of tactics in the direction of functioning. It is also important to take care that the available power is used in an ethical way that is going to be in function of realizing goals of organization and its members.

In recent time researches on the topic of effective leadership on organizational innovations and organizational behavior, which contribute thinking of complementarity and organizational performances in era of "innovatively lead" markets is widespread. Concept of "leading through innovations" becomes recognizable as central concept in big number of organizations, so they introduce modern technologies and develop innovative cultures in order to conduct a sustainable strategy of innovations. Dilemma of innovative leaders arises in area of choice of the effective strategy in market appearance – is the effective strategy directed to moving market or to following the market and consumers. Huge majority of organizations accept in practice concept of moving the markets (following the attitude that consumers are insufficiently conscious of their real needs, so they will accept innovations when they are to be found on the market) or concept of following the market (following the distinctive "feedback" of consumers on new ideas, which as consequence has lowered originality and innovation of final output).

Besides undoubted importance which organization give to innovation as modern symbol of competitiveness, in business reality innovations are followed by a rather different treatment – from superior ejecting in to the forefront, up to the suppression in crisis times. According to a number of research innovations are primary initiator of growth, improvement of profitability and empowering of organizational performances.

There is significant information that says that even in branches that are conditioned with achievements that follow quick technological development, competitive advantage, innovative organization and leaders don't just base

it on creating new ideas, solutions and products. The thing that makes these firms successful and their leaders effective is often linked to much more important internal climate based on confidence, respect, entrepreneurship and talent for innovation. Role of the effective leader is to recognize the meaning of the individual in organization and to create organizational ambient which encourages innovative thinking and proactive behavior on all levels. Based on the attitudes of researches, organizational innovations are defined as a whole process with which organization integrates external and internal resources, imagines, suggests, checks, adopts, and in the end, uses ideas, products, services, procedures and processes that are new and useful for organization.

Organizational creativity and organizational innovations are different.

Firstly, organizational creativity is linked to the process of creating new ideas, products and services, and organizational innovations include whole process of imagining, suggesting, checking, adopting, implementation and commercialization of new ideas, products and services. Secondly, organizational creativity emphasizes ability to create something new, while organizational innovation emphasizes processes and results. However, these two terms, are inseparably linked since organizational creativity represents the moving force for organizational innovations, and achievements that are made due to organizational activity are necessary for success of organizational innovation. Transformational leadership can directly affect on organizational creativity and innovations in two ways. Transformational leadership manifests its influence first as it precedes, and then it represents the moderator of organizational creativity and innovations.

REFERENCES

1. Amabile, T. M. (1988), A model of creativity and innovation in organizations. In B. M. Staw & L. L. Cummings (Eds.), Research in organizational behavior, Vol. 10, pp. 123-167, Greenwich: JAI Press.
2. Bass, B. M. (1990), From Transactional to Transformational Leadership: Learning to Share the Vision. Organizational Dynamics, 18(3): pp. 19-31.
3. Bass, B. M. (1999), Two Decades of Research and Development in Transformational Leadership. European Journal of Work and Organizational Psychology, 8(1): pp. 9-32.
4. Bass, B. M. & Rigio, R. E. (2006), Transformational leadership (2nd ed.). New Jersey: Lawrence Erlbaum Associates Inc.
5. Bennis, W. & Leaders, B. N. (1995), The Strategy for Taking Charge. New York: Harper & Row Publishers Inc.
6. Burns, J. M. (1978), Leadership. New York: Harper & Row Publishers Inc.
7. Damanpour, F., & Aravind, D. (2012), Organizational structure and innovation revisited: From organic to ambidextrous structure. In Mumford, M. D. (Ed.), Handbook of organizational creativity, Waltham: Academic Press.

8. Draker, P. (2006), Moj pogled na menadžment. Novi Sad: Asee Books.
9. Drath, W. H., & Palus, C. J. (1994), Making Common Sense: Leadership as Meaning-Making in a Community of Practice. Greensboro: CCL Press.
10. Drucker, P. (1995), Managing in a Time of Great Change. New York: Truman Talley Books/Plume.
11. Drucker, P. (2008), Managing Oneself. Boston: Harvard Business School Publishing.
12. Elkins, T., & Keller, R. T. (2003), Leadership in research and development organizations: A literature review and conceptual framework. Leadership Quarterly, 14(4): pp. 587-606.
13. Ford, C. M. (1996), A theory of individual creative action in multiple social domains. Academy of Management Review, 21(4): pp. 1112-1142.
14. Garcia-Morales, V. J., Jimenez-Barrionuevo, M. M., & Gutierrez-Gutierrez, L. (2012), Transformational leadership influence on organizational performance through organizational learning and innovation. Journal of Business Research, 65(7): pp. 1040-1050.
15. Graen, G. B. & Uhl-Bien, M. (1995), Relationship–Based Approach to Leadership: Development of Leader–Member Exchange (LMX) Theory of Leadership Over 25 Years: Applying a Multi–Level, Multi Domain Perspective. Leadership Quaterly, 6(2): pp. 219-247.
16. Gumusluoglu, L. & Ilsev, A. (2009), Transformational leadership, creativity, and organizational innovation. Journal of Bussiness Research, 62(4): pp. 461-473.
17. Hall, J., Johnson, S., Wysocki, A. & Kepner, K. (2002), Transformational Leadership: the Transformation of Managers and Associates. Retrieved May, 14, 2016, from: http:/edia. ifas.ufl.edu
18. Hitt, M. A., Hoskisson, R. E., Johnson, R. A., & Moesel, D. D. (1996), The market for corporate control and firm innovation. Academy of Management Journal, 39(5): pp. 1084-1119.
19. House, R. J., Hanges, P. J., Ruiz-Quintanilla, S. A., Dorfman, P. W., Falkus, S. A., & Ashkanasy, N. M. (1999), Cultural influences on leadership and organizations: Project Globe. In Mobley, W.H., Gessner, M.H., & Arnold, V. (Eds.), Advances in Global Leadership (2nd ed., Vol. 1), Bingley: Emerald Group Publishing.
20. Isaksen, S. G., & Tidd, J. (2006), Meeting the innovation challenge: Leadership for transformation and growth. New Jersey: John Wiley & Sons.
21. Jacobs, T. O., & Jaques, E. (1990), Military executive leadership. In Clark, K. E. & Clark, M. B. (Eds.). Measures of leadership, New Jersey: West Orange.
22. Jung, D. D., Chow, C., & Wu, A. (2003), The role of transformational leadership in enhancing organizational innovation: Hypotheses and some preliminary findings. Leadership Quarterly, 14(4): pp. 525-544.
23. Kouzes, J. M; & Posner, B. Z. (2003), The Leadership Challeng. San Francisco: Jossey-Bass.
24. Milovanovic, S., Baltazarevic, B. & Milovanovic, N. (2015), Personal branding through leadership. International Review, 3-4, pp. 75-81.
25. Newstrom, P. J. (2008), Leader and Leadership Process. New York: McGraw- Hill.
26. Northouse, P. G. (2012), Leadership: Theory and Practice. Thousand Oaks: Sage Publications.
27. Mumford, M. D., Scott, G. M., Gaddis, B. & Strange, J. M. (2002), Leading creative people: orchestrating expertise and relationships. Leadership Quarterly, 13(6): pp. 705-750.

28. Pucio, G. J., Mance M. & Murdock, M. C. (2011), Creative leadership. Skills that drive change. Thousand Oaks: Sage Publications.
29. Radovic-Markovic, M., Vukotic, V. & Krumova, A. (2014), Work Motivation Analysis between Serbia and Bulgaria. International Review, 1-2, pp. 127-135.
30. Schermerhorn, J. R., Hunt, J. G., Osborn, R. N., & Uhl-Bien, M. (2010), Organizational Behavior. New Jersey: John Wiley & Sons.
31. Spreitzer, G. M. & Cumings, T. G. (2001), The Leadership Challenges of the Next Generation. In: Bennis, W., Spreitzer, G. M., Cummings, T. G. (Eds.), The Future of Leadership: Today's Top Leader Thinkers Speak to Tomorow's Leaders. San Francisco: Jossey-Bass.
32. Stogdill, R. M. (1974), Handbook of leadership: A survey of theory and research. New York: Free Press.
33. Tarkovsky, S. (2010), 8 Key Character Traits That Make a Great Leader. Retrieved May, 14, 2016, from: http://www.buzzle.com/articles/key-character-traits-make-great-leader.html
34. Tidd, J., & Bessant, J. (2009), Managing innovation: integrating technological, market and organizational change. New Jersey: John Wiley & Sons.
35. Watkins, M. D. (2012), How Managers Become Leaders, The New Science of Building Great Teams. Harvard Business Review, 90(6): pp. 64-72.
36. West, M. A., & Richter, A. (2009), Climates and cultures for innovation and creativity at work. In: Handbook of organizational creativity. New York: Taylor & Francis Group.
37. Yukl, G. (2010), Leadership in organisations (7th edn.). Upper Saddle River, NJ: Prentice Hall.

Interconnectedness of Innovations and Transformational Leadership

DJURICIC Milan[20], DJURICIC Milutin[21], PAVLOVIC Miroslava Jordovic[22]

Introduction

Today's postmodern and more turbulent time is characterized by an overall globalization which causes faster, more dramatic, complex and unpredictable changes. The acceleration of changes is also caused by numerous technical and technological, market and economic, social, political and global factors.

In order for the market-oriented business system (hereinafter BS) to survive and to continually develop itself, it needs to be adjusted to the changes that occur. This causes business system to become "a learning organization" and to make changes by quickly transforming what has been learnt into actions.

That kind of behaviour represents the greatest advantage that BS can have, and this primarily due to the concept of transformational leadership that has the ability to carry out innovations and changes that are necessary for ensuring vitality of the BS. The objective of this paper is to point out to the phenomenon of transformational leadership that can be of assistance to BSs whose economic indicators are in decline, and especially in challenging business conditions.

Leadership – Phenomenon of the XXI century

The second decade of this century is characterized by unexpected and sudden changes (Figure 1). Management of a successful BS has to quickly find the answers and promptly make the best possible decisions and realize them in the most successful way by respecting all influences from the environment. We should bear in mind that certain actions in stable and unpredictable conditions are different. In stable and complex conditions, the managerial process boils down to planning and budget, organizing and planning human resources, controlling and solving problems, while when it comes to constant changes and unpredictability, we need to have a leadership that sets the direction and manages the desired vision, hence it guides the employees and communicates

[20] Faculty of Business and Industrial Management, UNION "Nikola Tesla" University, Belgrade, Serbia, milan.djuricic.17@gmail.com
[21] Business and technical college of applied sciences, Uzice, Serbia, djurazo1@gmail.com
[22] Business and technical college of applied sciences, Uzice, Serbia, miroslavajp@gmail.com

about objectives and in the end motivates and inspires the employees (Figure 2). It is evident that management is a job, and leadership a quality.

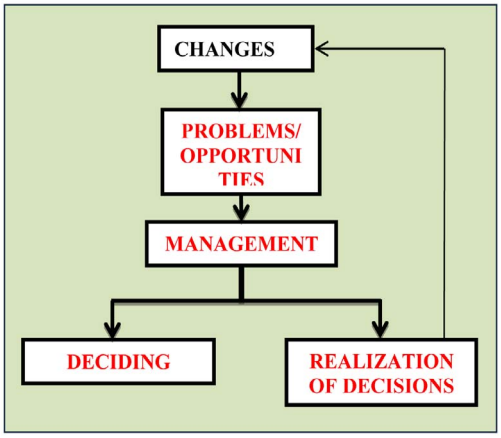


Figure 1. *Changes in environment and their influence on management inside organizations*
Source: Loncarevic, 2007

Leadership is most commonly defined as a process of influencing people to move towards a certain objective or to do what is planned in one organization. Leaders impose their authority by their skills and style of behaviour that help them influence human behaviour, unlike managers that need to have formal authority. Many people think that leadership is the most important factor of the success of BSs. However, there is no universally accepted definition of leadership which is thought to be a very complex process consisting of:

- variables of subordinates' characters,
- expectations of subordinates about how a leader should behave,
- abilities of a group to solve the problem,
- readiness of subordinates to accept the responsibility (Vlahovic, 2008., p. 30)

MANAGEMENT IS CONNECTED WITH COMPLEXITY AND STABILITY	LEADERSHIP IS CONNECTED WITH UNPREDICTABILITY AND CHANGE
- planning and budget - organizing and planning human resources - controlling and solving problems	- Determines the direction and manages the desired vision - Directs the employees and communicates about objectives - Motivates and inspires

Figure 2. *Differentiating between management and leadership*

Leadership outlines are:

- leadership is a process which means it doesn't represent a quality or characteristic within a person that we call a leader. The process implies that a leader influences his followers and that they influence him.

- leadership includes a certain amount of influence, it's primary concern is the influence of leaders on followers and without it leadership does not exist.
- leadership happens in groups (Northouse, 2008., p. 2)

Leadership occurs in the context in which individuals are gathered around a certain objective (Vlahovic, 2008, p. 31). Being a process it presupposes that leadership is a phenomenon that happens within a certain context and that as such is available to everyone. Some people are leaders thanks to their formal position in BS (formal leadership), and some due to the way other members react to them (informal leadership). When others accept an individual as the most influential member of the group or BS, regardless of the title that individual has, that person becomes an informal (spontaneous) leader. People have power when they have the ability to influence beliefs of others, their opinions and directions of activities. On the other hand, leaders that use force are interested in only their personal goals and are rarely interested in the desires and needs of their subordinates. It is clear that without followers there are no leaders (Masic, B., 2009, p. 406). There are two research approaches for determining quality traits of leaders: 1. they compared quality traits of those who have become leaders with quality traits of those who haven't; 2. they compared quality traits of successful leaders with quality traits of unsuccessful. (Boskovic, 2008, p. 204)

B. Masic (Masic, 2009, p. 408) summarizing opinions of many authors lists the following necessary qualities of leaders: 1. employees' role model, 2. self-conscious and realistic towards him/herself, 3. completely aware of the current situation, 4. visionary, 5. enjoys changes, 6. the one who learns, 7. ethical and has a sense of morality, 8. good communicator, 9. positive attitude, 10. enthusiast, and 11. comprehensive thinking and decisive decision-making.

Most of the authors agree on the thesis that the essence of leadership is after all the character of the person (integrity, sensitivity, curiosity, courage and the idea that guides them toward the realization of visions).

Driving strengths of leadership consist of 5 forces:

- desire for fulfilment,
- desire for power and authority,
- desire for wealth and social status,
- desire for professional recognition,
- desire for satisfaction and fulfilment. (Bittel, 1997, p. 25)

Leaders accomplish objectives and power is a means for an easier accomplishment of objectives and it is closely connected with leadership.

Practice knows five sources of power (Northouse, 2008, p. 5) and those are:

1. "Referent power is based on having followers to recognize and like the leader. For example, a school teacher whom students adore has referent power.
2. Expert power is based on the perception of followers about the leader's competences. Tourist guide that has knowledge about a foreign country has expert power.
3. Legitimate power is in relation with the existence of status or formal work authority. A judge that renders verdict in courtrooms is an example for legitimate power.
4. Reward power is derived from the existence of the possibility of rewarding others. Superiors who give awards to employees that work hard use reward power.
5. Coercive power comes from the possibility to punish or sanction others. A coach that leaves a player on the bench because they are late uses coercive power.

Due to its significance for the vitality of BS, efficient and effective work realization by more people, and due to the number of components on which it is based, leadership has become a phenomenon of the initial decades of this century. Leader is required to effectively manage changes in space and time continuum, to fascinate and gain a number of followers with an attractive and sufficiently understandable idea and to accomplish the improvement of subordinates' social standard, hence their increased mobility, education, awareness and intercultural mixing have always represented significant challenges for leadership (Todorovic, 2003, p. 557) In that sense, modern approaches to leadership are: 1. charismatic leadership, 2. transformational leadership, 3. visionary leadership, 4. team leadership.

With the help of innovativeness within BS, leadership should provide its competitiveness, hence its constant growth and development.

Innovativeness of business systems – Precondition for competitiveness and development

Innovativeness represents a creative act. *Creativeness* is a necessity in all stages of the *innovation process*. It is a function of knowledge, imagination and evaluation whose results are more connected with *radical changes than with a normal evolutionary process*. The objective of creativity (Creativity represents the ability to process information in a way that will lead to a

discovery of something new, original and significant. Its essence is the ability to overcome cognitive patterns and rules) and innovativeness is to constantly look for changes.

Innovative BSs increase their competitiveness by constantly improving the quality of their products and processes. Precondition for that is constant improvement of their own organization, methods and structures. Creativity and innovativeness are challenges for each business system exposed to international competition on domestic and export markets.

Innovation in modern BSs can be expressed as a juncture of 4Ps (Tidd, J. et al, 2005)

Table 1. *Innovation in modern business – 4Ps*

Productive innovation	Changes in products/services offered by an organization
Process innovation	Changes in the way products are created and delivered
Position innovation	Changes in the context in which products/services are introduced
Paradigm innovation	Changes of basic mental patterns that shape what the organization deal with

Innovation process in BS consists of five distinctive steps (Figure 3), and it is based on Research and Knowledge *(*Methodology Guide for Innovation, I3E Consortium, 2012, www.i3e.eu)

Research				
Knowledge				
Market research	*Analytical design, technical feasibility*	*Detailed design and testing*	*Redesign and production*	*Distribution and marketing*

Figure 3. *Five steps of the innovations process*
Source: Methodology Guide for Innovation, I3E Consortium, 2012, www.i3e.eu

Schumpeter lists five types of innovations:

1. Introducing new or improved product or service,
2. Introducing new process,
3. Discovering new markets,
4. Discovering new sources of raw material supplies and
5. Creating new type of industrial organization.

This division can be expanded to cover the range of possibilities showed in Figure 4.

Innovation is characterized by two dimension and those are:

- Level of newness and
- Frequency or how frequently innovations are applied.

Business system – BS that often applies smaller innovations will most likely be as innovative as BS that occasionally applies large innovations. Japanese production philosophy has showed that the collection of smaller innovations has an enormous influence onthe competitive advantage of BSs. Practice has showed that innovations are most commonly introduced in the latter life stages of the production cycle, so as to maintain or enhance competitive position of a product and prolong its life cycle (Figure 5).

Serbia is trying to make a developmental turning point. In the last two years, it has had small but positive growth of GDP. D. Povrenovic thinks that "In order to maintain economic growth as labour cost grow, Serbian BSs will have to increase investments into new technologies so as to promote productivity growth and develop new products and services. In order for that to happen, we need access to financial resources, but also internal managerial capacities, professional personnel and connections with those organizations in Serbia and abroad that can help in the process of development, marketing and distribution of new products. At the moment, development of Serbian economy is based on investments and its objective is modernization and promotion of industry and technological resources (equipment, machines and software), as well as expertise of its workers. Growth of Serbian economy still mostly relies on domestic demand, which isn't sustainable in the long run, hence the economy should be more export oriented and grounded on innovations."

Product or service development	Process development
To the world new products or service	
To the market new products or services ↑	Significantly new process
New lines of products or services within BS ↑	↑
Extras to line of products or services ↑	Slightly new process
Improvement and revision of products or services ↑	↑
New application of existing products or services ↑	Significant revision of the existing process
Repositioning of existing products or services ↑	↑
Reducing costs of existing products or services ↑	Slight improvement of the existing processes

Figure 4. *Range of innovation types*

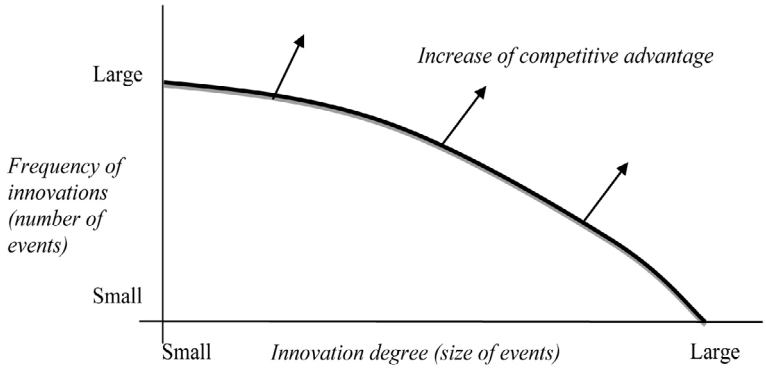


Figure 5. *Dependency of BS's competitive advantage increase from the level of innovativeness and innovation frequency*

"Serbia needs to go from the investment phase into the innovation phase, i.e. phase initiated by innovations, with the economy that shall be based on products with a higher added value and which are globally competitive and with more work places for which better and more expert qualifications are needed in internationally competitive sectors in which there is high growth." (Povrenovic, D., 2011)

It is clear that that demands development of competitive advantage in an entrepreneurial environment thanks to well-created innovation processes (Figure 6).

Management of product or process innovations represents a complex process comprised of series of decisions, activities and measures that need to be applied in order to enable transformation of some ideas into business value.

By doing so, explorers are provided with a set of measures and tools used to turn their ideas into market innovations. Each innovation system consists of three key elements:

subsystem for generating knowledge whose main task is to generate and transfer knowledge, such as research institutions, universities, organizations for transfer of technologies and such.

Subsystem for the application of knowledge refers to the business sector where knowledge is applied and used for solving everyday challenges and

the connection between these two subsystems (Erkko, A., 1998, pp. 131-140)

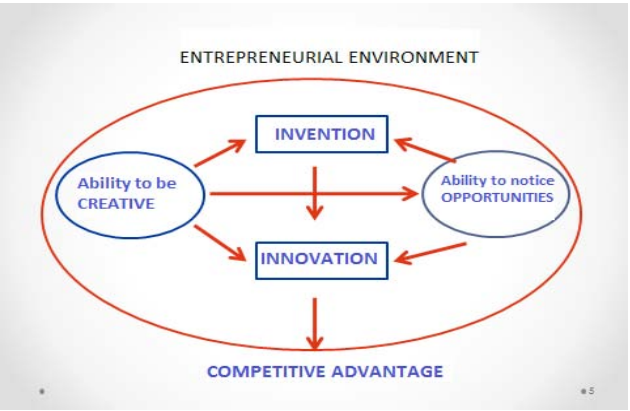


Figure 6. *Competitive advantage as a result of innovation process*

According to the results from researchers from Kragujevac, eight most suitable factors for the enhancement of corporate competitiveness were determined (Mandic, V., 2014): 1. Emphasis on knowledge, 2. Strategic influence, 3. Availability level, 4. Level of documentation, 5. Practical use, 6. "old age" of the technique, 7. Necessary resources for implementation and 8. Measurability.

The same group of authors established 10 most relevant techniques for:

- Knowledge management techniques
- Market intelligence techniques
- Cooperative and networking techniques
- Human resources management techniques
- Interface management techniques
- Creativity development techniques
- Process improvement techniques
- Innovative project management techniques
- Design management techniques
- Business creation techniques

From the abovementioned ten, the most commonly used are project management (82%), business plan development (67%), corporate intranet (66%) and comparative analysis (60%).

All the complexity of the contemporary market business causes an appropriate leadership approach instead of a classical managerial approach. Leadership, as a relatively new phenomenon, has very quickly become acknowledged around the world as a process of influencing other people to work on the achievement of BS's objectives. It is based on power, knowledge and attractiveness of one person to, by using different ways, guide or win over other people in order to accomplish business ideas. Because of a tough competition, dynamics of

chances and threats, leaders are required to be capable of actively managing changes, i.e. to perform their activities with the use of leadership approach, or the so-called transformational leadership.

Transformational leadership

Leadership, according to Burns (Burns, 1978) is a process of developing inter-relations in which leaders-guides influence their followers, but also change their own behaviour because they encounter acceptance or resistance.

Transformational leadership is a macro-process of mobilizing power in order to change social systems and institutional reform, but also a micro-process among the individuals. It can be carried out by anyone in a BS and at any level. The objective of a transformational leader is to raise the level of awareness of their followers by urging on "higher" ideals and moral values (freedom, justice, equality, peace and such) and not on "lower" emotions (fear, greed, jealousy or hatred). Opposite to transformational leadership there is transactional leadership (Table 1), where followers are motivated by urging on their own interests which include values important for the process of exchange, like honesty, responsibility and reciprocity (Yukl, Van Fleet, 1992: 175-176).

By relying on Burns' theoretical contribution, Bass defined transformational leadership in the sense of a leader's influence on followers which makes them more aware of the significance and values of the outcome of the task by activating their higher level needs and by leading them to overcome their own.

The result of this influence is that employees feel greater trust and respect for their leaders and are motivated to do more than they primarily expected (Yukl, Van Fleet, 1992: 176).

Table 1. *Characteristics of transactional and transformational leaders (Source: Bass B.M, 1990: 22)*

Transactional leader	Transformational leader
- Contingent rewarding: "Agrees on" the exchange of rewards for effort, promises rewards for good performance, recognizes achievements.	- Charisma: Ensures visions and the meaning of the mission, inspires pride, gains respect and trust.
- Management by exception (active): Observes and seeks deviations from rules and standards, takes corrective action.	- Inspiration: States high expectations, uses symbols for directing efforts, expresses important objectives in a simple way.
- Management by exception (passive): Intervenes only if the standards are not fulfilled.	- Intellectual stimulation: Emphasizes intelligence, rationality and carefully solves problems.
- Laissez-faire: Denies responsibility, avoids making decisions.	- Individual considerations: Pays attention, refers to each employee individually, practices, gives advice.

Four factors are related with transformational leadership (Figure 7):

1. charisma or idealized influence,
2. inspiring motivation (Figure 8),
3. intellectual stimulation and,
4. individualized consideration.

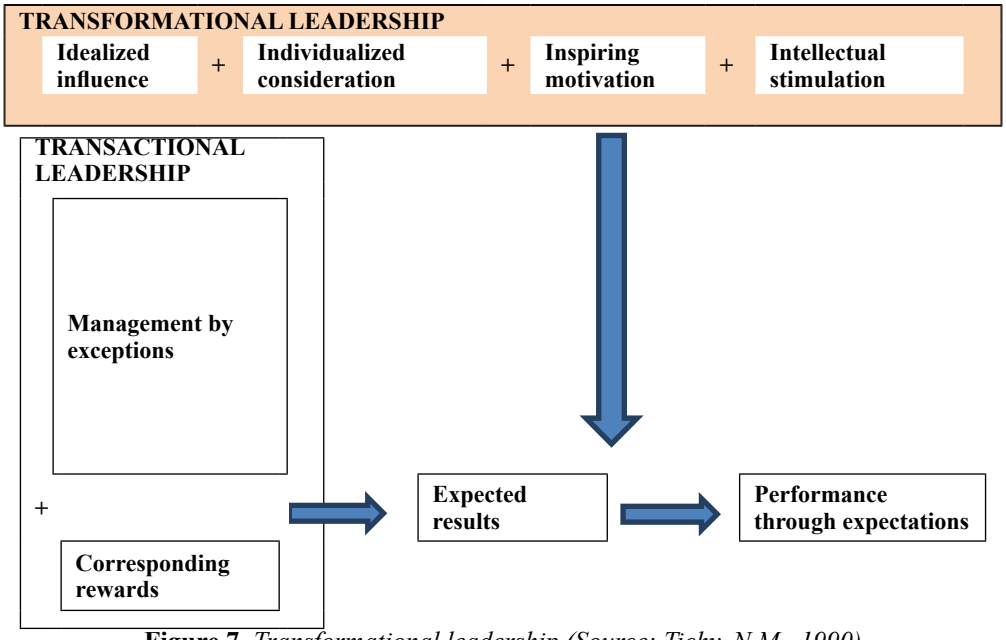


Figure 7. *Transformational leadership (Source: Tichy, N.M., 1990)*

Figure 8. *Inspiring motivation components*

Charisma or idealized influence is a necessary element of transformational leadership and it refers to the ability of leaders to be a role model for others.

However, it cannot lead to transformational process by itself because followers don't have to subject their personal interest to some general social objective even though they identify themselves with the popularity of charismatic personality (Figure 9). Transformational leader strives to convert their followers by working as their teacher and mentor. Readiness to personally take over the risk and consistency in making decisions increases mutual trust between leaders and followers. Good leaders will promote and authorize their followers, but there is not a small number of charismatic leaders who strive to keep their followers weak and dependent and to ensure personal loyalty, and not loyalty to the idea (Milisavljevic, 1999, p. 96). Yukl (1989) sees trust and respect of leaders and followers as key reasons because of which followers are motivated by their leaders.

Second factor of transformational leadership is an inspiring motivation which refers to the ability of leaders to create and communicate persuasive and inspiring visions of the future. With their behaviour and use of symbols they motivate those around them by giving them meaning and challenges in the work place (Figure 9). The result of that is:

1) expressed commitment and trust in leaders,
2) voluntary "obedience" of followers to leaders,
3) increased performance and motivation of the group,
4) higher group integration and
5) a sense of becoming independent in each of the followers – group member.

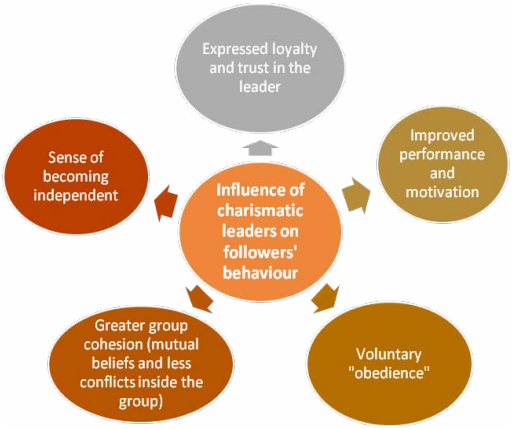


Figure 9. *Supposed influences of charismatic leaders on the behaviour of followers*

Intellectual stimulation of a transformational leader on his followers is highly significant. It makes followers aware of their problems in organizations. Now they can see their problems from a new perspective and with a higher level of self-confidence and self-respect.

Individualized consideration is a very important component of transformational leadership. Leader encourages followers to see the problem differently, but also to be responsible when solving certain problems. He also influences his followers by a way of respect by ensuring constant support and encouragement. Transformational leader sets high expectation for his followers by inspiring their motivation. Like that he gains the dedication of his followers to be part of a mutual vision inside BS.

In table 2 we showed leadership secrets of the famous *Jack Welch* which he used to significantly improve business operations of General Electric by his transformational leadership.

Table 2. *29 secrets of leadership by Jack W*

LEADERSHIP SECRETS	**Welch's rules:**
1. Harness the power of change	1. Accept the change. 2. Make sure employees know change is limitless. 3. Be prepared to reconsider the work plan.
2. Face reality	1. Face reality. 2. Quickly react to reality. 3. Reverse the business.
3. Managing less is managing better	1. Manage less. 2. Build trust. 3. Retreat. 4. Emphasize vision, not supervision.
4. Create a vision and then get out of the way	1. Job is simple. 2. Always bear in mind five main questions. • How does global competitive environment look like? • What have your competitors done in the last three years? • What have you done in the same period comparing with them? • In what way can they jeopardize you in the future? • What are your plans for overcoming the problem? 3. Management and allocation of people and resources. 4. Managers lead the vision.
5. Don't pursue a central idea: instead, set a few clear, general goals as business strategies	1. Set general framework of actions in your team. 2. Create values which are in accordance with company's vision. 3. Leave space for maneuvering.
6. Nurture employees who share the company's values	1. Give employees more responsibility so that they could make better decisions. 2. Take care of employees who nurture company's values even though they don't make results. 3. Eliminate employees who don't nurture company's values even though they make good results.
7. Keep watch for ways to create opportunities and to become more competitive	1. Don't sink your head in the sand. 2. See things as they are. 3. Begin with the vision.
8. Be number 1 or number 2 and keep redefining the market	1. Make business market leaders. 2. Define your market wide enough.
9. Downsize, before it's too late!	1. Even in the best of times always look through costs and main accounts. 2. Don't manage your company by conducting voting. 3. Well thought of actions today can prevent many problems in the future.
10: Use acquisitions to make the quantum leap	1. Make quantum leaps even if that is not in accordance with corporate culture. 2. Think outside the box. 3. Constantly look for small chances.
11. «Learning culture» I: Use boundarylessness and empowerment to nurture a learning culture	1. Emphasize sharing of ideas inside the company. 2. Find and implement best ideas no matter where they come from. 3. Ensure implementation of great ideas.
12. «Learning culture» II: Incalculate the best ideas into business, no matter where they come from	1. Let the priority of each employee be the quest for new ideas. 2. Regularly hold meetings at which you will share ideas. 3. Award your employees for sharing knowledge.
13.The big winners in the twenty first century will be global	1. First take care of the things inside the company. 2. Think globally and locally. 3. Recognize globalization phases.
14. De-layer, get rid of the fat!	1. Revoke those management levels which don't add proper value to processes. 2. Don't let your emotions get on the way of doing that.
15. Spark productivity through the "S" secrets: speed, simplicity, andself-confidence	1. Promote three "S": speed, simplicity and self-confidence. 2. Start with a simple message. 3. Establish a system which encourages self-confidence.

16. Act like a small company	1. Suppose your big company can act like a small company. 2. Have the structure of a small company. 3. Check reality.
17. Remove the boundaries!	1. Remove the boundaries. 2. Shape your behaviour through cooperation with senior managers. 3. Involve everyone.
18. Unleash the energy of your workers	1. Encourage productivity by involving all employees. 2. Turn workers into owners. 3. Be patient: attitudes don't change over night.
19. Listen to the people who actually do their work	1. Turn hierarchy up-side-down. 2. Ensure people feel free to say what they think. 3. If it isn't possible to have the entire Work-Out session, think about a half-day mini session.
20. Go before your workers and answer all their questions	1. Find practices which don't function any more. 2. Create programs on the principle of Work-Out programs. 3. Nurture dignity.
21. STRETCH: Exceed your goals as often as you can	1. Get the best out of your employees. 2. Set goals and strive to surpass them. 3. Go for the impossible.
22. Make quality the top priority	1. Encourage promotion of quality. 2. Find the "hidden factory". 3. Use quality in order to be sure your products are the right option for your consumers.
23. Make quality the job of every employee	1. Have universal opinion on quality. 2. Start from the framework of quality. 3. Link compensations with the results of quality.
24. Make sure everyone understands how Six Stigma works	1. Exchange components of the Six Sigma program. 2. Nothing is more important than continuity. 3. Your consumers recognize quality.
25. Make sure the customer feels quality	1. Consumers must be involved in the process. 2. Don't presume your customer is as satisfied as you are. 3. Let the customers become the main focus.
26. Grow your service business: it's the wave of the future	1. Think about services that are directly related to your products. 2. Pay equal attention to services that are not so close to basic product lines. 3. Stay flexible.
27. Take advantage of e-business opportunities	1. First think and then enter e-business. 2. Look for the right chances for e-business. 3. Use web efficiency.
28. Make existing business internet-ready – don't assume that new business models are the answer	1. Adjust your business model to the Internet. 2. Think how you are "web-enabled" and not "web-threatened". 3. Think inside and outside company's frameworks.
29. Use e-business to put the final nail into bureaucracy	1. Carry out management in the Internet era by using the latest technology. 2. Re-innovate your company to compete in the Internet era. 3. Build your approach on being strong.

Source: abridged: Masic, www.master.crnarupa.singidunum.ac.rs, p. 18

It is obvious that transformational leadership represents a contemporary leadership style that demands vision, constant improvement of oneself but also of one's followers. Creativity and constant innovation process are the central point of its actions.

Modern information and communication technologies and transformational leadership

Information and communications technologies (ICT) have changed and, as many believe, enhanced business operations of market entities, but also the quality of living. Hence, it is very important that each and every individual becomes computer literate. "Knowing how to use hardware and software in order to increase profit, reduce costs, enhance productivity and increase customer satisfaction is an example of computer literacy. Computer literacy recognizes how and why people (managers, employees, shareholders and others) use information and communication system: in order to be familiar with the organization, way of making decisions, managerial structure and in order to be informed; likewise, computer literacy recognizes how an organization should use computers and information system so as to achieve success. Knowing how to develop business processes, management system, support in decision-making and expert system with the aim to make a company successful is the key of computer literacy." (Stair, 2008)

That causes the need to define architecture of an adequate information and communication system of a business system. Information and communication system represents a complex process that covers the application of modern techniques and technologies concerning computers and communication, Internet service and Intranet, distributed data processing and use of databases.

The projected system has to fulfil some basic preconditions:

- good-quality communication system,
- high level of computer equipment compatibility,
- openness of network architecture,
- forming a system according to business processes,
- modularity of ultimate users equipment,
- efficiency of data management system,
- compliance with the system of quality,
- constant development of user applications.

It is evident that modern transformational leadership cannot be imagined without the adequate application of ICT. Famous Jack Welch confirmed that in his secrets. That causes the necessity of owning adequate knowledge and numerous skills and this concerns every leader. Leader must ensure that, aside from the ICT team of experts for development and maintenance of information and communication system, all employees acquire the necessary and sufficient knowledge in the field of ICT which can be accomplished by a continual

process of lifelong learning.

Information system that is harmonized and modelled in such a way enables, among many other things, a basis for constant improvement of organizations in a business environment filled with challenges.

Conclusion

Contemporary business operations of market-oriented business systems revolve in conditions of speedy, dramatic, complex and unpredictable changes and overall globalization.

Survival and development of a contemporary BS is related to creativity and innovations in all segments of the business. That demands a significant promotion of the top management whose development needs to be directed towards becoming a "learning organization" and in such a way make changes, hence quickly transforming what is leant into actions.

Transformational leadership closely connected with constant innovation processes can help heal BSs whose economic parameters are in decline and especially in critical business conditions.

Transformational leaders are not limited to the analysis and control of specific transaction and rules, rather they choose strategic focus by creating a vision, values and ideas by gaining followers to make a change. They are aware of the fact that business operations of companies demand constant fight in order to achieve a certain goal. They are also aware of the necessity of daily work on improvements and radical changes through innovations and that they have to direct activities in the right way by motivating and activating their followers – employees in business systems.

REFERENCES

1. Bittel, R. L., (1997), Liderstvo-Stilovi i tehnike upravljanja, Clio, Beograd,
2. Bošković, J., (2008), Osnovi menadžmenta, Pobjeda a.d., Podgorica,
3. Erkko, A., 1998., Evaluation of RTD in regional systems of innovation, European Planning Studies, Vol:6, ISSN:0965- 4313, p:131-140
4. Lončarević i saradnici (2007). Menadžment: principi, koncepti i procesi. Beograd: Univerzitet Singidunum
5. Mandić, V., Rašić, V., Jevtović, J., Knežević, J., Subašić, L., Zlatić Šutić, D., (2014), Metodologija za upravljanje inovacijama,Univerzitet u Kragujevcu,Kragujevac
6. Mašić, B., (2009), Menadžment, Univerzitet Singidunum, Beograd,
7. Mašić, B., Transformaciono liderstvo: Mogu li nam pomoći tajne Jack Welch-a?, dostupno na www.master.crnarupa.singidunum.ac.rs,
8. Milisavljević M. (1999): Liderstvo u preduzećima, Beograd: Čigoja štampa.
9. Northouse, G. P., (2008): Liderstvo teorija i praksa, Data Status, Beograd,

10. Povrenović D., (2011), Analiza inovacione delatnosti u Srbiji Beograd, Zavod za intelektualnu svojinu, Beograd,
11. Tichy, N. M., & Devanna, M. A. (1990). The transformational leader. Willey
12. Todorović,J., (2003), Strategijski i operativni menadžment, Conzit, Beograd,
13. Vlahović, S., (2008), Liderstvo u savremenim organizacijama, CID, Podgorica,
14. Stair, R., Reynolds,G. and Chesney,T. (2008), Principles of Business Information Systems, Cengage Learning EMEA, London.

Effective Management Predictions on the Basis of the Regression Model

KOLMAKOVA Ekaterina[23], DEGTYAREVA Nina[24], KOLMAKOVA Irina[25]

Introduction

Today the activity in any area of economics (management, finance, and credit, marketing, accounting, auditing) requires specialists and entrepreneurs to implement modern methods, to have a wide knowledge of achievements of the world economy, to understand a scientific language. The majority of new methods are based on econometric models, concepts, and techniques. Without a profound knowledge of econometrics, it is impossible to learn how to use them.

The econometrics is a rapidly growing branch of science, the purpose of which is to define quantitative standards (measures) for economic relations; the science, which gives a quantitative expression of relationships of economic phenomena and processes. This science has been developed as a result of the interaction and uniting of the three components: economic theory, statistical and mathematical methods. It studies specific quantitative patterns (regularities) in the economic life, applying the statistical methods – methods of a pair and multiple regression, pair, particular and multiple correlations, defining a trend line and other components of a dynamic series, and so on.

The main problem of econometrics is to develop an econometric model and establish abilities of its use to describe, to analyze and predict real economic processes.

The market economy requires improvements in the use of statistical and economic information, carrying out econometric calculations of future economic activities and establishing the ways to meet these requirements.

Such calculations facilitate the proper assessment of the factors influence on various indicators of the effective development of their relationship.

The market economy requires the manager or the entrepreneur to know how to use statistics to build and establish models and use them to make predictions.

[23] South Ural State University (National Research University), FSAEI HE Federal State Funded Educational Institution of Higher Professional Education, Chelyabinsk, Russia
[24] South Ural State Humanitarian Pedagogical University, FSBEI HE, Chelyabinsk, Russia
[25] Chelyabinsk State University, FSBEI HE, Chelyabinsk, Russia

The ability to predict the situation gives the manager an opportunity to make reasonable decisions.

Nowadays the activity in any branch of economics requires a specialist to apply modern mathematical methods and models. A today's manager, an entrepreneur should be good at economic and mathematical methods and be able to apply them in order to simulate real economic situations.

The particular feature of an economist practice is the work with the lack of information and incomplete benchmark. The analysis of such information requires knowledge of special econometric methods.

The majority of econometric methods is based on the development of econometric models and the possibility of their use for the description, analysis, and prediction of real economic processes.

The econometric model is an economic-mathematical model of the factor analysis, the parameters of which are evaluated by means of the mathematical statistics. This model serves as a tool for analyzing and predicting specific economic processes.

Forecasting methods are being used in the work of planning, analysis, marketing departments of industrial enterprises and associations. In modern conditions managerial decisions should be made only on the basis of a careful analysis of the available information, thus, the use of the statistical software Statistica, Eviews and Excel and so on is widespread in order to solve econometric problems of data analysis, calculation of model parameters and model analysis (Eliseeva, 2011, pp. 14-15).

Most of the processes and phenomena in the economics are in a constant, mutual, objective relation. The study of dependencies and interconnections of existing phenomena and processes plays an important role. The effective economic activity is impossible without assessing these relationships between various factors and performance indicators, defining their patterns and making predictions (Mhitaryan, 2010, p. 7).

Discussion

Regression models are of great interest with the direction and complex nature of their relations between internal (endogenous) and external (exogenous) variables.

There are model equations of pair and multiple regressions. If we use – y for endogenous variables, and – x for exogenous variables, then in the case of the linear model, the pair regression equation looks like this: yt = a0 + a1xt1 + ε_t, and the multiple regression equation looks like this: y = a0 + a1xt1 + a2xt2

+ … + amxtm + ε_t .

In order to develop the economic model with its further use in forecasting it is necessary to solve the following problems (Eliseeva, 2017, pp. 44-45):

- To select some benchmark;
- To select factors that have more influence on the performance indicator;
- To choose the type of the econometric model including the structure formation and forms of the functional connection between variables in the model;
- To carry out the statistic analysis of the chosen model, i.e. to evaluate unknown parameters of the model according to available statistics;
- To test the quality of the model: compare the actual data and the data according to the model, to test the adequacy of the model, to evaluate the accuracy of the data according to the model;
- To use the model for the economic analysis and prediction.

Let us study the research of the dependence of production costs on the following factors: basic production assets and the number of people who are employed in production.

At one enterprise a quarterly sample is conducted – of production costs (thousands of roubles) (http:///www.uralfo/gov.ru 29.10.2015): 1815,48; 807,53; 1462,61; 1307,49; 1710,40; 1430,44; 1165,42; 1309,35; 1464,13; 1059,87; 1010,98; 1515,41; 1746,04; 2116,98; 709,53; 1481,01; 1648,89; 1158,94; 1924,64; 1050,83, a sample – of basic production assets (thousands of roubles): 1123,56; 442,16; 1038,71; 791,07; 1137,65; 908,92; 681,17; 863,25; 965,68; 607,24; 541,30; 1060,70; 1108,75; 1460,49; 453,78; 968,32; 1094,29; 682,56; 1268,93; 666,37 and a sample – of the number of employees in production (people): 204, 180, 189, 144, 207, 165, 124, 157, 176, 110, 108, 193, 202, 226, 146, 176, 110, 108, 193, 202 within a period of five years.

The performance indicator y(t) – production costs; factor characteristics: x1(t) – basic production assets; x2(t) – the number of people who are employed in production.

The major difficulties in using the multiple regression analysis appear when there is the factor multicollinearity. The stronger the factor multicollinearity is, the less reliable the evaluation of the distribution sum of the explained variation in separate factors using the least squares method is.

For the evaluation of the factors multicollinearity, the matrix of pair correlation coefficients between factors y(t), x1(t), x2(t) is used (Table 1).

Table 1. *The matrix of pair correlation coefficients*

	y	x_1	x_2
y	1,000	0,985	0,808
x_1	0,985	1,000	0,839
x_2	0,808	0,839	1,000

Since $r_{yx1} = 0{,}985 > 0$, the connection is direct; $|r_{yx1}| = 0{,}985 \approx 1$ - the connection is close.

Since $r_{yx2} = 0{,}808 > 0$, the connection is direct; $|r_{yx2}| = 0{,}808 \approx 1$ - the connection is close.

Since $r_{x1x2} = 0{,}839 > 0{,}75$, the pair correlation between insignificant explicative variables is quite high, i.e. the process of multicollinearity, the both factors cannot be included in the model. We include the factor in the model because this one is more closely connected with the dependent variable y, i.e. $|r_{yx1}| > |r_{yx2}|$. The process of making a regression equation is about assessing its parameters. In order to assess parameters of the regression the least squares method is used. The least squares method allows getting such parameter estimates, with which the sum of squares of deviations of actual values of the resulting feature from the theory is minimal, i.e., $\sum$ (y t - (a0 –a1x1))2 ® min.

In order for the parameters estimates obtained by means of the least squares method to have necessary properties the following deviations premises are formed ε_t (Kremer, 2011, pp. 111-114)

3. variable ε_t is a random one;
4. expected value ε_t equals zero: $M(\varepsilon_t) = 0$;
5. dispersion ε_t is constant: $D(\varepsilon_t) = D(\varepsilon_j) = \sigma^2$ for all t and j;
6. variables ε_t are independent;
7. variable ε_t is a normally distributed random variable.

If the regression model meets these premises, then the parameter estimates obtained using the least squares methods have the following properties:

1. estimates are unbiased, i.e. the expected value of each parameter estimate is equal to the true value of the parameter;
2. estimates are reliable, and their reliability increases with the sampling;
3. estimates are efficient, they have the lowest dispersion among all linear unbiased estimates.

Let us build the linear regression model $\hat{y}_t$ = a0 + a1x1 for the selected x(t) = x1(t). The regression coefficients estimates can be found by means of formulas using the least squares method (Vulokov, 2004, pp. 143-144):

$$a_1 = \frac{\sum(y - \bar{y})(x_1 - \bar{x_1})}{\sum(x_1 - \bar{x_1})^2} = \frac{1936416,234}{1477323,421} \approx 1,311$$

$$a_0 = \bar{y} - a_1 \cdot \bar{x_1} = 1394,799 - 1,311 \cdot 893,245 = 223,969$$

The selected regression equation for the chosen x_1 will look like: $\hat{y}_t = 223,969 + 1,311x_1$.

The power law model: $\hat{y}_t = 1331 \times x^{0,0017}$, the exponential model $\hat{y}_t = 555 \times 1,00099^{x_1}$ and the linear model: $\hat{y}_t = 223,969 + 1,311x_1$ are developed in order to solve the problem of the model specification.

The regression coefficients estimates are found with the help of the least squares method (Eliseeva, 2011, pp.97). The main results of the statistical analysis for each model are shown in the summary table 2.

Table 2. *The results of the statistical analysis*

Model	Determination coefficient	Fisher's ratio test	Relative approximate error
Linear	0,97	582	3,97
Power law	0,31	8,9	23,89
Exponential	0,94	313	5,28

Apprently, the best model is a linear one: $\hat{y}_t = 223,969 + 1,311x_1$

The quality of the model is estimated according to the adequacy and accuracy of the model based on the analysis of regression residuals e_t: $e_t = y_t - \hat{y}_t$ - the remaining number.

The residuals analysis allows to get an idea of how well the model is adjusted and how correctly the method of coefficients estimation is chosen.

Does the model correspond to the actual economic process? The model is adequate if the residual component meets the four characteristics of a random component of the remaining number which is (Fedoseev, 2012, p.95):

- expected value of the remaining number being equal to zero;
- randomness of the remaining number;
- independence of the remaining number;
- correspondence of the remaining number with the normal law of distribution.

1. test of the equality of the expected value of the excess levels to zero is done according to the formula:

$$M(e) = \bar{e} = \frac{\sum e(t)}{n} = \frac{0,00000000001}{\text{Ø}} \approx 0,0000000000003$$

Since $|\bar{e}|$=0,0000000000003 < 0,5, thus, M(e)»0.

2. test of the randomness of the excess levels is done according to the criterion of turning points:

$$P > \left[2 \cdot \frac{(n-2)}{3} - 1{,}96\sqrt{\frac{16n-29}{90}}\right] = \left[\frac{2 \cdot (20-2)}{3} - 1{,}96\sqrt{\frac{16 \cdot 20 - 29}{90}}\right] = [8{,}5] = 8$$

Since the number of turning points P = 10 > 8, then the randomness is accomplished.

3. independence of the excess levels is verified with the help of d-criterion (Durbin-Watson statistic):

$$d = \frac{\sum_{t=2}^{n} (e(t) - e(t-1))^2}{\sum_{t=1}^{n} e(t)^2} = \frac{171274{,}527}{76720{,}140} \approx 2{,}232$$

Since d = 2,232 does not fall in the interval from d_2 to 2, then we find $d' = 4 - 2{,}232 = 1{,}768 \in [1, 411; 2]$, i.e. the levels are independent.

4. correspondence between the excess numbers and the normal law of distribution is established with RS-criterion:

$$RS = \frac{e_{\max} - e_{\min}}{S_e}, \qquad RS = \frac{118{,}794 - (-122{,}858)}{63{,}544} = 3{,}803$$

Since $3{,}803 \in [3{,}18; 4{,}49]$, i.e. the value of RS- criterion is between the table borders with the set probability level (for $n \leq 20$, p = 70%), then the hypothesis about the normal law of distribution of excess numbers is accepted.

If all the conditions are met, then the model is adequate.

The relative approximate error is calculated to find characteristics of the model accuracy (Degtyareva, 2013, pp. 17-19):

$$\overline{E_{отн}} = \frac{1}{n} \sum \frac{|e(t)|}{y_t} \cdot 100\%$$

$$\overline{E_{отн}} = \frac{1}{20} \times 79{,}332 \approx 3{,}967\ \% < 5\%,$$

which shows a good model accuracy.

The quality of the developed model is assessed by means of the determination coefficient:

$$R^2 = 1 - \frac{\sum e(t)^2}{\sum (y - \bar{y})^2} = 1 - \frac{76720{,}140}{2614896{,}803} \approx 0{,}971$$

The coefficient $R^2 = 0,97$ shows that more than 97% of the dependent variable variation is taken into account in the model under the influence of the factor (fixed production assets) that is included in the model, the rest 3% is for other factors that are not included in the model.

Since the parameters of the regression equation are significant, then the equation is significant, indicators of closeness are important, the approximation error is equal to 3.97%, the determination coefficient is equal to 0.97, the regression equation is significant, thus, it is concluded that the regression model of the dependence of production costs of fixed assets is $\hat{y}_t = 223,969 + 1,311x_1$ can be used for the analysis and predictions.

When using an accurate and adequate model of a linear regression to make predictions some assumptions are made concerning the maintenance of existed relationships of variables for the forecasting period and during it.

There are point and interval predictions. In the first case it is a specific number, in the second it is the interval that covers the true value of the variable with a given level of confidence. There is conditional and unconditional forecasting depending on whether we are interested in explaining the known variables exactly or approximately. In our case, it is conditional forecasting because the values are known.

The prediction of economic indicators is based on the idea of extrapolation.

Under the extrapolation usually the distribution of patterns, relationships, and ratios, operating in the studied period is understood. In a broader sense, it is considered to be the process of getting ideas about the future on the basis of some information relating to the past and the present. In the process of building predictive models in their structure sometimes there are elements of the supposed future condition of an object or phenomenon, but in general these models reflect the patterns observed in the past and the present, thus, a reliable prediction is possible only about such objects and phenomena, which are determined by the past and present (Tihomirov, 2003, p. 216).

The prediction consists of two parts: point and interval.

To make predictions about the dependent variable for k stages ahead it is necessary to know prediction values of all the factors of the model. Their assessment can be obtained by the methods of expert estimates or they can be directly assigned by the researcher or can be obtained on the basis of extrapolation methods, such as using the average absolute increase of factor features:

x(n+k) = x(n)+САП×k, где САП=(x_n-x_1)/(n-1)

САП× = (666,370-1123,560) / (20-1) = - 457,19/19 ≈ -24,06

к = 1, x(20+1) = x(21) = x(20) + (-24,06)×1 = 642,307

к = 2, x(20+2) = x(22) = x(20) + (-24,06)×2 = 618,245

In order to get prediction estimates of the dependent variable according to the model: $\hat{y}$ (n+k)=a_0+a_1x(n+k), one substitutes the predicted values of the factor:

$\hat{y}$ (21) = 223,969 + 1,311×642,307 = 1065,880

$\hat{y}$ (22) = 223,969 + 1,311×618,245 = 1034,339

Apparently, the exact matching of the actual data in the future and forecasting point estimates is unlikely to happen. Thus, the point prediction should be accompanied by bilateral borders, i.e. specifying interval values when with the sufficient certainty one can expect the forecasting value. This interval is called the interval prediction (Tihomirov, 2003, p. 342).

For the linear regression model the range of possible values of the performance indicator with known values of the factors, i.e. the confidence interval prediction is calculated as follows. The value of deviations from the regression line is estimated (let us mark it as *U*):

The value *U*(*k*) of the pair regression model looks like this:

$$U(k) = t_\alpha \cdot \overline{S_E} \cdot \sqrt{1 + \frac{1}{n} + \frac{(x(n+k) - \bar{o})^2}{\sum (x_t - \bar{x})^2}}$$

where $\overline{S_E}$ - approximation error, which is calculated according to the formula:

$$\overline{S_E} = \sqrt{\frac{\sum E(t)^2}{n-1}};$$

n – observation number;

k – number of stages;

x_t – observed value of the factor feature at the moment t;

x(n+k) – forecasting value of the factor for *k* stages ahead;

t_α – table value of t-statistic with the given range of value α and a number of observations n.

The forecast confidence interval for the stage *k* has the following limits: the upper forecast limit : $\hat{y}$ (n+k) + U(k), the lower forecast limit: $\hat{y}$ (n+k) - U(k), with U(1) < U(2).

The confidence interval of the prediction has the following limits:

when k=1 the upper prediction limit: $y_p(20+1) + U(1) = 1065,880 + 71,654 = 1137,534$; *the lower prediction limit*: $y_p(20+1) - U(1) = 1065,880 - 71,654 = 994,225$.

When k=1, $U(1) = 1,05 \cdot 65,286\sqrt{1+\frac{1}{20}+\frac{(642,3075-893,245)^2}{1477323,421}} \approx 71,654$

The confidence interval of the prediction has the following limits:

when k=2 the upper prediction limit: $y_p(20+2) + U(2) = 1034,339 + 71,935 = 1106,274$; the lower prediction limit: $y_p(20+2) - U(2) = 1034,339 - 71,935 = 962,404$

When k=2, $U(2) = 1,05 \cdot 65,286\sqrt{1+\frac{1}{20}+\frac{(618,254-893,245)^2}{1477323,421}} \approx 71,935$, where

$$\overline{S_E} = \sqrt{\frac{76720,140}{20-1-1}} = \sqrt{4262,23} \approx 65,286$$

Forecasting results are presented in table 3.

Table 3. *Forecasting results*

k	*x(n+k)*	$\hat{y}$ *(n+k)*	Lower limit	Upper limit
1	642,307	1065,880	994,225	1137,534
2	618,245	1034,339	962,404	1106,274

The graph will show the actual data, model, and the prediction results.

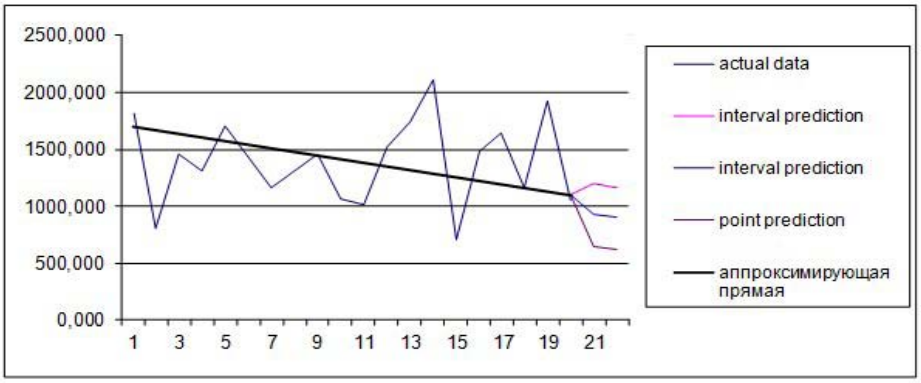


Figure 1. *Approximation and prediction result*

If the built regression model is adequate and forecasting factors estimates are quite reliable, then with the selected probability (1 - α = 0,7), one can say that due to the maintenance of the development patterns the forecasting

value of production costs in the first quarter of next year will take the value of the interval that is (994.225; 1137.534) thousand of rubles, as for the second quarter, it will be (962.404; 1106.274) thousand of rubles.

The obtained forecast on the basis of the accurate regression model offers an opportunity to make effective management reliable decisions by the manager of the enterprise, thus, controlling the amount of costs at the enterprise and reducing the risk of making incorrect, unreasonable and subjective decisions.

One can also bear in mind unnecessary patterns in forecasting and take measures to prevent them along with the forecast (Dubina, 2010, p. 19).

Conclusion

Thus, it should be noted that the development of econometric forecasting studies is determined by the relative simplicity of procedures for forecasts developing, clarity and certainty of the use of their results in the management of the public development. Econometric studies have been expanded significantly because different kinds of a priori reasoning seek for their empirical evidence and composition (Kolmakova, 2009, pp. 12-18).

During the process of forecasting the verification procedure is very important.. The verification involves the rationale of the prediction reliability, evaluation of its accuracy and quality. One of the most important stages of the verification is to identify (or not to identify) standard errors with the formalized description (extrapolation) of the development patterns in the studied process.

This error can be made because of incorrect form of the functionality of an econometric model, mistakes in choosing the composition of its constituent factors, inaccurate estimates of the coefficients of the model. The standard errors can be made because of an incorrect selection of the "forecast background".

If predictions are made on the basis of unmanageable factors, then the process itself becomes unmanaged. The predictions of such processes are often called search or (research) predictions. In this case, the control system has the ability to adapt to the patterns of the forecasting process, to take these patterns into account when dealing with (justifying) control measures for the corresponding object.

If the factors are manageable, the control system can choose, establish their levels defining the most rational, "optimal" process development pattern of the object during the forecast period. Such predictions are usually referred to as normative ones.

With partially manageable factors the control possibilities over the development process during the forecast period are limited.

In the case of manageable and partially manageable factors econometric models provide the researcher with all the information about to the control limits (ranges of factors variation), the efficiency of their use in management.

In this case, the efficiency indicator to some extent can be determined on the basis of the value of elasticity coefficients of the variable *y* according to the factors x_{tk} (the response of *y* to changes x_{tk}).

Other efficient constituents (management implementation costs, results, benefits which the management presupposes) are identified on the basis of the economic analysis of the problem.

One of the most important characteristics of the quality of prediction is the value of its confidence interval. It is obvious that with different equal conditions the narrower the interval is, the more reasonable the prediction itself and management activities of the studied process are.

REFERENCES

1. Degtyareva, N. (2013) Econometric models of analysis and prediction: Methodical guidelines Troitsk: Troitsk branch of Chelyabinsk State University.
2. Eliseeva, I. (2007), Practical course on econometrics: Manual . M.: Finance and statistics.
3. Eliseeva, I. (2011), Statistics: [advanced course]: the textbook for bachelors. Moscow: Urait.
4. Fedoseev, V. (2012) Economic-mathematical methods and applied models. M.: UNITI-DANA.
5. Kolmakova, E. (2009) The comparison of the effectiveness of the regulation of social and labour relations (Ural Federal District). CSU Bulletin, 9 (147): 12-18.
6. Kremer, N.(2011). Econometrics [Text]: University textbook. M.: UNITI-DANA.
7. Mhitaryan, V. (2010). Econometrics: textbook. M.: Publishing office: Prospect.
8. Tihomirov, N.(2003). Econometrics M.: Publishing office “Ekzamen”.
9. Vulokov, E. (2004) The basics of the statistical analysis. Practical course on statistical methods and study of the operations with the use of Statistica и Excel M.: INFRA-M.
10. http: ///www uralfo/gov.ru. Ural Federal District (29.10. 2015).

Financing and the Development of Innovativeness of Small and Medium Enterprises in the Republic of Serbia

GAVRIC Gordana[26], RAVIC Nenad[27], GAVRILOVIC Milan[28]

Introduction

Today's business environment is described as an environment of hypercompetition, meaning that the situation in the region is such that fierce competition rules over the market, where the level of competition is constantly increasing. (R. A. D'Aveni, "Coping with Hypercompetition: Utilizing the New 7S's Framework", Academy of Management Executive, August 1995, pp. 45–60; Coulter, 2010, p. 202) Where competition is intense, companies without quality products and services that attract and satisfy customers cannot remain viable for long (Nadler, Gerstein, Shaw & associated, 1992, p. 138).

Learning and innovation, and based on that, adapting to change, become an existential need and the dominant process in the life of organizations.

Simply, the frightening uncertainty that traditionally accompanied major organizational change has been superseded by the frightening uncertainty now associated with staying the same. (Cameron, Quinn, 2006, p. 1) During 1994, we informally surveyed business people from a variety of industries. We asked them, "What percentage of their time do you think people in your organization spend thinking, learning, and innovating?" The answers cluster rather strongly in the range of 5 to 15 percent (Goldman, Nagel, Preiss, 1995, p. 190). This statistic is unacceptable today. In modern business conditions, innovation is one of the most important factors for survival, growth and development of enterprises, the national economy and society as a whole.

SMEs are considered to be companies that have a high degree of flexibility and enormous potential, as proven in the nineties when, despite extremely unfavorable business conditions, the number of SMEs in Serbia grew. The fact that 99 percent of companies in the EU are SMEs, and that they employ nearly two-thirds of employees in the private sector (Ozegovic, 2011, p. 146) is the best indicator of this sector's importance as well as of the importance of the innovation potential of small and medium enterprises.

[26] Faculty of Business Economy and Entrepreneurship, Belgrade, Serbia, gordana.gavric.bg@gmail.co
[27] Faculty of Business Economy and Entrepreneurship, Belgrade, Serbia, nenad_ravic_bps@yahoo.com
[28] Faculty of Business Economy and Entrepreneurship, Belgrade, Serbia, sagatagm@gmail.com

SMEs are exactly the main driving force of the economy of most EU countries. Year by year, their number increases in Serbia also.

Unfortunately, the domestic economy today is characterized by a small number of highly innovative SMEs with high growth potential (this refers primarily to SMEs in the field of information and other technologies), and a large number of SMEs which are not innovative, at least not sufficiently.

So, in spite of awareness about the importance of innovation for SMEs in Serbia, most of their competitiveness is not built on its development. Moreover, innovative activity of SMEs in Serbia has a tendency to decline in recent years.

The situation is similar in other European countries, where almost half of all enterprises in the EU (28) reported innovation activity (48.9%) during 2010-2012, which is, compared to the period of 2008-2010, for 3.9% less. (Eurostat, 2015.) By the number of innovative activities, Serbia was in the middle of the scale, among EU members (behind Germany, Luxembourg, Ireland and Italy, and in front of the Bulgaria, Poland and Romania) with 47.5% during the period of 2010-2012. (Eurostat, 2015.)

Thus Semcenko (2009, p. 46) there are two groups of factors that affect the degree of innovation of a company. The first group includes an organizational structure, organizational culture and company's ability to make good decisions in conditions of uncertainty. The second group of factors includes financial factors related to the financing of innovation projects. A financing problem is one of the main constraints faced by small and medium-sized enterprises in Serbia.

This paper will compare bank loans, as the most common (external) financial source for business SMEs in Serbia and Venture capital, that is often viewed as a particular valuable source of financing of the innovative and entrepreneurial firm, because it combines capital and competencies. It will, also, highlight the advantages and disadvantages of each type, as well as give suggestions for improving the current situation.

Because of the benefits they bring to the national economy (SMEs are starters of the state's economic development, since they are employing the largest part of the working age population; significantly affecting the formation of gross domestic product; solving the unemployment problem; raising living standards and strengthening the international competitive position of the country through export business), the state should design and launch programs that would continuously encourage innovative activities of this category of companies and helps them to be successful.

Innovation in the function of competitiveness

One of the greatest challenges in modern business is how to gain and maintain competitive advantage. It can be defined as the ability of a company to make its offer more attractive in consumers' eyes than the offer of competitors (Various authors, 2006, p. 334). In other words, competitive advantage means that an organization has something competitors don't have, that it is better than other organizations in something, or that it does something that others are not able to do. After all, competition is the thing that brings a desired profit.

Competitive advantage can be gained in different ways, but innovation is one of the most dominant. The case of Nokia, once the strongest brand in the field of mobile telephony, which has lost its leading position due to the fact that they didn't pay enough attention to innovation, served as a lesson and a warning to other companies. In modern business conditions, big companies do not eat small ones any more, but fast developing companies eat those who are not able to respond to the challenges of environment in time and in the best possible way. After the events with Nokia, executive director of Apple, Tim Cook, said that innovation represents a central part of Apple's plan for the future.

Knowledge, technology and innovation play a key role in increasing the productivity, in the development of new products as well as in the creation of organizations' competitive advantage (Ravic & Radic, 2015, p. 357). In the contemporary conditions, learning and innovation can no longer be a "right and duty" only of organizations' management. Instead, it should be state of mind of all employees who will be trying every day to do something for their company. The best example of this is the world's largest car manufacturer – the Japanese company Toyota, which complete organizational structure and focus directs towards innovation. Example of Toyota is also an example of innovative management that ensures competitive advantage to its organization, providing extra profit for survival, further growth and development.

The benefit of innovation is multiplex – it is not just a path to better business, but to better social relationships, wealthier companies and society. If we remember that innovation is the introduction of new, cost-effective concepts, applied in Serbia, this means a better life for each individual (Belic et al, 2006, p. 35). Stojanovic, Djokic and Djokic promote similar attitude in their work, "Organizational behavior – a creative tool for creating value" (2013, p. 75), stating that organizations "do not just create goods and services that we use every day, but also, more than any other institution, business organizations affect the quality of our environment, where and how we live."

Small and medium enterprises in Serbia that are trying to be innovative, face numerous problems such as lack of financial resources, various administrative barriers, lack of access to the results of the activities of research institutions, lack of access to international markets, as well as lack of supportive economic environment. To solve these problems, it is necessary for the state to create a development policy and program to help small and medium enterprises in Serbia in using their innovation potential (Nikolic, 2014, p. 197).

A survey-innovation of smes in serbia

In order to elucidate presence of innovative actions in companies in Serbia, we have conducted a research. Given study is a part of the research about organizational cultures in companies in Serbia, conducted for the purpose of the doctoral thesis. The survey was conducted in the period November 2014-November 2015.

The survey was conducted by technique of written interviewing.

A questionnaire in the form of Likert scale for measuring attitudes (1-completely disagree, 2- partly disagree, 3- neither agree nor disagree, 4- partly agree, 5- completely agree), constructed according to Denison's model, was used for data collection. Some paragraphs related to innovation in companies in Serbia were selected for this study: "This organization responds well to competitors and other changes in the external business environment", "This organization continually adopts new and improved ways to do work", "Attempts to change this organization usually meet with resistance", "Different units in this organization often cooperate to create change", "Customer wants and needs are understanding and directly influence our decisions", "We encourage direct contact with customers by members of the organization", "This organization encourages innovation and rewards those who take risks", "Learning is an important objective in our day-to-day work".

Research sample

The study included 1000 respondents employed in micro (200 respondents), small (171 respondents), medium (338 respondents) and large companies (291 respondents) in the Republic of Serbia.

Regarding to the city of company the 34% employees are from companies in Belgrade, 7% are from Loznica, as well as frm Nis and Leskovac, from Vranje are 4,1% respondents, from Lazarevac 4%, from Kragujevac 3,8% respondents, from Jagodina 3,2%, from Obrenovac and Ruma are 2,6%, from Novi Sad and

Kraljevo are the same percent 2,3% of employees, from Senta, Krusevac and Cacak 2,2%, 2% are from Kanjiza and the same number from Smederevo, from Presevo are 1,9% of respondents, from Aranjdjelovac 1,8%, from Vrbas 1,8%, from Subotica 1,4%, from Backa Topola are 1,4% respondents, from Coka 1,4%, from Kikinda 1,2%, from Petrovac on Mlava are 0,9% respondents, from Sombor 0,9%, from Pozarevac 0,8%, from Smederevska Palanka 0,6% and from Kac are 0,6% respondents.

Regarding to activity of the company, most of the employees work in the company which is engaged in other service activities 20,4%, in field of public administration and compulsory social security work 17,8% of respondents, in production 14%, in field of education 11,6%, 8,4% work in financial area and are of insurance activities, 6,6% respondents work in field of transport and storage, 4,7% respondents work in companies which is engaged in field of accommodation and food services, from field of health and social work are 4,3% respondents, in field of information and communication work 3,9% respondents, from companies engaged in administrative and support service activities are 3,6% respondents, in field of professional, scientific, innovative an technique activities are 2,6% respondents, in field of arts, entertainment and recreation work 1,9% of employees and in companies engaged in real estate work 0,2% respondents.

Most of the employees, who took part in research, work in domestic companies, 86%, and the rest of examinees work in foreign companies, 14%.

According to owned company, more than a half of employees (52%) are from private companies, 44% respondents are from state companies and 4% work in social companies.

A survey on innovativeness of smes in serbia

As the most appropriate method of data processing was chosen the single-factor ANOVA method, which measures the effect of factors on the dependent variable.

Table 1. *Test of Homogeneity of Variances*

Test of Homogeneity of Variances				
	Levene Statistic	df1	df2	Sig.
RespondsWell	6,404	3	996	**,000**
NewImproved	5,711	3	996	**,001**
AttemptsChange	3,274	3	996	**,021**
UnitsCooperate	4,727	3	996	**,003**
WantsNeeds	1,320	3	996	,266
EncourageContact	5,957	3	996	**,001**
InovationRisk	4,810	3	996	**,002**
Learning	31,299	3	996	**,000**

We see that the condition of homogeneity of variance, Sig>0.05 is filled only for the variable "Customer wants and needs are understanding and directly influence our decisions" (Table 1).

Since the requirement of variance homogeneity wasn't met for the other variables, for them we use Brown–Forsythe robust test instead of ANOVA test (they include use of median instead of medium value) (Table 3).

Table 2. *ANOVA test*

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
RespondsWell	Between Groups	36,995	3	12,332	9,509	**,000**
	Within Groups	1291,581	996	1,297		
	Total	1328,576	999			
NewImproved	Between Groups	50,887	3	16,962	12,763	**,000**
	Within Groups	1323,744	996	1,329		
	Total	1374,631	999			
AttemptsChange	Between Groups	33,168	3	11,056	8,489	**,000**
	Within Groups	1297,151	996	1,302		
	Total	1330,319	999			
UnitsCooperate	Between Groups	36,778	3	12,259	9,563	**,000**
	Within Groups	1276,822	996	1,282		
	Total	1313,600	999			
EncourageContact	Between Groups	47,770	3	15,923	11,957	**,000**
	Within Groups	1326,374	996	1,332		
	Total	1374,144	999			
InovationRisk	Between Groups	64,869	3	21,623	13,943	**,000**
	Within Groups	1544,615	996	1,551		
	Total	1609,484	999			
Learning	Between Groups	66,056	3	22,019	14,032	**,000**
	Within Groups	1562,855	996	1,569		
	Total	1628,911	999			

Table 3. *Brown – Forsythe robust test*

Robust Tests of Equality of Means					
		Statistic[a]	df1	df2	Sig.
RespondsWell	Welch	10,214	3	495,210	**,000**
	Brown-Forsythe	9,830	3	925,663	**,000**
NewImproved	Welch	13,940	3	494,783	**,000**
	Brown-Forsythe	13,195	3	923,273	**,000**
AttemptsChange	Welch	9,549	3	483,497	**,000**
	Brown-Forsythe	8,398	3	833,054	**,000**
UnitsCooperate	Welch	10,620	3	487,283	**,000**
	Brown-Forsythe	9,612	3	856,889	**,000**

EncourageContact	Welch	12,419	3	491,409	**,000**
	Brown-Forsythe	12,218	3	909,477	**,000**
InovationRisk	Welch	15,002	3	482,006	**,000**
	Brown-Forsythe	13,771	3	840,088	**,000**
Learning	Welch	17,842	3	500,884	**,000**
	Brown-Forsythe	14,866	3	891,156	**,000**
a. Asymptotically F distributed.					

We got a statistically significant difference for all variables, depending on the size of the company because, Sig<0.05 (Table 3).

After application of the ANOVA method we got the result shown in the table 4:

Table 4. *ANOVA*

ANOVA					
WantsNeeds					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	46,525	3	15,508	10,560	**,000**
Within Groups	1462,666	996	1,469		
Total	1509,191	999			

We got the result that there is a statistically significant difference in all researched attitudes.

Descriptive data for the analysis of variables related to encouraging innovation in companies are given in the table 5. Presented data are related to the number of respondents in each category (micro/small/medium and large companies), mean of each category, standard deviation from the mean and standard error, as well as 95% confidence interval. The last two columns represent the minimum and the maximum value in each category, i.e. they denote a rank.

Table 5. *Descriptive data*

Descriptives									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
RespondsWell	1-9	200	3,82	1,074	,076	3,67	3,97	1	5
	10-49	171	**3,94**	1,050	,080	3,78	4,10	1	5
	50-249	338	**3,46**	1,143	,062	3,34	3,58	1	5
	≥250	291	3,52	1,224	,072	3,38	3,66	1	5
	Total	1000	3,63	1,153	,036	3,56	3,70	1	5
NewImproved	1-9	200	3,80	1,080	,076	3,65	3,95	1	5
	10-49	171	**3,85**	1,057	,081	3,69	4,01	1	5
	50-249	338	**3,31**	1,132	,062	3,19	3,43	1	5
	≥250	291	3,44	1,273	,075	3,29	3,59	1	5
	Total	1000	3,54	1,173	,037	3,46	3,61	1	5

Attempts Change	1-9	200	3,64	1,048	,074	3,49	3,78	1	5
	10-49	171	**3,33**	1,241	,095	3,15	3,52	1	5
	50-249	338	**3,17**	1,119	,061	3,05	3,29	1	5
	≥250	291	3,17	1,167	,068	3,03	3,30	1	5
	Total	1000	3,29	1,154	,036	3,22	3,36	1	5
UnitsCooperate	1-9	200	3,71	,996	,070	3,57	3,84	1	5
	10-49	171	**3,61**	1,194	,091	3,43	3,79	1	5
	50-249	338	**3,24**	1,102	,060	3,12	3,35	1	5
	≥250	291	3,32	1,214	,071	3,18	3,46	1	5
	Total	1000	3,42	1,147	,036	3,35	3,49	1	5
WantsNeeds	1-9	200	3,86	1,209	,085	3,69	4,02	1	5
	10-49	171	**3,81**	1,209	,092	3,62	3,99	1	5
	50-249	338	**3,38**	1,180	,064	3,25	3,50	1	5
	≥250	291	3,40	1,251	,073	3,26	3,55	1	5
	Total	1000	3,55	1,229	,039	3,48	3,63	1	5
Encourage Contact	1-9	200	4,13	1,129	,080	3,97	4,28	1	5
	10-49	171	**4,07**	1,066	,082	3,91	4,23	1	5
	50-249	338	**3,64**	1,118	,061	3,53	3,76	1	5
	≥250	291	3,65	1,257	,074	3,51	3,80	1	5
	Total	1000	3,82	1,173	,037	3,74	3,89	1	5
InovationRisk	1-9	200	3,69	1,166	,082	3,53	3,85	1	5
	10-49	171	**3,43**	1,332	,102	3,23	3,63	1	5
	50-249	338	**3,06**	1,182	,064	2,93	3,19	1	5
	≥250	291	3,08	1,315	,077	2,93	3,23	1	5
	Total	1000	3,25	1,269	,040	3,18	3,33	1	5
Learning	1-9	200	4,13	,907	,064	4,00	4,25	1	5
	10-49	171	**3,90**	1,249	,096	3,71	4,09	1	5
	50-249	338	**3,63**	1,317	,072	3,49	3,77	1	5
	≥250	291	3,43	1,376	,081	3,27	3,58	1	5
	Total	1000	3,72	1,277	,040	3,64	3,80	1	5

Small and medium enterprises, according to staff estimates, encourage innovation less than micro-enterprises, but more than large-sized companies.

In other words, the larger the company, the less investments in innovation (with very small difference when it comes to evaluation of attitudes, such as "This organization responds well to competitors and other changes in the external business environment" and "This organization continually adopts new and improved ways to do work"). In relation to the category of companies that interest us, we can conclude that small businesses encourage innovative activities significantly more than the middle ones. The explanation for such statistics can be found in the fact that larger enterprises are more secure in their position on the market. Larger enterprises are more stable and occasional crises can merely shake their survival, while micro and small companies are in a constant struggle.

Since the finance is the basic stumbling block of innovation activities of small and medium-sized companies, in the sequel we will present one of the possible ways for the solution of this problem.

Alternative sources of financing smes

According to Schumpeter, economic development is not a harmonious process, but rather "a discontinuous change." In other words, economic development involves risk and uncertainty and requires a special type of people, organizations and financial institutions ready to consciously enter into risks of new combinations and innovation. In his work "The theory of economic development" (1961, p. 65), Schumpeter formulates his thesis that economic development is based on the following three elements: new combinations, entrepreneurs who carry out new combinations or innovation, and credits granted to entrepreneurs for the implementation of a new idea.

There is a huge problem of financing the introduction of new technologies and innovation in Serbia and the fact still significantly slows the growth and competitiveness of the organization and the country. According to research by Belgrade Chamber of Commerce, the problems of financing SMEs in Serbia lie in credit debt, the highest interest rates in the region, high banking costs, securing loans and a limited amount of the loan (Belgrade Chamber of Commerce, 2015). This is mostly true, especially bearing in mind that there are enough so-called "alternative" sources of financing. Solution may be found in alternative sources of funding, that there are not enough.

Innovators in every stage of business are faced with the need for financial resources. Some are faced with this problem in the seed stage, when they are researching possible business concepts and attempting to understand the viability of their idea. In the start-up phase, the need for funds to initiate phase increases, innovators are registered as legal entities doing additional researches of potential markets. In the next stage, innovative companies make their first business deals. At this stage, the first economic growth is noticeable, so companies need to increase their financial resources to continue economic development. In the final stage the company needs to continue to grow and then it needs financial investments to become a stable company and to maintain a significant position in the market. The amounts required for each of these phases have different types of financial resources (Figure 1).

Development stage	Financial source
Seed stage	Owner money; Grants
Start-up stage	Business angels; Venture capital
Early-growth	Venture capital; Bank loan
Expansion	Bank Loan; Stock Market

Figure 1. *Different types of financial resources*
Source: Leach J. C., Melicher W. R., 2014, pp. 115–119.

Lenders are not willing to lend money to innovative companies in the early stages of development, qualifying such offers as high-risk activities. (USAID, 2012) On the other hand, traditional financial sources (own funds, loans of commercial banks) are generally not preferred ones for innovative companies, because the cash flow of companies at an early stage is mostly negative. The need for alternative sources is more than obvious.

In the world there are more forms of alternative ways of financing entrepreneurs and SMEs. In this paper, we will especially point out: – Risk capital (Venture Capital-VCFs). Their role is very important in developed countries. Number of investors and funds grew from year to year. In Europe investments VCF varies from year to year. In 2015. European venture capital invested €3.8 billion into close to 2,800 companies, according to Invest Europe's data. However, while venture capital funds in the United States raised €25 billion from investors in 2014, in Europe the total was a fifth of that at €5.3 billion, despite being economies of a similar size. The most common form of release is in the form of sales of shares on the secondary market. From this brief analysis, it is evident that the emergence of VCF in Serbia can bring much more good than bad things.

VCF have five basic characteristics that reflect the essence of their business (A. Metrick, 2007, p. 3): – VC is essentially financial intermediation, capital collects from individual investors, which is subsequently invest in one or more small and medium-sized enterprises. – VC funds invest only in private companies. – This type of institution retains an active role in the management and control of companies in which they invested their money. – The basic objective of these institutions is to maximize profit. – Funds which they invest are used to finance investments in internal growth of the company. Through the realization of the internal method of growth is expected to increase the overall value of the company, and then analyzes the potential exit strategy (exit).

One of the advantages of financing through venture capital investment is in the medium to long investment horizon that does not burden the cash flow with payments of interest and principal; and the other is that collaterals aren't necessary, as in borrowing from banks, which is usually one of the biggest

problems for SMEs (Eric at all, 2012, p. 45).

So, in addition to the role of investment VCF typically perform two roles – monitoring (control and help the organization to develop their business) and output (preparing for the future through the public issue of shares (which is called-going public)). They usually remain minority owners. Small and medium-sized enterprises in which they invest may remain in the form of a limited liability company or closed joint stock company, until conditions are right for a change of legal form.

The fact that invest in smaller companies which are later go to the stock exchange and become public joint stock companies (the issue of shares and their sale on the stock exchange through the process of an initial public offer (Initial Public Offering-IPO)), whose shares are traded on the secondary markets is leading to some authors served they point out that "private capital markets helps rediscovering the market for corporate control (Wruck, 2008, p. 9).

In Serbia, it is evident that SMEs are not sufficiently familiar with the concepts of venture capital and private equity financing. According to the survey almost 90% of respondents said they did not or not sufficiently familiar with these forms of financing (Eric et all, 2012, p. 75).

The existence of venture capital funds would have a favourable impact on the mobilization of entrepreneurial skills, resources, acceptance of standards, liquidity increasing in the capital market, listing companies on the stock exchange at the exit from investments and attracting foreign capital investments with long-term aspirations that would result in raising the competitiveness of the economy and its development. In short, research shows that 0.1% of GDP invested in venture capital results in a 0.4% GDP growth (Mayer, 2010, p. 3).

Measures to be taken, that would encourage investment funds, thus acquire a share in propulsive, growing, innovative, technology-oriented micro, small and medium-sized companies, which would later, after 3 to 7 years, be able to sell at a higher value include:

- To provide laws on investment funds that would treat a venture capital fund as a separate economic category;
- To legislate that investment funds – venture capital funds can provide loans to companies;
- To give some tax incentives;
- To allow the funds of technical reserves and guarantee reserves of insurance companies to invest in private equity funds, venture capital (Economics Institute, 2011).

Given the potential and importance of SMEs for economic development

of a country, it is clear that in business circumstances the role of funds of venture capital significantly increases, but also of the other alternative sources of financing where lies a huge untapped potential, both in Serbia and in the region.

Conclusion

In order to achieve growth and development of small and medium-sized enterprises in Serbia, it is necessary to operate on several fields, and one of the very significant fields to work on is the development of their innovation. Simply, in the new millennium the question of survival of organizations is the issue of their willingness to be innovative. The high level of flexibility, developed entrepreneurial spirit, focus on creativity and freedom in the work, lack of rigid rules and procedures, as the basic characteristics of SMEs, are traits suitable for innovation development. Also, more direct internal communication and closeness with consumers allow entrepreneurs faster and better insights into the needs and requirements of consumers in relation to large companies.

Because of the benefits that innovative activities bring to the national economy and given that they improve the country's and the region's competitiveness in the world, the state should permanently encourage innovative activities of its own enterprises. Innovation without much investment can bring fantastic results.

In this context, a possible solution for the issue of financing enterprises, as the most serious problem that SMEs are faced with in Serbia, is to create a favorable environment for attracting venture capital funds (VCFs).

The activities to focus on are the change in the institutional framework and legislative solutions that regulate the functioning of venture capital, financial markets and changes in fiscal regulations. The outcome of such activities would be the growth and development of the entire economy through the creation of entirely new economic environment that would bring new managerial experience, operational and strategic skills, higher standards for budgetary control and assistance with the initial public offering, which would also develop the financial market of our country.

REFERENCES

1. Belgrade Chamber of Commerce (Privredna komora Beograda), Razvoj malih i srednjih preduzeća 1990-2015. godine,septembar 2015
2. Belic D. i ostali (2006), Znanje za uspesno poslovanje III; oružje za poslovne bitke, izabrani tekstovi iz e-magazina – godina III, Beograd: GSM PublicBeograd

3. Cameron S. K., Quinn E. R. (2006), Diagnosing and changing organizational culture; Based on competing values framework, revised edition, San Francisco: The Jossey-Bass A Wiley Imprint.
4. Coulter M. (2010), Strategijski menadžemnt na delu, forth edition, Belgrade: Data Status
5. Economics Institute, Makroekonomska analiza i trendovi, (2011), no. 199. Available: http://www.ecinst.org.rs/sites/default/files/prezentacije/mat199maj2011.pdf
6. Eric, D. D., Beraha, A. I., Djuricin, O. S., Kecman, Dj. N., Jakisic, B. B., (2012), Finansiranje malih i srednjih preduzeća u Srbiji, Institute of economic science, Chamber of commerce and industry of Serbia, Belgrade.
7. Eurostat, http://ec.europa.eu/eurostat/statistics-explained/index.php/Innovation_statistics#, (2015, 18th july).
8. Gavric, G., (2016), Organizaciona kultura kao faktor rasta i razvoja privrednog drustva, doctoral thesis, Faculty of Applied Management, Economics and Finance, Belgrade.
9. Goldman, L. S., Nagel, N. R., Preiss, K. (1995.), Agile competitors and virtual organizations; strategies for enriching the customer, Van nostrandreinhold, USA: A division of international Thomson publishing Inc.
10. Leach, J. C., Melicher, W. R., (2014), Entrepreneurial Finance, 5th Edition, Cengage Learning, pp. 115-119.
11. Metrick, A. (2007), Venture Capital and Finance of Innovation. John Wiley & Sons, New York.
12. Meyer, T., (2010), Venture capital adds economic spice, Frankfurt: Deutsche Bank Research.
13. Nadler, A. D., Gerstein, S. M., Shaw, B. R. and associated (1992), Organizational architecture; designs for changing organizations, San Francisco: Jossey-Bass Publishers
14. Nikolic, M. (2014), Inovativnost malih i srednjih preduzeća kao faktor privrednog razvoja Srbije, doctoral thesis, Nis: Faculty of economic.
15. Ozegovic, L. (2011.), Menadžment malih i srednjih preduzeća-budućnosti Srbije, Economics- Theory and Practice, year IV, no. I, pp. 140-153.
16. Ravic, N., Radic, V., (2015) Significance of innovation for realizing of sustainable competitive advantage of organizations, Conference Employment, education and entrepreneurship, Faculty of business economics and entrepreneurship, Challenges to Promoting Entrepreneurship, Leadership and Competitiveness, pp. 355-377.
17. Schumpeter, J. (1961), The Theory of Economic Development, A Galaxy Book, New York.
18. Semecenko, D. (2009), Faktori u oblikovanju nacionalnog inovacionog sistema, Belgrade: Institute Mihailo Pupin
19. Stojanovic, T., Djokic, A., Djokic, S., (2013), Orgnanizational behavior- creative tool for creating value, International Review, No.1-2, pp. 74-87.
20. USAID-Serbia, Finansiranje rasta malih i srednjih preduzeća, Knjiga preporuka namenjena Vladi Republike Srbije, 2012., pp. 9-14.
21. Various authors, (2006), Ekonomski rečnik. Belgrade: Faculty of economic
22. Wruck, K. H. (2008), Private Equity, Corporate Governance, and the Reinvention of the Market for Corporate Control. Journal of Applied Corporate Finance, Vol. 20, Issue 3, pp. 8– 21.

The Influence of Cash Conversion Cycle on Profitability of Trade in Serbia

LUKIC Radojko[29], HANIC Azra[30], HANIC Hasan[31]

Introduction

Cash conversion cycle is necessary measure of financial performance of firms. In trading firms, it measures the time it takes a company to convert its investment in inventory before it is sold and cash collected from customers.

To aim at efficient financial management, cash conversional cycle is analysed among trade sectors, firms and categories of products. As well as in other firms, efficient cash management (optimal cash holding is one of the significant financial decisions that manager has to make) affects profitability of trade firms. In order to accomplish desirable profitability between cash conversional cycle and cash holding, regarding the determinants, there should be established appropriate relation for each trading firm (Das, 2015).

The efficiency of managing net current assets reflects on operative cycle, cash conversion cycle, and, ultimately, on the profitability of trading companies, what is shown by many conducted empirical research (Moss, 1993; Topal, 2013; Shan, L.H, 2015; Li, 2014; Yazdanfar, 2014). The example of restaurant firms shows that working capital significantly affects their profitability. In the context of optimization there is inverted U-shape between working capital and profitability. Likewise, there is correlation between the cash holding and current assets, and profitability. Sum of cash holding significantly affects the efficiency of managing working capital. If working capital is positive it will have negative impact on profitability of restaurant firms, but negative will have positive impact on the profitability of restaurant firms (Mun, 2015).

Generally speaking, the efficiency of managing net current assets is affected by type of inventories and customer's initiative to use credit (Mateut, 2015).

Cash management, in the sense of accomplishing efficient optimisation, significantly affects liquidity (Warrad, 2015) and profitability of all companies (Das, 2015a,b; Nizam, 2015).

Adequate strategy and credit politics have immense impact on the growth of sales as a factor of net current assets and financial performance of all companies (Yazdanfar, 2015), including trading.

[29] Faculty of Economics, University of Belgrade, Serbia, rlukic@ekof.bg.ac.rs
[30] South Ural State University (National Research University), Chelyabinsk, Russia
[31] Belgrade Banking Academy, Belgrade, Serbia

Concerning its significance, *the research issue* in this work is primarily to envisage the specifics of cash conversion cycle impact on profitability of trading companies. The *aim of the research* is to do thorough comparative research on factors of cash conversion cycle and its impact on the profitability of trading enterprises globally, in Europe and with special insight into Serbia.

Extensive literature is written worldwide on the issue of impact of cash conversion cycle on profitability of firms, especially trading, while in Serbia there is no paper fully devoted to the research of this subject, which is only indirectly treated in the context of financial management of trade in Serbia (Lukic, 2011, Lukic, 2012; Lukic, 2013a, b; Lukic, 2014a, b, c; Lukic et al., 2014; Lukic, 2015a, b,c, d, e, f). All accessible international theoretical, methodological and empirical knowledge in this work is used as fundamental basis for research of the influence of cash conversion cycle on the profitability of trading enterprises in Serbia.

The primary *research hypothesis* in this work is that cash conversion cycle is significant factor of profitability of trading companies. It is tested on the example on numerous enterprises for the period 2010-2014.

According to the issue, aim and the hypothesis, beside comparative analysis of selected countries, trading enterprises, types of stores and categories of products, *the research methodology* in this work also used regression model for measuring impact of the efficiency of managing net current assets and cash conversion cycle on performance of trade enterprises in Serbia respectively. In order to bring relevant conclusions we used other research methods, especially literature and case studies.

The issue of the impact of cash conversion cycle on the profitability of trading enterprises in Serbia is, as far as we know, thoroughly treated for the first time in this work, in what we find its scientific and professional value, and the main *contribution* of the work is that it shows which measures should be taken so as to maximally control the impact the cash conversion cycle on the profitability of trade enterprises in Serbia. The *limitation* of this work we find in the fact that the used data are not fully comparable because the frequent change of accounting rules and coordination with International accounting standards, International standards of financial reporting, and directives of the European Union. Nevertheless, those limitations do not substantially diminish the significance of this work (in other words – the use of the obtained results) in improving the system of integrated control of cash conversion cycle impact on the profitability of trading enterprises in Serbia in the future.

Net current assets

Methodologically, net current asset is understood as difference between current assets (working capital) and short term liabilities (current liabilities).

In its essence, it is a part of current assets which is financed from long-term sources of funds, and also, significant measure of financial management of companies from all sectors, especially their solvency.

Typical regression model for envisaging the impact of net current assets on profitability of companies (Shan et al., 2015):

$$ROA = a + b1(CATAR) + b2(CLTAR) + b3(SIZE) + b4(SLGR) + b5(LEV) + e$$

i.e.

$$TQ = a + b1(CATAR) + b2(CLTAR) + b3(SIZE) + B4(SLGR) + b5(LEV) + e$$

where: a = Intercept (constant); ROA = Return on assets of firm for period t; Q = Market value of firm for period t; CATAR = Total current assets to total assets ratio of firm for period t; CLTAR = Total current liabilities to total assets ratio for period t; SIZE = Firm size, natural logarithm firm total assets; SLGR = Sales growth or annual sales growth; LEV = Financial leverage of firm; e = unexpected error of model.

Tobin's Q (TQ) model is used for envisaging the impact of current assets on approximate value of all enterprises, including trading.

Net current assets ratio varies across sectors due to the character of their business. According to one research the average net return of current assets (in days) in 2014 was as follows: construction products 80.3, construction and engineering 60.8, food and beverage 55.3, media and entertainment 34.1, mining and resources 43.0, retail 57.8, transportation and distribution 40.1, services 26.6 and other 50.5 (Working Capital report 2015, Cash and Working Capital Centre of Excellence, McGrathNicol, http://www.mcgrathnicol.com/working-capital-report-2015/). Within the trade sector net current assets return varied across regions, companies, types of stores, categories of products due to nature of business.

There are many diverse possibilities for efficient managing of net current assets in trade and especially retail sector. So, for example, according to one research, the inventory can be reduced by 10% to 40%, receivables 10 to 25%, and payables can be extended up to 10% (European Working Capital Study in Retail Industry – Key Findings; http://schulz-beratung.de/european-working-capital-study-in-retail-industry/). Within the system of integrated net current assets management in trade as well in other sectors, special attention should be

paid to managing receivables, inventory and payables, including cash holdings (Cash for Growth - Working Capital in the Retail Sector, December 2014, PWC; https://www.pwc.nl/nl/assets/documents/pwc-cash-for-growth-working-capital-retail.pdf). Efficient management of net current assets positively affects cash conversion cycle as a factor of profitability of trade firms (Bridging the Gap – 2015 Annual Global Working Capital Survey, PWC; https://www.pwc.com/gx/en/services/advisory/deals/business-recovery-restructuring/working-capital-survey.html). In order to efficiently manage the net current assets, and to envisage the impact of cash conversion cycle on profitability of trade firms, it is necessary to know the total net current assets turnover and its components (in days) – especially inventory, receivables and payables. The (net) structure of current assets affects the profitability of trade firms (Michalski, 2007). Beside other factors, size of trading company significantly affects the efficiency of managing current assets (Tang, 2014). Table 1 illustrates the current assets (working capital) turnover (in days) in global retail and Europe for the period 2009-2013.

Table 1. *Global and European current assets performance in retail, 2009-2013*

	2009	2010	2011	2012	2013
Global					
Current assets (days)	9,7	11,1	12,5	12,6	13,6
Receivables (customers) (days)	12,1	13,4	14,3	14,0	14,5
Inventory (days)	32,0	32,8	33,7	33,2	33,3
Short-term liabilities (to vendors) (days)	34,3	35,1	35,4	34,5	34,2
Operative cycle (days)*	44,1	46,2	48,0	47,2	47,8
Cash conversion cycle (days)*	9,8	11,1	12,6	12,7	13,6
European					
Current assets (days)	-9,8	-8,4	-5,0	-3,4	-2,0
Receivables (customers) (days)	12,7	13,4	14,4	13,1	13,1
Inventory (days)	30,0	31,2	32,1	30,5	29,1
Short-term liabilities (to vendors) (days)	52,1	53,1	51,5	47,1	44,3
Operative cycle (days)*	42,7	44,6	46,5	43,6	42,2
Cash conversion cycle (days)*	-9,4	-8,5	-5,0	-3,5	-2,1

Note: *author's calculations

Source: Cash for Growth - Working Capital in the Retail Sector, December 2014, PWC, https://www.pwc.nl/nl/assets/documents/pwc-cash-for-growth-working-capital-retail.pdf (December 19,2016)

The data in the table summarize negative cash conversion cycle in retail sector in Europe, what indicates that more cash was spent than earned in the observed period of time. Considering this, it is necessary to manage current assets more efficiently so as to improve the liquidity of retail sector in Europe in the future.

To thoroughly analyse significance and the role of working capital in trade, table 2 presents working capital in Wal-Mart and its competition for the 2010-2015 period.

Table 2. *Wall-Mart, working capital turnover, and its competition, 2010-2015*

	Jan 31, 2015	Jan 31, 2014	Jan 31, 2013	Jan 31, 2012	Jan 31, 2011	Jan 31, 2010
Current assets (USD $ millions)	63,278	61,185	59,940	54,975	51,893	48,331
Less: Current liabilities (USD $ millions)	65,272	69,345	71,818	62,300	58,484	55,461
Working capital (USD $ millions)	(1,994)	(8,160)	(11,878)	(7,325)	(6,591)	(7,230)
Net sales (USD $ millions)	482,229	473,076	466,114	443,854	418,952	405,046
Working capital turnover ratio[1]	-	-	-	-	-	-
Working capital turnover, competitors						
Amazaon.com Inc.	-	27,48	45,26	26,63	18,53	10,13
Costco Wholesale Corp.	149,76	34,70	39,83	76,67	52,57	46,36
eBay Inc.	-	1,99	1,51	1,34	1,97	1,40
Home Depot Inc.	20,62	17,40	19,12	13,68	20,26	18,71
Lowe's Cos. Inc.	76,81	37,62	24,34	23,02	17,14	19,87
Netflix Inc.	-	4,31	4,84	6,39	5,29	8,57
Target Corp.	30,89	-	30,53	31,67	9,21	8,94
TJX Cos. Inc.	10,44	10,75	13,26	11,21	11,16	10,63
Working capital turnover, sector						
General retailers	-	58,63	62,50	44,18	39,65	37,10
Working capital turnover, industry						
Consumer services	-	42,82	39,16	29,47	27,45	23,69

Note: 2015 calculation – [1]working capital turnover = Net sales/working capital = 482,229/-1,994 = -

Source: Based on data from Wal-Mart Stores Inc. Annual Reports. According to: Wal-Mart Stores Inc. (WMT), Short-term (operating) Activity Analysis, https://www.stock-analysis-on.net/NYSE/Company/Wal-Mart-Stores-Inc/Ratios/Short-term-Operating-Activity (December 19, 2016)

In the observed period, working capital turnover of Wal-Mart was negative.

In other words, in the long run, important part of its business was financed from current sources of funds. Similar situation was in 2015 with its competitors (Amazaon.com Inc., eBay Inc., Netflix Inc.) in sectors – general retailers,

and industry – customer services, which was, among other inner factors, a consequence of generally unfavourable business conditions.

Regarding this, the activity ratio (inventory turnover, receivables and payable, operative cycle and cash conversion cycle) and indirect indicators of managing working capital efficiency, Table 3 shows the activity of Wal-Mart for the period 2010-2015.

Table 3. *Wal-Mart activity ratio, 2010-2015*

	Jan 31, 2015	Jan 31, 2014	Jan 31, 2013	Jan 31, 2012	Jan 31, 2011	Jan 31, 2010
Turnover ratio						
Inventory turnover	8,09	7,98	8,05	8,23	8,68	9,19
Receivables turnover	71,15	70,85	68,87	74,76	82,33	97,74
Payables turnover	9,50	9,57	9,26	9,15	9,40	10,00
Working capital turnover	-	-	-	-	-	-
Turnover -Average number of days						
Average inventory processing period	45	46	45	44	42	40
Add: Average receivable collection period	5	5	5	5	4	4
Operating cycle	50	51	50	49	46	44
Less: Average payables payment period	38	38	39	40	39	36
Cash conversion cycle	12	13	11	9	7	8

Source: Based on data from Wal-Mart Stores Inc. Annual Reports. According to: Wal-Mart Stores Inc. (WMT), Short-term (operating) Activity Analysis, https://www.stock-analysis-on.net/NYSE/Company/Wal-Mart-Stores-Inc/Ratios/Short-term-Operating-Activity (December 19, 2016)

According to the data in the Table 3, Wal-Mart average period of operational cycle is between 44 and 51 days, and cash conversion cycle between 8 and 13 days. During that time, there was gradual increase of operational cycle and cash conversion cycle period. In other words, the financial performance of Wal-Mart deteriorated lately.

Cash conversion cycle

According to the general definition and the specifics of trading business, cash conversion cycle expresses the length of time that it takes for a company to convert cash into inventory (accounts payable) and than through sales (accounts receivable) back into cash. In other words, cash conversion cycle in trading companies is time period (expressed in days) from the moment of paying goods to vendors/creditors up to the moment of collection of the goods sold. Due to the business character, operative cycle is longer in trading than in service companies.

In tune with general definition, basic formula for measuring the cash conversion cycle is as follows: Cash conversion cycle = Accounts receivable (in days) + inventories (in days) – accounts payable (in days). On the right side of given equation first two variables mark the operational cycle (Operational cycle = Accounts receivable in days + inventories in days). In the given formula some variables are measured as follows: Account receivable in days: receivables/sales x 365; Inventory (in days): Inventories/sales x 365; Account payable in days: payables/sales x 365.

Cash conversion cycle can be positive and negative. Positive cash conversion cycle shows that the number of days payable is less than days receivable. On contrary, negative cash conversion cycle is vice versa – the number of days needed for collection from customers (days receivable) is less than the number of days needed for payment to vendor (days payable). The aim of every company is to optimize the cash conversion cycle, especially to eliminate negative, in a function of managing expected profit. Optimal cash conversion cycle is efficient management of cash flow. It positively reflects on financial performance of trading companies.

Cash conversion cycle is observed integrally in the context of efficiency of managing net current assets. In trading companies the need for net current assets can be reduced: by reducing period of keeping inventories (improving the process of inventory control or by practicing the vendors supply in the moment the good are necessary for further sales to customers); by shortening the time for accounts payable (by improving efficiency of collection control process, by granting discounts to customers for earlier payment, by overcharging interest for deferred payment); slower payment to vendors (which is accomplished by better relations with vendors or creditors). The application of the Japanese philosophy of managing inventories: "just in time" and modern technology (radio frequency identification) significantly improves net current assets, operative cycle and cash conversion cycle in trading companies, what has a

positive reflection on their profitability.

Concerning the differences in nature of business, cash conversion cycle differs among economy sectors. So, for example, according to one study, cash conversion cycle (maximum – days; minimum – days) in Europe per some economy sectors amounts: consumer (personal) goods and retail 22.15, industrial goods and engineering 42.28, automobile and parts 40.68, gas, water and other 22.00 (minimum – days 26.01), transportation and travel 3.23 (minimum – days 5.41), care and pharmaceuticals 65.45 (minimum – days 11.89), and media, telecommunication and technology 93.59 (minimum – days 69.30) (European Working Capital Study in Retail Industry – Development of the Cash Conversion Cycle in Europe; http://schulz-beratung.de/european-working-capital-study-in-clothing-industry/). Under the influence of specific factors it differs within one sector, as observed under sub-sectors, for example, in trade sectors per firms, types of stores, categories of goods and items. As to illustrate, Table 4 shows the cash conversion cycle in Wal-Mart and its competition for the period 2010-2015.

Table 4. *Cash conversion cycle in Wal-Mart, 2010-2015*

	Jan 31, 2015	Jan 31, 2014	Jan 31, 2013	Jan 31, 2012	Jan 31, 2011	Jan 31, 2010
Average inventory processing period	45	46	45	44	42	40
Average receivable collection period	5	5	5	5	4	4
Average payables payment period	38	38	39	40	39	36
Cash conversion cycle[1] ratio	12	13	11	9	7	8
Cash Conversion Cycle, Competitors						
Amazaon.com Inc.	-	-34	-37	-42	-44	-53
Costco Wholesale Corp.	3	4	4	3	4	2
Home Depot Inc.	43	43	47	50	54	49
Lowe's Cos. Inc.	-	-	-	-	-	-
Target Corp.	-	-	-	40	42	45
TJX Cos. Inc.	25	25	24	31	28	28
Cash Conversion Cycle, Sector						
General retailers	-	11	11	13	13	14
Cash Conversion Cycle, Industry						

Consumer services	-	16	15	16	17	17

Source: Based on data from Wal-Mart Stores Inc. Annual Reports. According to: Wal-Mart Stores Inc. (WMT), Short-term (operating) Activity Analysis, https://www.stock-analysis-on.net/NYSE/Company/Wal-Mart-Stores-Inc/Ratios/Short-term-Operating-Activity (December 19, 2016)

In Wal-Mart cash conversion cycle is on average for the sector – general retailers and industry – consumer services. In is on the higher level compared to many competitors (Amazon.com.Inc., Home Depot Inc., TJX Cos. Inc.).

Working capital of trade in Serbia

As in other countries, the role of trade is also important in creating performances of Serbian economy. It participated in total number of enterprises with 35.10%, in total number of employed with 19.46% and total revenue with 33.49 (calculation performed by the author based on the Business registers agency data). High share of trade in relevant indicators show that the structure of economy of Serbia has changed, and that it widely assumes characteristics of "tertiary business". In this work, the number of covered trade enterprises from Serbia in statistical survey was as follows: 2010 – 35.474, 2011 – 33.849, 2012 – 32.933, 2013 – 33.905, and 2014 – 32.911, so we can consider the sample valid.

Purchase and sale, managing of working capital belongs to important characteristics of trading companies' performance in Serbia, as well in other countries. In order to manage working capital it is necessary to know all relevant aspects of its analysis: assets share, total revenues share, current liquidity, working capital turnover ratio, net current assets, operative cycle and cash conversion cycle. Table 5 illustrates share of working capital, current liabilities and capital in assets of trade in Serbia for the period 2010-2014.

Table 5. *Share of working capital, current liabilities and capital in assets of trade in Serbia, 2010-2014*

	Number of enterprises	Working capital, (%)	Inventory, (%)	Assets (%)	Current liabilities, (%)	Capital, (%)
2010	35474	57.78	19.18	37.69	57.54	28.65
2011	33849	57.16	19.61	36.39	56.75	30.94
2012	32933	56.37	19.66	35.64	55.39	29.99
2013	33905	63.00	22.26	23.84	63.33	34.53
2014	32911	63.32	22.43	23.87	62.16	35.28

Descriptive Statistics						
Minimum						
Maximum	32911,00	56.37	19.18	23.84	55.39	28.65
Mean	35474,00	63.32	22.43	37.69	63.33	35.28
Std. Deviation	33814,4000	59.5260	20.6280	31.4860	59.0340	31.8780
Valid N (listwise)	1043,63250 5	3,35671 5	1,57961 5	7,00463 5	3,49839 5	2,89271 5

Note: author's calculations. Descriptive statistics calculated by SPSS statistic program
Source: Business registers agency

The data indicate that the average share in the assets in trade of Serbia is: working capital 59.52%, inventory 20.62%, assets 31.48%, current liabilities 59.03% and capital 31.87%. Given the specific character of business, such share is similar in trading business of other countries.

Liquidity is significant measure of financial performance of all companies, including trading. It is established as relation between current assets and current liabilities. Table 6 shows the current liquidity of trading companies in Serbia for the period 2010-2014.

Table 6. *Liquidity of trade in Serbia, 2010-2014*

	Current liquidity
2010	1,00
2011	1,00
2012	1,01
2013	0,99
2014	1,01

Note: author's calculations
Source: Business registers agency

The liquidity of trade in Serbia is very unfavourable, and significantly below the "gold banking rule" (current assets 2: current liabilities 1), "industry standard" of comparable countries, especially European Union and the region.

In analysing turnover ratio we envisage the efficiency of managing assets, i.e. working capital in all economy sectors, including trading. Considering this, Table 7 represents working capital turnover in trade of Serbia for the period 2010-2014.

Table 7. *Efficiency of managing working capital in trade of Serbia, 2010-2014*

	Working capital turnover ratio	Inventory turnover ratio	Assets turnover ratio	Current liabilities turnover ratio
2010	2,17	6,55	3,33	2,18
2011	2,31	6,73	3,62	2,32

2012	2,34	6,70	3,70	2,38
2013	1,19	6,20	5,80	2,18
014	2,19	6,18	5,81	2,23
Descriptive Statistics Minimum Maximum Mean Std. Deviation Valid N (listwise)	 1,19 2,34 2,0400 ,48083 5	 6,18 6,73 6,4720 ,26640 5	 3,33 5,81 4,4520 1,24277 5	 2,18 2,38 2,2580 ,08899 5

	Working capital turnover in days	Inventory turnover in days	Assets turnover in days	Current liabilities turnover in days
2010	168	55	109	167
2011	157	54	100	157
2012	155	54	98	153
2013	166	58	62	167
2014	166	59	62	163
Descriptive Statistics Minimum Maximum Mean Std. Deviation Valid N (listwise)	 155,00 168,00 162,4000 5,94138 5	 54,00 59,00 56,0000 2,34521 5	 62,00 109,00 86,2000 22,47665 5	 153,00 167,00 161,4000 6,22896 5

Note: author's calculations. Descriptive statistics calculated by SPSS statistic program
Source: Business registers agency

In trade of Serbia average turnover ratios of total and specific types of working capital are: working capital 2.04, inventory 6.47, assets 4.45, current liabilities 2.25. Average duration of its turnover expressed in days: working capital 162.40, inventory 56.00, assets 86.20, current liabilities 161.40.

According to these data, the performance of managing working capital in trade of Serbia are bad in comparison to global trade, European trade and "industry standards". There is an obvious trend of decreasing period of accounts receivable collection in trade of Serbia. Nevertheless, it is shorter than time used for payment of current liabilities, above all - to vendors. In other words, trade in Serbia finances its business activity mostly from current assets sources.

Working capital is major indicator of financial performance of all companies, especially trade given the character of their business – purchase and sale of goods. Table 8 shows the dynamics of working capital of trade in Serbia for the period 2010-2014.

Table 8. *Working capital of trade in Serbia, 2010-2014*

	Working capital (million dinar)	Share of working capital in total revenue, (%)	Share of working capital in total assets, (%)	Working capital turnover ratio	Working capital turnover in days
2010	4.557	0.19	0.24	523	0,69
2011	9.447	0.31	0.41	315	1,15
2012	23.181	0.74	0.97	135	2,70
2013	-6.982	-0.23	-0.32	-426	-0,85
2014	25.423	0.83	1.15	119	3,06
Descriptive Statistics					
Minimum	-6.982,00	-.23	-.32	-426,00	-,85
Maximum	25.423,00	.83	1.15	523,00	3,06
Mean	11.125,2000	.3680	.4900	133,2000	1,3500
Std. Deviation	13449,88566	,43142	,58970	352,81185	1,58605
Valid N (listwise)	5	5	5	5	5

Note: author's calculations. Descriptive statistics calculated by SPSS statistic program
Source: Business registers agency

As the data in the Table 8 indicate following average performance values are characteristic for working capital of trade in Serbia: working capital 11.125 million dinars, share of working capital in total revenue 0.37%, share of working capital in total assets 0.49%, working capital turnover ratio 133.20, working capital turnover in days 1.35. Therefore, the share of long-term fund sources in financing of working capital is at very low level in trade of Serbia.

In 2013 working capital was fully financed from short-term sources, what is an indication of unsatisfied liquidity and solvency of trade in Serbia. Presented characteristics of working capital in the observed time period reflected on operative cycle and cash conversion cycle and profitability of trade in Serbia.

Table 9 shows profitability of trade enterprises in Serbia for the period 2010-2014.

Table 9. *Profitability of trade Serbia, 2010-2014*

	Return on revenue (net income/ total revenue)	Return on assets (net income/ assets)	Return on equity (net income/ equity)	Assets turnover ratio (total revenue/ assets)	Financial leverage (assets/ equity)	Firm size (Log 10)	Annual sales growth
2010	3,05	3,84	13,42	1,25	3,49	6,42	0,08
2011	3,20	4,24	13,70	1,32	3,22	6,45	0,08
2012	2,99	3,95	13,17	1,31	3,33	6,49	0,09
2013	2,97	4,12	11,93	1,38	2,89	6,48	-0,04
2014	2,87	3,98	11,30	1,38	2,83	6,48	0.01

Descriptive Statistics							
Minimum	2,87	3,84	11,30	1,25	2,83	6,42	-,04
Maximum	3,20	4,24	13,70	1,38	3,49	6,49	1,00
Mean	3,0160	4,0260	12,7040	1,3280	3,1520	6,4640	,2420
Std. Deviation	,12157	,15582	1,03587	,05450	,28411	,02881	,42711
Valid N (listwise)	5	5	5	5	5	5	5

Note: author's calculations. Descriptive statistics calculated by SPSS statistic program
Source: Business registers agency

Average values of some indicators of profitability of trade in Serbia in the observed period were: return on revenue 3.01%, return on assets 4.02%, return on equity 12.70%. Profitability of trade in Serbia is on the lower level compared to "industry standard" and comparable countries, above all countries of the European Union and the region. These were unfavourably affected by low assets turnover ratio (average relation of total revenue and assets is 1.32) and financial leverage (high indebtedness, assets and revenue relation is 3.15%), firm size (average Log 10 – 6.4640) and annual growth of sales (0.2420 on average).

Cash conversion cycle of trade in Serbia

Cash conversion cycle is very significant indicator of financial performance (i. e. factor of profitability) of companies. Regarding this, Table 10 presents operative cycle and cash conversion cycle of trading enterprises for the period 2010-2014.

Table 10. *Operative cycle and cash conversion cycle of trade in Serbia, 2010-2014*

	Operative cycle	Cash conversion cycle
2010	164	-3
2011	154	-3
2012	152	-1
2013	120	-47
2014	121	-42
Descriptive Statistics		
Minimum	120,00	-47,00
Maximum	164,00	-1,00
Mean	142,2000	-19,200
Std. Deviation	20,32732	23,17758
Valid N (listwise)	5	5

Note: author's calculations. Descriptive statistics calculated by SPSS statistic program
Source: Business registers agency

According to the analysis of the operative cycle, financial performance of trade in Serbia is very unfavourable – 142.20 days on average and prolonged – compared to global and trade of the EU. Beside, cash conversion cycle is negative, so more money is spent than earned. More money is spent than earned in sale of goods, for 19 days on average. It is negatively reflected on profitability of trade in Serbia. The data in Table 11 show that cash conversion cycle with minus sign has a weak impact on return on assets in trade of Serbia.

Table 11. *Correlation analysis of impact of selected factors on profitability of trade in Serbia*

		Return on revenue	Return on assets	Return on equity	Assets turnover	Financial leverage	Operative cycle	Cash conversion cycle
Return on revenue	Pearson Correlation	1	,494	,866	-,515	,568	,685	,680
	Sig. (2-tailed)		,398	,058	,375	,318	,202	,206
	N	5	5	5	5	5	5	5
Return on assets	Pearson Correlation	,494	1	,056	,490	-,405	-,267	-,173
	Sig. (2-tailed)	,398		,928	,402	,499	,664	,781
	N	5	5	5	5	5	5	5
Return on equity	Pearson Correlation	,866	,056	1	-,821	,890*	,936*	,934*
	Sig. (2-tailed)	,058	,928		,088	,043	,019	,020
	N	5	5	5	5	5	5	5
Assets turnover	Pearson Correlation	-,515	,490	-,821	1	-,977**	-,954*	-,861
	Sig. (2-tailed)	,375	,402	,088		,004	,012	,061
	N	5	5	5	5	5	5	5
Financial leverage	Pearson Correlation	,568	-,405	,890*	-,977**	1	,976**	,928*
	Sig. (2-tailed)	,318	,499	,043	,004		,004	,023
	N	5	5	5	5	5	5	5
Operative cycle	Pearson Correlation	,685	-,267	,936*	-,954*	,976**	1	,967**
	Sig. (2-tailed)	,202	,664	,019	,012	,004		,007
	N	5	5	5	5	5	5	5
Cash conversion cycle	Pearson Correlation	,680	-,173	,934*	-,861	,928*	,967**	1
	Sig. (2-tailed)	,206	,781	,020	,061	,023	,007	
	N	5	5	5	5	5	5	5

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

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

Note: author's calculations. Descriptive statistics calculated by SPSS statistic program

In order to thoroughly analyse the treated issues in this work, we envisage the impact of cash conversion cycle on the profitability of trade in Serbia, with the help of regression model.

Regression model is as follows:

$$ROA_{i,t} = a + b_1CCC_{i,t} + b_2SIZE_{i,t} + b_3LEV_{i,t} + e_{i,t}$$

where: a is constant, $ROA_{i,t}$ profitability (%), $CCC_{i,t}$ cash conversion cycle (in days), $Size_{i,t}$ firm size in time t (natural logarithm sale, Log 10), $LEV_{i,t}$ financial leverage of firm, and $e_{i,t}$ accidental statistical error.

Table 12 represents the results of the given regression model in analysing the impact of cash conversion cycle on profitability of trade in Serbia.

Table 12. *Impact of cash conversion cycle on profitability of trade in Serbia - results of regression model (obs. 33814)*

	Dependant variable: Return on assets			
Independent variable	Coefficients	Std. Error	t-statistic	Sig.
(Constant)	20,321	35,606	,571	,670
Cash conversion cycle (CCC)	,012	,013	,869	,545
Firm size (SIZE)	-1,892	5,132	-,369	7,775
Financial leverage (LEV)	-1,219	1,227	-,994	,502
(Weighted statistics)				
(R square)	,525			
(Adjusted R square)	-,902			
(SE of regression)	,21488			
(F-statistics)	,368			
(Sig. F)	,802			
(Durbin-Watson)	2,647			

Note: author's calculations. Descriptive statistics calculated by SPSS statistic program

Results of the regression model show that cash conversion cycle almost has no effect on profitability of trade in Serbia. In other words, the impact of cash conversion cycle is marginal, with minus sign on profitability of trade enterprises in Serbia. In order to improve its impact it is necessary to manage total working capital and its manifestations (inventory, assets, liabilities) more efficiently in the future.

So as to thoroughly research the issue of impact of cash conversion cycle on the performance of trade in Serbia we will present working capital, operative cycle and cash conversion cycle of five largest trading companies in 2014.

Observed trading companies participated in 2014 in market share with

9.14% (calculations performed by the author based on the Business registers agency data).

Table 13 presents business efficiency with special insight into working capital, cash conversion cycle and profitability of five biggest trade companies in Serbia, 2014.

Table 13. *Business efficiency of five biggest trade companies in Serbia, 2014*

	Assets turnover ratio	Current liquidity (current assets/current liabilities)	Working capital turnover ratio	Inventory turnover ratio	Assets turnover ratio	Current liabilities turnover ratio	Financial leverage
Delhaize Serbia	1,12	1,33	2,54	12,35	7,74	3,41	1,53
Mercator-S	1,07	0,79	3,06	6,84	12,70	2,43	3,07
IDEA	2,18	0,64	3,92	132,40	5,72	2,53	8,48
Knez Petrol	7,48	1,06	9,37	82,70	12,06	9,97	4,32
Veletabak	4,82	1,06	5,09	13,70	10,08	5,43	9,01

Note: author's calculations.

Source: Business registers agency

The liquidity of the observed trading companies is unsatisfactory. They finance business activities from foreign sources of funds. The efficiency of usage of the total assets, i. e. current assets is also unsatisfactory, significantly below the "industry standard" and comparable trading companies. All that unfavourably affected the cash conversion cycle as a factor of their profitability.

Table 14 presents working capital of five biggest trading companies in Serbia for 2104.

Table 14. *Working capital of five biggest trading companies in Serbia, 2014*

	Working capital (million dinars)	Share of working capital in total revenue, (%)	Working capital turnover ratio	Working capital turnover in days
Delhaize Serbia	7.463	9.95	10,04	36
Mercator-S	-6.077	-8.37	-11,93	-30
IDEA	-7.311	-14.01	-7,13	-51
Knez Petrol	249	0.63	157,44	2
Veletabak	461	1.21	82,07	4

Note: author's calculations

Source: Business registers agency

Based on these data we can conclude that the companies Delhaize Serbia, Knez Petrol and Veletabak slightly financed their working capital form long-

term sources of funds. On contrary, companies IDEA and Veletabak have negative working capital, what means that it is totally financed from current sources. It has a negative impact on their current liquidity and profitability.

Table 15 presents cash conversion cycle of five biggest trading companies in Serbia in 2014.

Table 15. *Cash conversion cycle of five biggest trading companies in Serbia, 2104*

	Inventory turnover in days	Assets turnover in days	Current liabilities turnover in days	Operative cycle	Cash conversion cycle	Return on revenue (net income/total revenue)	Return on assets (net income/ assets)	Return on equity (net income/ equity)
Delhaize Serbia	29	47	107	76	-31	4,01	4,49	6,89
Mercator-S	53	28	150	81	-69	0,13	0,14	0,045
IDEA	2	63	144	65	-79	-6,50	-14,17	-119,85
Knez Petrol	4	30	36	34	-2	0,69	5,22	22,60
Veletabak	26	36	67	62	-5	2,24	10,85	97,81

Note: author's calculations

Source: Business registers agency

All observed trading companies have negative cash conversion cycle, especially IDEA. More money was spent than earned. It affected their profitability. In other words, there is significant positive correlation between cash conversion cycle and profitability of observed trading companies in Serbia (Table 16).

Table 16. *Correlation analysis of cash conversion cycle impact on the profitability of five biggest trading companies in Serbia*

		Inventory turnover in days	Assets turnover in days	Current liabilities turnover in days	Operative cycle	Cash conversion cycle	Return on revenue	Return on assets	Return on equity
Inventory turnover in days	Pearson Correlation	1	-,515	,422	,736	-,205	,474	,333	,371
	Sig. (2-tailed)		,374	,479	,156	,740	,420	,584	,539
	N	5	5	5	5	5	5	5	5
Assets turnover in days	Pearson Correlation	-,515	1	,433	,201	-,494	-,604	-,727	-,737
	Sig. (2-tailed)	,374		,467	,746	,397	,281	,164	,155
	N	5	5	5	5	5	5	5	5
Current liabilities turnover in days	Pearson Correlation	,422	,433	1	,825	-,957*	-,471	-,690	-,644
	Sig. (2-tailed)	,479	,467		,086	,011	,423	,197	,241
	N	5	5	5	5	5	5	5	5
Operative cycle	Pearson Correlation	,736	,201	,825	1	-,625	,065	-,193	-,159
	Sig. (2-tailed)	,156	,746	,086		,259	,918	,755	,799
	N	5	5	5	5	5	5	5	5

Cash conversion cycle	Pearson Correlation	-,205	-,494	-,957*	-,625	1	,684	,853	,807
	Sig. (2-tailed)	,740	,397	,011	,259		,203	,066	,099
	N	5	5	5	5	5	5	5	5
Return on revenue	Pearson Correlation	,474	-,604	-,471	,065	,684	1	,909*	,833
	Sig. (2-tailed)	,420	,281	,423	,918	,203		,032	,080
	N	5	5	5	5	5	5	5	5
Return on assets	Pearson Correlation	,333	-,727	-,690	-,193	,853	,909*	1	,980**
	Sig. (2-tailed)	,584	,164	,197	,755	,066	,032		,003
	N	5	5	5	5	5	5	5	5
Return on equity	Pearson Correlation	,371	-,737	-,644	-,159	,807	,833	,980**	1
	Sig. (2-tailed)	,539	,155	,241	,799	,099	,080	,003	
	N	5	5	5	5	5	5	5	5

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

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

Note: author's calculations. Correlation analysis calculated by SPSS statistic program

Conclusion

Net current assets (working capital) belongs to significant instruments of managing finance in trading companies. In reflects on operative cycle, cash conversion cycle as a factor of profitability of trading companies.

Cash conversion cycle of trade in Serbia is negative – more money is spent than earned in trade. Such negative cash conversion cycle had unfavourably affected profitability of trade in Serbia.

So as to improve the efficiency of cash conversion cycle on profitability of trade in Serbia it is necessary to manage more efficiently the working capital and all its manifestations (inventory, assets, short-term liabilities). In that context, huge part of working capital should be financed from long-term sources of funds. All that, and other relevant measures will have positive effect on profitability of trading enterprises in Serbia.

REFERENCES

1. Bridging the Gap – 2015 Annual Global Working Capital Survey, PWC, https://www.pwc.com/gx/en/business-recovery-restructuring-services/working-capital-management/working-capital-survey/2015/assets/global-working-capital-survey-2015-report.pdf (December 19, 2016).
2. Cash for Growth - Working Capital in the Retail Sector, December 2014, PWC, https://www.pwc.nl/nl/assets/documents/pwc-cash-for-growth-working-capital-retail.pdf(December 19, 2016).
3. Das, S. (2015a), A study on management of corporate cash in consumer durable sector. Management Science Letters, 5: 137-156.
4. Das, S. (2015b). Impact of cash conversion cycle on cash holding – A study on FMCG

sector. Accounting, 1: 1-16.
5. Li, C., Dong, H., Chen, S. and Yang, Y. (2014), Working Capital Management, Corporate Performance, and Strategic Choices of the Wholesale and retail Industry in China. The Scientific World Journal, Volume 2014, Article ID 953945, 15 pages, http://dx.doi.org/10.1155/2014/953945(December 19, 2016).
6. Lukic, R. (2011). Evaluacija poslovnih performansi u maloprodaji. Beograd: Ekonomski fakultet.
7. Lukic, R. (2012). Sustainable Development of Retail in Serbia. Review of International
8. Comparative Management, 13 (4): 574-586.
9. Lukic, R. (2013a). Računovodstvo trgovinskih preduzeća. Beograd: Ekonomski fakultet.
10. Lukic, R. (2013b). The Influence of Working Assets Efficiency Management on the Profitability of Trade in Serbia. Review of International Comparative Management. 14 (5): 731-745.
11. Lukic, R. (2014a). The economic and financial status of trade entrepreneurs in Serbia. Economic and Environmental Studies, 14 (3): 239 -264.
12. Lukic, R. (2014b): The profitability of trade in Serbia. Asian Journal of Management Research, 4 (3): 485-500.
13. Lukic, R. (20014c). The Analysis of the Efficiency of Trade Costs Management in Serbia, Economia. Seria Management, 17(2): 195-209.
14. Lukic, R. (2015a). The Analysis of Profit per Employee in the Trade of Serbia. Economia. Seria Management, 18(1): 1-16.
15. Likić, R. (2015b). Analiza faktora koji utječu na kreiranje dodatne vrijesnosti kao pokazatelj učinkovotosti poslovanja trgovine u Srbiji. Ekonomska misao i praksa, 1: 99-125.
16. Lukic, R. (2015c). The Analysis of Efficiency of Managing Inventories in Trade in Serbia. Review of International Comparative Management, 16 (2): 222-238.
17. Lukic, R. (2015d). The Impact of Financial Leverage on Performance of Trade in Serbia. Business Excellence and Management, 5(3): 5-21.
18. Lukic, R. (2015e). The impact of firm size on the performance of trade in Serbia. Economic and Environmental Studies, 15(4): 379 – 395.
19. Lukic, R. (2015f). The capital structure determinants in trade of Serbia. Business Excellence and Management, 5(4): 37-49.
20. Lukic, R., Vojteski-Kljenak, D. and Jovancevic D. (2014d). Food waste management. Management Research and Practice, 6 (4): 23-39.
21. Mateut, S., Mizen, P. and Ziane, Y. (2015). Inventory composition and trade credit. International Review of Financial Analysis, 42: 434-446.
22. Michalski, G. (2007). Portfolio Management Approach in Trade Credit Decision Making. Romanian Journal of Economic Forecasting, 8(3): 42-53.
23. Moss, J.D. and Stine, B. (1993). Cash Conversion Cycle and Firm Size: A Study Of Retail Firms. Managerial Finance, 19(8): 25-34.
24. Mun, S.G. and Jang, S. (2015). Working capital, cash holding, and profitability of restaurant firms. International Journal of Hospitality Management, 48 (20): 1-11.
25. Nizam,N.Z. and Hoshino, Y.(2015). Corporate Characteristics of Retailing Companies among Malaysia, Japan and USA. International Journal of Business and Management, 10 (6): 40-52.
26. Shan, L.H. et al., (2015). Working Capital Management Effect on the Performance of Wholesale and Property Industry in Malaysia. Journal of Economics and Behavioural

Studies, 7(5): 19-28.
27. Tang, Y. (2014): Trade Credit and Profitability in Small and Medium Enterprises. 1-9, http://essay.utwente.nl/65357/1/Tang_MB_IBA.pdf
28. Topal, B., Tunahan,H. and Dizkirici, A.S. (2013). Analyzing The Working Capital Structure and Profitability of Supermarket Chains: An Evidence From Istanbul Stock Exchange Trade Index. The Journal of Business Science, 1: 57-69.
29. Warrad, L.H. (2015). The Impact of Cash Conversion cycle on Services Firms' Liquidity: An Empirical Study Based on Jordanian Data. International Journal of Business and Management, 10(10): 108-115.
30. Working Capital report 2015, Cash and Working Capital Centre of Excellence, McGrathNicol. http://www.mcgrathnicol.com/working-capital-report-2015/ (December 19, 2016).
31. Yazdanfar, D. and Öhman, P. (2014). The impact of cash conversion cycle on firm profitability. An empirical study based on Swedish data. International Journal of Managerial Finance, 10 (4): 442-452.
32. Yazdanfar, D. and Öhman, P. (2015). The impact of credit supply on sales growth: Swedish evidence. International Journal of Managerial Finance, 11 (3): 329-340.

Analysis of Financial Performances of Public Companies Operating in Serbia

NIKOLIC Radmilo[32], FEDAJEV Aleksandra[33], MILICEVIC Rajica[34]

Introduction

Public enterprises constitute a separate segment of business entities, aimed at carrying out activities of public interest, as well as strategic importance for the state. Necessity of public enterprises existence in the economy is reflected primarily in eliminating or reducing the imperfections of market mechanisms in industries such as generation, transmission and distribution of electricity, oil, oil products, coal and natural gas, organizing and carrying out of road, air, water and postal transport, use, management and protection of resources in the public interest (such as, water, forest, mineral resources) etc. Since, as a rule, these are natural monopolies, the state regulates the price of these enterprises' products (so that goods and services, which they provide, would be available to all citizens), hence it is usually being far below the costs. The difference is paid from the state budget, because it is necessary that these enterprises cover the costs incurred. Besides, even though, by definition, public enterprises are owned by the state, the main source of funding for these enterprises should not be solely from the state budget, because in one moment the level of budget deficit and public debt would become unsustainable. This would disturb macroeconomic stability in the country (because imbalance in the fiscal sphere is rapidly being transferred to the whole economy), but also it would limit the offer of these goods and services for future generations (Nikolic, 2013). For this reason, it is necessary to strengthen the financial, institutional and human resource capacities of this segment in the public sector, where the business of these enterprises should be based on market rules and the principles of corporate governance. Keeping the balance between social justice and economy enables public enterprises to realize their function in the economy.

Despite numerous attempts to establish an adequate monitoring of their performances and use of resources, public enterprises in the Republic of Serbia still do not operate efficiently and rationally enough.

[32] Technical Faculty in Bor University of Belgrade, Bor, Serbia
[33] Technical Faculty in Bor University of Belgrade, Bor, Serbia
[34] Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia

Many years of their inefficient operation may put the sustainability of public finances in question. For the last few years, the situation in these enterprises has become so complex, that without the state aid, their normal functioning, and thus the supply of goods and services of general interest, would be almost impossible. According to assessment of the Fiscal Council, public enterprises, in all respects, made an annual fiscal cost of about 2% of GDP by 2012, and in 2013 and 2014, government expenditure on public enterprises grew about 3% of GDP (around billion Euros). This effect includes subsidies, activated guarantees and unpaid taxes and contributions – which burden the state budget, representing an annual cost that the state pays for the unsuccessful business of enterprises in their ownership (Fiscal Council, 2014). Besides generating significant government funding, these enterprises are blocking the assets of other companies, by not paying their obligations to them. Concerning this matter, the professional community often highlights the fact that among the main generators of liquidity crisis, which severely shake domestic economy, are many state-owned enterprises (Glisic, 2013).

In this sense, the main goal of this work is to examine both completely and comprehensively the financial position and profitability of crucial public enterprises by using ratio analysis. On the basis of its findings it will be possible to define not only the appropriate recommendations and guidelines for the public enterprises management but policy creators as well related to the possibility of increasing the efficiency of these enterprises through greater recognition of market principals.

Financial performances of Public Enterprises in the Republic of Serbia from 2010 to 2015

Bearing in mind that in this period began the implementation of certain reforms aimed at privatization and restructuring of public enterprises, there had also been certain changes regarding the number of public enterprises. In order to perceive the pace of implementation of these processes, Figure 1 shows the trend of the total number of public enterprises in the Republic of Serbia in the period between 2010 and 2015.

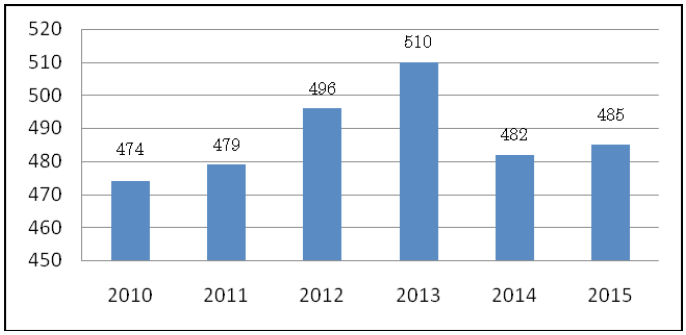


Figure 1. *Trend of the public enterprises number in the Republic of Serbia in the period from 2010 to 2015*
Source: Serbian Business Registers Agency

Based on the data presented, an upward trend in the number of public enterprises until 2013 can be noticed (due to statutory changes and organizing of new companies), and in 2014 the number of enterprises was significantly reduced. After that, the number of public enterprises increased again in 2015.

Namely, in the Republic of Serbia in 2015, 485 public enterprises operated, which is 0.5% of the total number of economic entities in the country and 3 enterprises more than in the previous year. Majority of public enterprises in 2015, 216 of them, were operating in E sector – Water supply, waste water management, controlling the process of removing waste and similar activities.

These changes in the number of public enterprises and efforts for rationalization, that is, for reduction of the number of employees definitely had an influence on the dynamics in number of employees in these enterprises. So Figure 2 shows trend in the number of employees in public enterprises in the Republic of Serbia in the given period.

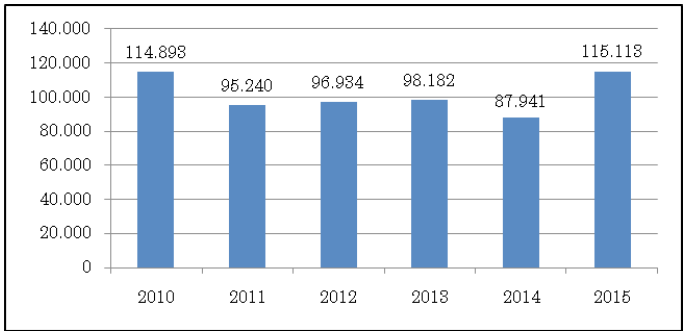


Figure 2. *Trend of the number of employees in public enterprises in the Republic of Serbia in the period from 2010 to 2015*
Source: Serbian Business Registers Agency

The number of employees primarily fell in 2011 and then there had been its constant growth until 2013. After the rationalization of the number of employees

in the context of austerity measures in 2014, the number of employees in these companies had been reduced to 87.941, which is 2,223 fewer employees than in the previous year thus making 9% of total employment number.

The following year brings significant growth in the number of employees (27172) due to the status change in which a public enterprise merged with seven limited liability companies. As a result of this change, in the public sector in 2015 there had been 11.6% of the total number of employees in the Republic of Serbia. It is interesting to notice that, even though 46.2% of public enterprises were classified as small companies (224 of them), still the largest number of workers employed large enterprises and even 59.9% of the total number of workers were in the public sector. Besides, it should be underlined that the largest number of public sector employees worked in this sector E – Water supply, waste water management, process control waste management and remediation activities (26.8% of them).

Besides engaging a significant number of workers, public enterprises also engage significant resources in the form of business assets, as shown in Figure 3.

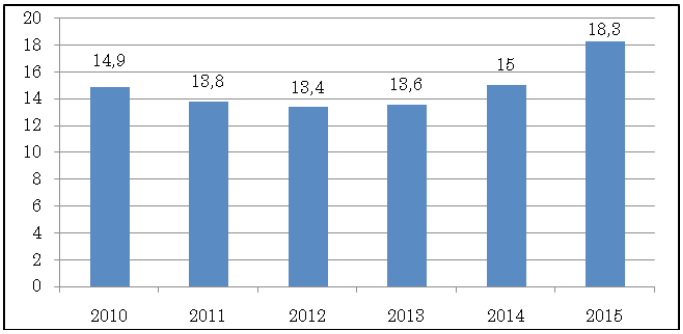


Figure 3. *Value share of the business assets of public enterprises in the total value of assets of all business entities in the Republic of Serbia from 2010 to 2015*
Source: Serbian Business Registers Agency

The share of public enterprises in the total assets of business entities in the Republic of Serbia decreased until 2012, and then its growth by the end of the observed period was noticed. Assets of public enterprises in 2015 increased by 23.4% (as a result of the aforementioned status change), which is significantly higher than the increase comparing to the level of the economy where the growth of assets of 2.2% was achieved. In the structure of business assets in 2015, fixed assets dominated with incredible 88%. It should be emphasized that 89% of the assets were owned by large companies, mostly in the sector D – Electricity, gas, steam and air conditioning, which increased their assets by 84.2%.

At the same time, the public enterprises had a significant share of the total economy capital, which, during the observed five-year period, was one fifth of

the total capital, which can be clearly seen in Figure 4.

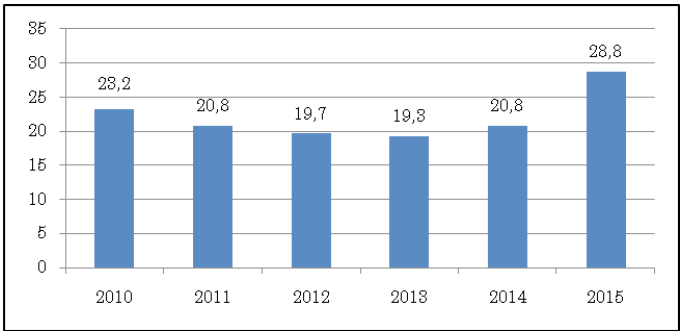


Figure 4. *The share of the public enterprises' capital value in the total capital value of all business entities in the Republic of Serbia from 2010 to 2015*
Source: Serbian Business Registers Agency

The presented data show that the mentioned share had been decreasing continuously until 2013, but from 2014 it began to grow. Share of public enterprises' capital in the economy's total capital in 2015 reached 28.8%. In the structure of funding sources, up to 2/3 make the capital. However, during 2014, there was an increase in borrowing, and this trend continued in 2015, when the value of the borrowed resources increased by 10.2% compared to the previous year. Public enterprises were mainly borrowing in the short term, so slightly more than one half of the total debt consisted of short-term liabilities.

This was far more favorable than previous year when short-term liabilities made almost 2/3 in the foreign sources of funding. It is also important to note that 91.1% of the capital was owned by large public enterprises. Like in the case of assets, the largest part of the potential also engaged enterprises from the sector D – Electricity, gas, steam and air conditioning, which doubled their capital comparing to the previous year.

More than 60% of public enterprises in the observed period were operating with a net profit, and a number of such enterprises increased over time. Thus, in 2015, 350 public enterprises operated profitably, realizing a total net profit of 27.015 million dinars, which is 5.8% of total net income generated in the economy that year. This image of positive performances of public enterprises is largely spoiled by the fact that these enterprises accumulated significant losses. Trend of accumulated losses share of public enterprises in the total accumulated loss of the economy is shown in Figure 5.

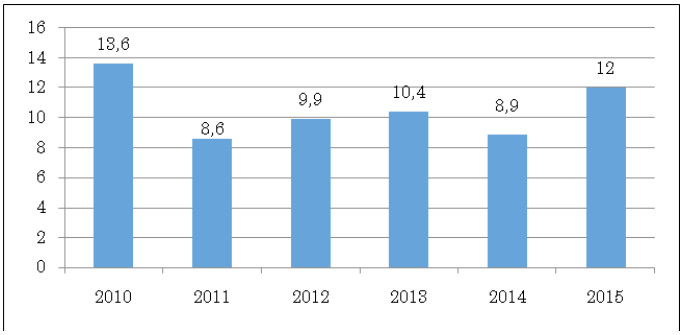


Figure 5. *Share of accumulated losses of public enterprises in the total accumulated loss of the Serbian economy from 2010 to 201*
Source: Serbian Business Registers Agency

Cumulated losses in 2015 reached 417 999 million dinars or 12% of the total loss of the economy. If we look at the entire period it could be concluded that the share of the accumulated losses in the total cumulative loss of the economy had experienced significant variations. It should be noted that the loss which excesses the capital is 108,592 million dinars and that it is present in 68 public companies. The biggest losers among the public enterprises are PE Srbijagas, PE EPS, PE Roads of Serbia, Serbian Railways Ins. and PE Resavica, which, for several years, have been placed in the first hundred business entities by the total loss in the publication "One hundred most enterprises in the Republic of Serbia" (Serbian Business Registers Agency).

Large public enterprises showed losses almost entirely throughout the period and finally at the end of 2015 they reached the amount of up to 289,113 million dinars. One of the major causes of the financial imbalance in the public enterprises is the lack of quality sources of financing, so these companies were operating with negative net working capital in the observed period. Such state in the financial statements of business entities indicates serious disturbances in operating and it is a signal for taking corrective measures.

The Economic Position of Public Enterprises in the Economy of the Republic of Serbia

The economy of the Republic of Serbia has been facing many challenges in its development for many years, as other transition economies in Western Balkan region, like underdeveloped institutions, delay in implementing reforms, war clashes during the 1990-s on the territory of former Yugoslavia and further disputes over territories and borders (Fedajev et al 2014; Nikolic, 2013). A number of structural imbalances and disorders inherited from the period of

real socialism have not been neutralized yet, and some of them have even deepened more over time. The slow pace of reforms greatly hinders economic recovery and its return to the path of growth and development (Nikolic et al 2013). What is encouraging is the fact that a significant number of enterprises are privately owned, which created good preconditions for the transition to a market economy. The data in Table 1 clearly indicate that the companies, whose business is based on private ownership and market regulations, are the most numerous economic entities in the country, with 93.9% in total number, and 85% in total employment. Though their number has decreased compared to the previous year by 164 undertakings, the number of employees in the segment of the economy has grown by 21,549. In this sense, we can say that this group of economic subjects is a key generator of economic growth and employment in the Republic of Serbia. It should be noted that the micro companies are the most numerous, making 89% of the total number of companies.Overall, this part of the economy has operated profitably in the last few years, but still it has a significant share in the cumulative loss (57.3%).

Table 1. *Structure of business entities in the Republic of Serbia in 2015*

Business entities in the economy	**Share (in %)**				
	In total number of business entities	**in employment**	**in assets**	**in capital**	**in accumulated losses**
Business organizations	93.9	85.0	75.0	71.9	57.3
Public enterprises	0.5	11.6	18.3	25.8	12.0
Business organizations in privatization	0.1	2.4	2.6	1.3	9.0
Business organizations in bankruptcy and liquidation process	5.5	1.0	4.1	1.1	21.7

Source: Serbian Business Registers Agency

However, the biggest loss in relation to the amount of assets and number of employees engaged, as expected, have the companies in bankruptcy and liquidation. Only 11 of these companies are large systems that employ 38.1% of employees in this economic segment, while the majority makes micro companies (97%) with only 17.9% of employees. These companies, along with business companies in the privatization process, are key generators of loss in the economy. These two groups of business entities have been operating with loss for many years. In the case of companies in the privatization process, we speak mainly about large systems which accumulated substantial losses, given

that 0.1% of business companies cumulated up to 9% of the total accumulated losses of the economy. Their number has two and a half times decreased comparing to the previous year as a result of changes in legislation which considerably shortened deadlines for the completion of this process.

Social enterprises in the privatization while operating mainly rely on state support, hence they are not only considered as generators of losses, but also as generators of imbalances in public finances of the state. The large number of this enterprises operated in sectors that are traditionally had a great contribution in employment and GDP (Urošević at al. 2011), so unfavorable situation in these companies greatly influenced the level of economic activity and number of employees in the country.

If simultaneously share in a number of business entities and share in employment and assets are observed, it can be concluded that a relatively small number of public enterprises engage a significant number of employees and total business assets in the economy. If we add the data on share in cumulative loss, it can be concluded that the efficiency and effectiveness of public enterprises are at a low level, and that they use available resources irrationally.

The Effects of the Measures Aimed at Increasing the Efficiency of Public Enterprises and Improvement of public finances

Policymakers have repeatedly tried to implement a systematic and coherent program of measures to reform the public sector. A key segment of the fiscal consolidation program was public enterprises troubleshooting as soon as possible by abolition of soft budget constraints. However, contrary to the set goals, set deadlines have been constantly prolonged thus deepening problems even more. The state has continued the practice of soft budget constraints (issuing new government guarantees, paid subsidies and tolerated unsettling the obligations towards public enterprises for delivery of goods and services provided, but also their liabilities to other economic entities and to the state), which makes public finances in Serbia less and less sustainable. Thus, in one of these programs from 2013, the government pledged to stop issuing guarantees to Srbijagas, but by the end of the next year the same company was issued a new guarantee. Since neither in 2014 the problems of companies, which do not pay for gas, were not solved (such as e.g. Petrohemija and Azotara), the state has approved another guarantee tomentioned public enterprise at the end of 2015, while the share of debt to NIS for delivered energy transferred into a public debt. This, unfortunately, is not an isolated case. A large number of public enterprises, at all levels, cannot take over servicing of their obligations

instead of the state.

Particularly negative tendency, which significantly affects the imbalance of public finances, is growth in public sector wages, which are far above the average of the economy, the average of public sector and productivity. In order to perceive the trend of wages in the public enterprises in the observed five-year period, Figure 6 shows the trend not only of the base index of wage and productivity growth in public enterprises(productivity is given as total revenue per worker), but the index of wage growth in the public sector and at the level of the entire economy as well (base year is 2010).

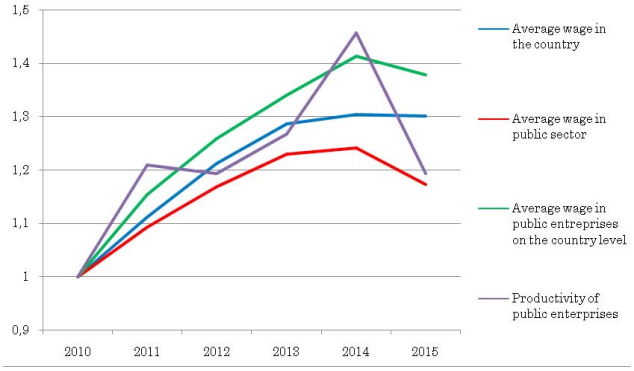


Figure 6. *Trend of index of wage growth and productivity in the public enterprises, public sector wages and average wages at the level of the entire economy*

Based on the given graphic, continuous growth in average wages in state-owned public enterprises can be noticed, followed by their fall which started in 2015. During 2012, 2013 and 2015 the average wage in the state-owned public enterprises were well above their productivity. Certainly the biggest gap between the average wage in the state-owned public enterprises and labor productivity was registered in 2015, suggesting that the current rationalization measures in number of employees and wages in the public sector are not effective enough. What is worth noting is the fact that the growth of average wages in state-owned public enterprises during the entire period was considerably higher than the growth of average wages on the state level, particularly in relation to the growth in public sector wages, which indicates the inconsistency in measures in this field. More specifically, the rationalization measures were not applied uniformly to all segments of the public sector. Thus, for example, EPS (public enterprise that employs the largest number of workers and which has the highest wage bill among public enterprises) wages have not been cut by 10% as Act on temporary determination of basis for calculation and payment of salaries, i.e. wages and other regular income of public funds beneficiaries,

called for. Such inconsistency in the implementation of the reforms certainly affected the achieved effects as well. Beside salaries, a great number of other non-wage payments to employees affected their irrational business, such as the 13th salary, one-off loans and the like in periods when the performances of the company deteriorated, investments were insufficient and the company accumulated loss.

As the prices of public enterprises are non-market, the regulated prices, which are below the cost of production, forced the state to pass a number of legal provisions aimed at liberalizing the sector in which public enterprises operate. The selling prices of the products and services of certain public enterprises were held on a level which did not cover the costs (like the price of electricity, gas, certain utilities et cetera), in order to increase the purchasing power of citizens and reduce the operating costs of the economy. Thus both social function and the function of subsidizing the rest of the economy were being imposed to public enterprises. This resulted in their operating with loss and spills on public finances. At the same time this kind of social policy is undeniably inefficient, because it provides non-targeted help for both the rich and the poor citizens (Fiscal Council, 2014). The state had seen the solution to this problem in liberalization, but the problem is that in some sectors it really came to life (telecommunications, air transport, most PTT services, production and distribution of oil etc.), while in some sectors it was only formal (production and distribution of electricity and gas and utilities sector). Also, a number of companies had been privatized, but these were only sporadic cases (like NIS and JAT for example) and the results were not as being expected.

Another attempt to impose financial discipline and market economy model to public enterprises is passing the new Law on Public Enterprises. The new Law on Public Enterprises insists on greater appreciation of corporate rules and principles of corporate governance, especially in the areas of:

1. Management and leadership - These changes relate to the conditions and procedures for the selection and appointment of managers and supervisory board members of public enterprises. Besides, the two-tier management has been abolished, conditions to be met by candidates for the abovementioned functions have become stricter and the provisions relating to the procedures for their dismissal or suspension, the duration of the acting conditions and like, have been enhanced;
2. Strategic and current planning - Public enterprises which are financed from the budget of the Republic of Serbia, autonomous province or local self-government, according to the new law, are required to submit an annual program of operations not later than 15 days after the adoption of the Act

on the Budget of the Republic of Serbia, autonomous province or local self-government;

3. The control of public enterprises - Most of the changes have taken place in this segment. Public enterprises established at the local level, above all, are no longer obliged to submit annual programs and quarterly reports to the relevant departments of the government, but solely to the founder. The founder, however, compiles and submits report to the Ministry concerning degree of compliance of planned and realized activities, and within 60 days after the end of the calendar year as well as the analysis of public enterprises operations, with the measures taken for the elimination of disruptions in operations.

Although it has brought a number of innovations, the new law is still not implemented effectively enough, primarily because certain provisions have not been sufficiently clearly and precisely defined and also because of insufficient control of implementation of the adopted measures. First of all this primarily relates to the fact that the lines of responsibility, monitoring and control over public enterprises are set up in such manner that responsibility can easily be relativized and switched from one to another responsible person, and that in fact in the end no one bears the consequences of the decisions made. Without strong control and clearly defined responsibilities, certain essential progress in the implementation of the principles of corporate governance in public enterprises' businesses, cannot be expected.

Inefficient operations of public enterprises reflect, to a large extent, not only on the state of the budget, but also on the level of debt. The Republic of Serbia has been registering a budget deficit for several years, which has largely been reflected on the level of public debt. In order to perceive the state of public finances of the Republic of Serbia, the trend of fiscal indicators and external debt in the Republic of Serbia from 2010 to 2014 are presented in Table 2.

It can be concluded from the presented data that during the entire observed period consolidated public revenues grew, with their growth rates increasing until 2012, when a growth of 8% was registered compared to the previous year. After that, public revenues registered significant fluctuations till the end of the period when their growth was 4.6%. Bearing in mind that in the last quarter of 2012, the general VAT rate increased from 18% to 20%, it can be concluded that this slower revenue growth for the last three years has been the result of tax indiscipline, i.e. poor tax collection. Public expenditures have grown faster than public revenue until 2012, followed by 2013, when their growth rates were more than 6 times lower compared to the previous year thanks to the implemented austerity measures. Despite the given measures, in

the following 2014, public expenditures have increased by 7.4% compared to the previous year while during the following year a slight decline of 1.9% has been registered. The tendency of constant increase in the participation of the subsidies in the total public expenditure should also be noticed. This growth was interrupted in 2013 to some extent, but afterwards, in 2014, the growth of their share was registered to 5.1%. Their growth rates increased over three times in the following year. On the other hand, activated guarantees registered a slight constant growth rate of 0.2% until 2012, after which a significant growth of their share in total expenditure was noticed- by 0.5% in 2013, 1.6% in 2014 and in the next year for another 1.5%. Increase of subsidies and activated guarantees should be attributed mainly to significant amounts of funds that the state transferred to Srbijagas and EPS.

Table 2. *Trend of fiscal indicators and external debt in the Republic of Serbia from 2010 to 2015*

Indicators	2010	2011	2012	2013	2014	2015
Consolidated public revenue (in mill. of dinars)	1,278,435	1,362,641	1,472,118	1,538,054	1,620,752	1,694,831
Consolidated public revenuesgrowth rate (in %)	6.5	6.6	8.0	4.5	5.4	4.6
Consolidated public expenditures (in mill. of dinars)	1,419,451	1,526,125	1,717,306	1,750,150	1,878,878	1,843,965
Consolidated public expendituresgrowth rate (in %)	6,9	7,5	12,5	1,9	7,4	-1,9
Subsidies (in mill. of dinars)	49,511.3	56,277.7	86,597.9	75,632.4	95,538.5	110,394.4
Share of subsidies in the consolidated public expenditure (in %)	3.5	3.7	5.0	4.3	5.1	15.6
Activated guarantees (in mill. of dinars)	2,674.9	3,272.0	3,738.3	7,896.8	29,650.8	30,107.3
Share of activated guarantees consolidated public expenditure (in %)	0.2	0.2	0.2	0.5	1.6	1.5
Consolidate public surplus/deficit (in mill. of dinars)	-140,016	-163,484	-245,188	-212,097	-258,126	-149,134
Consolidate public surplus/deficit (% GDP)	-4.6	-4.8	-6.8	-5.5	-6.6	-3.8

Public debt, end of period, in mill. dinars (central government)	1,282,536	1,547,511	2,014,751	2,309,041	2,753,199	3,017,519
Public debt, end of period, % GDP (central government)	41.8	45.4	56.2	59.6	70.4	76.0
External debt in mill. of euros	23,509	24,123	25,645	25,643	25,676	26,374
Share of public sector in external debt (in %)	38.7	44.8	47.5	51.2	55.1	60.0
External debt (% GDP)	79.0	72.2	80.9	74.8	77.1	80.1

Source: Ministry of Finance, 2016

Faster growth of public expenditure than growth of revenues has led to a constant increase in the budget deficit at the beginning of the observed period

As the situation has become alarming, it was necessary to implement further austerity measures, such as the introduction of the solidarity tax and an increase of the lower VAT rate from 8% to 10%. However, in 2013, there was a growth in public expenditure, due to neglect and delay in necessary structural reforms (mainly in the form of covering the losses of the state-owned enterprises), so in spite of additional austerity measures only a modest reduction of the budget deficit to 5.5% of GDP was registered. In the following year, the budget deficit grew again and reached the level it had before the beginning of fiscal consolidation in 2012, so it can be said that the effect of the achieved savings was neutralized by neglecting of solving problems of public enterprises.

After that, by beginning of a new fiscal consolidation program, budget deficit in 2015 was almost decreased two times compared to 2014. However, it should be emphasized that such a reduced deficit was a result of one-off and extraordinary increase in non-tax revenues as well as a significant delay in the execution of public investment. Although the Republic of Serbia is still far from entering the EMU, the troubling fact is that the share of the budget deficit throughout the period exceeds the limit defined by the Maastricht criteria of 3% of GDP. The worst result was registered in 2012, when the budget deficit peaked 6.8% of GDP, which is more than twice of the defined limits.

As for the public debt, it registered continued growth throughout this period, both in absolute and in relative terms. This happened due to significant reduction of income from privatization, on one hand, and an increase in public spending, which is largely caused by inefficient operations of public enterprises, on the other. The state had to borrow by issuing securities denominated, first,

in dinars, and later, in Euros, to finance a growing budget deficit.

Already in 2011,the fiscal rule, that limits the size of the public debt to 45% of GDP, has been undermined, and in 2014 the limit of public debt determined by the Maastricht criteria of 60% of GDP has exceeded to the end of the period when it has reached a level of up to 76% of GDP. Thus, the Republic of Serbia from an average indebted state has become one of the most indebted countries in Europe in just a couple of years. Something that further worsened the image of public finances in the Republic of Serbia is the fact that indebtedness is not accompanied by a corresponding increase in investment spending, which would both create conditions for the increase in GDP in the future and more opportunities for debt repayment.

External debt has also registered a significant growth. Whereas, the external debt measured in absolute terms has registered slower growth. The public sector greatly contributed to the growth of external debt, having in mind that the share of public sector debt in external debt had been growing constantly and in 2015 it reached the level of 60% of the external debt. In relative terms, i.e. expressed as % of GDP, external debt registered some oscillations, and in 2014 it was even 77.1%. According to the criteria determined by the World Bank, the state is considered to be over-indebted if the external debt reaches the level of 80% of GDP. The Republic of Serbia crossed this limit in 2012.

Although after some time this indicator fell, the Serbian economy was still close to the upper limit of indebtedness. Such trend of a given indicator shows that the country's GDP grows slower than the growth of debt, which reduces the possibility of debt repayment.

Ratio analysis of public enterprises operation in Serbia

Ratio analysis provides objective and accurate assessment of the financial position of the enterprise, providing, at the same time, a reasonable basis for the respective comparative analysis. Bearing in mind that ratio analysis in its original form includes a great number of indicators, it is necessary to make an appropriate selection of indicators that can give adequate information on observed public enterprises, which will also be a good basis for the implementation of multi-criteria analysis.

Among the economic-financial models which use ratio numbers, the most significant are those that are used to predict the bankruptcy of economic entities.

One of the most commonly used models is the Altman Z-score, formulated by an expert in finance and a professor at the Stern Business School at New York University - Edward Altman in 1968, which is based on predicting the

bankruptcy of enterprises over the next 12 months. It combines five financial ratios calculated on the basis of data from the adequate financial statements that assess the financial "health" of the company. For calculating this score the following form is used (Kumar, Kumar, 2012):

$$Z\text{-score} = 1{,}2X1 + 1{,}4X2 + 3{,}3X3 + 0{,}6X4 + 0{,}999X5 \quad (1)$$

where:
X1- working capital/total assets (liquidity indicator)
X2 - retained earnings/total assets (profitability indicator)
X3 - profit before interest and taxes/total assets (profitability indicator)
X4 - market value of capital/total value of debt (solvency indicator)
X5 - Sales revenue/Total Assets (efficiency indicator).

This model has many advantages over other models for predicting bankruptcy, and the most important are high reliability and calculation simplicity. Therefore, despite the appearance of a large number of other models, even after almost 50 years, since the interest in this model had begun, it has not been slowing down and it is still up to date and applicable in practice. Bearing in mind aforementioned advantages, the analysis of the financial position of chosen public enterprises in the Republic of Serbia was carried out on the basis of ratios which are applied in this model, as given in Table 3. The selection of enterprises was made taking into account that almost all activities of strategic importance for the country are included. Besides, these companies engage a significant resources volume. They employ 40.1% of workers in this segment of the economy, and their business assets participate in total operating assets of public enterprises with 74.1%. The analysis of the financial position of thus selected public enterprises will create the basis for defining recommendations and guidelines for increasing the efficiency of operations of these companies in the future, bearing in mind that these are enterprises that have had a significant impact on the imbalance in public finances in the past.

Already at cursory glance at the data of the first observed ratio, it may be concluded that the liquidity of public enterprises is not satisfactory. Seven out of ten analyzed public enterprises have a negative ratio X1 due to the negative working capital. The biggest problem with the settlement of short-term liabilities in this group of public enterprises has the Serbian Railways, where the difference between the value of current assets and short-term liabilities is almost 40% higher than the total value of assets of this enterprise.

Srbijagas follows with indicator in the value of -0.95, followed by Srbijavode with -0.68, Resavica with -0.43, Stara Planina with -0.21, Roads of Serbia with

-0.13 and Srbijasume with liquidity indicator with value of -0.02.

These public enterprises are the key generators of illiquidity in the economy and their arrears to creditors greatly increase systemic risk in the state. On the other hand, the most suitable indicator of liquidity has the Post of Serbia, which quite timely meets its obligations to its short-term creditors. However it should be noted that the value of this indicator of 0.21, registered with this enterprise, is not satisfactory.

Table 3. *Ratio analysis of selected public companies operating in the Republic of Serbia in 2015*

Public eneterprises	X1	X2	X3	X4	X5
PEEPS	0.04	0.006	0.003	3.73	0.21
PESrbijagas	-0.95	0.140	0.050	1.46	0.54
PEResavica	-0.43	**0.350**	**-0.090**	0.59	**0.82**
PE Srbijavode	-0.68	0.020	0.006	1.39	0.10
PE Post of Serbia	**0.21**	0.230	**0.080**	5.78	0.63
PESrbijasume	-0.02	0.006	0.007	**20.43**	0.10
PERoads of Serbia	-0.13	**0.000**	-0.010	4.28	**0.05**
PE Stara planina	-0.21	0.050	-0.007	3.09	0.06
PE Jugoimport	0.19	0.080	0.050	1.32	0.46
Serbian Railways Inc.	**-1.39**	0.020	0.050	**0.52**	0.14

The next two indicators also point to the profitability of the observed public enterprises, but from different aspect. It can be concluded, from the analysis of the aforementioned ratios, that the profitability of these two public enterprises is very low. Although it has not been operating well for years, and that it has been relying on the support of the state, Resavica has the highest value of X2 ratio. This enterprise has a certain amount of retained revenue from previous years and when put together in relation with the relatively low value of the property, gives the highest value of a given ratio in this group of enterprises.

On the other hand, the lowest value of this indicator has Roads of Serbia, who has been operating at a loss and, therefore, do not have retained revenues (for this reason the value of the mentioned ratio is equal to zero).

If, however, the data on the second ratio profitability - X3 are being analyzed, it can be concluded that the Post of Serbia registered the highest value of this indicator. This condition is the result of a slightly higher operating income in 2015, which contributed to increase of profits for the company by 14.9% compared to the previous year, which brought this company to the 12th position in net profit in the report “The one hundred most business enterprises

in the Republic of Serbia in 2015" issued by the Business Registers Agency (SerbianBusiness Registers Agency, 2016) It should be noticed that the company has a high value of the property, which influenced the height of this indicator to some extent (although the highest in this group of enterprises, it is relatively low). At the other end, there is Resavica which in 2015 registered a very high loss, which combined with the low value of the property, gives the relatively high value of X3 indicator. It should be underlined that two other enterprises registered a negative value of the mentioned ratio - Roads of Serbia and Stara Planina.

Unlike previous ratios, where the difference among the observed public enterprises is relatively small, with the indicator X4, larger differences are being noticed, suggesting that the solvency of the observed public enterprises are at a very different level. By far the highest value of the mentioned indicator has Srbijasume, which is not surprising, given that this public enterprise is at the eighth place concerning the value of capital in the report "The one hundred most business enterprises in the Republic of Serbia in 2015". On the other hand, the lowest value of the ratio was registered by Serbian Railways, which accumulated significant losses beyond the capital (this company is on the fourth position concerning the accumulated loss in the report "One hundred most… business enterprises in the Republic of Serbia in 2015" [SerbianBusiness Registers Agency, 2016]) which significantly influenced the market value of this enterprise's assets. Slightly higher, but also extremely unfavorable value of this ratio has Resavica, which also registered extremely high value of accumulated losses.

The last ratio which was used in the analysis indicates that the efficiency of the observed public enterprises is also relatively low. The lowest efficiency, according to this indicator, has Roads of Serbia which generates insufficient revenue from tolls for its regular operating, forcing the state to allocate a significant amount of subsidies for this enterprise (Fiscal Councile, 2016).

The relatively low level of income with high value of assets (this enterprise is in the second position concerning business assets in the report "One hundred most business enterprises in the Republic of Serbia in 2015" (SerbianBusiness Registers Agency, 2016)) resulted in the fact that this company realized ratio value of only 0.05. Contrary to Roads of Serbia, the highest value of this indicator has Resavica, which is largely caused more by low assets value, than the high income of the enterprise.

Generally speaking, it can be concluded that the financial position of the key public enterprises in the Republic of Serbia is seriously threatened and that these enterprises are facing crisis of liquidity, profitability and solvency,

which, all together affects their insufficient efficiency.

Multi-criteria analysis of public enterprises financial position

In order to perform a comparative analysis of public enterprises' financial position (according the mentioned ratios), it has been applied multi-criteria analysis. The aim of multi-criteria analysis is ranking of numerous alternatives from best to worst, based on a large number of opposing criteria. One of the most commonly used methods of multi-criteria analysis is PROMETHEE GAIA method, developed by Brans, Vincke and Marshal during the late XX century [Brans et al 1984; Brans, Vincke, 1985].

PROMETHEE GAIA methodology

In recent years, it has been developed a large number of methods for decision support in order to facilitate finding out the best compromise solution. One of them is certainly the PROMETHEE method developed by Jean-Pierre Brans and Bertrand Mareschal. This is one of the newest methods in multi-criteria analysis, and it is known as one of the most effective and the simplest in this field. The advantages of this method lie in the way of structuring the problem, in the amount of data that can be processed, the possibility of quantifying qualitative data, good software support and presentation of results (Obradovic et al 2012).

The PROMETHEE method is an adequate method for solving problems whose aim is multi-criteria ranking of final set of alternatives (in this case public enterprises) based on a number of criteria that need to be maximized or minimized. For each alternative calculated its value is expressed in preferences.

Thereby, each alternative is evaluated based on the two preference flows.

Positive preference flow φ + (P) indicate how much is given alternative better than other (according to all criteria). Accordingly, the higher this preference flow is, the alternative is better. The negative flow of preference φ - (P) indicates how much a given alternative is worse than the rest, and therefore if this flow is lower, the alternative is better. After that, the PROMETHEE method accounts net preference flow φ (P) as the difference between these two flows:

$$\varphi\ (P) = \varphi + (P) - \varphi - (P) \quad (2)$$

On the bias of such calculated net preference flow, final ranking of alternatives

is performed, from the best one, with the highest net preference flow, to the worst one, with the lowest net preference flow. To calculate mentioned flows, PROMETHEE method requires the specification of appropriate parameters for each criterion (Brans et al 1984; Brans, Vincke,1985):

1. Direction of preference, minimizing or maximizing;
2. Weight coefficients, indicating the importance of certain criteria;
3. Adequate preference function, that converts the difference between the two alternatives in the level of preference, which ranges from 0 to 1. In PROMETHEE methods following preference functions are available: Linear, Usual, U-shape, V-shape, Level and Gaussian;
4. Preference threshold (p), which represents the minimum deviation that decision maker considers important for the decision making;
5. Indifference threshold (q), which represents the maximum deviation that decision maker considered irrelevant for the decision making.

After defining parameters, PROMETHEE methodology is used, which consist of next steps (Behzadian et al, 2010):

1. First, deviation based on comparison of pair of alternative is calculated

$$d_j(a,b) = g_j(a) - g_j(a) \quad (3)$$

Where dj(*a, b*) represent differences between the value of alternative a and b according to every criteria.

2. After, the chosen function of preferences is used:

$$P_j(a,b) = F_j\left[d_j(a,b)\right] \quad (4)$$

Where Pj (*a, b*) represents preferences alternative *a* for each alternative *b* within every criteria, as a function of *dj (a, b)*.

3. Further, the general index of preferences is calculated:

$$\forall a,b \in A \;\; \pi(a,b) = \sum_{j=1}^{k} P_j(a,b) w_j \quad (5)$$

Where π (*a, b*) stands for weighted sum P (*a, b*) for each criteria, while w_j stands for weighted *j* criteria coefficient.

4. Then, the positive and negative course of preferences are calculated:

$$\varphi^{+}(a) = \frac{1}{n-1} \sum_{x \in A} \pi(a,x) \quad (6)$$

$$\varphi^{-}(a) = \frac{1}{n-1}\sum_{x \in A}\pi(a,x) \quad (7)$$

Where φ+ represents positive and φ- negative preferences values for each alternative.

5. Finally positive and negative courses of preferences are used to calculate net flow of preferences and rank alternative:

$$\varphi(a) = \varphi^{+}(a) - \varphi^{-}(a) \quad (8)$$

Where φ(a) stands for net course for each alternative.

On the bias of φ(a) value the countries are ranked from best to the worst, having in mind all observed criteria.

Ranking results

The above mentioned indicators and weights have been used for setting a multi-criteria model for comparative analysis of the observed public enterprises financial position. The multi-criteria analysis was conducted by using the Decision Lab software package, which has the ability to present the results graphically and, thus, to provide the more complete picture of the observed problem. Conducting the multi-criteria analyzes, using the PROMETHEE GAIA method, requires the definition of certain parameters such as the direction of preferences, preference function and weights. In this regard, Table 4 presents the parameters of the multi-criteria model.

Table 4. *The parameters of the multi-criteria model*

Parameters	X1	X2	X3	X4	X5
Direction of preferences	Max.	Max.	Max.	Max.	Max.
Preference function	Usual	Usual	Usual	Usual	Usual
Weights	15,9996	18,6662	43,9989	7,9989	13,3333

Based on such defined parameters, multi-criteria analysis was conducted using the PROMETHEE GAIA method. The order of selected public enterprises is shown in Figure 7.

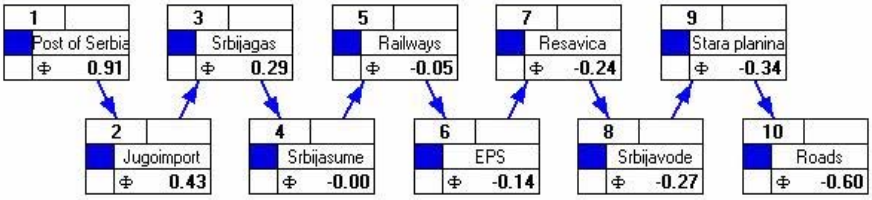


Figure 7. *The ranking of observed public enterprises*

From the Figure 7 it can be concluded that Post of Serbia is the best ranked public enterprise among the observed public enterprises. It is followed by Jugoimport, Srbijagas, Srbijasume, Railways, EPS, Resavica, Srbijavode, Stara Planina and, at the very bottom, Roads of Serbia. In order to gain a better insight into the results, they are displayed on the GAIA plane in the Figure 8.

Figure 8 clearly reflects the fact that the Post of Serbia is the best ranked company, having in mind that it is located in the direction of the decision stick and it is the farthest from the coordinate origin. Jugoimport is also located in the direction of the decision stick, but it is much closer to the coordinate origin in relation to the Post of Serbia, which indicates that it has something unfavorable position in relation to the best-ranked enterprise. In addition to the fact that they are located in the direction of the decision stick, both public enterprises are located in the direction of the criterion vector X3, which overlaps with a decision stick, pointing out that this is a key criterion for the ranking and that the both public enterprises have significantly higher value of this ratio than the other observed enterprises. Certainly, Post Serbia is in the much better position than Jugoimort, bearing in mind that it is located much further from the coordinate origin. EPS and Srbijašume are located near the criteria vector X4, which indicates that these enterprises gained their sixth and fourth position, due to slightly more favourable solvency. On the other hand, Srbijagas gained its third position due to profitability ratio measured by X2 ratio, which indicates that the company has a significant amount of retained earnings on dinar assets.

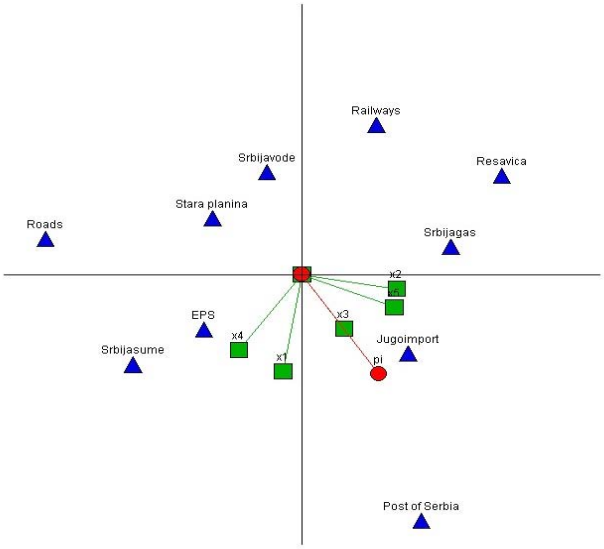


Figure 8. *GAIA plane*

Srbijavode, Stara Planina and the Roads of Serbia are located opposite to the decisions stick, indicating that they are among the worst ranking enterprises.

Roads of Serbia are located the farthest from the coordinate origin.

Stara Planina and Srbijavode are located opposite to the criteria vector X3, which indicates that they are the worst ranked public enterprises, due to unfavorable profitability, expressed by X3 ratio. Roads of Serbia are opposed to the criteria vectors X2 and X5, reflecting the fact that this company is the worst ranked, primarily due to the most unfavorable position in the area of profitability and efficiency. Conducted comparative analysis indicates which enterprises have the numerous and which very few problems in business, based on the given ratios, as well as, what are the main reasons for such a situation.

On this basis, it is possible to determine measures which should strengthen the positive aspects of the business, and improving those aspects of the business that are not currently at a high level.

Possibilities for improving the performance of public enterprises in Republic of Serbia

Effective troubleshooting of public enterprises requires a systematic approach to each individual company as well as making long-term (not ad-hoc) measures. Short-term solutions would lead to immediate positive effects, but they would very quickly "melt", while irrationality in this segment of the

economy would be transferred to the population and the "healthy" part of the economy, thus increasing systemic risk. Besides, it should bear in mind the specific characteristics of the financial position and operations' features of each public enterprise individually, in order to determine the appropriate measures to improve their performance for each of them. Although this analysis did not cover all public enterprises in the Republic of Serbia, on the basis of conveyed analysis it is possible to identify some general measures which, regardless of the specifics of each of the public enterprises, would work towards improvement of their operations and, accordingly, stabilization of their financial situation.

One of solutions to the accumulated problems of public enterprises should be the privatization. Whereas, it should keep in mind, that in the case of public enterprises, privatization should refer to certain parts of public enterprises, after the completion of the statutory changes and restructuring of the resultant business entities. Primarily this refers to Railways and EPS, where the separation of certain segments of these companies and their privatization would not only greatly improve the quality of goods and services, but it would also increase the efficiency of these separated units' operations and create conditions for competition in the market in which they operate.

For the successful privatization, in the first place it is necessary to define comprehensive, clear and precise plan of privatization, which would be based on transparency enhancement of the process. One should also think about the inclusion of appropriate privatization advisors in this process, in order to ensure the best conditions for the sale of assets and equity of public enterprises.

The privatization process should be based on determining the real value of assets and liabilities with interest and debt conversion to equity, which would prevent the devaluation of assets of enterprises and create a real basis for determining the market price of the enterprise. Additionally, subsidizing of jobs in order to attract investors should be reduced, because this model has proven to be inefficient, given that a large number of investors so far gained significant revenue in this way, but after some time they closed the purchased company. As a tax policy is usually emphasized as a significant determinant of business environment (Makojevic et al 2013), privileges for investors should be focused on cession of land and buildings with no charges, reduction in the payroll tax and exemption of reinvested profits from taxation, which would encourage the development of technology as well as increase the share of products with higher level of exports' processing.

Since many public enterprises without prior restructuring cannot be privatized, it is necessary to implement appropriate restructuring measures that would increase the chances for their privatization. Hence, the need to

reduce direct state support to inefficient public enterprises (in the form of state guarantees, subsidized lending and other forms of support) will improve the situation in the budget and reduce the shifting of these obligations on taxpayers.

Besides, as an additional restructuring measure occurs the rationalization of the number of employees in the public sector as well as reduction of their salaries (which have grown in some enterprises for a longer period independently of labor productivity), taking into account that the savings achieved in this way should not to be followed by the fall of the level and quality of products and services of these enterprises. Featuring principle should be applied to all public enterprises with no exception (because, current austerity measures did not apply to EPS, for example), with reducing the possibility to use payment of loans and bonuses to employees and/or by enhancement of the calculation of earnings coefficient in order to avoid implementation of the necessary measures for rationalization. In addition to salary costs, unnecessary expenses should be eliminated or cut back on, such as sponsorships, purchases irrational public procurement, unjustified expansion and replacement of the enterprise's vehicles and the like. Such irrational operating of public enterprises led them into a situation where they do not have enough funds for investments so the production capacity and infrastructure of these enterprises are outdated and insufficiently productive, which greatly affects the occurrence of losses in distribution (e.g. Gas and electricity), increases costs and reduces the quality of products and services (which is especially noticed in rail transport).

Among the key causes of the unfavorable position of these enterprises' finance is the high amount of uncollected receivables. The state should free public enterprises from both their social function and their function of subsidizing the rest of the economy as well as to suspend delivery of electricity, gas, water and municipal services to all non-payers without exception as soon as possible. Since the economy has slightly larger debts than citizens, it is necessary to execute a long-delayed privatization and restructuring of business entities which have large debts towards public enterprises. Until the completion of these processes, the state should allocate some funds in the budget for the settlement of their obligations, so that public enterprises would no longer have a burden of enterprises which are in the privatization and restructuring processes.

This especially refers to EPS and Srbijagas, given that their products are used by all economic subjects and that at the same time these companies have the largest amount of uncollected receivables which is burdening their business.

Beside the uncollected receivables and non-market "social" prices of public enterprises' goods and services, which cause significant problems not only in

finance of enterprises themselves, but also in the state as well, which subsidizes difference between the market and administratively determined prices.

Operating in great market pressures imposes the need to meet consumer needs and to have competitive price (Rajic at al 2012). In order to ensure market pricing, the process of liberalization should be intensified in all sectors where public enterprises operate, especially in the energy sector and the rail transport sector, where the current liberalization measures have not given good results. At the same time, due to the possible negative social effects of the price rises, it should be worked on defining appropriate social map, in order not to subsidize all citizens. Pricing based on market principles, in general, would ensure the sustainability of the production system and supply of citizens and businesses by goods and services of general interest.

A significant problem of these companies is inefficient management as well, which in no way contributes to the strengthening of budgetary constraints and the rationalization of the asset. Without a quality management, processes of privatization and restructuring cannot give positive results, so it is necessary to introduce more rigorous licensing procedure for managers of public enterprises and bankruptcy managers as well, to execute departisation of their election, to increase their responsibility for the management of the company (this should be included in the management contract, which would define penalties in case of irresponsible governance, as well as awards in the case of successful management of the company) and to introduce frequency of submission of financial statements and reports on the state of the assets and operating of the enterprise to the competent authorities (which should be prepared in accordance with International standards on Auditing).

Although the new Law on public enterprises is aimed at greater respect for the principles of corporate governance, still it has not particularly developed the concept and content of this long-term and medium-term plan of business strategy and development, having in mind that this law gives the equal importance to plan and business strategy. In this sense, it is necessary by the amendment of this law, to define clearly and precisely the concept and content of these documents, where the business strategy should precede and be the basis for the plan development. Besides, too many decisions cannot be made without the approval of the founders, which leads to the weakening rather than strengthening of responsibility and control of public enterprises' operating.

If policymakers really want to implement the principles of corporate governance in their original form, it is necessary to expand the circle of authority and not solely relate it to the founder, but to the management of public enterprises as well.

Along with corporatization, one of the key "pillars" of the reform of public enterprises is also the effective implementation of the Law on Public-private Partnerships and Concessions. Given the importance of goods and services provided by public enterprises and that the state does not have enough funds to finance current operations of these enterprises and investments to improve their infrastructure, conclusion and implementation of contract on public-private partnerships and concessions with strategic partners from abroad, could almost be considered the most appropriate solution to the problems of this economy segment.

Conclusion

More than 15 years after the acceleration of the reform processes in the Republic of Serbia, the fiscal imbalance is still present, and the situation becomes increasingly worse. Public enterprises contributed have in great extent to this situation because, due to inefficient operations, they drained significant resources of the state by increase of wages above productivity, subsidies, guarantees and other forms of state support. Such a situation in this economy segment caused the emergence of new and deepening of existing imbalance in the Serbian economy, which has had a negative impact on the macroeconomic stability.

Public enterprises in Serbia have a slight share in the structure of business entities in the reporting period, which does not exceed 1% of all business entities in the country. On the other hand, these enterprises employ a relatively large number of employees (on average about 10% of the total number of employees), they possess a significant amount of assets (on average about 15% of the total assets of all business entities) and capital (on average about 22% of the total capital in the economy), so it can be concluded that it is about a relatively small number of very large companies that contribute in large extent to the formation of GDP. In addition to the fact that they engage significant amount of resources, public companies have been cumulating significant losses, which participate with about 11% (on the average) of the total losses of the economy in the reporting period. If one takes into account that less than 1% of the total number of enterprises has cumulated such a high losses, it can be concluded that these companies use of their resources very inefficient.

State has faced numerous challenges, while it has been solving accumulated problems of public enterprises. Numerous measures have been implemented which should lead to the more rational operation of the public enterprises and fiscal consolidation, such as the privatization of certain public enterprises,

strengthening the budget constraints, number of employees and wages rationalization, acceleration of liberalization in certain sectors, the adoption of the new Law on Public Enterprises (which insists on principles of corporate governance), etc. However, the state, in general, has not been consistent in implementing the adopted measures, notably during the introduction of hard budget constraints and number of employees and wages rationalization in public companies. This has resulted in a high budget deficit (which is reached the amount of 3.8% of GDP at the end of 2015), public debt (76% of GDP) and external debt (80% GDP), which will, if these trends continue, eventually become unsustainable.

Performed ratio analysis, based on ratios that are used in the calculation of Altman Z-score for predicting the bankruptcy of the companies, indicates that the problems of the observed public enterprises are numerous-insufficient liquidity, profitability, solvency and efficiency. Post of Serbia has the highest liquidity, while the most disadvantaged in this area is Railways of Serbia.

The two ratios of profitability are used in this paper, one that is based on retained earnings and the other which is based on earnings before interest and taxes, and both of them are given as a relation to the total assets.

It is interesting that Resavica has the highest first ratio and the lowest second ratio of profitability, reflecting the fact that the company owns a certain amount of retained earnings from the previous period, but ended the year 2015 with a loss. Roads of Serbia, on the contrary, do not have retained earnings in their balances and it has a minimum value of the first ratio of profitability, while most beneficial operating result before interest and taxes and, consequently, the best value of the second ratio, is recorded Post of Serbia. Regarding the solvency, Srbijasume are in the most favorable position, and the most unfavorable position has Railways of Serbia. Finally, Resavica is a public enterprise with the highest efficiency ratio, which is primarily a result of the low value of the assets of the company. In contrast to Resavica, Roads of Serbia has the lowest level of efficiency ratios, due to the high value of assets (bearing in mind that the road infrastructure is of high value).

In order to synthesize all used ratios into one indicator, which allows the ranking the observed enterprises, multi-criteria analysis was applied. Conducted multi-criteria analysis indicates that Post Serbia is the best ranked enterprise.

It is followed by Jugoimport, Srbijagas, Srbijašume, Railways of Serbia, EPS, Resavica, Srbijavode, Stara Planina and, finally, Roads of Serbia. Based GAIA plane it can be conclude that the main advantage of the best ranked public enterprises (Post Serbia and Jugoimport) is the relative high profitability, while the biggest weakness of worst-ranked enterprises are low profitability and lack

of efficiency.

The situation in public enterprises is very complex, so it is necessary to implement the comprehensive changes both at the public enterprises, as well as in the economic system, to solve the accumulated problems of this economy segment. The current imbalances and irrationality cannot be solved by elimination of one or a few causes of the public enterprises problems.

Therefore, fiscal consolidation should be done on the basis of a precise, clear and systematic program for solving the problems of this economy segment, through transparent privatization of some parts of public enterprises created by an appropriate statutory changes, tightening the control of operating costs (particularly wage costs), increase the efficiency of collection of receivables, modification of pricing policy (in terms of incorporation of the market laws in their formation), the implementation of corporate governance principles, the implementation of public-private partnerships and the like.

Without solving the problems of public enterprises, it is impossible to implement effectively the fiscal consolidation and return the public debt in the statutory limit. Any future reform measures, such as increasing the solidarity tax, VAT and other taxes, rationalization of the public sector employees' number, the reduction of salaries and pensions and so on, will be a futile sacrifice if government expenditures for maintaining the liquidity of public enterprises overcome these savings. Therefore, although EU membership is not certain yet, Republic of Serbia should comply with the Maastricht criteria in the formulation and implementation of economic policy measures, in order to ensure an adequate level of macroeconomic stability and long-term sustainable development.

Acknowledgement

The authors feel indebt to the company Visual Decision Inc. Montreal, Canada, for package Decision Lab 2000 provided free of charge.

REFERENCES

1. Behzadian, M., Kazemzadeh, R. B., Albadvi, A., Aghadasi, M., (2010). PROMETHEE: A comprehensive literature review on methodologies and applications, European Journal of Operational Research, Vol. 200, no. 1, pp. 198-215.
2. Brans, J.P., Mareschal, B., Vincke, Ph., (1984). PROMETHEE: A new family of outranking methods in multi-criteria analysis,Operational Research '84, Brans, J.P. (eds.), North-Holland, Amsterdam, pp. 447–490.
3. Brans, J.P., Vincke, Ph., (1985). A preference ranking organisation method: The PROMETHEE method for MCDM,Management Science, Vol. 31, no. 6, pp. 647-656.

4. Fedajev, A., Nikolić, R., Urošević, S. (2014). The achieved level of competitiveness and characteristics of business environment in Western Balkan countries, Actual Problems of Economics, Vol. 155, no. 5, pp. 46-57.
5. Fiscal Council, (2014).Analysis of state-owned enterprises: the fiscal aspect (in Serbian), http://www.fiskalnisavet.rs/doc/ocene-i-misljenja/rezimeanaliza_preduzeca_u_drzavnom_vlasnistvu-fiskalni_aspekt.pdf
6. Fiscal Council, (2016). Answer of the Fiscal Council on the occasion of announcement of EPS (in Serbian),http://www.fiskalnisavet.rs/doc/analize-stavovipredlozi/Odgovor%20na%20saopstenje%-20EPS-a.pdf
7. Fiscal Council, (2016).Fiscal trends: Annual report for 2015 and analysis of current trends, http://www.fiskalnisavet.rs/doc/mesecni-izvestaji/fiskalna_%20kretanja_%20godisnji_%20izvestaj_2015_%20analiza%20tekuih%20trendova.pdf
8. Glisic, M., (2013). Financial performances of companies owned by the Republic of Serbia (inSerbian), Quarterly monitor, Vol. 33, pp. 63-73.
9. Kumar, R. G., Kumar, K., (2012). A comparison of bankruptcy models, International journal of marketing, financial services & management research, Vol. 1, no. 4, pp. 76-86.
10. Makojevic, N., Veselinovic, P., Fedajev, A., (2013). Multicriteria approach in business environment ranking: case of new EU and transition countries, Actual Problems of Economics, Vol 149, no. 11, pp. 415-425.
11. Ministry of Finance, (2016). Public Finance Bulletin, Vol. 138, http://www.mfin.gov.rs/UserFiles/File/bilten%20javne%20finansije/Bilten%20142%20SRB%202709.pdf
12. Nikolic, R., Fedajev, A., Damnjanovic, Z., Riznic, D., (2013). Macroeconomic stability and competitiveness of the Republic of Serbia, Technics, Technologies, Education, Management (TTEM), Vol. 8, no.4, pp. 1743-1751.
13. Nikolic, R., Fedajev, A., Damnjanovic, Z., Riznic, D., Ranisavljevic, P., (2013). A new model of economic growth and development of Republic of Serbia, Technics, Technologies, Education, Management (TTEM), Vol. 8, no.4, 2013. pp. 1715-1723.
14. Nikolic, R., Fedajev, A., Riznic, D., Damnjanovic, Z., Kostadinovic, A., (2013) Economic Crisis In The Western Balkans,Metalurgia International,Vol. 18, no. 8, pp.54-58.
15. Obradović, S., Fedajev, A., Nikolić, Dj. (2012). Analisys of business environment using the multi-criteria approach - case of Balkan's transition countries, Serbian Journal of Management, Vol. 7, no. 1, pp. 37-52.
16. Petrovic, P., Minic, S., (2015). Fiscal consolidation 2012-14 Vs. 2015-17: Is it different now? (in Serbia), Quarterly monitor, Vol. 40, pp. 58-63.
17. Rajić, T., Fedajev, A., Nikolić, R., Riznić, D., (2012). How quality, value and corporate image affect customer behavioral intentions: the case of Serbian retail, Toyotarity. quality of services assessment according to bost method, Borkowski, S., Ingaldi M. (eds.), Faculty of Logistics, University of Maribor, Celje, pp. 109-123.
18. Serbian Business Registers Agency, (2016). Reoprt on operations of economy in the Republic of Serbia (in Serbian)
19. http://www.apr.gov.rs/Portals/0/GFI%202015/Saopstenje%20o%20poslovanju%20privrede%20u%20RS%20u%202015..pdf?ver=2016-06-29-114005-517
20. Serbian Business Registers Agency, (2016). The one hundred most … business enterprises in the Republic of Serbia in 2015 (in Serbian)
21. http://www.apr.gov.rs/Portals/0/GFI%202015/Saopstenje%20STO%20NAJ%20za%20objavljivanje%2027092016.pdf
22. Serbian Business Registers Agency, http://www.apr.gov.rs

23. Urošević, S., Fedajev, A., Nikolić, R., (2011). Significance and perspectives of textile industry in Republic of Serbia in transitional environment, Industria Textila, Vol. 62, no. 3, pp. 134-140.

A Credit Policy Framework for Enterpreneurship

VIDAKOVIC Neven[35]

Introduction

Entrepreneurship lies at the foundation of any prosperous economy.

Without the ability to generate new ideas and create new solutions for existing problems there can be no economic growth and a long-term increase in productivity. New business ventures are the driving force of economic prosperity.

This approach to economic growth goes back at least to the era of Schumpeter (1942). However,the moment after every single entrepreneurial ideais conceived,it runs into a wall. This problem can best be framed asthe question: Who is going to fund my idea? In highly developed economies with large and economically important and efficient capital markets the answer is rather simple: Someone will fund a new business idea through capital market mechanisms. Just as there are many business entrepreneurs in developed economies, there are also many financial entrepreneurs who are willing to fund new ideas. At least, this approach is true for the United States, but it does not hold true in Europe, and especially in Eastern Europe, as shown in Belke, Fehn, Foster (2006).

In a bank-centric economy, like most European economies are, or in a country that does not have developed capital markets, like most transition countries are, the answer to the question of who will fund new entrepreneurial ventures is simple: No one.

This paper recognizes the problem new entrepreneurs have in obtaining funds for their projects. The issue is known as credit constraint, the inability to obtain a desired amount of credit. The paper also recognizes the problem that most European economies do not have developed capital markets that are going to fund new ideas, andthey do not have the ability to develop capital markets in a short period of time. Using all these constraints, this paper tries to create a monetary and credit framework in which banks will give high-risk loans to new entrepreneurs who have insufficient collateral. In essence, the paper proposes a structural framework for an entrepreneur-oriented credit policy in a bank-centric economy.

[35] Platinum Invest Zagreb and Zagreb School of Economics and Management, Croatia, neven.vidakovic@ platinuminvest.hr

Before we move further into the paper, there are some things we must immediately get out of the way. One of them is to answer the obvious question of why someonewould fund a new business venture. The answer is to make money since profit has always been the main driving force in economics.

Another item we must address is the existing framework for stimulating entrepreneurship, in this case EU funds. We should immediately dispense with any notion of entrepreneurship being financed with EU funds. The explanation is simple: the procedures are complex, lengthy, have stringent requirements and are not focused on fostering new ideas and development. For the economic effect of EU funds on economic growth see Mohla and Hagenc (2010), and for their inability to generate success see Matek, Miletić, Poljak (2015).

The proposal for funding entrepreneurs made in this paper is simplerthan complex EU funding, more user friendly and focused on the entrepreneur and his idea, and not on how much bureaucracy must be satiated. Also, the proposal to stimulate entrepreneurial activity must use the existing financial structure, not demand a new one.

If capital markets cannot be used to fund entrepreneurial ideas, then the burden of funding has to fall on banks. The problem we face is how to make such lending profitable for them.Banks are conservative by nature and are not risk averse especially toward new clients who do not have a long-standing business reputation. So the main focus of the paper must be on how to make the funding of entrepreneurial activity profitable for them.

Before we move into the model, we will explore the nature of entrepreneurship and the main problems it faces. Entrepreneurship is difficult to quantify and it is difficult to determine its source. For example, Thurik and Dejardin (2012) provide an overview of how culture affects entrepreneurship.

They also analyze three main theories of entrepreneurship. The first theory is an aggregate psychological trait.The higher the number of entrepreneurs in an economy, the higher overall entrepreneurship will be. This concept is further explored in Inglehart (1997). Social legitimation theory points to the overall social status of entrepreneurs. The higher the social status that an entrepreneur has, the higher the number of entrepreneurs in an economy will be. This theory is explored in detail in Etzion (1987). The third theory is dissatisfaction theory, as explained by an example in Baum at all (1993). It is a simple theory in which entrepreneurs have undertaken their first entrepreneurial venture simply because they were not happy with their existing job.

Regardless of which theory we use to determine the rationale for entrepreneurship, or what the socio-psychological explanations of entrepreneurship are, the fact remains that entrepreneurship is essential for

economic growth. The theoretical connection between economic growth and entrepreneurship can be found in Dejardin (2000).

The connection of entrepreneurship and economic growth has also been tested on an empirical level. In a large study of 188 countries Berthold and Grundler (2012) found that entrepreneurship is the key for economic growth.

There are many factors that affect economic growth, but based on their study, it is clear that an increase in entrepreneurship does lead to an increase in economic growth. If the level of entrepreneurship is high, economic growth will also be high.

The fact that a country or people in a society are more prone to entrepreneurship is a necessary, but still insufficient, requirement for an increase in economic growth. There are other factors that are needed for entrepreneurs to succeed.

This point is clearly made by Wong, Ho, Autio (2005), who conclude that entrepreneurship is important, but it cannot be the sole reason for economic growth. This conclusion should also be analyzed in conjunction with Berthold and Grundler (2012),who, in the aforementioned study,clearly mention two important elements of successful entrepreneurship.

The first one is political stability and the second one is the risk-taking approach of the entrepreneur. The need for political stability for economic growth is not unknown. The connection of political stability and economic growth has been clearly determined in Alesina et al. (1992), and Alesina and Perotti (1996).

Legal and political stabilityhas been shown to be essential for economic growth in the long run. The rule of law and a stable political framework are essential for providing the economic environment for entrepreneurial success.

The second important element for entrepreneurship is that the entrepreneur has to be someone with smaller risk aversion and who is willing to take on the risks involved in entrepreneurship. This aspect is also mentioned in and older paper by Kihlstrom and Laffont (1979).

The importance of entrepreneurship is also recognized by government when creating fiscal policies. Many governments have programs whose sole purpose is to stimulate economic growth through initiatives designed to encourage entrepreneurship. For an overview of these economic policies it is useful to look at Ács, Autio, Szerb (2014). For a particular example of measures to jumpstart entrepreneurship in Croatia, see Poljak and Udovičić (2014).

We shall focus more on the element of risk taking as part of entrepreneurship.

Being an entrepreneur is different from being an innovator. There is a clear difference between having an idea to realizing that idea in business form. The one step to bridge the difference is the issue of financing. To change from being

an innovator to being an entrepreneur, a person must have the financial means to turn a business idea into business activity. To take this step, some form of financing is needed. This financial constraint can be overcome by credit.

The importance of creditin entrepreneurial activity is clearly made in Bassetto, Cagetti and De Nardi (2015), who analyzea model in which entrepreneurs are credit constrained. The novelty of the model is that entrepreneurs are explicitly modeled and represent a micro foundation for a macroeconomic model. The importance of this paper is that the model created is used to analyze existing problems of the US economy, and the conclusions are startling. The paper concludes that post-2008 crisis fiscal policy has, in fact, hindered growth and that economic recovery has been slow and timid precisely because entrepreneurshave not been able to obtain credit and use itto spur economic growth and business expansion. This clearly links the existing problems of economic growth with the behavior of banks after the 2008 crisis and their credit policies, which can only be described as tight. The paper states that there is great importance in how banks distribute credit in the economy and to whom such credit is distributed. This assertion sheds new light on banks and their role in the economy. The standard assumption is that savings equals loans, but Bassetto, Cagetti and De Nardi (2015), have shown there is significant importance in the way banks determine to whomthey should lend.

The effects of credit and employment in small firms in case of Serbia was done in Gvozdanić, Vukosavjević and Beslać (2015).

The issue of how to finance entrepreneurial activity is at the heart of this paper. The next section tries to connect banking theory with entrepreneurship.

A simple model of a bank's behavior is created in order to postulate that bank's business problem. We then develop a model with a solution for how banks could stimulate credit activity oriented toward entrepreneurs. The fourthsection of the paper analyzes potential problems with the model and the final part presents the conclusions.

Theory of banking and entrepreneurship

Banks formulate their credit policies based on the amount of risk they are willing to take. Their risk appetite is determined individually by each bankand it is inversely related to the probability of a loan being repaid. Although banks face many risks, there are two main risks that are the focus of the banking business: credit risk and liquidity risk. These risks are intertwined.

A bad loan by definition is a loan that is not being paid back, therefore the bank is not receiving the expected cash inflow. A decrease in the expected cash

inflow creates a problem in the term structure of the bank and affects the bank's liquidity. Because of credit risk the banks are forced to pay strict attention to the probability of a loan being paid back, hence the constant monitoring of credit quality. In order to increase the probability of the loan being paid back, banks require collateral and have a strict evaluation of credit quality.

Banks are always willing to lend more to companies and households that require fewer funds and have more collateral.

There are two types of collateral in terms of a theoretical set up that a bank can use. The first type is explicit collateral, which is based on the existing assets owned by the creditor. A classic example of this type of collateral is a mortgage. A bank is willing to extend a loan, but it takes under collateral a property that it can confiscate if the loan is not paid back. The second type is implicit collateral. This type of collateral is based on future income and future cash flow from business activities. An example of this type of a loan is a checking overdraft. Banks allow customers to use more money than they have in their accounts based on the assumption that future paychecks will cover the overdraft. Implicit collateral is not uncommon. There are many other types of debt instruments that do not have explicit collateral, such as "unsecured bonds."

The ability to obtain an unsecured loan with implicit collateral is proportional to the overall quality of a creditor. For more on the way credit policy functions in both theory and practice, see Gregurek and Vidaković (2015).

Entrepreneurship, by its nature, means having a new business idea and the willingness to start a business enterprise based on that idea. The less developed the business, the lower the amount of explicit collateral that can be used,so a bank has to rely on implicit collateral based on the quality of the project.

The main "Catch-22" of the relationship between banking and entrepreneurship is precisely at this point. Banks want to lend funds to a company thatwill be able to repay the loan, however many new entrepreneurs do not have a good enough business track record to convince banks to loan them money. The flip side of this problem is that there can be no economic growth without new companies and new ideas flowing into the economy, as we showed in the first part of this paper. Banks have to pay attention to the risk and are forced to lend less to new companies. For a review of risks in small companies see Agrawal (2016) and for assement of a credit policy in a small open economy see Zipovski, Kvrgić, Vujadin (2013).

Let's set up a simple problem thata bank faces when there is implicit collateral. There is probability p, the business venture will be successful, and probability $1-p$, the business venture will not be successful. The value of p

comes from a bank's subjective distribution of the credit risk. The bank has some threshold p^*, which is the minimum probability of a loan being paid back, and which is necessary for a bank to approve the loan. The bank will approve a loan in the amount of loan L. The expected payoff R, for the bank is:

$$R] = p * (L + r) + (1 - p) * 0 \quad (1)$$

If a business venture is successful, then the bank will get back the loan L and the expected interest rates r, from the loan. If the business venture is not successful, the bank will get 0 since the collateral is implicit.

In the case of explicit collateral, the expected payoff for the bank is going to be:

$$R] = p * (L + r) + (1 - p) * C \quad (2)$$

where C is the collateral used to obtain a loan. As for the value of the collateral, there is a basic restriction in the form of $0<C<L\tau$. The value of the collateral has to be greater than 0. The value of the collateral is a fraction of the value of the loan. The percentage amount of the loan that is covered by collateral is parameter τ, which has the property $0<\tau\leq 1$. The parameter τmust be greater than 0 since the collateral must have some value, but it can also be 1.

If parameter τ has a value of 1, the loan is fully secured by collateral. In reality the amount of collateral can be greater then 100%, but for our analysis that is not relevant.

As previously mentioned,a bank will prefer to lend when there is explicit collateral, which is as much collateral coverage as possible. For a bank to lend under implicit collateral, the following condition must be met:

$$R] = E_I[R] \quad (3)$$

The expected return on a loan with implicit collateral and a loan with explicit collateral must be the same. In this case, lending for the bank will be equivalent. This is not an easy requirement. In fact, it cannot be met by the entrepreneur himself. The solution requires a broader interference.

A proposed solution

There are two main solutions to the mathematical requirement presented by equation (3) in the previous section. The first solution is a guarantee scheme by the government. In such a case the government would take all of the credit risk upon itself.

There are several problems with this solution. The first one is that it interferes with the market mechanism and it removes a bank's expertise from the business relationship. Banks will lend under such a scheme only because

they do not have any risk and they will not analyze the projects. Also, sincethe government is approving projects, there is a possibility for corruption.

The process does not utilize the expertise of banks and it interferes with market mechanisms.

The second solution is some sort of fund that will give credit to entrepreneurs.

Such a fund can exist at the national or supranational level. This idea has already been rejected as inefficient at the beginning of this paper.

Therefore, I want to propose an alternate solution that will involve banks directly in the loan approval process. The main objective of this proposal is to create a business framework in whichbanks will be willing to lend money to new entrepreneurs and create a positive business environment.

It is important that banks determine which loans are granted. The reason is simple: Banks have a long-term relationship with clients. They also have experienced personnel who are well versed in the methods of credit analysis.

Also, banks have the resources to monitor the funds used and to evaluate the quality of proposed projects.

There are seven separate elementsthat must be considered for our proposed solution to work: tax incentives, liquidity, chart of accounts, control of the loans, projects to be funded, the legal framework and control of the funds provided to entrepreneurs. For this proposal to work, there must be a system of checks and balances thatwill structure the system for the maximum long-term benefit.

We willfirst determine the source of the liquidity for the loans. Entrepreneurial loans granted by a bankmust have a long-term stable source of funds.

The only way for a bank to secure that source of funds is to issue long-term, fixed interest rate bonds in the local currency. By issuing bonds, funding for the loans is secured, the interest rate expense is fixed since the interest rate on the bonds is fixed, and currency risk is eliminated because the bonds are in the local currency.

Now we must overcome the main obstacle. Earlier in the paper it was clearly stated the requirement the expected return on the loan with implicit collateral and expected return on a loan with explicit collateral must be equal in order for banks to make loans to entrepreneurial start-ups or fledging businesses.

The bank must be indifferent between lending to businesses with implicit collateral and businesses with explicit collateral. The probability of success must be the same for both types of loans, and the profit from lending for both types of loans must be the same. To achieve that, we have to provide explicit collateral for entrepreneurial loans that only have implicit collateral.

This can be done by providing a tax subsidy for bad entrepreneurial loans.

Just to be clear, we are not talking about a tax deduction, but a tax subsidy, which means that if the bank has to pay 100 monetary units in taxes and has 80 bad entrepreneurial loans, it will only have to pay 20 monetary units in taxes.

Under this condition the bank is not taking any credit risk since all of the risk is compensated by the tax subsidy. The amount of subsidy the bank does not pay in taxes the bank should place in a special liquidity reserve so that over time it accumulates enough funds to be able to pay back the issued bonds, plus interest.

Tax payments that the bank has to pay to government serve as implicit collateral for entrepreneurial loans. For the bank, tax is a cost, just like bad loans are a cost. The bank is indifferent to whether it is paying taxes or writing off bad loans. This proposal resolves the problem of credit risk that entrepreneurial loans have. Banks can either choose to pay taxes or to write off bad entrepreneurial loans. Both elements are a cost for a bank so there is no real distinction between the costs.

This scheme limits the size of entrepreneurial loans to a bank's annual profits. Since most of the credit risk that the bank can cover is equivalent to the income tax that it has to pay, the amount of loans will not be a significant share in the overall banking system. Although this assertion might seem to be a negative argument, in reality it is not. For an economy it is much better to have small, but highly focused loans rather than large loans that have a dubious economic impact. Also, as time goes on, entrepreneurial loans will increase in size, so the actual level of entrepreneurial loans does not have an upper limit.

It is only limited by the connection of write-offs and a bank's income tax.

Also successful entrepreneurial ventures will grow and over time they will be able to provide explicit collateral to the bank, there by leaving the proposed scheme and creating room for new entrepreneurial loans. Bad loans will be written-off also providing room for new entrepreneurial loans.

We now come to the issue of how to control both the assets and the liabilities side of the transactions in terms of accounting. The problem can be solved through the chart of accounts set up by a regulator. The regulator mustestablish special accounts where the bonds that are issued to fund lending will be booked and where loans that are issued will be booked. Bonds that are issued should not be subject to any regulation like a reserve requirement, so there will be no increase in the cost of funds because of regulatory burden. These loans also must be given a weightof 0 when used for calculating capital adequacy.

This calculation is important so that the loans do not increase the bank's need for capital. This will also make loans more attractive for the banks since their capital burden is smaller.

The importance of the chart of accounts is not only as a means of control, but as the first element in a system of checks and balances needed for the project to be successful. A clearly specified chart of accounts is necessary so that the regulator can follow which funds were used to finance which projects.

The second element of checks and balances comes from the government in the form of special legislation for entrepreneurial loans. We have stated that the whole plan hinges on a bank'swillingness to lend to entrepreneurs.

Bankswill beprepared to do that if there is some incentive. We have specified the incentive: A tax subsidy. However it is up to the government to specifythe requirements for loans funded under this scheme. It must institute special legislation regarding the conditions for loan approval. That legislation should state which loans, from which sector of the economy,and under which specific criteria,can be considered entrepreneurial loans. The criteria have to be simple and easy to understand. The main object of this proposal is to simplify things, not to complicate them. The first criteria obviously must be the size of the business and size of the loan. A minimum and maximum limit will have to be set. The second criteria could be the number of new jobs created under the entrepreneurial project. The third criteria should be the overall viability of the project. There would also have to be regulations regarding the term of the loan, the grace period before repayment of the loan starts, and on the maximum interest rate spread the bank can charge. The legislation would then be incorporatedinto the credit approval process by banks and controlled by the central bank, so no further government involvement would be needed.

The third element of the checks and balances system is left up to the banks. The quantitative criteria can be determined by the government, but the qualitative requirements in the form of assessing the overall probability of success of the project would be the bank's responsibility. The bank would have to determine if it wants to fund the project or not. In this way, the entire scheme fully utilizes the bank's experience and knowledge.

We have now created a triangle of checks and balances between all of the participants in the process. The government has to determine the overall criteria for a project to be viable using this scheme. The central bank has to make necessary adjustments in the chart of accounts and allow the bonds that are issued not to be subject to regulation. Finally, banks can choose which projects are to be funded based on their overall experience. Using this approach, each of the parties in the process is utilizing its strongest point and creates an environment that will foster economic growth and the development of entrepreneurship.

The approach we have suggested here can create an initial boost for small

entrepreneurs who are looking for funding, but do not have necessary business references to obtain it. The approach uses each of the participant's strong points and provides theopportunity for banks to use credit policy to generate new jobs and economic growth and the banks are not going to lose anything by extending credit to entrepreneurs since the cost of credit is covered.

Potential problems

However, there are other elements that also must be addressed if this proposal is to work. The framework proposed in this paper is based solely on the monetary aspects of lending and credit activity. Other aspects are outside of the scope of this paper. The main participants in this model are banks, fiscal policy and entrepreneurs, but in the economy there are other factors thatmake a significant impact on entrepreneurs.

One of the main problems of the business activity in general is a fully functional and stable legal framework. This issue is described in Scully (1988), and Posner (1998). There are many studies that show the importance of an efficientjudicial system and business success. We have already mentioned Alesina at al. (1992), and Alesina and Perotti (1996). The stability of the political and judicial systems are issues which are outside the scope of this paper. However, there are some financial elements thatshould be addressed.

The first one is the tax subsidy that is at the heart of the proposed scheme.

The initial result of the project would be a decrease in tax revenue for the government, but in the long run the new jobs created by investments and entrepreneurship would outweigh any negative effects. As long at the new jobs criteria for loan approval is met, the impact on the overall economy will be positive. As stated in the introduction of this paper, entrepreneurship means taking risks.

Another important element is the issue of the profitability of the banks.

If banks record a loss, then there is no benefit for them to receive a tax subsidy. If this is the case, then banks can be given a tax credit for future periods of positive income.

There is also the issue of moral hazard. If the legislation is set in place, will the banks actually issue any loans to new entrepreneurs? The answer to this question cannot be given, considering the general problems with economic growth that countries have experienced since the crisis in 2008. The solution proposed here is something that could be used and not dismissed as overreaching, abstract or controversial. Considering the discussion of helicopter money as proposed by Turner (2015), it is possible that what is proposed in this paper is

not outrageous at all.

Conclusion

This paper tries to bridgethe gap between theoretical and practical problems in the financing of entrepreneurship. The theoretical problem lies in the issue of a bank's need for collateral and a high probability a loan will be repaid.

Because of this banks are reluctant to make loans to start-up entrepreneurial activities. The practical problem is how to create an economic structure in which it is profitable for banks to make high risk loans without any collateral.

The paper creates a theoretical framework to create a practical framework in whichit is profitable for banks to issue loans without any collateral.

The core of the paper is a financing scheme under which a government would create a legal framework and tax incentives for banks to encourage lending to entrepreneurs. Banks would evaluate projects and decide which ones to fund under specific conditions, and entrepreneurs would have access to a stable source of financing. The proposal involves activities from all participants in the economy: legislators, fiscal policy, central bank and entrepreneurs, but in the end the framework proposed is a viable framework for an entrepreneurship oriented credit policy.

REFERENCES

1. Ács Z.J., Autio E., & Szerb L. (2014), National Systems of Entrepreneurship: Measurement issues and policy implications. Research Policy, 43(3): 476-494.
2. Agrawal, R. (2016), Enterprise risk management essential for survival and sustainable development of micor, small and medium enterprises. International review, 5(1-2): 117-124
3. Alesina, A., Özler, S., Roubini, N. & Swagel, P. (1992), Political Instability and Economic Growth. NBER Working Paper, No.4173.
4. Alesina, A. & Perotti, R. (1996), Income Distribution, Political Instability, and Investment. European Economic Review, 40(6):1203-1228.
5. Bassetto M., Cagetti M. & De Nardi, M. (2015), Credit Crunches and Credit Allocation in a Model of Entrepreneurship. Review of Economic Dynamics, 18(1):53-76.
6. Baum, J.R., Olian, J.D., Erez, M., Schnell, E.R., Smith, K.G., Sims, H.P., Scully, J.S. and Smith, K.A., (1993), Nationality and work role interactions: A cultural contrast of Israeli and US entrepreneurs' versus managers' needs. Journal of Business Venturing, 8(6): 499-512.
7. Belke, A., Fehn, R. & Foster, N. (2006), Does Venture Capital Investment Spur Employment Growth? Finance India, 20(1):75–98.
8. Berthold, N. & Gründler, K. (2012), Entrepreneurship and economic growth in a panel of countries. Wirtschaftswissenschaftliche Beiträge des Lehrstuhls für Volkswirtschaftslehre, Wirtschaftsordnung und Sozialpolitik, Universität Würzburg, No. 118

9. Dejardin, M. (2000), Entrepreneurship and economic growth: an obvious conjunction? Introductory Discussion Paper Ref. IDS DP 2000-08, Indiana University, Bloomington. http://econwpa.repec.org/eps/dev/papers/0110/0110010.pdf
10. Etzioni, A. (1987), Entrepreneurship, adaptation and legitimation. Journal of Economic Behavior and Organization, 8(2):175-189.
11. Gregurek, M. & Vidaković, N. (2015), Bankarsko poslovanje, Visoko učilište Effectus – visoka škola za financije i pravo, Zagreb, 606 pages.
12. Grozdanić R., Vukosavljević D., Beslać M. (2015), Complementariesd between microfinance and job creation, International review, 4(1-2): 7-16.
13. Inglehart, R. (1997), Modernization and post-modernization: cultural, economic and political change in 43 societies. Princeton, NJ: Princeton University Press
14. Kihlstrom, R.E. & Laffont, J.J. (1979), A General Equilibrium Entrepreneurial Theory of Firm Formation Based on Risk Aversion. The Journal of Political Economy, 87(4): 719-748.
15. Matek, P.P., Miletić, D. & Poljak, D. (2015), Can alternative funds match UCITS success? Bančni vestnik, 64(7-8): 15-18.
16. Mohla, P.& Hagenc, T. (2010), Do EU structural funds promote regional growth? New evidence from various panel data approaches Regional Science and Urban Economics 40(5): 353–365.
17. Poljak, D. & Udovičić, L. (2014),Economic cooperation funds in Croatia: purpose and effects on Croatian economy. Third international conference on Employment, education and entrepreneurship, Beograd, Fakultet poslovne ekonomije i poduzetništva Beograd (BEE), VolumeFinance, insurance and investment Pages 133 - 148.
18. Posner R. (1998), Creating a Legal Framework for Economic Development. World Bank Research Observer, Feb. 1998, p. 1.
19. Schumpeter, J. A., (1942),Capitalism, Socialism and Democracy, New York: Harper and Row.
20. Scully, G. W. (1988), The Institutional Framework and Economic Development. Journal of Political Economy, 96(3), 652–662.
21. Thurik, R. & Dejardin M. (2012), Entrepreneurship and Culture. In Marco van Gelderen, Enno Masurel. Entrepreneurship in Context, Routledge, pp. 175-186, 2012, Routledge Studies in Entrepreneurship
22. Turner, A. (2015), The Case for Monetary Finance – An Essentially Political issue, 16th IMF Jacques Polak Research Conference. http://www.imf.org/external/np/res/seminars/2015/arc/pdf/adair.pdf
23. Wong PX, Ho YP & Autio E. (2005), Entrepreneurship, innovation and economic growth: Evidence from GEM data. Small business economics, 24(3): 335-350.
24. Zipovski, LJ., Kvrgić, G., Vujadin, N. (2013) Credit activities of commercial banks in Serbia: causes and consequences. International review, 2(3-4): 41-53.

Utilization of Entrepreneurial Insurance Companies' Approaches to Improvement of Risk Assessment

PILJAN Tatjana[36], PILJAN Ivan[37], COGOLJEVIC Dusan[38]

Introduction

In the time of societal changes, technological development and empowered consumerswhich are changing the nature of the entrepreneurial insurance business, the established insurers need to determine how risk management of the basic and the new risks fits in their strategies. The impact of risk over time will be more profound, so it is necessary to identify, assess, and underwrite emerging risks and to identify new revenue sources.

This paper presents some of the key results of the field research on positions of managers of insurance companies from three Western Balkan countries regarding identification and management of various risks in their business.

Literature overview

Insurance entrepreneur identifies, assesses and measures risks it is exposed to in business, manages them in order to ensure a lasting degree of exposure to risks which would not jeopardize assets and business of the company.

It provides protection of interests of the insured and all other participants in the insurance business. Insurance is based on trust. Insurance contract or insurance policy for the agreed period of time is settlement of claims by the insurer upon occurrence of harmful event; reimbursement of the insured – payout of the agreed value. At the moment of entering into the insurance contract or insurance policy, losses are unexpected, contingent and future, and the insurance company has at its disposals only assumptions regarding probability and intensity of future losses. When the insurance offer is accepted, insurance policy issued and insurance contract signed, the insurance company accepts the obligation to reimburse all the future losses.

[36] Higher business school of vocational studies "Radomir Bojković PhD", Krusevac, Serbia, tanja.piljan@gmail.com
[37] Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, piljanwvp@gmail.com
[38] Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, dusan.cogoljevic@vspep.edu.rs

The notion of insurance risk: It is a form of risk management primarily used to hedge against the risk of a contingent, uncertain loss. An entity which provides insurance is known as an insurer, insurance company, or insurance carrier. A person or entity who buys insurance is known as an insured or policyholder (PwC Denovo, 2016). The International Association of Insurance Supervisors (IAIS) classifies the risks of an insurance company into:

- *Technical risks*: The risks which are directly or indirectly associated with the technical or actuarial calculations of insurance premiums and technical reserves, with the risks of uncontrolled operating expenses growth;
- *Investment risks*: The risks directly or indirectly associated with the insurers' asset management; and
- *Non-technical risks*: Non-technical risks are all other risks which cannot be classified into previous two groups (On Solvecy, 2000, p. 9; Komelj, 2007, p. 56).

According to the decisions in force, insurance companies are exposed to the following risks:

1. *Underwriting risks*: The risks arising from insurance contracts. They are associated with the risks from insurance contracts, as well as the accompanying procedures. It arises from inability of an insurance company to absorb the risks of a specific insurance activity. It is the risk of appearance of financial losses as the result of unwanted negative events of the insured property or persons. It is comprised of: the risk of improper insurance premium – the price of insurance; the risk of inaccurate evaluation of the risks involved in writing an insurance policy; the risk of inadequate reinsurance limit of the company or taking over risks which are higher than reinsurance limit, or not transferring the excess portions of risk above the reinsurance limit to other parties; the risk of unadjusted, undated and financially harmful tariff policy of the company in connection with the dispersion (in time and place) of the risks which are transferred to other parties, i.e. inadequate determination of general, special, additional or singular insurance conditions; other insurance risks (professional and technical) which depend on the nature, scope and complexity of a company's operations;
2. *Market risks*: The risks arising from unfavorable changes in an insurance market and financial market. This risk includes in particular: competition risk; the risk of inadequate adjustment to the insurance consumers' demands; the risk changes in of interest rates; the risk of changes in prices of securities; the risk of changes in real-estate prices; foreign currency risk (Aleksey et al., 2014, p. 9); other market risks which depend on the nature,

scope and complexity of operations of an insurance company;

3. *Operational risks*: These risks include the possibility of arising of events influencing negatively operations of a company and financial position of an insurance company due to somestaff failures, inappropriate internal procedures and processes, inadequate management of informational and other systems, as well as due to unpredictable external events, or as the consequence of improper functioning of the business system. Along with the risk of inappropriate premium, the risks of insufficient technical reserves and mathematical reserves, operational risks are among the most serious threats facing the business of insurance companies (Vujovic, 2009, p. 169).
4. *Risk of incoherent terms and structures of assets and liabilities*: This is an imminent threat of exposure of insurance companies to liquidity risk. Assets pooled into funds are used in various financial markets (insurance companies build portfolios of securities in stock, bond and mortgage markets) thus exposing themselves to the credit and market risk. Life and health insurancecompanies invest much more into corporate bonds and mortgages (mostly backed by commercial assets) than property and liability insurance companies due to the long-term nature of many life insurances and provision of annuities. Property and liability insurance companies invest much more into municipal bonds which are tax free as it decreases investment income tax because of larger amounts which are associated with the real-estate and liability. Relatively higher investments into common stock are also associated with taxes (since dividends on these shares are for the great part exempt from paying taxes) (Karlsson et al., 2012, pp. 1-27).
5. *Risk of deposits and investments of the company*. Investments are of tremendous importance in all operations of insurance companies. Since premiums are paid in advance, they may be invested until the moment when it is necessary to payout claim and expenses. Life insurance companies split their assets into two accounts. General fund is used for contractual liabilities of the guaranteed insurance amounts such as death compensation claims. A separate account is used for covering liabilities for variable life insurance, variable annuities and private pension compensations.
6. *Legal risk*: The possibility of negative effects influencing financial results or capital due to the penalties and sanctions resulting from legal disputes regarding the unfulfilled contractual and legal duties and penalties and sanctions imposed by regulatory body, i.e. failure to abide by the regulations of the business (regulations, internal rules and procedures, ethical codes

etc.)

7. *Reputational risk*: The possibility of negative effects influencing financial results and capital of an insurance company due to negative public opinions which influence market positioning of the company; and
8. *Other risks*.

Research sample and methodology

This paper is based on the field research on positions of managers of insurance companies from the territory of Western Balkans: Serbia, (NBS, Insurance Sector, Annual Reports 2005-2013), Bosnia and Herzegovina (Insurance Agency of Bosnia and Herzegovina, 2014, pp. 0-101) and Montenegro (Insurance Supervision Agency of Montenegro, 2014, pp. 5-41) regarding the types of risks these companies observe in their operations and management of those risks. The research was carried out in 2016 on the representative sample of seventeen insurance companies (Piljan, Cogoljevic, 2015 pp. 435-451), ten entrepreneurial insurance firms from Serbia, four firms from Montenegro and three firms from Bosnia and Herzegovina. The methods used are field questionnaire and research, statistical methods (Preacher, 2001) and graphic data processing methods.

Key research results

Insurance companies Banks in Balkan countries included in the research, in their risk management practices, assessed further types of risks (Figure 1):

1. Operational risk;
2. Human resource risk;
3. Financial and capital risk;
4. Credit risk,
5. Market risk;
6. Reputational risk;
7. Strategic risk;
8. Risk of financial reporting;
9. Liquidity risk;
10. Other risks.

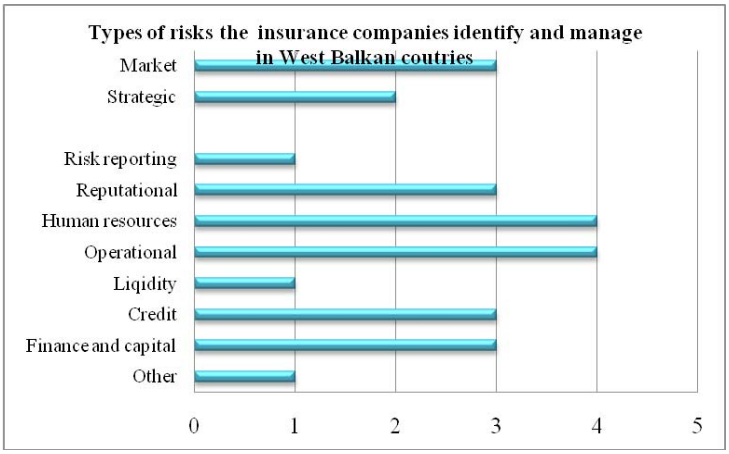


Figure 1. *Types of risks insurance companies assess*
Source: Authors' calculations

According to the results of the research, the various risks influenced the level of income of the surveyed companies in 2016. Slightly less than half of the respondents who have confirmed this effect, stated that the impact of different types of risks led to the sustainability of their income, and that the risk impact to the sustainability of income is dominant (Table 1).

Table 1. *The impact of risk on the income*

The impact of risk on revenues	**Insurance services**
Revenue sustainability	8
Decrease in revenue	2
Increase in revenue	7
Total	17

Source: Authors' calculations

Researching the future importance of risk management in the insurance companies policies for the next planning period, it could be seen, that they concern it important, still not plan activities as of most importance, although they are aware of rising importance of risk management (Figure 2).

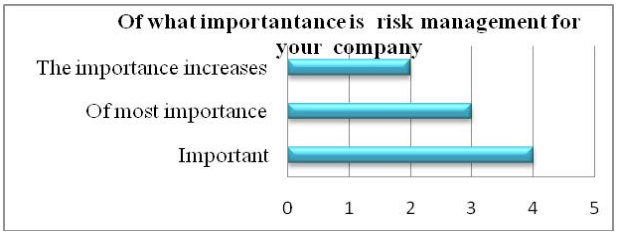


Figure 2. *The importance of risk management*
Source: Authors' calculations

Conclusions

The research on current risk issues of the insurance companies have identify and manage presented in this paper has confirmed the main hypothesis that, both end-consumer and insurer may benefit from managing risks in advance since, if they work together, they can better manage or even avoid losses.

Effective risk management and reporting can improve efficiency of the entrepreneurial insurance company by improving efficiency in customer interaction and conversion ratios, reducing quote-to-bind and FNOL-to-claim resolution times, and increasing new product speed to market (Jevtic, Vucekovic, 2014, p. 27).

Because of the growing sophistication of decision-making capabilities, the insurance firm would soon be able to improve target prospects in order to convert them to customers, refine risk assessment and risk-based pricing, enhance claims adjustment, and more. By means of adequate identification of various risks, insurance entrepreneurial sector would be able to improverisk selection and assessment process, techniques, tools, and models.

The most profound impact could well result from the firm's ability to identify trends and emerging risks, and the assessment of risks for individuals, corporations, and lines of business. Its ability to help carriers develop new sources of revenue from risk and non-risk based information will also be significant.

REFERENCES

1. Aleksey, V., Jerkovic, S., Ilic, S. (2014). The first US intervention in Serbian economic reconstruction and recovery, International Review, Vol. 3-4/2014, pp. 9.
2. Agencija za osiguranje u BiH, (2014), Statistika trzista osiguranja u BiH, godisnji izvestaj za 2014, Sarajevo, pp. 9-101.
3. Agencija za nadzor osiguranja, (2014), Izveštaj o stanju na trzistu osiguranja u Crnoj Gori za 2013. godinu, Podgorica, pp.5-41.
4. Jevtic, B., Vucekovic, M. (2014). Technological innovations, evidence from Serbia, International Review, Vol. 3-4/2014, pp. 27
5. Karlsson, C., Johansson, B., Stough, R.R. (2012). Entrepreneurship, social capital and governance,Edward Elgar, Northampton, USA, pp.1-27
6. Komelj, J., Dolnicar, J. (2007). Izazovi i mogucnosti u osiguranju sa naglaskom na Solventnost II, 18. Susret osiguravaca i reosiguravaca, SoRS Sarajevo, pp.52-61.

NBS, Sektor osiguranja, (2005). Godisnji izvestaj, Beograd, pp. 2-22.
NBS, Sektor osiguranja, (2006). Godisnji izvestaj, Beograd, pp. 2-21.
NBS, Sektor osiguranja, (2007). Godisnji izvestaj, Beograd, pp. 2-18.
NBS, Sektor osiguranja, (2008). Godisnji izvestaj, Beograd, pp. 2-17.
NBS, Sektor osiguranja, (2009). Godisnji izvestaj, Beograd, pp. 2-18.

NBS, Sektor osiguranja, (2010). Godisnji izvestaj, Beograd, pp. 2-18
NBS, Sektor osiguranja, (2011). Godisnji izvestaj, Beograd, pp. 1-17.
NBS, Sektor osiguranja, (2012). Godisnji izvestaj, Beograd, pp. 3-20.
NBS, Sektor osiguranja, (2013). Godisnji izvestaj, Beograd, pp. 4-20.
On Solvency, (2000), Solvency Assessments and Actuarial Issues, pp. 9

7. Pearson, K. (1900). Chi-squared test, International Statistical Review, 51 (1983), pp. 59 -72. Longman Group Limited/Printed in Great Britain
8. Piljan, I., Cogoljevic, D. (2015), Trziste osiguranja Srbije od 2005 do 2014 godine, Entrepreneurship: Economic development and finance, Beograd: VSPEP, pp.435-451.
9. Preacher, K. J. (2001). Calculation for the chi-square test: An interactive calculation tool for chi-square tests of goodness of fit and independence, Computer software, available at: http://quantpsy.org.
10. PwC Denovo. (2016). Top insurance industry issues in 2016, PwC, available at: www. pwc.com/us/insurance
11. Vujovic, R. (2009), Upravljanje rizicima i osiguranje, Univerzitet Singidunum, Beograd, pp.157-176.

IT Entrepreneurial Companies Optimization

ZIVADINOVIC Jovan[39], MEDIC Zorica[40], JEVTIC Boris[41]

Introduction

In order to increase a company's efficiency and business productivity, IT companies have to improve their speed and agility, which is a prerequisite for maximizing their profitability. It is essential to identify critical processes within the company, the way they function and how they can improve and automate.

Business process management (Sljivic et al., 2015, pp. 39-49) is unimaginable without information systems and technologies. In the modern business era, optimization of business processes and total business is incomplete without the implementation of information systems and technology to help automate many processes.

IT companies and their solutions are necessary for creation of more value by means of enabling business processes with technology, as well as for their optimization. The success in these efforts requires creating solidclear stage gates and metrics for holding business and IT leaders accountable.

New technology platforms and capabilities are clearly creating new opportunities at many different levels within organizations.

The highest current priorities for IT companies, according to McKinsey Survey (Roberts et al., 2015) are improving of effectiveness and efficiency of business processes and reducing IT costs (Fig.1).

Figure 1. *Current IT priorities*
Source: Roberts et al., 2015

[39] Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, zjovan50@gmail.com
[40] Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, zjovan50@gmail.com
[41] Faculty for ICT, Belgrade, Serbia, boris.jevtic10@gmail.com

The paper shows the possible ways to arrive to the structural system analysis phaseintroducing the metrics for process models for the purpose of optimization of IT companies, meaning the early stage of the information system procedure.

The proposed metrics can be divided into the basic and the derived ones. Basic metrics can be obtained by determining values of the diagram components, while the derived metrics are defined on the basis of metrics, and represent higher level of the model characteristics quantification. The metrics of size and complexity of the model are particularly important.

Country context

Technological readiness of serbia

The competitiveness is often illustrated by IT investment relative to economic strength (GDP). Significant differences are noticeable among European countries in IT spending vs. GDP per capita. Between Serbia and its Northwest neighbors, there is a few decades long technological gap (WEF, 2014). Present day IT investments in Serbia are <1% of GDP (2% of the GDP is the EU standard). According to the WEF index of technological readiness, Serbia ranks 80th on the list of 148 countries, which is the third lowest rank.

Serbian it entrepreneurial sector

IT sector in Serbia is growing into one of the pillars of economy. Expanding IT entrepreneurship, start-up scene and strong presence of entrepreneurial spirit within the ICT community create abundance of new business ideas.

In 2013, there were 1,971 enterprises in IT industry with 17,711 employees, representing 1.2% of the total workforce in Serbia. More than one half of the numbers of the enterprises from this segment are active in the software subsector (180 of 337). Investments and support for SME sector are important for the IT industry fast development. IT industry structure, according to the industry subsectors and enterprise distribution by company size, is presented in the table below.

Table 1. *IT Industry in Serbia, 2013*

No. of companies	1,071
No. of employees	17,711
Average no. of employees	9
Revenue (€)	1.48 billion
Revenue per employee (€)	83.894

Source: NBS, theSerbian Business Registers Agency (SBRA)

The structure of IT entrepreneurial sector by enterprise size and IT subsector shows that most companies are SMEs (1,964), where micro companies make the huge number of them (1,629 or 82,6%). Only 5 companies are large-sized with over 250 staff.

Despite the crisis, the revenue generated in 2013 was more than RSD 1 million (€ 1.48 billion), while net assets of Serbian IT industry continued to grow in 2013 and achieved around € 388 million. Compared to 2006, in which the IT industry net assets were round € 150 million, the impressive compound annual growth rate (CAGR) of more than 15% was accomplished. Some of the key investors in the ICT sector are: Microsoft, IBM, Nordeus, Siemens, Asseco, Schneider Electric.

Serbian IT market value was between € 400 million and € 450 million for the period from 2009 to 2013. Serbian IT market accomplished € 433.1 million in 2014, which provides minimal annual growth of 1.0% ((Matijevic et al., 2015, p. 92). Serbia which ranks 40th on the list of biggest software exporters exported around EUR 230 million in software services in 2013. Some other indicators are also high for IT companies: profitability index of IT sector per employee, liquidity of IT, the debtand bank loans, and the highest average gross wage - 66% higher than Serbian average.

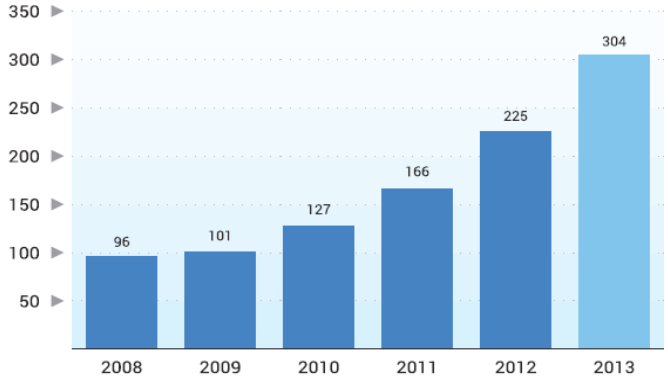


Figure 2. *Export of IT services (2008-2013, million €)*
Source: National bank of Serbia

Methods and materials

There is a variety of units which can be used for measuring the effort needed for program development. The common measure of work is human/months.

Although the concept of effort, usually measured by time, is important, the real significance of the metrics of effort is the actual cost. The fact is that acceptable forms of effort and cost are important and cannot be highlighted

well enough within the field of management. The knowledge about effort and cost is vital for management in certain matters such as: profit, feasibility of the project and productivity of a programmer. If there is no information on how much effort and cost were needed for the past projects of different sizes and functions, than it is not possible to make a reasonable intuitive assessment of an upcoming project.

Classification of the Estimation Model.

The estimation models in the software process are classified in different ways. One of the possible divisions is a division into:

a. Empirical parameter (algorithmic) models,
b. Empirical nonparametric models, and
c. Analogue models of assessment.

The simplest empirical parameter model of effort assessment is a function which connects the effort needed for development of a software product with the some measure of size of that product. The measure of product size can be, for example, the number of code lines in the program or some other size which quantifies a feature of the software product. Effort is usually expressed in the measurement such as man-day or man-hour, and in exceptional cases, man-year. The good sides of these models are: objectivity, formality, efficiency, and using engineering practice experience as the basis. The negative features are: necessity of calibration before application in a particular environment, subjectivity of input values, models are based on past instead on future events.

These models use experiences from previous software projects by applying the regression analysis method and therefore connect size and effort. Thereby, linear and exponential dependence are most often used. The model developed by Albrecht and Gaffney (1983, pp. 639-648) is based on a linear connection between effort and functional points. Nowadays, the most popular model of assessment without any doubt is COCOMO (Boehm, 1981; Boehm et al., 2004, pp. 156-164), which uses exponential functions for the connection between effort and the number of the code lines. Also, there have been other researchers who have used different functions, such as the square function (Banker et al., 1994, pp. 275-282). The models for assessing effort based on the number of code lines have one significant flaw: the number of code lines is known only after completed coding and testing, meaning in a very late stage of software development. To be able to use these models in the early stages, the assessment of the number of code lines is often done first, followed by the assessment of the effort. The assessment of the number of the code lines is performed by analogy with other projects and by ranking the system components, and mostly by free

assessment of the personnel. This approach significantly reduces precision of the assessments.

Empirical nonparametric models use data on the accomplished projects, but the assessments are not made by applying a given mathematical formula, but by using some other approaches. Among these models we may mention the following: optimized set reduction procedure, decision tree model and neural networks. The optimized set reduction procedure selects a subset of the projects by which the assessment of productivity for the new project is evaluated. The productivity is defined as effort in men-months divided by the number of code lines. The distribution of productivity probability is derived from the distribution of frequency of the selected projects over the range of productivity intervals. Productivity for the new project is estimated by calculating the expected value based on the derived distribution of probability.

Comparison of the accuracy of OSR technique and COCOMO model gave the results which show that OSR is a better model of the assessment (Briand, et al., 1992, pp. 931-942). A significant advantage of OSR is that it is applicable even with incomplete input data, meaning when only the cost factors value subset is known.

Analogue models of assessment use analogies between the new project and some accomplished projects in order to make the assessment. A comparison is made between the proposed project and a similar project with known data about effort, time and cost. In these models, a larger amount of data about the accomplished projects is required. In some aspects, this approach represents a systematized form of the expert assessment model considering the fact that experts usually decide which projects to compare the new project to. These techniques require clarification of the project features which we should use to search for similar projects. Values of the effort (cost, time) of those projects are used for assessing the new project. Basic difficulties within this approach consist in finding a project similar enough to make assessments. The two best known analogue models are ESTOR and ANGEL (Mukhopadhyay et al., 1992; Shepperd et al., 1996).

The metrics used by ESTOR are function point components and input values in the intermediate COCOMO model. ESTOR looks for the original analogy according to the values of the function point components of the target project.

The most similar project is found by using vector calculation as a minimum distance from the original project. The effort of the analogue project is taken for the initial solution for effort assessment. The differences between the analogue and the new projects are determined by comparing their metrics. The influence of those differences on effort assessment is considered by applying a set of

rules, with ESTOR basing the rules on expert estimation. ANGEL is based on generalization of the method (Sheppard et al., 1996), and according to that method, the projects are represented through the function point components.

The analogue projects are comparable with the new project, and are found by calculating the vector distance from the new project. Effort for the new project is estimated based on the average effort value of the comparable projects.

As we can see, ESTOR and ANGEL have numerous similarities: in both of these models, the projects are represented by easily available metrics, and in both cases calculating the vector distance for searching analogue projects is used. ESTOR uses only one analogy for the assessment, while ANGEL can base the assessment on several different analogies. The main difference is that ESTOR adapts the values of the first assessment through application of certain rules, while ANGEL uses mean value of the analogue projects.

Process models

The process models represent an intellectual tool for describing the system dynamic, the effects of the input on the system state and on output information via a program of defined data model.

To assess the time, costs and resources needed for development of the information system, as well as to compare different process models, we need to define the metrics of the structure of the process models.

In further research, we will be limited to the concepts of the Structure System Analysis (SSA) – a complete methodology for specification of the information system. In many ways, it can be connected with methods of other phases in the specific methodology of the overall development of the IS. For example, it can be a baseline for designing the data base logical structure by the method of normalization, or it can be treated as a methodological approach of decomposition of one system into the subsystems with the goal by finding the model of the subsystem data and their integration, to obtain a complete model of the data of the observed system. The SSA observes the informational system as a function (processing) which generates output data on the basis of the input data. The input data are processed, and the output data are taken from the process through the data flows. Structural system analysis is the method of system analysis which aims at description of the system functioning by forming the structural model of the process.

The structural systematic analysis is a data flow diagram. For complete description of the system, it is necessary to make a data dictionary which includes definitions of the data contained in the data flow and in the data storage. Apart from that, a mini specification is required – specification of the primitive processes logic. Data definitions are given by s syntax that

allows data structure description, and description of the logic of the primitive processes is given by standard techniques, such as: natural language, program flow diagram, decision-making tree, pseudo code and decision table.

A basic technique to describe system data flow diagrams is decomposition of the system top-down (progressive detailing). This way, the system is shown clearly and in a detailed manner. By hierarchical decomposition of the process, it decomposes according to the one data flow diagram and it is shown by the new diagram on the lower level of hierarchya parallel process is carried out along with the decomposition, while the data are put into storage (Lazarevic, 1993, pp. 92).

The basic concepts for specification of the IS and the SSA are data processing, data flows, data storages and interface. Their mutual relation is shown by the data flow diagram (DFD), which represents a link of the interface, meaning data storage as a source or a link of the data with equivalent processes, as well as the mutual relation between the processes (Lazarevic, 1993). Starting from these basic concepts, we will introduce some basic metrics, and based on them we will define the following:

- Metrics of the process model size, and
- Metrics of the process model complexity.

Assessment of the Software Development Process

One of the most important activities in software project management is planning. For efficient planning, quality assessments of the required effort (usually expressed in men-months), of the project duration (calendar duration), or of the costs (in monetary amount), are required. Normally, assessments are done approximately, based on the earlier experiences, which can function well only if it concerns similar projects. But when a new project is launched in the area in which the organization has no previous experience (which is not rare in software industry), the approach mentioned is of no use. There are several reasons for which valuation of the process of software development should be carried out. Some of the most important ones are the following (Walkerden, Jeffery 1998; Walkerden, Jeffery, 1997):

- *Planning and budget.* Project managers make strategic decisions based on the assessment. Those decisions are to continue with the project, which price to offer etc.
- *Project management.* Managers use valuations to plan and monitor project implementation, as well as to manage it.
- *Communication between team members.* These valuations often consider a complete work plan, which can be useful for members of the developing team for better understanding of their roles in the team.

For the purpose of the valuation, the sizes to be estimated as well as the required accuracy of the valuation will be significant. Whenever estimates are made, this is done to look into the future, and a certain degree of uncertainty is acceptable. The valuation, at the present level of computing development, is still more a skill than a science. An assessment of the required resources and costs, as well as efficient placement of the activities, demands experience and a good historical background with the relevant data. The assessment carries a lot of risks, which arise as a result of insufficient information, which cannot be known in advance. It is a place where a good historic background comes to the fore. Therefore, risk is measured by the degree of uncertainty in quantitative evaluation of the resources, costs and schedule.

It is clear that a software project cost assessment will never be an exact science. There are numerous factors which affect software development process as well as the development price. These factors can be human, technical, as well as political, and their influence cannot be completely predicted. Regardless of that, assessment of software projects can be a number of systematic steps which will provide results with an acceptable degree of deviation. To achieve more reliable predictions, it is necessary to delay the moment of valuation as long as possible in order to collect a larger amount of data based on which the valuation will be done (it is obvious that complete precision can be achieved at the moment when the project is finished) (Walkerden and Jeffery, 1997).

The basics of all valuation methods are software metrics.

Earlier experiences are expressed quantitatively in terms of given measures and sizes. Direct measures of size, known in the early stage of a software project (predictors), are used as the basis for prognosis of other sizes, which cannot be directly measured in a certain time period, and they are of a vital interest for software projects quality planning.

The estimates are made in all phases of software life cycle. They need to be carried out whenever the amount of the known information about the project increases, since that way precision of the estimates is increased. In addition to that, different assessments are necessary in different phases of software development (Boehm et al., 2004, pp. 156-164).

The Metrics of Process Models Size

Structural system analysis is usually represented by an information flow diagram which considers four basic components: data processing (active system components), environment objects (interfaces) with which the system communicates, data storages which the processes use and/or update, and data flows which connect all other system components into a whole. By analyzing DFD, we come to the basic metrics which arise from the basic components

from which DFD is formed. In accordance with that, the following basic metrics can be defined:

KO - the number of environment objects (interface) with which the system communicates,

KP - the amount of data processed,

KS - the number of data storages which the processes use and/or update,

T - the number of data flows which connect the system components into a whole,

N - the number of the process sub models,

AT_i - the number of attributes and type of data flow,

AS_j - the number of attributes of data storage.

The values of basic metrics are determined by counting of certain components in the data flow diagram. It should be noted here that there were no similar types of environment objects of data storages for ensuring visibility on the diagram.

Based on the basic metrics, we can define the following metrics of the process model structures:

The total number of the components in the process model,

$$K = KO + KS + KP \quad (3.1)$$

The total number of the data flow attributes in the process model,

$$AT = \sum_{i=1}^{T} ATi \quad (3.2)$$

The average number of the data flow attributes in the process model,

$$\overline{AT} = \frac{\sum_{i=1}^{T} ATi}{T} \quad (3.3)$$

The total number of the data storage attributes in the process model,

$$AS = \sum_{j=1}^{KS} ASj \quad (3.4)$$

The average number of the data storage attributes in the process model,

$$\overline{AS} = \frac{\sum_{j=1}^{KS} ASj}{KS} \quad (3.5)$$

The total number of the attributes in the process model,

$$A = \sum_{i=1}^{T} ATi + \sum_{j=1}^{KS} ASj \qquad (3.6)$$

The average number of the sub model attributes in the process model,

$$\overline{A} = \frac{\sum_{k=1}^{N} Ak}{N} \qquad (3.7)$$

The average number of data flows per process in the process model,

$$\overline{TP} = \frac{T}{KP} \qquad (3.8)$$

The average number of the attributes per process in the process model.

$$\overline{AP} = \frac{A}{KP} \qquad (3.9)$$

The reasons for introducing K, T and A metrics are obvious: in order to define the size and the complexity of the process model, it is necessary to know not only the number of components, but also the number of data flows and attributes. The process models with equal number of components, but a different number of data flows and attributes cannot be considered as equally complex.

Sizes AT and $\overline{AT}$ are introduced in order to be able to measure the size and the complexity of the data flow in the process model. We consider that the process model is even larger and more complex if data flows include more attributes, and if the average number of attributes per data flow is larger.

A similar logic is introduced by the AS and $\overline{AS}$ metrics. They are considered to fit the size and the complexity of the data storage in the process model.

The average number of the data flows per process and the average number of the attributes per process are introduced to quantify the complexity of the process itself within the model process. The process is more complex if it has a larger number of input and output data flows (here, we consider that input and output data flows have the same influence on process complexity).

Between two processes with the same number of input and output data flows, more complex is the one with the data flow which carries a larger number of attributes. On the other hand, the more complex process is the one with a larger number of data flows, even if they carry a smaller number of attributes.

One of the most important features of the process model is its size. By basic metrics it can be defined as:

$V = K + T$

During determination of the size by metric V, less important is the role of the components in the process model, as we consider only its appearance.

This is due to the fact that size of the process model is equally influenced by the number of appearances of each of the concepts. So, for example, the size of the process will grow if the number of concepts is constant and the number of data flows grows and vice versa.

What is the practical purpose of these metrics? Let us say that one software team has developed information system *A,* and that structural system analysis for information system *B* has been completed. If *V* for the information system *A* is for example 40, and for the information system *B* it is80, it is possible to conclude that the same team in the same conditions would develop the information system *B* in twice as much time as the information system *A*.

Of course, this is a rough estimate, but it can be useful in the early phases of software development planning.

The company can come to a more accurate estimate if it compares several size metrics. For example, if numeric values for the size of the process and the total number of data flows and average number of attributes per components in the process model for information system *A* are twice lower than the matching metrics for the information system B, then we can undoubtedly argue that for the implementation of the information system B we will need twice as much time then we needed for A. Of course, if the relations of those three metrics differ significantly, we would have to decide which metric to take as a parameter, or to monitor the arithmetical mean of the relations of the observed metrics. A special flaw of these metrics is that it is rare that the same team in the same conditions works on several software projects in practice, especially in larger software companies. Regardless of this, the metrics of size, because of their objectivity, can be used as a tool for comparison of different process models.

Conclusions

This paper describes the efforts made for introduction of the metrics into the process models. The process model size represents the summation of all components and the data flows in the process model, and it is used to assess the model scope. In defining this metric, we assumed that all process model components and data flows have the same weight. So, for the two process models with an equal number of components and data flows, we considered that they have the same size, regardless of the fact that they do not have to

contain the same number of specific components. In addition to that, model size metrics are not the attributes of the process. The complexity metrics, however, treat differently the influence of the different process model components and data flows and attributes on the process model complexity. This is achieved by introducing weight coefficients. These coefficients are entirely of an empiric nature, meaning that their values can be found only based on practical experience. Into consideration has been taken that the processes exerts the biggest influence on process model complexity, then data storages, data flows, interfaces, and at the end the attributes, according to which values of weight coefficients are assigned. The process model complexity is mostly connected to the time, costs and effort of the information system development considering that it is possible to use process model complexity metrics for assessment during planning and for proper distribution of the resources according to the level of the difficulty of work.

According to the demonstrated focus of IT companies and IT functions within business on effectiveness and efficiency, as well as on reduction of costs and optimization of the processes and projects, this paper contributed to the focus also introduction the metrics into the process models.

REFERENCES

1. Albrecht, A., Gaffney, J. (1983). Software Function, Source Lines of Code, and Development Effort Prediction, A Software Science Validation, IEEE Transactions of Software Engineering, 9 (6) pp. 639-648.
2. Banker, R., Chang, H., Kemerer, C. (1994). Evidence of Economies of Scale in Software Development, Information and Software Technology, 36 (5) pp. 275-282.
3. Boehm, B. (1981). Software Engineering Economics, Prentice Hall, Eaglewood Cliffs, New Jersey.
4. Boehm, B. Brown, R., Yang, Y. (2004). A software product line life cycle cost estimation model, The International Symposium on Empirical Software Engineering,Proceedings, pp. 156-164.
5. Briand, L., Basili, V., Thomas, W. (1992). A Pattern Recognition Approach for Software Engineering Data Analysis, IEEE Transactions of Software Engineering, vol. 18 no 11, pp. 931-942.
6. Lazarevic, B.(1993). Strukturna sistem analiza, Laboratorija za informacione sisteme, Faculty for organization sciences in Belgrade, Serbia
7. Matijevic, M., Šolaja, M. (2015). ICT in Serbia, Vojvodina ICT Cluster, pp. 92.
8. Mukhopadhyay, T., Vicinanza, S., and Prietula, M. J., (1992).Estimating the Feasibility of a Case-Based Reasoning Model for Software Effort Estimation, MIS Quarterly, 16 (2) pp. 155-171.
9. NBS (2014), Odeljenje statistike platnog bilansa, Bilans usluga, januar - decembar 2012-2013/1, Beograd, 2014.
10. Roberts, R., Sikes, J. (2015). Global Survey results on a rising role on IT, McKinsey

11. Sheppard, M., Schofield, C., Kitchenham, B. (1996). Effort Estimation using analogy, 18th International Conference on Software Engineering, Proceedings Berlin.
12. Sljivic, S., Skorup, S., Vukadinovic P. (2015). Management control in modern orgnaizations, International Review, No. 3-4, pp. 39-49
13. SITO (2014). The scope and structure of Serbian IT market, Belgrade.
14. Walkerden, F., Jeffery, R. (1998). An empirical study of analogy-based software estimation, CAESAR-Report.
15. Walkerden, F., Jeffery, R. (1997), Software Cost Estimation: A Review of Models, Process and Practice, Advances in Computers Academic Press, San Diego.
16. WEF (2014). The Global Information Technology Report, World Economic Forum, Geneva, Switzerland.

Critical Aspects Related to Optimum Volume of Sales and Indiscriminate Sales Policies

D'ARCONTE Carmine[42]

Introduction and theoretical review

There is a general agreement that sales fare fundamental for every business in order to survive and develop over time; nevertheless, we believe that in this regard little attention has been given to one fundamental point, that is what volume of sales every profit company should aim at, in order to attain its main goal, that is to maximize the profit and the return on the invested capital.

What contributions do we have from literature and scholars in this regard?

To start with, as well known, microeconomics proposes a classical model of supply and demand according to which, in a competitive market, the unit price for a particular good, will vary until it settles at a point where the quantity demanded (at the current price) will equal the quantity supplied (at the current price), resulting in an economic equilibrium for price and quantity transacted; in this representation the price is set by the market and nobody has the possibility to change it.

This model is based on the so called "perfect competition" assumptions that are far away from what happens in the real world and therefore, as Blythe (2010) points out in a very clear way, it may be in practice of little use for companies; anyway, as we will see, it's good to keep this always in mind so to remember the vital necessity to refer the offer to the demand.

Going to a more practical approach, Fiocca (2005) states that the potential demand for a company at the *t* time should be calculated with the following formula, PMt = Nt x Pil x O x D where: PMt = Market potential at the *t* time; Nt = Total number of the potential product buyers in the specific situation; Pil = Percentage of the population that may be interested to buy the product at a certain price; O = number of possible usage of the product in the *t* time; D = minimum quantity of product to be used every time in the *t* time.

Also Philip Kotler (1997) suggests a very similar model, though a little more advanced, the so called *chain-ration method*, that involves multiplying a base number by several adjusting percentages and then the *multiple-factor index method* which again considers some critical factors but with each factor assigned a specific weight.

[42] Faculty of Economics, University of Rome Three, Rome, Italy, carmine.darconte@tiscali.it

In all respect, this may only be a good start but definitely not the solution.

In fact, in the real world, the demand of a product or service rather than by simple deskwork calculations is determined by many other factors, such as the price and the level of differentiation of the product in relation to similar goods, the prices of these last ones, the income of the potential target, the general socioeconomic situation and so on.

If, out of simplicity, we consider only the price of the product, *coeteris paribus*, that is assuming that all the other factors remain unchanged, we know that with a very few exceptions (the Veblen and the Giffen goods), there is always an inverse relation between the price and the demand, that is the higher the price the lower the demand and vice versa; this means anyway that we may have as many demands as many levels of price we offer to the market; therefore we should try to ascertain whether *one* of the *n* possible demands is the best for profit companies, namely the demand that maximizes the profit.

Anyway we have also to consider that profit is calculated deducting costs from revenues and therefore a perspective based only on the demand is not sufficient at all; beyond this, the price of a product, in the companies' real routine, cannot be fixed without a previous determination of the relevant costs.

Hence it appears fundamental for companies to be in a position to determine with extreme care the costs of their products and therefore we are really astonished to read some economist (Palmerio, 2013) who states that "*there is no evidence that companies, especially big ones, to set their prices, behave in such a gross way to add to the average cost a certain mark up. Experience shows that companies operating under Monopoly or Oligopoly systems, consider the demand when fixing the price*".

Leaving aside Monopoly and Oligopoly situations, in the real world it's exactly the contrary, that is most companies work exactly in this way, that is they evaluate the costs the best they can and they then add a mark up while they do not seem skilled enough to evaluate adequately the aspects related to the demand.

We have to add that to go in-depth in all aspects related to costs, far from being a gross approach, seems to be the privilege of a few companies conversant with standard costs, price and pricing procedures, advanced analytical accountancy such as ABC, advanced data process systems and so on (D'Arconte, 2015).

Anyway also to refer to costs only is not sufficient as it risks to remain a good theoretical exercise and one of the authors who is tackling this critical issue is Lambin (2000) who warns that all calculations that refer only to costs, though made in the best scientific way, do not give any guarantee that the established quantities will be effectively sold.

What we are trying to say is that we definitely need a basic fundamental model that takes into consideration simultaneously both the demand and the costs and their reciprocal relations as the final gross profit will depend on the quantity effectively sold at a certain price P, deducting all the relevant costs.

Going now to the second point of this paper, that is the possible problems companies may have focusing on an indiscriminate sales policy, we will consider here two main aspects, that is first of all the operative leverage mechanism and then the importance not only of quantitative but also of qualitative aspects in relation to company's portfolio.

As for the operative leverage mechanism, there are many contributions but they seem rather incomplete as that they do not consider all aspects and that in a few cases they may also be a little misleading; for instance according to Tyran (2009) the operative leverage degree is "what the company obtains following to the sales variation" which, as we will see, sounds at least an inaccurate definition. A good contribution comes from a rather old book on Finance (Metallo, 1998) where nevertheless the author, does not sum up the fundamental consequences for companies neither gives indications for practical behaviour focusing mainly on the impact of fixed and variable costs in relation to variations in sales. A better contribution comes, as we will see, from a good though rather spare paper by Ghorowatt (2013).

Regarding the second point, we found many contributions that anyway seem to remain some kind of generic recommendations about the centrality of the customers without giving practical directions on how to handle one's customer portfolio.

So we have to say that regarding both the subjects we are here trying to broach, we were able to find in the literature numerous and interesting contributions that, nevertheless, remain rather incomplete.

Research objectives and methodology

Research question

How entrepreneurs in organizations approach management performance in general and in particular what kind of sales policy they tend to adopt.

Methodology

It was prepared a complete and detailed questionnaire with nearly 50 questions on entrepreneurial competences and their approach to business.

Out of these questions, many focused on price and pricing, accountancy and obviously on entrepreneurs' general approach to sales.

The questionnaires were distributed to 30 entrepreneurs, most of them

members of CNA, Confederazione Nazionale dell'Artigianato e della Piccola e Media Impresa di Roma, mainly the owners of little companies; after they filled it up, there was a long, open and interactive discussion on every single item.

Results

The questionnaires and the following interactive discussion confirmed what we had been observing in our experience teaching several courses on business administration to approximately 200 members of the already mentioned organization (CNA).

Entrepreneurs seem to be very poor as far as managerial skills are concerned mainly because they did not receive any managerial preparation; they have difficulty in fundamental issues such as the methodology for preparing an estimate, fixing a price and adapting it, costs assessing and control and so on; beyond this, they normally do not have any advanced accountancy system to relate properly the effective costs and revenues of their products and services such as an Activity Based Costing. Considering the main topic of the research, their recurrent sales policy is to try and sell the more they can without being able to evaluate in an appropriate way the profitability of their choices and, alas, without taking too much care of the satisfaction level of their customers.

Optimal price and sales quantity. Towards an elementary though fundamental model

We will consider in the order:
4.1 Initial steps in sales quantity determination;
4.2 Operative leverage;
4.3 Company's life cycle and the equilibrium between sales and retention;
4.4 Demand function and optimum price.

Initial steps in sales quantity determination

Profit, in normal profit companies, is obtained selling a certain amount of the company's output to a certain price that allows revenues to exceed the total cost sustained; therefore the first elementary preliminary condition is that the price must be higher than the variable cost (P>VC) so that the contribution margin is higher than 0 (CM>0).

After this, we must consider that every company has necessarily two

fundamental limits; a lower one, that is the quantity necessary to have the break-even point and cover all costs (Qbep), that it has necessarily to exceed and then an upper limit, namely the maximum output that can be produced with the available plant without any modification or upgrading (that is with the present fixed costs) which, on the contrary, it cannot exceed in any case (QmaxCF).

At this stage we have then to determine what the market demand may be, considering many different aspects; only after we have done all this we can ask ourselves whether there may be an optimum quantity (we will indicate with Qopt) that obviously will have to be higher than Qbep and lower or equal to QmaxCF.

So to sum up, under the obvious condition that CM>0, we will have to determine Qopt having in mind that it will have to be:

Qopt > Qbep (it must exceed the break-even quantity) and

Qopt ≤ QmaxCF (it cannot exceed the maximum quantity the plant can produce).

How to determine this optimum quantity? I am inclined to believe that for someone this may sound a futile question as the obvious answer should be to sell in any case the maximum quantity the works can produce, referring to the well known principle that the more we sell the more we earn. Apart from focusing on this "in any case" we will try to demonstrate that this principle, under certain conditions, may be wrong.

Operating leverage

The operating leverage, in a nutshell, measures how gross profit is affected by changes in the volume of sales; the topic is not simple and here we will limit ourselves to make a very simple but effective example.

Let's imagine to have a company with only one product, fixed costs for 20,000, unit price 100 and variable cost 60; we know that in case of one product only and with no change in price or costs, we will have to sell 500 pieces for the break-even point, (Qb = 20,000/40 = 500) while to have an operating result of € 12,000 we will need to sell 800 [(20,000 + 12,000)/40] = 800) (D'Arconte, 2013). How would change the operating result, OR1 if we could double the sales from 800 to 1600 without any increase in price and costs? It will evidently be (20,000 + OR1)/40 = 1600 and the total OR1 would approximately be 44,000; so this means that while the sales have increased by 100% the gross profit shows an extra value of +32,000 in absolute value that, compared to the initial profit, is 266.66% higher than before. This is expressed

by saying that, in the initial situation, there was an effect of operating leverage equal to 2,66 since, for an increase of 100%, the extra profit amounts to 100x2, 66 = 266.66% more.

It is to note that 32,000 is the extra profit to be added to the initial one but if we compare the total OR of 44,400 to the initial value of 12,000, we find that total profit is now 3,6667 times higher (44,000/12,000 = 3.6667).

This would seem to confirm the intuitive hypothesis according to which the more we sell the more we earn; however, we must ask ourselves what would happen if we could double the sales again going to 3200, always without any increase in price and costs? A quick calculation gives us an extra profit of 63,980 which in percentage is "only" 1.45 times more (+145%) while if we add this extra profit to the initial one we have a total of 107,980 and this means that total profit is now "only" 2.45 times more.

In other words the more we increase the sales (always assuming no change in price and costs) the less we can benefit of the leverage effect as its degree is continuously decreasing, at first very quickly and then very slowly, tending to the infinite to the limit value 1; in fact the operative leverage degree, that we will indicate with OLD, can be calculated for every volume of sales, dividing the total contribution margin (CMt) by the relevant ORt and if we let the ratio CMt/ORt tend to ∞, it will become 1/1 = 1 as the numerator and denominator have the same degree.

So we have this important indicator, the operative leverage degree (OLD) that allows to calculate exactly how the gross profit will grow because of a certain increase in the sales. For instance, with an Old of 3 and a sales increase of 100%, the extra profit will be 3 x = 100% = 300 (see the fourth line, 750 initial pieces with an OLD of 3 and the seventh line in the table of the figure 1, with 1500 sales and 300% extra profit, +30,000).

Quantity increase	*Quantity*	*Price*	*Variable cost*	*CM*	*CF*	*Invested capital*	*OR*	*Roi*	*Operative leverage degree*	*CMt*
	500	**100**	**60**	**40**	**20000**	**50000**	**0**	**0,00%**	**0**	**20000**
1,2	600	100	60	40	20000	56000	4000	7,14%	6	24000
1,334	667	100	60	40	20000	60020	6680	11,13%	3,99	26680
1,5	750	100	60	40	20000	65000	10000	15,38%	3	30000
1,6	**800**	**100**	**60**	**40**	**20000**	**68000**	**12000**	**17,65%**	**2,67**	**32000**
2,5	1250	100	60	40	20000	95000	30000	31,58%	1,67	50000
3	1500	100	60	40	20000	110000	40000	36,36%	1,5	60000
3,2	**1600**	**100**	**60**	**40**	**20000**	**116000**	**44000**	**37,93%**	**1,45**	**64000**
4	2000	100	60	40	20000	140000	60000	42,86%	1,33	80000
5	2500	100	60	40	20000	170000	80000	47,06%	**1,25**	100000

6	3000	100	60	40	20000	200000	100000	50,00%	**1,2**	120000
6,399	**3200**	**100**	**60**	**40**	**20000**	**211970**	**107980**	**50,94%**	**1,19**	**127980**

Figure 1. *Operative leverage trend*

What conclusions can we draw?

If companies continue to increase their sales and they do not have any change in price and costs, they will always have a more than proportional increase in profit but, nevertheless, in an always decreasing way and therefore entrepreneurs who have the possibility to make choices between alternatives should consider it carefully; in fact rather than investing 100% of their resources to obtain the maximum production in plant or project A, it might be better to invest part of the available money in plant or project B.

After all these considerations the impression may be that in any case the operating leverage is a positive factor, as infinite sales are absolutely unrealistic and therefore companies will always have a more than proportional benefit from increasing the sales though in an always decreasing way. Nevertheless, there are some important cons that should be carefully considered.

The first one is that in many circumstances it is not all easy to sell as much as one likes. Sometimes it may be impossible, in other cases it might be necessary to invest considerably in advertisement and we should consider the relevant cost.

Even more serious may be the fact that increasing the production a physiologic improvement in the initial phase, due to the curve of experience and economy of scales, seems to be followed by an unavoidable fall-off in efficiency (Kerin, 2013, Contorti, 2006), with a consequent increase in the variable cost, increase of which companies may be unaware considering the low general level of managerial competences among entrepreneurs (D'Arconte 2015) and the fact that, generally, they cannot rely on advanced accountancy systems so to have a continuous and correct representation of costs for every product and/or service.

There is finally a fundamental objection related to the dangers to consider costs only, without taking into account the relevant demand and in this regard we refer to a stimulating paper (Ghorawat, 2013) where the focus is first of all on an innovative way to calculate the break-even point that we will consider later on, and then on what the author calls the "Total Operating Leverage" that measures the sensitivity of operating profits to simultaneous change in quantity and in price, with the objective of determining the optimum capacity utilization for maximum profit.

In fact hitherto we have been assuming that while we increase the sales, that

is the offer to the market, the price remain the same but it should not be like this as it would violate the general law of demand and supply.

When we make a price change, we expect and inverse variation in the quantity sold and we know that the extent of the variation will depend on the elasticity of the demand to the price; for instance we can imagine a company that, with 2,000,000 of fixed costs and a variable cost of 70, sells 120,000 products at the price of 100 and has consequently a gross profit of 1,600,000 with a resulting OLD of 2,25 (3,600,000/1,600,000). If the company makes a price cut of 10% to increase the sales and that they go up to 140,000, we will have an increase of 16,66%; if we make some quick calculation we find an elasticity of -1,66.

The OLD, as we said, is 2,25 and this means that without any change in price we should have 0,1666x 2,25 = 37,48% increase in the operative result, that is +600,000 as it is shown in the table of the figure 3 (see B), with the total profit going up to 2,200,000; anyway we have to take into account that the price should change with quantity variations. So, re-considering our example the other way round, we should expect, according to the general law of demand that, with an increase of sales of 16,66% and an elasticity of 1,66, the price automatically goes down to 90 (less 10%) and this would entail a very different result as far as profit is concerned.

	ε	Q	CF	P	CV	CMt	OR	GLO
A		120000	2000000	100	70	3600000	1600000	2,25
B		140000	2000000	100	70	4200000	2200000	1,91
B1	-5	180000	2000000	90	70	3600000	1600000	
B2	-3	156000	2000000	90	70	3120000	1120000	
B3	-1,66	140000	2000000	90	70	2800000	800000	
B4	-1	132000	2000000	90	70	2640000	640000	
B5	-0,7	128400	2000000	90	70	2568000	568000	

Figure 2. *The tricky and misleading effect of operative leverage*

We have said that the real world is not in line with the perfect competition assumptions where is valid the law of demand and supply but, nevertheless, there will be for sure a certain effect on the price. This should happen automatically in the case of a company working in business to consumer, especially if the product is not highly differentiated and if the competition is high, while in business to business, under similar conditions, the customer would most likely try to renegotiate the contract.

Anyway, in case the price should diminish in line with the law of demand and supply, the situation will not be good at all because, as it is shown in the

table of figure 2, the company would be earning only 800,000 (see B_3), so losing money in comparison to the previous situation. In the same table we can see how we need a very high elasticity of the demand to the price (-5) to obtain the same result than before (see B_1), while obviously with lower values – and even more with elasticity values lower than 1 – the situation would be getting worse and worse.

To sum up, when speaking about operating result leverage, before being enthusiastic with its seemingly miraculous effects, companies should consider carefully the possible cons, including the fact that the price may be affected by the increased offer of the product in the market so that, in some cases, an increase in the sales will not necessarily mean a profit increase.

Company's life cycle and the equilibrium between sales and retention

A company that begins its line of business ex novo, when there are no customers at all, necessarily has to engage in a continuous research of new customers as, at this stage, the priority must necessarily be acquiring revenues and market share, being known in the market and so on, while profit in most cases may be a secondary issue.

Anyway if the company develops, profit will soon become a fundamental aspect to be strictly monitored and it will be no longer a matter of acquiring new customers only, but also to retain the existing *good* ones (we will explain better later on what we mean by this), so that the more the time passes the more the new acquisitions should represent, apart from reasonable exceptions, a decreasing percentage of the total portfolio. In other words it is almost impossible – and in any case it would be pointless – to hypothesize a considerable development for the company over time by relying mainly or even "only" on new customers; when the company grows, the main point of reference has to be the portfolio of already acquired customers, as long as they are profitable, solvent and reliable.

Furthermore if, conditions being equal, we have to choose between investing in keeping a customer or acquiring a new one, there is no doubt that we should opt for the former option for various reasons that we will now consider.

To begin with it is widely known that the cost of acquiring a new customer is much higher than the cost of keeping one even if there is no precise indication for this (according to different authors it may vary from 3 to 6 times or 5 to 12 times higher). In any case it is not the exact percentage that is important but rather the overall agreement that the acquisition costs are much higher than the retention ones.

This should already set the alarm bells ringing, but actually there is much

more than that! For instance let's ask ourselves: "If we lose a customer with a 50,000 Euros per year contract, how much are we actually losing? 50,000 Euros?" The answer is: "of course not" as we need to refer to the "Life Time Value", that is to the *current net value of all the contributions, present and future, of a customer during his or relationship with the company (Scott, 2011)*

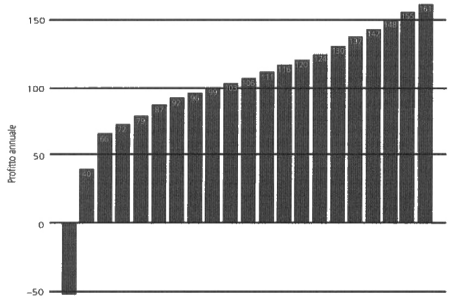


Figure 3. *Profit model of the customer life cycle in the credit card*

Figure 4. *Satisfaction and Profit Matrix sector. Friedrich Reichelf, The loyalty effect Harward Business School*

Another very important aspect is that the considerable investments needed to acquire a new customer often mean that a company's account is in the red during the initial phase; we need to know the customer well, to understand what he or she needs and expects and this means the beginning of a serious commitment which is higher when the service and the personalization required are more complex.

Figure 3 shows for example the trend of the profits found in the credit card sector where it is clear that there is a considerable initial loss that is only recovered after a certain period of time, after which not only does the company show a profit, but it also tends to earn increasingly over time (Reichelf, 1996).

Finally it should be noted that, if a customer is lost because he or she is dissatisfied, we must expect a negative word-of-mouth, a kind of "demarketing" activity which will certainly have extremely damaging consequences for the organization even though it is difficult to quantify them.

To summarize, *good* customers are more profitable the longer they stay with the organization while, if they leave prematurely, the company risks not even recovering the acquisition costs.

So, as we already said many times, companies should focus on the retention of *good* customers. What does it mean *good* and how can we proceed in this regard? For profit companies it means first of all that they must be profitable and possibly strategic, in the sense that they can offer opportunities for future developments; secondly they should be satisfied with the service level they receive and be in a satisfactory relation with the company so that they will be

inclined to continue working with the same organization.

As for "how to proceed" in one of our contributions on CRM (D'Arconte, 2013), we have indicated the fundamental importance of an accurate knowledge of the portfolio and in particular we suggested the importance of building up what we call the "Profit and Satisfaction Matrix" as shown in the figure 4, where we have in the abscissas the profitability level and in the ordinates the satisfaction level.

As we can see we have here 16 different "classes" of customers; for every one of them should be planned and carried out specifically targeted actions but, definitely, two of them are immediately drawn to our attention because they require intermediate intervention:

- the first group are in the last quadrant down on the right, they are highly profitable and at the same time highly dissatisfied, too; a company should give absolute priority to intervene and ensure that they do not leave the company for another supplier;
- the second group are on the top quadrant on the left, they represent a serious loss for the company, probably because they pay very little for a company's services but, in this case, they are, alas, very satisfied so that they will tend to remain as customers indefinitely thus worsening the damage over time.

So, to sum up, we can state that it's not only a matter of quantity but first of all of quality in evaluating and handling the portfolio and that to grow and develop in the appropriate way and maximize profit and profitability, a company should take always more care of the existing *good* customers with the highest retention, monitoring appropriately profitability and satisfaction level rather than investing in a continuous research of new customers trying, in addition, to sell them all they can.

Demand function and optimum price

Lambin (2010) and others, remind us that according to economical theory, the optimum price is inversely proportional to the elasticity to the price expressed in absolute value and that consequently, if we know the value of elasticity, we can determine the optimum price multiplying the direct cost of a product by a coefficient that can be obtained as follows: $[\varepsilon/(\varepsilon+1)]$; so if for instance the cost (C) is 105 and ε is -2.1 the optimum price will be $P = C \times [\varepsilon/(\varepsilon+1)]$, that is 105 x 1,9 = 205.

He also shows in a table how this coefficient diminishes while elasticity to the price increases; he starts with ε = -1,2 where the multiplying coefficient is 6 and he arrives until -15 where it is only 1,07. In the table we obviously do not

have any indication for elasticity = 1 because the ratio $\varepsilon/(\varepsilon+1)$ mathematically speaking is ∞, that in practice means that there is no optimum price; it seems also that the formula cannot be applied for values of elasticity < 1 as the ratio $\varepsilon/(\varepsilon+1)$ gives a coefficient lower than 1 that will diminish the price rather than increasing it.

Apart from this, companies to apply it should know with a good approximation the value of the elasticity to the price that, as we know, changes for every level of price; so it seems to be a generic model useful to have a first indication but that does not consider the characteristics of the particular product of a specific company in a well defined market. The same Lambin, speaking about the limits of the studies on elasticity points out how elasticity is in the final end related to the consumer's behaviour and therefore it can be measured only *ex post* so that it cannot be used ex ante for fixing the price of a new product. Elasticity, as Nagle (1987) states, is a theoretical tool that enables to understand economical phenomena rather that helps companies to make decisions.

They may be right, even if we do not agree with them completely but, nevertheless, despite the difficulty, the problem remains as companies have to fix the price of their new products and adjust those of their already existing ones. What contribution can we give rather that limiting ourselves to state that this is a very complicated topic?

We believe that in order to see whether exists an optimum quantity of sales related to an optimum price, we should be able to make some assumptions on the demand function to the price, that is a law that determines the quantity sold for every level of price.

This is not at all an easy task; the only certainty we have is that, with the exception of Giffen and Veblen goods, there is an inverse relationship between the quantity demanded Q and the level of prices P and that therefore Q will be a decreasing function of P.

In the attempt to find a suitable demand function, let's start considering the equilateral hyperbolic one ($y = 1/x$) that is widely used in economics; this has some important drawbacks that make it unsuitable for our purposes because, according to it, the demand becomes infinite when the price is very low (mathematically speaking when it tends to zero) while on the other hand, even if the price is extremely high (in theory also an infinite value), there is always someone ready to buy the product. In addition the elasticity is always 1 and this means that any change in the price will normally result in a inverse proportional change of the demand.

In the real world something quite different is normally happening, namely that no matter how much we reduce the price, there is a limit beyond which the

sales do not increase (first of all because the number of customers is "limited" and also because an excessive price reduction might have an opposite effect, i.e. generates doubts about the quality). Secondly there is a limit price beyond which no one buys whatever product and, finally, the elasticity of the demand with respect to price normally is not a fixed value but it changes according to each price level and generally it is very elastic when the price is high and tend to increase considerably even more if we continue to increase the price; it's inelastic just for one level of price (when elasticity is 1) and tends to be increasingly rigid when the price is low and if we continue to reduce it.

A function that shows a behaviour of this kind and can thus be used for a simple but effective representation, is a descending straight line that has as the algebraic expression $Y = - mx + C$. If we wish to give this equation a more "economical" representation we can replace Y with Q, mx with mP, and C with Qmax; the expression of our function demand therefore will be: $Q = Qmax – mP$, where Qmax is the intersection with the ordinates and the maximum amount that may be sold when the price tends to 0, m the angular coefficient and P is the price. The linear decreasing demand may be considered therefore an acceptable though inaccurate representation of what is normally happening in reality and therefore, as next step, we can consider the following algebraic system with the demand function, the total costs and the operative result expressions, with the two limits already indicated (Mc> 0 and Qmax FC)

Demand function	$Q = Qmax – mP$
Cost function	$Ct = FC + VCxQ$
Operative result	$Or = (P \times Q) – Ct$

We substitute the first and the second expression into the third one and we obtain a profit function $OR= -mP^2 + (Qmax+mVC)P – (FC+VCQmax)$ which is the expression of a parabola with the concavity downwards; this has a maximum point (see figure 6) that can be easily found calculating the first derivative of the function and putting this equal to 0; in this way we obtain the formula indicated by Springer (1968), that is, $P = ½ [(Qmax/m) + Vc]$.

Price	3	3,5	4	4,9	5	5,5	6	6,5
Var.Costs	2	2	2	2	2	2	2	2
Fixed costs	65000	65000	65000	65000	65000	65000	65000	65000
Quantities	50000	45000	40000	31000	30000	25000	20000	15000
Revenues	150000	157500	160000	151900	150000	137500	120000	97500
Total costs	165000	155000	145000	127000	125000	115000	105000	95000
Op. Result	-15000	2500	15000	24900	25000	22500	15000	2500

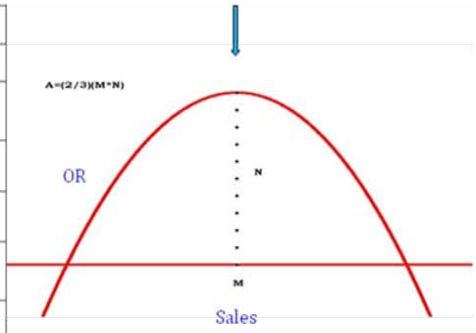


Figure 5. *Optimal price and optimal quantity of sales with the relevant impact on, Figure 6. The trend of operative result in case of a linear de-and profitability creasing demand*

A numerical example may serve to clarify what has been said so far and, what is more important, will allow us to evaluate the impact on profit and profitability.

Let's suppose that according to a specific market research we find out that 80,000 is the maximum quantity of the product X that the company Y may sell for the lowest acceptable price and that 8 € is the limit price for which sales are zero; the demand function will be therefore Q = 80,000 – 10,000 P (m may be obtained simply dividing 80,000 by 8). If the variable cost is 2 and the fixed costs are 65,000, we can obtain immediately that the optimum price is we will have P = ½ [(80,000/10,000) + 2] = 5. We can note that the optimum price is not depending from the fixed costs.

The fundamental importance of all this can be seen considering the table in figure 5 which helps us understand how *the optimal price is unique* and that any change of this value has very serious consequences on profit; from the table it can be seen for example that as a result of a decrease in price by 40% (from 5 to 3), there is a reduction of profit by 160% (from 25,000 to -15.000) while for a price increase of 30% (5 to 6.5) there is a reduction of the profit in this case of 90% (from 25,000 to 2,500).

It is also to be noted that the same gross profit of 2,500 may be obtained either with a price of 3,5, selling 50,000 pieces, or of 6,5, selling only 15,000, but in the first case we have to invest 155,000 with a Roi of 1,61 while in the second we only need 95,000 with a Roi of 2,63. In this regard, every two points of the parabola intersected by a line parallel to the abscissas correspond to the same value of gross profit obtained anyway with very different amount of capital.

This is an evident example of how the focus should be on the price and not on quantities and that the principle "the more we sell, the more we earn" may

be in certain cases completely wrong both for profit and for profitability.

This model is built up on two data, the maximum quantity than can be sold with the lowest acceptable price and the limit price after which nobody will buy the product and both may be evaluated with good approximation thanks to specific market researches: after this a simple formula allows us to calculate the optimum price of a product that should be always compared with the competitors' prices evaluating carefully their differentiation level so to make the necessary adjustments. For sure we will not have in this way the exact optimum price but we can have a good approximation and, above all, we will have a simple basic model to refer to.

Apart from this, the model may be extremely useful also for other reasons; in fact this representation of OR with a parabola shows not only a vertex with a maximum profit but also two intersections with the abscissas that we can calculate putting the expression, $OR= -mP^2 + (Qmax+mVC)P – (FC +VCQmax)$ equal to 0 and using the values of our practical example; we find in this way two prices, 3,41 and 6,58 that substituted in the demand function Q = 80,000 -10,000 p, give us two quantities 45,900 and 14,500; what do they represent? As in both cases OR = 0, that is revenues equal costs, they represent two particular break-even points that, unlike the standard formula, consider the demand variation to the price. A company with the break-even selling 45,900 pieces for a price of 3,41, should increase the price until 5 and reduce the sales to 30,000 while on the contrary, if selling 14,500 pieces at 6,58, it should reduce the price until 5 and increase the sales up to 30,000.

In line with the main objective of our research we can now imagine a company selling 30,000 pieces at a price of 5 that decides to cut the price until 3,41 so to sell more, let's say 45,900 pieces; what would be the result? The result would be a catastrophic *break-even point* where, continuing to sell at all costs at an always lower price, the company goes so far as to destroy all the money previously earned and, to crown it all, investing always more money.

Obviously the figures that we obtain taking into account the demand, should be most likely modified considering that the general law of supply and demand cannot be here strictly applied but, even like that, they will be sensibly different and this representation seems to be much more realistic in relation to what we obtain from the normal break-even formula; so this approach, though with many limits, appears to be rather advanced as it takes into account the demand both for the optimum and for the break-even quantity in line with what Ghorowatt (2013) pointed out and suggested.

Conclusions

So to sum up, we have seen first of all how the operative leverage mechanism that plays a fundamental role in pushing companies to sell as much as possible, far from being a miraculous remedy may be, at least in some cases, rather tricky and do not give the company the expected benefits; at the same time we have underlined the difficulty and the cost of increasing the sales because of advertisement and we also indicated how to step up the production may inevitably generate a fall-off in efficiency. We also stressed how companies should start taking care of the *good* customers they already have and we provided a simple but effective schema with the profit and satisfaction level matrix for portfolio segmentation. Here we wish to add that this is only one of the many aspects of optimization that should regard systematically all the internal and external processes that, in line with process engineering and re-engineering philosophy, may be analyzed and revised periodically in order to make them more effective and efficient.

Paying more attention to internal aspects and in particular to good customers, companies may avoid unnecessary advertisement as well as limiting disputes with difficult and not profitable customers, so to benefit of a reduced churn, of an increased lifetime value of customers and of a positive word of mouth that in many cases will bring for free new customers. For this, anyway, companies not only should have advanced data gathering systems that make it possible the continuous monitoring of processes but they should finally also understand how *saved money* (i.e improving a process) is as good as *earned money* (i.e acquiring a new customer).

We believe that all this may already give companies significant benefits but, apart from that, in line with Springer's simplistic but effective model, we have shown that it may exist an optimum price to which corresponds an optimum quantity of sales that maximizes the profit which means that any change in the price simply means that companies will be losing money. If a profit company is not able to fix the right price it's already something extremely serious but, in case of an indiscriminate sales policy, the situation may be even worse because, as we have seen, there is the well-founded risk to continue to invest more and more money only to have a worse financial result.

So companies should stop investing so much resources in a continuous and indiscriminate research of new customers; though difficult to determine the demand function actually "exists" and therefore also exists an optimum price and an optimum quantity of sales so that companies should try first of all to determine for every product or service the most profitable quantity to produce

and the relevant optimum price.

REFERENCES

1. Business week. 6.10.1984. Peter P. J., Donnelly H. J., Pratesi C..(2013) Marketing. Milano. McGraw-Hill.
2. Blythe G., Cedrola E., (2010). Fondamenti di Marketing. Pearson Prentice Hall.
3. Contorti (2006). Ricerca Mediobanca. Tratti caratteristici delle medie imprese Italiane.
4. D'Arconte C., Pricing, (2013) In Marketing. Peter P. J., Donnelly H. J., Pratesi C.. Milano. McGraw-Hill.
5. D'Arconte C., CRM. (2013) In Marketing. Peter P. J., Donnelly H. J., Pratesi C. Milano. McGraw-Hill.
6. D'Arconte C., Paper on "Managerial accounting and business decision making". Published in "Challenges to Promoting Entrepreneurship, Leadership and competitiveness. Edited by PEP, Visoka škola za poslovnu ekonomiju i preduzetništvo. October 2015. Belgrade Serbia, ISBN978-86-60-69-116-5.
7. D'Arconte C., Paper on "Entrepreneurial competences, Managerial skills and their impact on company's management" Published electronically by the University Press of Kliment Ohridski, University, Faculty of Philosophy, department of Social, Work and Educational Psychology, Sofia. ISBN 978-954-07-4120 - 8, http://press-su.com/public_ftp/incoming/62/895/Sbornik_full_Book.pdf
8. Fiocca R, (2005), Marketing. Impresa e mercato. Milano. McGraw-Hill
9. Ghorawat 2013 <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2273478>(27/07/2016)
10. Kerin R.A., Hartley Steven W., Berkowitz E. N., Rudelius William (2013) Marketing. McGraw-Hill Irwin.
11. Kotler P., (1997). Marketing Management. Prentice Hall International, Inc., Upper Saddle River, NJ.
12. Lambin J.J., (2000). Marketing Strategico e operativo. McGraw-Hill.
13. Nagle T. T. (1987), The Strategy and Tactics of Pricing. Englewood Cliffs. Prentice Hall.
14. Metallo G.,(1995). Tipici strumenti di analisi finanziaria. Padova. CEDAM.
15. Palmerio G., Frau A.,(2013). Elementi di Microeconomia. Cacucci Editore, Bari.
16. Reicheld F., (1996). The Loyalty effect. Page 51. Harward Business School Press. Boston
17. Springer C.H. -Herlihy R.E. -Beggs R.I. (1968), Matematica per Dirigenti. Etas Kompass
18. Scott W., Sebastiani R,. (2011). Dizionario di Marketing, Il Sole 24 ore.
19. Tyran M. R., (2009). Indici Aziendali. Il Sole 24ore.

Fostering Entrepreneurial Marketing

NIKITOVIC Zorana[43], VUJICIC Sladjana[44], STEVANOVIC Mirjana[45]

Introduction

Global competition, intense turbulence, high level of uncertainty and risk in businesses, quick technological progress and high quality in customer satisfaction are the characteristics of businesses in today's conditions.

The process of entrepreneurial marketing is a dynamic category, it is constantly changing and realizing itself in the real world. Hence, modern enterprises are adjusting to new business conditions and directing their business and resources so as to enable a long-term survival on the market and achieve competitive advantage.

Development of entrepreneurship imposes the need and obligation to all market participants to accept new behaviour regulations in order to conduct business and survive in such market conditions which are subject to constant changes. Entrepreneurs, as very important and unavoidable market entities, are mostly striving to proactively react and use changed conditions of market business as their opportunities.

Objective of this paper is to point out to the significance of recognizing opportunities that are coming from inside of the environment and to define marketing strategies that entrepreneurs can apply. This paper gives an insight into different approaches in entrepreneurial businesses that start from recognizing opportunities on the market to developing appropriate marketing strategies.

Theoretical background

Entrepreneurial marketing implies a combination of marketing strategies and entrepreneurial spirit that help entrepreneurs and enterprises in their striving to find their way on the market. Unlike big enterprises, micro, small and medium enterprises and entrepreneurs are often not in the possibility to, inside the organization, have a sector for marketing, development and research…rather they are trying to use limited resources to achieve business endeavours.

[43] Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, zorana.nikitovic@vspep.edu.rs
[44] Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, sladjanakonto@gmail.com
[45] Higher business school of vocational studies "Radomir Bojković PhD", Krusevac, Serbia, mira.stev@mts.rs

In such conditions, companies are often not able to apply traditional marketing strategies. Through entrepreneurial marketing, innovations and creativity, they are trying to be different, to single themselves out from the competition by creating specific values for consumers.

Concept of entrepreneurial marketing demands integration, synchronization and coordination of all activities that refer to business operations of a market-oriented enterprise. Marketing activities should contribute to the efficiency of enterprising, i.e. to meeting the needs of customers, employees, economy and society. In time, marketing function has been established as the most important function in companies and as such it deserves special attention (Ravic et al., 2016). What stems from this fact is that entrepreneurial marketing is such a concept that should enable adequate assessment and integration of market, economic and broader social interests. The essence of entrepreneurial marketing lies in timely ability to adjust to the present changes and demands of society and market.

Table 1. *Definitions of Entrepreneurial Marketing*

"The entrepreneurial marketing concept is focused on innovations and the development of ideas in line with an intuitive understanding of market needs; […]."	(Stokes, 2000, p. 13).
"Entrepreneurial marketing is characterised by responsiveness to the marketplace and a seemingly intuitive ability to anticipate changes in customer demands."	(Collinson, Shaw, 2001)
"Entrepreneurial marketing is the "marketing of small firms growing through entrepreneurship."	(Bjerke, Hultman, 2002, p.15).
"Entrepreneurial marketing represents an opportunistic perspective wherein the marketer proactively seeks novel ways to create value for desired customers and build customer equity"	(Morris et al. 2002)
"Entrepreneurial marketing synthesizes critical aspects of marketing and entrepreneurship into a comprehensive conceptualization where marketing becomes a process that firms use to act entrepreneurially."	(Morris et al., 2002, p. 2).
"Themes relevant to understanding entrepreneurial marketing within a social enterprise context emerged are opportunity recognition (OR), entrepreneurial effort (EE), an entrepreneurial organizational culture (EOC) and networks and networking (N&N)."	(Shaw, 2004, p.197).
"Entrepreneurial marketing is the overlapping aspects between entrepreneurship and marketing; therefore it is the behaviour shown by any individual and/or organization that attempts to establish and promote market ideas, while developing new ones in order to create value."	(Bäckbrö, Nyström, 2006, p.13).

Miles and Darroch suggest that large firms can, and must, effectively leverage entrepreneurial marketing processes (EMPs) and by doing so they will achieve more opportunities, create and/or discover new ways to be innovative, they will evaluate and exploit the market and all this in order to gain competitive advantage. "A firm adopting EMPs must strategically trade off investment in the profitable business of better meeting current customer needs with costly and risky investments in developing future marketing mixes and strategies to meet anticipated and latent needs".	(Miles, Darroch, 2006, pp.488-489)
"Entrepreneurial SMEs may use marketing as a path to create competitive advantage, based on differentiating their marketing program by leveraging their superior knowledge of customers, markets and technologies."	(Hills et al., 2008, p.100).
"Entrepreneurial marketing is a spirit, an orientation as well as a process of pursuing opportunities and launching and growing ventures that create perceived customer value through relationships, especially by employing innovativeness, creativity, selling, market immersion, networking or flexibility"	(Hills et al., 2010, p.6).
"Entrepreneurial marketing is an organizational function and a set of processes for creating, communicating and delivering value to customers and for managing customer relationships in ways that benefit the organization and its stakeholders, and that is characterized by innovativeness, risk-taking, proactiveness, and may be performed without resources currently controlled."	(Kraus et al., 2010, p.9).

Source: Mar Solé, 2013. Modified

Entrepreneurial marketing can be defined as a process used to direct marketing activities towards consumers with the aim to meet their needs, by which it contributes to achieving efficient and effective functioning of a company, to taking the best strategic position on the market, to gaining competitive advantage, achieving maximum profitability as the basic business objective. It is a dynamic process because market conditions and those in an enterprise are changing very quickly; hence what is necessary is constant adjustment of marketing activities to changed environment conditions and new business objectives.

Role of entrepreneurial marketing

Role and significance of entrepreneurial marketing is reflected in company's permanent contact with the environment, wherein an enterprise, through activities by which it constantly affects the market, foresees changes so as to

be able to adjust to them and it also uses customer satisfaction to ensure market survival and achieve competitive advantage.

Customer needs should primarily be identified and studied, then, based on that, market goals should be established and what should be planned also based on these needs are production and sales program, marketing and other activities. Besides that, what needs to be found are ways and methods which will ensure effective use of available resources in order to gain competitive advantage on the market (Nikitovic, Novakovic, 2015, p. 81).

The objective of entrepreneurial marketing activities is to achieve planned results and to make an exchange on the target market. In order to achieve such an objective it is necessary to undertake appropriate marketing actions which are used to provoke desired demand in comparison with the offer. Marketing service, interested in the realization of a potential transaction with the target market, analyses what target customers want and expect, makes a list of desires of potential customers which represents the initial basis when making the system of offer.

Aside from the information on customer demands and desires, in order to structure entrepreneurial marketing activities it is also necessary to ensure additional information on how customers react to different marketing incentives which are often an integral part of the offer. The offer should be formed in such a way to motivate buyers to buy a certain product, but also as a basis for structuring managerial activities of entrepreneurial marketing which should enable continuity in regards to demand. When structuring managerial activities of entrepreneurial marketing we have to bear in mind the objectives and tasks that a company has in regards to certain target segments.

Responsibility of entrepreneurial marketing refers to creating such conditions and such environment in which all company's activities will be directed towards the target market, and also to ensuring value chain for customers, which results in meeting the needs, as well as creating a loyal customer. Due to that, an entrepreneur has a task to use all favourable possibilities in the environment and in such a way remove all barriers and obstacles so as to reach an exchange.

In his first book, "Marketing management" Kotler defines a group of key concepts which consists of: (Kotler, 1997).

- Needs, wants and demand – Need is a sense of lacking something and by getting that we establish a biological and psychological balance. Want is a conscious or unconscious aspiration which strives to be fulfilled in a real or imaginative way. Demand represents desires for certain products followed by financial solvency.
- Target market, positioning and segmentation – Target market is a

homogenous group of buyers for whom an enterprise creates and develops marketing program adjusted to their needs and preferences. Market segmentation is a planned and strategic stratification – division of an overall market to smaller segments – parts. Positioning is an activity used to adjust products or services to buyers in such a way that from the moment they start to think about their needs, a specific brand is one of the first to cross their mind.

- Offer and brands – Offer is a quantity of certain goods that is offered to buyers in a certain time, on a certain place and at a certain price. Brand is the sum of all data about products or groups of products in order to reach improvement of credibility and reputation of the organization or individual.
- Value and satisfaction – Value expresses perceived material and non-material benefits and expenses for the buyer. Satisfaction expresses a comparative evaluation made by an individual which is a result of perceived characteristics of a certain product and in accordance with customer's expectations.
- Marketing channels – marketing channels are used to send and receive messages from target buyers in order to show, sell or deliver a physical product or service to the buyer and to realize transactions with potential buyers. Marketing channels link the seller with target buyers.
- Supply chain – Supply chain represents a longer chain that starts from raw materials, it includes components and ends in final product which is delivered to final buyers.
- Competition – Competition is a contest between at least two individuals, groups, organization and such, for territory, space or resources.
- Marketing environment - Marketing environment is a complex of external factors which affects the marketing system and determines its course and form of existence.
- Marketing planning – Marketing planning is one of the parts of marketing management process and an overall planning process in a business system.

Economic systems often change the way of their business activities due to numerous significant trends and factors from the environment, especially in today's time which is characterized by global competition, intense turbulence, high level of uncertainty and risk in business, quick technological improvement and high level of buyer and customer satisfaction. Business systems that will be successful are those that will be able to constantly adjust their marketing and business to changes in environment and on the market.

Marketing experts have to constantly look for ways to improve their performances. Enterprises cannot be successful if they are stagnating. It is

necessary for them to invest in their offer and in discovering new ideas. Hence, marketing experts have to be in close relationship and to timely cooperate with all sectors inside an enterprise and with research-development sector, production, sale and other sectors so as to develop the enterprise, to sell goods and to enter the market with products which completely satisfy needs, desires and demands of customers.

According to Kotler (Kotler et al, 2014, pp. 623 – 629) traditional marketing experts played the role of a mediator whose duty was to understand customer needs and to pass on their demands to different functional areas, sectors inside the company. When talking about entrepreneurial marketing, the emphasis is put on networking inside the company, where each functional area can be in communication with customers. Marketing is no longer the sole communicator with customers. It has to integrate all processes directed to customers so that the customers see one face and hear one voice when communicating with the company. Good entrepreneurial marketing includes that each and every person in the company accepts the concepts and objectives of marketing and to participate in choosing, creating and providing values to the customers.

The main characteristic of modern social and economic life in its every aspect are changes (Kastratovic et al., 2016). Entrepreneurs have to keep up with trends and be ready to take advantage of them. There are situations when keeping up with trends brings great risk. Then, companies more often opt for protecting the existing markets and personal resources than for innovations.

Innovating, implementing innovations is not easy, especially if we know the fact that 90% of innovations don't live up to our expectations. For that reason, entrepreneurs don't only rely on creative inspiration, but are also guided by their knowledge and information on customers and what is happening around them. In that way, they can create an image of the future needs on the market and create products and services which they would use to fulfil identified needs and desires. Every market-oriented organization puts customers' needs and their adequate satisfaction in the centre of their business because that's the key to achieving goals and company's development (Nikitovic, Novakovic, 2015, pp. 80-100).

By applying entrepreneurial marketing concept an enterprise is seeking to avoid negative consequences that dynamic environment and modern business conditions are imposing (Kotler et al, 2014, p. 647)

- Insufficient focus on market and consumers
- Not recognizing needs of the target market
- Inadequate monitoring and analysis of the market
- Not keeping good business connections with interest-influential groups

- Inability to find new opportunities
- Inadequate marketing planning
- Insufficiently harsh product and service policy
- Bad communication skills and skills of creating a brand
- Disorganization of the company in regards to a successful and fruitful marketing
- Insufficient usability of modern technologies.

On this basis we can summarize that the global processes taking place are not only social, political and economic changes, but also changes in the business environment in which the organisational unit as such must be addressed with a new philosophical vision and the new challenges facing it must be taken into account (Markovic et al., 2014, p. 12).

Precondition for a company to survive on the global market is to offer superior offer in comparison with the competition, i.e. to achieve sustainable competitive advantage. That can be accomplished by an appropriate market orientation of the business system that presupposes that it is directed not only to consumers, but also to the competition.

To achieve competitive advantage it is not enough only to have advantages concerning costs and differentiation. There are often competitive situations in which more competitive advantages have to be followed simultaneously in order to maintain position on the market (Figure 1).

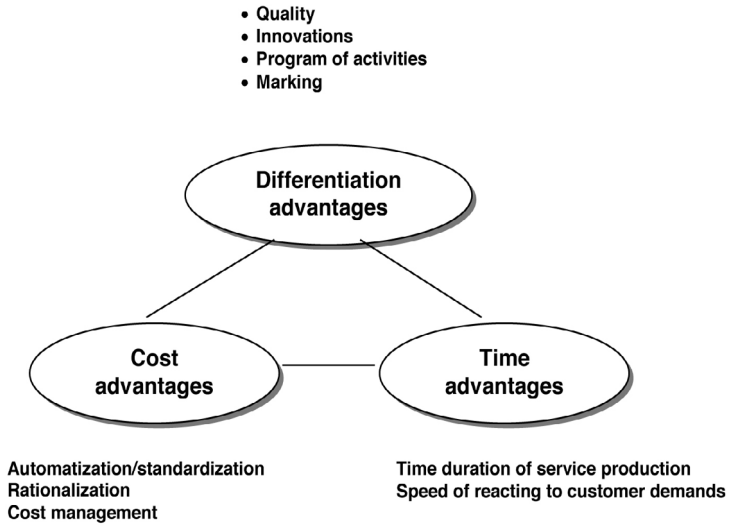


Figure 1. *Dimensions for combining competitive advantage strategies* (*Đuričić et al. 2010, p. 98*)

An entrepreneur has to continually search for new ways to achieve competitive advantage through incremental changes in methods of production, sales and distribution. Entrepreneurial marketing does not consider the external environment as given. Proactive behaviour is a dispositional construct that differentiate people in the extent to which they take action to influence their environment.

EXHIBIT ONE:
ENTREPRENEURIAL MARKETING PROCESSES COMPARED TO TRADITIONAL MARKETING CONCEPTS

MARKETING PRINCIPLES	**TRADITIONAL MARKETING**	**ENTREPRENEURIAL MARKETING**
CONCEPT	Customer-orientated: Market-driven, product development follows	Innovation oriented: Idea-driven, intuitive assessment of market needs
STRATEGY	Top-down segmentation, targeting, and positioning	Bottom-up targeting of customers and other influence groups
METHODS	The marketing mix Four/Seven P's	Interactive marketing methods Word-of-mouth marketing
MARKET INTELLIGENCE	Formalised research and intelligence systems	Informal networking and information gathering

Figure 2. *Entrepreneurial marketing process compared to traditional marketing concept Source: Stokes, 2000*

Entrepreneurial marketing concept is focused on innovations and development of ideas in accordance with intuitive understanding of the market.

Traditional marketing starts from the assumption that a thorough estimate of customer needs precedes the creation of products or services. When it comes to entrepreneurial marketing, the emphasis is placed on retaining the existing buyers and extending the market through loyal, satisfied buyers and through word-of-mouth marketing, hence it relies more on the collection of information through networking, personal contacts.

Entrepreneurial marketing approach demands changes not only in the behaviour of entrepreneurs, but also in emphasising the importance of those who are in charge of making marketing decisions.

Table 2. *Contrasting Conventional marketing and Entrepreneurial marketing*

	Convencional marketing	*Entrepreneurial Marketing*
Basic premise	Facilitation of transactions and market control	Sustainable competitive advantage trough value creating innovation
Orientation	Marketing as objective, dispassionate science	Central role of passion, zeal, persistence and creativity in marketing
Context	Established, relatively stable markets	Envisioned, emerging and fragmented markets with high level of turbulence
Marketer's role	Cooridantor of marketing mix; builder of brand	Internal and external change agent; creator with dynamic innovation
Market approach	Reactive and adaptiv approach to current market situation with incremental innovation	Proactive approach; leading the customer with dynamic innovation
Customer needs	Articulate, assumed, expressed by customer trough survey research	Unarticulated, discovered, identified trough lead users
Risk perspective	Risk minimization in marketing actions	Marketing as vehicle for calculated risk-taking, emphasis on finding ways to migrate, stage or share risks
Resource management	Effcient use of exiting resources scarcity mantality	Leveraging, creative use of the resource of others, doing more with less; actions are not contrained by resources currently contolled
New product/ service development	Marketing supports new product/service developement activities of research and developement and other technical departments	Marketing is the home of innovation, customer is co-active produces
Customer's role	External source of intelligence and feedback	Active participation in firms' marketing decision process, defining product, price, distribution and communication approach

Source: Morris et al. 2002, pp. 1-19.

As defined, entrepreneurial marketing captures the interface between entrepreneurship and marketing, and serves as an umbrella for many of the emergent perspectives on marketing. It has seven underlying dimensions.

Four of the dimensions are derived from the work on the entrepreneurial orientation of the firm: proactiveness, calculated risk taking, innovativeness and opportunity focus. The fifth dimension is resource leveraging. The last two dimensions are costumer intencity and values creating that are consistent with market orientation of the firm. (Mayasari et al., 2009, pp. 5-8).

Any management system should always bear in mind that satisfying customer's needs, i.e. consumer's needs should be the main task and purpose of all businesses in the company. Management basis of every successful company is realizing what customers' needs are. Every organization should have an adequate strategy in all stages of establishing relationship with the customers, for the sake of their satisfaction and loyalty. The organization observes, studies and adjusts a great number of factors which affect the customer's motivation and perception; it strives to reach the most effective presentation of products and services, i.e. it is making every effort to persuade potential customers that what their company presents is exactly what they need (Nikitovic, Novakovic, 2015, p. 82).

On the other hand, consumers themselves strive to satisfy their needs.

A buyer (customer) is satisfied not only when the product or service live up to their expectations, but also when they surpass them. Satisfaction, i.e. customer satisfaction (z) is a function of two variables: realized (perceived/ experienced) benefit (x) and the anticipated benefits (y) of use/utilization of the purchased product. If x = y, the consumer will be satisfied. If x<y, the customer will be dissatisfied (if x is substantially less than y, the customer will be very dissatisfied or disappointed). If x>y, the consumer will be more than happy (if x is much greater than y, the consumer will be more than pleased and excited/ thrilled) (Hanic, 2010, Dimitrijevic, Cogoljevic 2016, p.30).

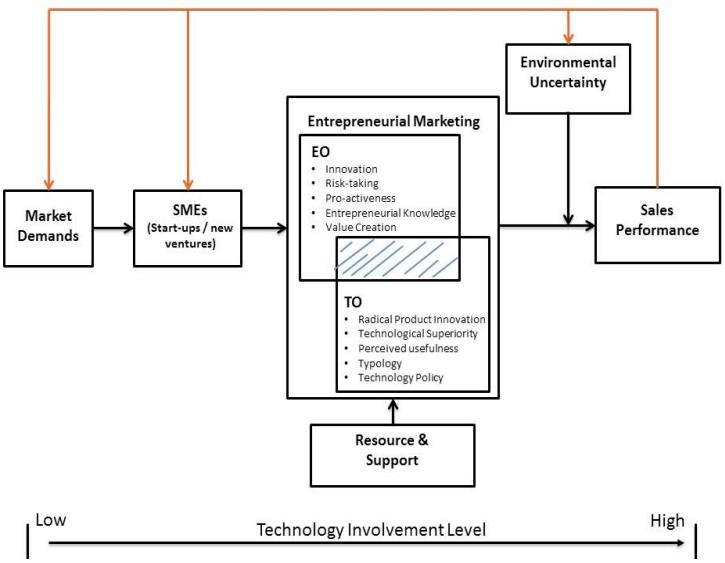


Figure 4. *The Technological Entrepreneurial Marketing Performance (TEMP) model Source: Tian, 2016.*

Entrepreneurial marketing strategies

On today's market, if entrepreneurs don't have a clear objective ahead of them, they can very easily blend with the mass or get lost in a large number of companies on the market and become invisible. This is why one of the greatest challenges for entrepreneurs is differentiation, or being different from the competition. In the following passages, what is listed are some of marketing strategies than can be applied individually or simultaneously in order to achieve business objectives.

Relationship marketing or marketing of relations, being a segment of holistic marketing has for its purpose to build mutually good relationship between business systems and all other crucial partners of the company, consumers, suppliers, distributers and all other stakeholders. It is a marketing concept that is primarily focused on the orientation towards target groups. Relationship marketing is different from the existing marketing management approaches because it indirectly introduces consumers into the company, through a certain value chain. The line where the purview of organization stops and of the market begins is shifted. By adopting the concept of relationship marketing, business systems are striving to get closer to their buyers. Of course, maximum results are achieved not only when informal considerations of relations with buyers are adopted, but also the formal objectives and strategies of relationship marketing. Relationship marketing is focused on strong connections between brands and consumers (Filipović, Kostić-Stanković, 2009, p. 109).

Expeditionary Marketing implies the creation of market and development of innovative products. Objective of this strategy is extending the company to new markets in order to create new values for the entire company. Unlike entrepreneurial marketing, it is not limited to start-up, some of the greatest and well-established companies in the world are using expeditions of marketing strategies. This strategy starts from the analysis of physical, financial and intellectual potentials of the company, and then it seeks to find new markets where those resources could be applied. This is at the same time the essence of this strategy. Creating new products and extending to new markets is a process that includes many risks, but companies, by applying these strategies, believe that they will make profit and successfully develop their operations.

The process of analysing possibilities, product projection and their introduction to new buyers is all part of the expeditionary marketing tactics.

One to One Marketing is a strategy that is based on getting to know the buyers, their wishes, needs and demands, wherein buyer is observed as an individual whose needs company is striving to recognize and completely fulfil. This strategy is not used only to attract the attention of buyers, but also to create a loyal and faithful consumer. Two basic types of 1:1 marketing are personalization and customization. Talking about personalization, the company is trying to observe their consumers and their needs and wishes, as well as their previous purchases and to adjust their offer to each buyer based on that. Within the strategy of adjusting, the company is offering their consumers the possibility to adjust the products to their own personal tastes, wishes and needs.

Real time marketing uses the power of technology in the interaction with the client in real time. By using this strategy the company is trying to determine the optimum approach to a certain buyer, in a certain place, in real time. Real time marketing is creating a strategy focused on current, relevant trends and immediate feedback from customers instead of creating a marketing plan in advance and executing it according to a fixed schedule. The goal of real time marketing is to connect consumers with the product or service that they need now, in the moment. This strategy can be applied because buyers want to part of the trend. Real-time marketing now makes use of all kinds of customer data to help companies understand exactly how customers behave.

It is important to note that real-time marketing is both a technology and a marketing tool. Companies gather customer intelligence data such as online searches, demographics, shopping history, and what topics or products the customer clicks on while surfing the net. Once gathered, this information is used to create ads that appear nearly instantly to the customer and are directly related to the customer's interests and preferences. Thanks to real-time marketing via customer behaviour analytics, companies are better positioned to interact with customers in timely, relevant ways throughout their journey and ensure they are making the most relevant offers.

Viral marketing is a technique in marketing in which the advertisement is willingly passed on by the customers of a certain product or service. In an ideal case, each customer advertises the product to a larger number of new customers in great speed, i.e. in the speed viruses are spread. The viral effect can spread through many different networks, such as Word-of-mouth, Email, Social networking sites (Facebook, Twitter, LinkedIn etc), Video sharing sites (Youtube, Vimeo etc), Web forums. This type of marketing is a lot cheaper than other conventional advertising methods.

Digital marketing is an umbrella term for the marketing of products or

services using digital technologies, mainly on the Internet, but also including mobile phones, display advertising, and any other digital medium to support marketing efforts. Digital media is so pervasive that consumers have access to information any time and any place they want it. Gone are the days when the messages people got about products or services came from the company and consisted of only what company wanted them to know. Digital media is an ever-growing source of entertainment, news, shopping and social interaction, and consumers are now exposed not just to what company says about brand, but what the media, friends, relatives, peers etc., are saying as well. And they are more likely to believe them than company. People want brands they can trust, companies that know them, communications that are personalized and relevant, and offers tailored to their needs and preferences.

The fact is that successful marketing strategies have to be based on promoting and sustaining stable relationships with their clients, and that implies having the knowledge on both the consumers and products. What is also important are the concept and nature of the cooperation with suppliers as well as the ability to differentiate and adjust one's products to consumers.

Conclusion

Environment in which companies are doing business is being characterized by changes both in the area of competitiveness and in the procurement, itself, production, sales and consumption. Characteristic of modern environment is "change". Each of them brings new demands that the participants on the market have to accept if they want to remain on the market. Whether somebody will see problems in those changes or favourable opportunities for success, depends primarily on personal traits of the individual dealing with them, and mostly on how they perceive the world around them and how ready they are to respond to the changes in the shortest possible time interval. In such conditions it is necessary to apply and adjust in different areas of one company's functioning.

Companies often change the methods of their business due to numerous important trends and factors from environment, especially in today's time which is characterized by global competition, intense turbulence, high level of uncertainty and risk in business, quick technological progress and high quality in buyer and customer satisfaction. Business systems that will be successful are those that will be able to constantly adjust their business and marketing to changes occurring in environment and on the market.

Entrepreneurial response to market conditions has to be proactive and efficient, and as such it should enable market-sustainable business. Establishing

efficient entrepreneurial marketing can be a successful entrepreneurial response to such market conditions because it not only reacts to newly occurred market conditions, but it also places the entire business into the concept of electronic era and like that ensures the proactive approach. Application of entrepreneurial marketing opens up many possibilities for market participants and makes their business more efficient, hence more successful. Development of entrepreneurship demands from its participants the establishment of new rules of market behaviour and business activities in all fields. Entrepreneurial marketing has to represent an imperative to each and every entrepreneur who is serious when it comes to achieving sustainable market success.

Entrepreneurial marketing concept is the concept defined from the point of needs and interests of the consumers and simultaneously a concept that exists for the sake of company's needs. Companies find and assess market successfulness in the highest possible level of meeting and fulfilling customer needs and requests.

When a company is having satisfied customers it results in the increase of customer loyalty and positive verbal propaganda about a certain product/service or the company. Increase in loyalty practically means a lot more repeated purchases of the same product/service bought by the existing consumers. Positive verbal propaganda leads to an increase in the number of new consumers.

Precondition for achieving long-term concept of company's growth and development is to acquire customer trust, foresee customer behaviour and create sustainable competitive advantage. This is simultaneously the leading objective of the entrepreneurial marketing concept because only if permanent preference of consumers for certain company's products exists will there be continuity in business. Entrepreneurial marketing is of crucial importance for the success or failure of an enterprise, as its success is ultimately decided in the market, competing for the target customers.

Modern consumer has increased expectation. If companies want to meet these expectations they will have to take customer requests very seriously, which means they will have to make certain re-organizations inside their companies and to think of other ways to approach products, advertisement and customers. Companies that succeed in adjusting to new conditions and trends will most definitely acquire not only new, but also loyal and grateful customers.

In order to be ahead of their customers' and clients' expectations, many companies have marketing teams that deal with creating marketing content in real time exclusively. That enables them to keep track, to keep pace with new

trends and to quickly and efficiently meet the needs and wishes of consumers for new information. Social networks are of great need, hence companies are trying to use their full potential.

When it comes to domestic marketing practice, it is necessary for companies to break loose from that way of thinking which is limited by domestic market, local understanding of business and business experience. Entrepreneurial marketing has to be treated as a strategic function that has an integrative character in comparison with other business functions. General prepositions for promoting entrepreneurial marketing activities of domestic companies are: necessity for permanent innovation of knowledge of all employees, primarily experts who deal with marketing, necessity for a planned approach to managing marketing function inside a company and marketing management has to be based on high tech achievements, especially in the domain of information technologies, as well as using budget surplus in Internet marketing and Social media at the expense of classical media. Use of digital media for communicating with consumers and release of advertisement message is slowly, but safely gaining trust of marketing experts and managers in Serbia, too.

REFERENCES

1. Bäckbrö, J. & Nyström, H. (2006). Entrepreneurial marketing: Innovative value creation (Master's thesis). Jönköping International Business School, Jönköping University.
2. Bjerke, B. & Hultman, C.M. (2002). Entrepreneurial marketing: The growth of small firms economic era. Gloucestershire: Edward Elgar Publishing Limited.
3. Chaston, I. (2000) Entrepreneurial Marketing, competing by challenging conventions. Great Britain: Macmillan Business.
4. Collinson, E. & Shaw, E. (2001). Entrepreneurial Marketing - a historical perspective on development and practice. ManagEntrepreneurial marketingent Decision, 39(9), 761-766
5. Dimitrijević Lj., Cogoljević M., (2016), "Marketing", Visoka škola za poslovnu ekonomiju I preduzetništvo, Beograd.
6. Đuričić M. R., Đuričić Z. Z., Đuričić M. M., Integrisani marketing menadžment sistem u zdravstvenom turizmu, IC „IR - MIR", Užice, 2010.
7. Filipović V., Kostić-Stanković M., Marketing mennadžment, Fakultet organizacionih nauka Institut za menadžment, Beograd, 2009., str. 109.
8. Hanic H., (2010), Modern Concepts of Marketing Management,International Scientific Conference „MANAGEMENT 2010", FIM Krusevac, University of Transport "Todor Kableshkov" Sofia, School of economics and Managament in Public Administration Bratislava, Krusevac.
9. Hills, G.E., Hultman, C.E., Kraus, S. & Schulte, R. (2010). History, theory and evidence of entrepreneurial marketing – an overview. International Journal of Entrepreneurship and Innovation ManagEntrepreneurial marketingent, 11(1), 3-18.
10. Hills, G.E., Hultman, C.M. & Miles, P.M. (2008). The evolution and development of

entrepreneurial marketing. Journal of Small Business ManagEntrepreneurial marketingent, 46(1), 99-112.
11. Kastratovic E., Arsenijevic O., Miletic L. (2016). "Level Of Tolerance To Changes In Vojvodina Enterprises,, International Review, Visoka škola za poslovnu ekonomiju I preduzetništvo, Beograd, Srbija, co-editor MEDIMOND, Italija, (1-2/2016), ISSN 2217-9739, str. 74-82.
12. Kotler Ph., Marketing Management, Prentice Hall International Inc. Upper Sadle River, New Jersey, 1997.
13. Kotler P., Keller K.L., Martinović M., (2014), Upravljanje marketingom, MATE, Zagreb, p. 647.
14. Kraus, S., Harms, R. & Fink, M. (2010). Entrepreneurial Marketing: Moving beyond Marketing in New Ventures. International Journal of Entrepreneurship and Innovation ManagEntrepreneurial marketingent, 11(1), 19-34.
15. Mar Solé, (2013), Entrepreneurial marketing: A conceptual exploration and a link to performance, Journal of Research in Marketing and Entrepreneurship, Volume: 15, Issue: 1.
16. Markovic D., Krumov K., Nikitovic Z., (2014), P. 12.: "CHALLENGES IN MANAGING CROSS-CULTURAL VIRTUAL PROJECT TEAMS" *International Review*, Visoka škola za poslovnu ekonomiju I preduzetništvo, Beograd, Srbija, co-editor MEDIMOND, Italija, (1-2/2014), ISSN 2217-9739, str. 7-24.
17. Mayasari L., Maharani A., Wiyadi I., (2009), "Entrepreneurial Marketing for Small and Medium Entreprises Business", Integritas – JURNAL MANAJENTREPRENEURIAL MARKETINGEN BISNIS, Vol.2 No.1, April-Juli, 1-12.
18. Miles, M.P. & Darroch, J. (2006). Large firms, entrepreneurial marketing processes, and the cycle of competitive advantage. European Journal of Marketing, 40(4-5), 485-501.
19. Morris, M.H., Schindehutte, M. & LaForge, R.W. (2002). Entrepreneurial marketing: A construct for integrating Entrepreneurial marketingerging entrepreneurship and marketing perspectives. Journal of Marketing Theory and Practice, 10(4), 1-19.
20. Morris, Schindehutte, LaForge (2002) Entrepreneurial marketing: A construct for integrating emerging entrepreneurship and marketing perspectives. Journal of Marketing Theory and Practice, Vol 10 (Iss 4), pp. 1-19.
21. Nikitovic Z., Novakovic Z., (2015): "CONCEPT OF THE DEVELOPMENTOF CUSTOMER RELATIONS IN TELEKOM SERBIA JSC" Marketing, Business Law And Transformational Governance", The Fourth International Conference "Employment, Education and Entrepreneurship", 14.-16. Octobar 2015., Belgrade, pp. 82 80-100, ISBN 978-86-6069-115-8, ISBN 978-1-4951-7659-3, COBIS.SR-ID 218123020.
22. Ravic N., Kirin S., Filipovic P. (20126). Participation Of Employees In The Making Of Marketing Decisions In Enterprises In Serbia, International Review, Visoka škola za poslovnu ekonomiju I preduzetništvo, Beograd, Srbija, co-editor MEDIMOND, Italija, (3-4/2016), ISSN 2217-9739, str.73-86.
23. Shaw, E. (2004). Marketing in the social enterprise context: Is it entrepreneurial?. Qualitative Market Research: An International Journal, 7(3), 194-205.
24. Stokes D. (2000), "Putting Entrepreneurship into Marketing: The process of entrepreneurial marketing, Journal of research in Marketing and Entrepreneurship", Vol 2 No 1, Spring, 1-16.
25. Tian X, (2016), Sustainable Energy Smes: Is It Marketing As We Know It?, Eggers F., Monllor J., Hills G. L., Whalen P., Research at the Marketing/ Entrepreneurship Interface, Global Research Symposium on Marketing and Entrepreneurship.

Part III
TYPES OF ENTREPRENEURSHIP

International Entrepreneurship in a Network Economy

CHOU ZANADU Linjie[46],
GOLUBOVIC STOJANOVIC Aleksandra[47]

Introduction

International entrepreneurship has been made possible by globalization.

Globalization fosters the increase in the flow of people, goods, services, finance and information across borders. This trend has provided the possibility for entrepreneurs to venture into the new markets. The attempted creation of a unified Global market has greatly promoted the expansion of the business opportunities worldwide and has brought together entrepreneurs from all over the world to commonly target attractive markets and sectors.

With the emergence of the international markets, a lot of the entrepreneurs are concentrating on how they can maximize on the opportunities presented to them by the globalization of business transactions (Autio, 2007). International entrepreneurship by definition is the discovery, enactment, evaluation and exploitation of opportunities across national borders to create future goods and services (McDougall, Oviatt, 2003; Oviatt, McDougall, 2005, pp. 537-554).

Entering into a foreign market for entrepreneurs is however not an easy task as it may appear. The move to dive into a new market requires that the entrepreneur must familiarize himself or herself with the culture and regulatory policies of the new business environment (Davidson et al., 2006, pp. 179-214). Thus the essential elements of implementing a successful international entrepreneurial activity are knowledge intensity, opportunity recognition and network (Oviatt, McDougall, 2005, pp. 537-554; Keupp, Gassmann, 2009, pp. 600-633).

Knowledge intensity is the knowledge generated from assimilating new knowledge about the foreign market, the local regulatory policies and operation within the organizations in the new environment. The acquisition of foreign experiential knowledge therefore involves new ways of thinking (Autio et al., 2000, pp. 909-924) and the young firms and newly established entrepreneurs can acquire the knowledge faster than the matured firms and senior managers of MNCs.

[46] Petrovskaya Academy of Sciences and Arts, St.Peterburg, Russia, linjiechou@hotmail.com
[47] Faculti of Business Economics and Entrepreneurship, Belgrade, Serbia, aleksandra.stojanovic@vspep.edu.rs

The knowledge about the international market and operation can be obtained from both the internal top management team and their associated previous experience in the international markets (Reuber, Fisher, 1997, pp. 807-825; Zahra et al., 2005; Manolova et al., 2002, pp. 9-31), and external strategic alliances of the organization (Fernhaber et al., 2009, pp. 297-320), trade publications and industry experts (Aldrich, Martinez, 2001, pp. 293-311).

The general situational uncertainty of international environment also reinforces international entrepreneurs to acquire capability development through learning (Autio et al., 2011, pp. 909-924) to overcome the newness of the international exposure.

Opportunity recognition on the other hand, is argued as recognition that results in a creation of viable new business (Ardichvili, Cardozo, 2000, pp. 103-119). The opportunity is to be created through the prospection of creativity and the capability development (Oyson, Whittaker, 2010). The differences in entrepreneurial performance arise from the quality of opportunities and the location associated with the opportunities, as well as creative mode of exploitation (Zahra et al., 2005). Both entrepreneurs' social context (de Koning & Muzyka, 1999), psychological quality such as risk taken propensity (Zahra et al., 2005) and self-efficacy developed in home cultures (Muzychenko, 2008, pp. 366-377) outlast the specific opportunities they develop and pursue.

The asymmetry of information is said to be the main cause of opportunity recognition since not all economic actors receive new information at the exact same time, and such lags in timeliness creates opportunities for entrepreneurs (Shane, Venkataraman, 2000, pp. 217-226; Ellis 2010, pp. 99-127). Social stratification caused by the national differences in workforce influence the likelihood of these information asymmetries (Baker et al., 2005, pp. 492-504).

Use of network in international entrepreneurship

The use of network in international entrepreneurship is said to be a mediator to bridge the knowledge intensity and opportunity recognition (Mort, Weerawardena, 2006, pp. 549-572). Network might benefit the international new ventures to act a source to gather new resources (Coviello, Cox, 2006, pp. 113-132). Personalized social ties can facilitate the informational exchange that is particularly important in the market with inadequate institutional mechanism (Ellis, 2010, pp. 99-127). Harris and Wheeler (2005) found within the international entrepreneurial firms, business relationships are mostly based on informal social contacts and most of these relationships are rooted in social activities. According to Oviatt and McDougall (2005), entrepreneurs are most

depended upon on strong ties at start up, and strong tie requires significant amount of emotional and trust investment. The establishment of network requires trust. Particularly when there's lack of institutional mechanism in some foreign markets, trust will be the most important source entrepreneurs can rely on (Peng, Shekshnia, 2001, pp. 95-110; Welter, Smallbone, 2006, pp. 465-475). Trust is also said to promote cohesion and unity of cooperative direction for launching the new ventures (Zahra et al., 2006, pp. 541-560) in the process of international entrepreneurial network activities. Smith and Lohrke (2008) argued that during the early stages of entrepreneurial activities, affective trust embedded in emotional ties helps entrepreneurs to identify crucial networks that facilitates the new opportunity recognitions. As firm grow steadily, cognitive trust that based on socioeconomic exchanges thus will dominant most of the network building to assure the sustainable growth of the firm. The levels of trust deriving from institutional and cultural environments in which entrepreneurs are embedded also found to have influence on firm's networking process (Zaheer, Zaheer, 2006, pp. 21-29). A business partner from low trust society may prefer to invest in trust building and monitoring more than a business partner from the high trust society, and such difference may cause friction between the partners (Zaheer, Zaheer, 2006, pp. 21-29).

Skills of global leaders and managers

Skills of global leaders and managers imply precise activities requiring both learning and practice in order to be accomplished completely. Each skill has at least three basic components. These are: personal traits – which are characteristic for each person individually, formal education – which is a result of regular education or additional knowledge innovation and experience – which is acquired over time, by practical work.

Due to the fact that there is a great number of various skills which global leaders and managers can acquire, there is a practical problem of their classification which is mentioned in many books and literature covering this field. In this work, we will pay attention to the following skills:

- Communication skills;
- Skill of forming and managing global teams and
- Development of cultural diversities.

Communication skills

Communication is one of the most important global leader's skills affecting

his/her success significantly. Good communication implies understanding of people and their styles, understanding of culture, timely information, correct thinking and assessment, participation in meetings, giving information to other people, understanding of method of giving information, sending informal messages, listening and positive thinking etc.

The efficient intercultural communication is very important with regard to work in multicultural environment, as bad communication usually exists among people from different countries or of different race. Therefore, culture is a basis of communication process, while culture is transferred via communication.

A successful global leader and manager is aware of these differences and he/she is flexible enough to adjust his/her communication style to the style which is most appropriate for another party.

Global leaders and managers have to be good in communication as they have big responsibility in ensuring good communication among members of the organization. In order to be a good leader, the one has to improve many forms of communication continuously, such as: non-verbal communication, listening, consultations, speech and presentation, writing etc.

The ability of managers and leaders to communicate efficiently and overcome cultural boundaries determines the the international business transactions' success to a great extent.

Cultural factors are interconnected with communication process and therefore people's behavior depends on cultural environment in which they were raised. Culture is a basis, i.e. foundation of communication and cultural differences create differences in communication as well. The bigger cultural differences between the persons who communicate, the bigger the possibility of having difficulties in understanding each other.

Language barriers can be a cause of bad communication in global business, this bad communication arising from the individual's inability to speak local language, from bad or too literal translation, speaker's inability to understand body language or meaning of certain symbols etc. Misunderstanding exists even in the countries in which the same language is spoken and this problem can exist in one country between various sub-groups and sub-cultures, too. (Ricks, 1983, p. 89).

Non-verbal communication is also very important skill which global leaders and managers have to possess, having in mind the fact that people often believe in what they see rather than in what they hear (Pfeiffer, 1998).

Cultural differences affect understanding of distance, i.e. space which is considered to be a territory that has to be protected (Sussman, Rosenfekd, 1982, pp. 66-74).

Efficient communication and therefore cooperation which crosses national boundaries often depends on informal understanding between the parties, which is based on confidence they have in each other.

However, the significance of confidence and the manner in which it is gained differ in various societies. For example, in Arabic countries, business transactions are based on long-term relationships based on confidence unlike formal contracts and relationships which are typical for the United States of America.

The parties having confidence in each other understand each other as well.

This understanding has numerous advantages in business, including encouragement of both parties to overcome cultural differences and make the problem smaller. This enables them to deal with unforeseen circumstances with less conflict than in case of formal contracts and to make open communication easier before exchanging ideas and information.

Global leaders and managers have to be good listeners, advisors, speakers and presenters. In global business, they have to know intercultural context well and they must have positive relationship with people from various cultural environments.

Skills of forming and managing global teams

The appearance of virtual teams represents an answer to various challenges that 21st century organizations face (Radović-Marković et al., 2015). According to mentioned authors "the appearance of virtual teams was determined by fast changes in business environment, market globalization, as well as the increase in possibilities of inter- organizational cooperation", p. 24).

The term "global managerial teams" implies a group of managers from several countries who have to cooperate within the group so that they each manager can achieve optimal success and goals (Dyer, 1987).

Global teams consist of managers and technical staff who belong to different cultures and who perform business activities all over the world. The ability of the team to work together efficiently is very important for global company's success (Reich, 1987, pp. 77-88).

The teams that global managers and leaders lead need a set of values.

In line with this, "high-performance global companies must create the inclusive culture where people feel that their interests and those of the company are much the same the culture where people are self-challenged and oriented around a clear purpose" (Radović-Marković, 2008, p. 6).

In order to achieve individual and common goals of team members, a global

team has to provide: means for development of common corporate culture, development of global perspective, coordination and integration of global organization, as well as to meet the requirements of the local market. Namely to satisfy consumer needs, global companies and their competition from all over the world must have global teams for strategic development of organization as a whole and of local units.

The process of developing efficient global teams consists of four characteristic phases. (Solomon, 1998, p. 15) In phase I, each team member presents his/her expectations, culture and values. In phase II, team members go through the period of self-awareness, during which they learn to respect the culture of other team members. Phase III is characterized by development of confidence between team members and in phase IV team members begin to cooperate. Global companies have realized that global teams are important for their success in the world market.

Development of cultural differences

The ability of solving the problem of diversity is a special skill which is required from global leaders and managers. Each culture has some qualities which can contribute to overall success of the organization.

Respecting differences implies respect for various skills of the people coming from different environments. In that sense, a manager has to create a climate in which each employee is respected and which contributes to his/her good business results. A critical skill for managing of people and processes in other countries is cultural understanding, i.e. knowledge of cultural differences.

Managers and leaders often neglect the significance of cultural factors, so that many mistakes that are made in global operations can be attributed to the lack of understanding of different culture. Company reports and studies on management show that the lack of cultural sensibility is one cause of global organizations' failure.

Cultural sensibility implies awareness and honest care for the other individual's culture and requires the ability of understanding of perspective of the people living in other societies (Black, Mendenhall, 1990, p. 142).

Conclusion

In general, international entrepreneurship is a study between international business and entrepreneurship (Jones, Coviello, 2005, pp. 284-303). To many scholars, the current international entrepreneurship literatures however

focus more on the nature of international business than the actual studies of entrepreneurship (Keupp, Gassmann, 2009; Fletcher, 2004, pp. 647-661).

The role of entrepreneur as an individual unit has been conspicuously under explored (Acs et al., 2003, pp. 97-107). As advocated by Oyson and Whittaker (2010), putting entrepreneurs back to the studies of international entrepreneurs should be on the top research agenda. In the human science tradition, respecting individuals as unique and rational unit is the core of modern economic research (Nida-Rümelin, 2009). Therefore, the close look at the personal characteristics of the international entrepreneur will contribute to the in-depth theoretical understanding of international entrepreneurship. Particularly, the skills and competence that associates with the activities of international entrepreneurship should be thoroughly researched.

REFERENCES

1. Acs, Z. (2006). How is entrepreneurship good for economic growth, Innovation: Technology, Governance, Globalization, 1 (1).
2. Ardichvili, A. and Cardozo, R. (2000). A model of the entrepreneurial opportunity recognition process, Journal of Enterprising Culture, 8 (2).
3. Aldrich, H. and Martinez, M (2001). Many Are Called But Few Are Chosen: An Evolutionary Perspective for the Study of Entrepreneurship. In Entrepreneurship Theory & Practice, Springer Berlin Heidelberg.
4. Autio, E. (2007). Global Entrepreneurship Monitor, Global Report on High Growth Entrepreneurship, Babson College and London Business School, Wellesley, MA/London.
5. Autio, E., Sapienza, H. and Almeida, J. (2000). Effects of age at entry, knowledge intensity, and imitability on knowledge about foreign market & Operations, Academy of Management Journal, 43 (5).
6. Baker, T., Gedajlovic, E. & Lubatkin, M. (2005). A framework for comparing entrepreneurship processes across nations, Journal of International Business Studies, 36 (5).
7. Black J. S., Mendenhall, M., (1990) Cross-Cultural Traning Effectiveness: A Review and a Theoretical Framework for Future Research, "Academy of Management Review 15".
8. Coviello, N. and Cox, M. (2006). The resource dynamics of international new venture networks, Journal of International Entrepreneurship, 4.
9. Davidsson, Per, Delmar, Frederic, & Wiklund, Johan (2006) Arriving at the High-Growth Firm. In Davidsson, P, Delmar, F, & Wiklund, J (Eds.) Entrepreneurship and the Growth of Firms. Edward Elgar Publishing, United Kingdom, England, Cheltenham.
10. De Koning, A. and Muzyka, D. (1999). Conceptualizing opportunity recognition as a socio-cognitive process, Working Paper Series No. 1999:13, Stockholm School of Economics.
11. Dyer, W., (1987) Team Building, Reading, MA: Addison – Wesley.
12. Ellis, P. (2010). Social ties and international entrepreneurship: opportunities and constraints affecting firm internationalization, Journal of International Business studies, 42 (1).

13. Jones, M. & Coviello, N. (2005). Internationalization: conceptualizing an entrepreneurial process of behavior in time, Journal of International Business Studies, 36 (3).
14. Fernhaber, S., MacDougall, P. and Shepherd, D. (2009). International entrepreneurship: leveraging internal and external knowledge sources, Strategic Entrepreneurship Journal, 3.
15. Flecher, J. (2004). The paradox of posttheroic leadership: An essay on gender, power, and transformation, The Leadership Quarterly, 15.
16. Keupp, M. and Gassmann, O. (2009). The past and future of international entrepreneurship: a review and suggestions for developing the field, Journal of Management, 35 (3).
17. Manolova, T., Brush, C., Edelman, L. and Greene, P. (2002). Internationalization of small firms: personal factors revisited, International Small Business Journal, 20 (1).
18. McDougall, P. and Oviatt, B. (2003). Some fundamental issues in international entrepreneurship, Working Paper.
19. Mort, G. and Weerawardena, J. (2006). Networking capability and international entrepreneurship: How networks function in Australian born global firms, International Marketing Review, 23(5).
20. Muzychenko, O. (2008). Cross-cultural entrepreneurial competence in identifying international business opportunities, European Management Journal, 26 (1), 366-377.
21. Nida-Rümelin, J. (2009). Philosophical grounds of humanism in economics, in H. Spitzeck, M. Pirson, W. Amann, S. Khan & E. von Kimakowitz (Eds.), Humanism in Business, 15-25, Cambridge: Cambridge University Press.
22. Oviatt, B. and McDougall, P. (2005). Defining international entrepreneurship and modeling the speed of internationalization, Entrepreneurship Theory and Practice, 29 (5).
23. Oyson, M., Whittaker, H. (2010). Opportunity-Based Approach to International Entrepreneurship: Pursuing Opportunities Internationally Through Prospection, High-Technology Small-Firm Conference, University of Twente, the Netherlands (25-28 May), 15.
24. Peng, M. & Shekshnia, S.V. (2000). How entrepreneurs create wealth in transition economies, The Academy of Management Executives, 15 (1).
25. Pfeiffer, J., (january 1998) How Not to Lose Trade Wars by Cultural Gaffes, "Smithsonian 18", no. 10
26. Radović-Marković M., Marković D. and Radulović D. (2015),Critical Competencies of Virtual Team Members and its Managers for Business Success,International Review, Medimond, No. 1-2, 2015. http://scindeks-clanci.ceon.rs/data/pdf/2217-9739/2015/2217-97391502017R.pdf (Retrived: January 12,2017).
27. Radović-Marković, M. (2008) .Managing the organizational change and culture in the age of globalization, Journal of business economics and management, Taylor & Francis Group,Vol. 1, pp.3-11. http://www.tandfonline.com/doi/pdf/10.3846/1611-1699.2008.9.3-11 (Retrived: January 14, 2017.)
28. Reich, R. B., (1987) Who is Them? "Harvard Business Review"
29. Reuber, R. and Fischer, E. (1997). The Influence of the Management Team's International Experience on the Internationalization Behaviors of SMEs, Journal of International business Studies, 28 (4).
30. Shane, S. and Venkataraman, S. (2000). The promise of entrepreneurship as a field of research, Academy of Management Review, 35 (1).
31. Solomon, C., (1998) Building Teams Across Borders, Global Workforce
32. Sussman N, M., Rosenfekd, H. M., (1982) Imf luence of Culture, Language, and Sex on Conversa-tional Distance, "Journal of Personaliti and Social Psychology 42".

33. Welter, F. & Smallbone, D. (2006). Exploring the role of trust in entrepreneurial activity, Entrepreneurship Theory and Practice, 30 (4).
34. Zahra, S., Yavuz, R. & Ucbasaran, D. (2006). How much do you trust me: the dark side of relational trust in new business creation in established companies, Entrepreneurship Theory and Practice, 30.
35. Zahra, A.; Korri, J; and Yu, J, (2005) Cognition and international entrepreneurship: Implications for research on international opportunity recognition and exploitation Management Department Faculty Publications. Paper 113.
36. Zaheer, S. & Zaheer, A. (2006). Trust across borders, Journal of International Business Studies, 37 (1).

The Impact of Women's Entrepreneurship in the Social and Economic Development, Including Gender Equality

GASMI Gordana[48], LUTOVAC Mitar[49], STOJANOVIC Vladimir[50]

"I have the Agency for translation services for many years, and I also organize learning of language, tailored to client - Individually or collectively. When I began the business, my biggest problem was to penetrate among men. It is still difficult to get bigger engagements, malthough I have enough work references for larger job projects." Branka, Belgrade

Introduction

Women have passed very long way on their path to realization in a capacity of business women who are worth of respect, besides their traditional role of being respectful mothers and wives (Radović M, 2005, p. 13). Even after acquiring adquate business position, women have not benefited equal working and social opportunities nor equal pay as men. Rather late, almost at the end of twentieth century, economic empowerment of women and female enterpreneurship became important topics in reality.

Consequently, the first significant article on female entrepreneurship appeared in the mid-1970s, and it was an article that was published in 1976.

The author, Brantley Schwartz, wrote the article titled "Entrepreneurship, A New Female Frontier", based on interviews with twenty women entrepreneurs.

The author of this article focused on individual characteristics, motivations and attitudes of women entrepreneurs and came to the conclusion that the primary motive for women to become entrepreneurs is the desire to achieve job satisfaction and economic independence, which are the main motivators for men entrepreneurs also. Her article began the era of research on female entrepreneurship, its specific characteristics and factors. In recent years of the twenty-first century, in light of the struggle for gender equality and for improving the women's position in countries around the world, women entrepreneurs' issues receive a special significance.

[48] Institute of Comparative Law, Belgrade, Serbia, gordana.gasmi@gmail.com
[49] University Union Nikola Tesla, Belgrade, Serbia, gsmmitar@gmail.com
[50] University Aperion, Banja Luka, Bosnia & Herzegovina, maestros@eunet.rs

It is more simple and easier for women to start business and to be an entrepreneur in developed countries of market economy then to do the same in developing and poor countries, as well as in countries in transition.

For example, in 2007, 7.8 million firms were owned by women, accounting for almost 30% of all non-farm, privately held U.S. firms. Women-owned firms had sales/receipts of $1.2 trillion and those with paid employees had 7.6 million workers in USA ("Women-Owned Businesses in the twenty-first century", U.S. Department of Commerce, Economics and Statistics Administration, 2010).

However, women's entrepreneurship is intertwined with gender equality issues, especially through economic empowerment of women. Narrowing the global gender gap in work would not only be equitable in the broadest sense, but could double the contribution of women to global GDP growth between 2014 and 2025. Delivering that impact, however, will require tackling gender equality in society (McKinsey Global Institute, 2015).

Female entrepreneurship – Notion

Female entrepreneurship is important since it is *spritus movens* of job creation and contributes to the increase of the standard of living in each society.

Notion of the female entrepreneurship was scientifically established in the U.S. and the U.K., however women's entrepreneurship research is now conducted by scholars around the globe. Historically, this research has primarily focused upon women who start and/or run their own businesses (including those who are self-employed). As such, much of the collected work investigates the processes by which some women become entrepreneurs of this nature, the consequences of doing so, the psychological and contextual factors that facilitate or inhibit their entrepreneurial activity, and whether these processes, consequences, and influential factors differ from their male counterparts (Jennings, Brush, 2013, p. 662).

The concept of entrepreneurship is integral and does not make difference depending on gender of the person who starts a new business, so in literature there are different definitions of the woman entrepreneur. Most definitions of female entrepreneurship and women entrepreneurs have a strong gender dimension. Thus, women entrepreneurs are defined as those who use their knowledge and resources to develop and/or create business opportunities, women who are actively involved in managing their own business and have at least 50% ownership stake in the business that is performed at least during one year (Farr-Wharton, Brunetto, 2009).

According to one definition (Pantić-Popović, 2014), female entrepreneurs

are women who founded the company in order to achieve profit and growth, including women owners of small companies that have started a business also to achieve personal ambitions, where the business is the main source of income, engaging most of the time of women entrepreneurs.

Although women's employment has increased dramatically since the 1960s, females are still less likely to be employed than males. Moreover, the labor force not only remains sharply segregated into male-intensive and female-intensive occupations (Jennings, Brush, 2013, p. 664), but also clearly stratified, with women concentrated amongst the lower levels of organizational hierarchies and earning less pay (even for comparable work).

Concept of female enterpreneurship assumes that it is a business, which is completely or in majority part owned by one or more women. Center for Women's Business Research – CWBR in USA (McAdam, 2013:2) draws a distinction between businesses run by women and the businesses that are owned by women, considering that the concrete contribution of women to business, especially in the case of family businesses is to be taken into account.

According to some authors (Blagojević, 2006, p. 17), women's entrepreneurship is a multidimensional phenomenon that can be accessed from different angles:

- From the perspective of women's activism, when viewed as a way of activating the female resources in favor of women themselves;
- From the perspective of economic development, when treated as the way in which it is possible to activate women's resources, particularly in small and medium-sized enterprises;
- From the perspective of social policy, when strengthening of female entrepreneurship is to achieve the reduction of unemployment among women, especially women of the middle generation who are at high risk of losing their jobs during the transition process;
- From the perspective of ensuring sustainable development, when treated as a way to harmonize economic development with environmental and social development through socially responsible business.

In recent decades, due to social changes caused by the process of globalization and the expansion of information and communication technology, rapid development of entrepreneurial activity is accompanied by significant participation of women in entrepreneurship around the world. In comparative literature most assessments consider increase of enterprenial acitivites due to increase of women participation in enterpreneurship at global level (Kelly et al., 2011). Thus, in 2010, 104 million women in the 59 national economies started a new entrepreneurial venture. In addition, Kelly, Brush, Greene and Litovsky

(2011) point out that if we add the 83 million women who have already had their own businesses, we come to the number of 187 million women around the world who have their own business and are involved in its management, and that the range of participation of adult women in entrepreneurship, in these fifty nine national economies, are ranging between 1.5 and 45.4%. Those data emphasize the importance of research on female entrepreneurship, its perspectives and chances for further development.

Relevant aspects of female entrepreneurship

Decision to start entrepreneurial ventures/start a new job, inevitably depends on the personal motivation of the person who makes the decision on starting the job. Although the factors that operate from the external environment have an important role, the incentives are crucial in terms of starting entrepreneurial activities. What is it that motivates women to become entrepreneurs?

It is clear that personal desire to achieve something positive and to contribute to the quality of family and social life of women can be different. With the phenomena of modern society such as globalization, expansion of IT technology and digital media and with the movement to improve the status of women and their equality, women have become more aware of their rights, opportunities and of own position in society and in the labor market. This has multiplied motives that triggered the women to become entrepreneurs. One of the early research on the motives of women entrepreneurs shows that the main motives for starting a business are need for achievement, the desire for independence and desire to improve the financial situation (Schwartz, 1976).

In addition, the desire to control finances and the need for professional satisfaction were also significant motivators for women entrepreneurship (Scott, 1986). Some recent research show that women today are motivated to start entrepreneurship more with personal goals than financial (Kirkwood, 2003), such as, the desire for greater flexibility, the search for challenge and escape from organizational obstacles in the form of the phenomenon of «glass ceiling» or the desire to do things in their own way (Lee, Rogoff, 1997).

There are several essential incentives for women entrepreneurship:

1. The desire/need to improve the financial situation - one of the most universal motivator for women to start a business is the need to improve the financial situation. Women in the past, and in many countries even today, do not have equal opportunities to get a job and make money, like men, resulting in starting entrepreneurial activities that can provide them with what their company has not ensured. The need to improve the financial situation

is particularly powerful motivator in underdeveloped and developing countries, due to the high rate of women unemployment and poverty.

2. The desire for achievement and self-realization - need for achievement, personal development, and social recognition are important psychological motives for various activities in the life, because everyone has a need to do something positive and to be recognized by own environment. This motive for entrepreneurship is dominant among the educated women and among women who have already started entrepreneurial activity.
3. Search for the challenge and the desire for change - as a motive for female entrepreneurship occurs among the educated women and women in developed countries, who want to achieve their personal goals, and due to certain social or organizational barriers that could not be realized, what motivates them to engage in entrepreneurial activities to achieve their personal goals.
4. The desire for independence and autonomy - the motivator that some authors consider as the most important for women entrepreneurship, indicating that a large number of women who were not satisfied with their position within the public or private companies in which they were working, opted to start their own business in order to be independent and able to conduct business the way they want (Buttner, Moore, 1997). This motif can be linked to the previous one in terms of meeting personal goals.
5. The desire for greater flexibility - one of the major motivations for starting their own business by women is the flexibility of working hours and the possibility of balancing family and work commitments. Obligations in doing housework and childcare impose the need for women to have a very flexible working hours, which the entrepreneurship enables. Parker (2009) cites studies whose results support the hypothesis of flexibility, suggesting that women entrepreneurs in many cases themselves are taking care of their children, more than women employees, and that women entrepreneurs more often work from home compared to men entrepreneurs.
6. Overcoming obstacle: “glass ceiling” – “Glass ceiling” is a political term used to describe the inability of women and other minorities in the business hierarchy to advance to senior executive managerial positions, regardless of their qualifications and achievements. The desire to overcome the limitations imposed by the phenomenon of “glass ceiling” appears as a strong motivating factor for those women who, because of these barriers, have failed to progress to high managerial positions. This incentive encourages women to opt for risky step of starting their own business because they are frustrated by disproof of their abilities and by the lack of

gender equality in enterprises in which they were employed.

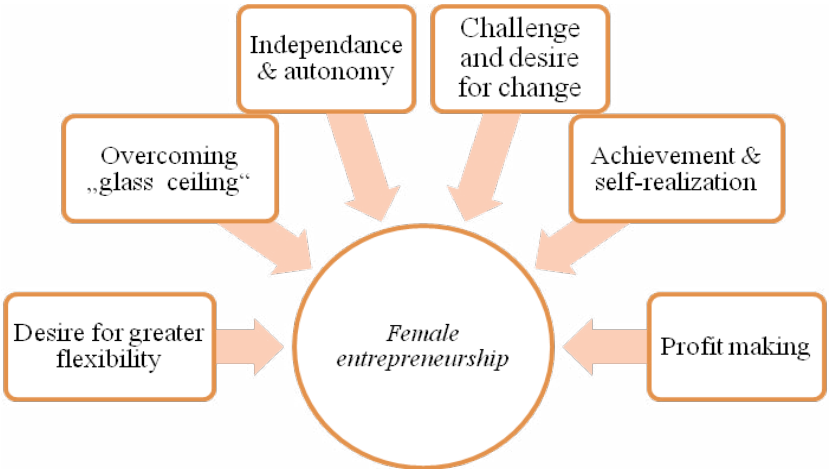


Figure 1. *Motives of Women's Entrepreneurship - Source: authors*

A large number of studies dealt with the examination of the differences in motivation for entrepreneurship between men and women. However, the findings of these studies are not harmonized. There are researchers who believe that the motives that drive men and women to entrepreneurship are more alike than they are different, claiming that regardless of gender, entrepreneurs seek independence and autonomy, as well as the higher revenues (Buttner, Moore, 1997).

On the other hand, there are authors who emphasize the differences in entrepreneurial motivation of men and women. They believe that men entrepreneurs are largely motivated by possibility to achieve higher revenue, while women entrepreneurs evaluate more the flexibility of working hours, the ability to balance work and family obligations, job satisfaction and self-assertion in enterpreneurial sector (Parker, 2009).

Factors of female entrepreneurship and gender equality

In considering the factors of female entrepreneurship, it is important to note that there is no single factor that causes the women to become entrepreneurs, but always comes to synergy of several different factors. The reasons why certain women made the decision to become entrepreneurs depend on a series of both internal/personal and external factors and circumstances.

Family support, social perceptions and personal attitudes towards female entrepreneurship are some of the factors that influence the decision of women to become entrepreneurs.

The first group of factors, which most authors consider as the most important factors of female entrepreneurship, include individual/personal factors that are associated with the woman. These are in fact psychological and cognitive factors, or motivators, such as the desire for progress and autonomy, for self-realization, etc. (Pérez-Pérez, Avilés-Hernández, 2016).

In addition to psychological factors, socio-demographic characteristics of women are also major factors of women's entrepreneurship. These factors include the age of women, education, household income, work experience and so on. (Pérez-Pérez, C., Avilés-Hernández, 2016). It is well known that the level of education of the population has an impact on economic growth, and therefore, educated women have better access to business opportunities, ie. jobs with high salaries. Relevant research results show a strong correlation between education and entrepreneurial success (Reynolds et. Al., 2002). In a similar way is manifested factor of working experience, because the chance of starting entrepreneurial activity is three to four times higher among women who are employed (full-time or part-time) compared with women who do not work or are retired, or are still studying (Pantic -Popović, 2014). This means that the workplace provides access to resources, social capital, and ideas that can help in business venture.

Besides above mentioned characteristics of women as factors of female entrepreneurship, the social and institutional factors are highlighted in theory.

The institutional factors are legislation, public policies and non-economic support and policy, market access, financing and access to vocational training and to training courses (Pérez-Pérez-Hernández Avilés, 2016). Pantic-Popovic (2014) points out that institutional and legal framework in a given society have an important role in women's entrepreneurship, because they influence its nature and prevalence, as well as the potential economic contribution.

Insufficient or inadequately developed institutional framework may limit the integration of women into the market economy, their access to resources that are necessary for the realization of business venture and to impose the role of a housewife, which could be in conflict with entrepreneurial activities.

The social and economic factors include different factors in the environment of women entrepreneurs, such as unemployment rates and employment opportunities, family support and so on. Reynolds and his associates (2002) states that there is a negative correlation between women's entrepreneurship and unemployment, especially in those countries that are characterized by low rates of income. This means that the level of female entrepreneurship is lower in those countries with high rates of unemployment, as women in such societies are discouraged to engage in launching a new business project.

The results of numerous studies put special emphasis on family support for women to start their entrepreneurial venture. Pérez-Pérez and Hernández Avilés (2016) explain the dual role that families play in supporting women entrepreneurs. First, the family can provide financial support for the woman so that she can start a new business. Secondly, family can offer her a moral support that stimulates woman's entrepreneur spirit, whether to continue the existing family business or to start a new one.

The social factors include also a social perception of women's entrepreneurship and the position of women in society. It is very intertwined with the notion of gender equality. Chamlee-Wright (1997) suggest that there are strong correlation between social norms with respect to marriage and family and women's entrepreneurship. This correlation can explain why women entrepreneurship is at a higher level of development in developed countries, where women are usually married in later stage and are living alone. This fact acts as a stimulating factor for women to engage in entrepreneurial activity, compared to women in developing countries. Ilustration bellow provides a concise review of the factors of women's entrepreneurship.

Female entrepreneurship can be a solution for those women who want control over their career and want to oppose "the glass ceiling effect" (Dafoe, S, 2001). Therefore, female entrepreneurship is closely linked and depends on gender equality in given society, since economic empowerment of women is essential part of their independence and of the improvement of women position towards equal opportunities, not only in business world but also in other domains of life, such as education, health protection, combating gender based violence, suppressing misogyny (hate speech against women) in media, sport etc.

On the basis of lessons learnt from previous period (2010-2015), government in Serbia has set three strategic goals for achieving complete gender equality, such as:

1. Changed gender patterns and improved culture of gender equality,
2. Increased equality between women and men by applying policies and measures of equal opportunities and
3. Systematic gender mainstreaming in making, implementation and monitoring of public policies.

Some research results (Radovic, 2005) show that women assess that they are in inferior position generally, and especially dominated by men in business/ economic domain. Most reasons are cultural ones, but also social reasons and economic ones (unemployment, lack of financial resources for start up business) explain this situation.

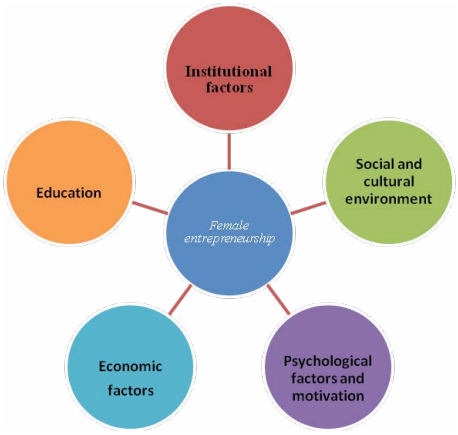


Figure 2. *The most important factors of female entrepreneurship*
Source: authors

Individual motivation, family structure, education, demography, unemployment, and social and economic environments are the main factors influencing female entrepreneurship. These factors are the main determinants of the differences between women and men regarding risk perceptions in the entrepreneurial process (Ascher, 2012).

It is important to stress an interesting typology of women entrepreneurs based on the factors that triggered the women entrepreneurship. The typology is shown in Table bellow.

Table 1. *Typology of women entrepreneurs according to factors of female entrepreneurship*

Type women entrepreneurs	Factor of female entrepreneurship
Purposeless	Young women entering the entrepreneurship due to unemployment
Focused on success	Young women who experience entrepreneurial activity as a long-term strategy
Strongly oriented to success	Women who perceive entrepreneurship as an opportunity for self-realization, or the means to overcome the 'glass ceiling'
Dualists	Women who see flexibility in entrepreneurship/possibility of harmonization of work and family responsibilities
Workwoman returnee	Women who left the job due to family obligations but are still motivated for self-fulfillment outside the family
Traditionalists	Women who have a strong family tradition of entrepreneurship
Radical	Women who fight for the empowerment of women and gender equality

Source: Bruni et al., 2004. Entrepreneur-mentality, gender and the study of women entrepreneurs. Source: Journal of Organizational Change Management, 17(3), pp. 256-268.

Concluding remarks

Closing the global gender gap could give the world economy a substantial boost – potentially doubling the growth in global GDP contributed by women in the next decade (McKinsey Global Institute, 2016). However, government measures are needed in the form of public policy activities, which include not only legislation, but also its implementation together with integrated government approaches to labor market – incentives for female entrepreneurship, to health protection and social protection issues.

Those issues are of very high importance for women in general, but also for women entrepreneurship. One of very significant government measures related to financing is to reduce taxes on labor. Only when those measures are implemented, one can note positive impact of female entrepreneurship in the social and economic development, including on gender equality.

It can be concluded that it is a complex process, highly dependable on above mentioned government policy measures. Positive examples of such measures are: to support projects of women associations, which can increase formal employment of women, reduce informal employment, increase labor activity of women and foster women self-employment.

In Serbia, the new National Strategy for gender equality in the period 2016 – 2020 has been adopted, together with the Action Plan for its implementation in the period 2016-2018 (Official Gazette of Serbia No 4/16). Those government strategic documents have defined crucial measures for gender equality, such as:

- Commitment of all public authorities and private employers to develop internal mechanisms for the control and protection against discrimination and to conduct a gender-balanced personnel policy, as well as to facilitate equitable advancement of women and men.
- Encouraging flexible forms of work, such as part-time, work from home etc.
- Creating a favorable environment for development of entrepreneurship in general, including the start of micro-enterprises, micro-finance, social entrepreneurship, entrepreneurship of chances, family businesses and cooperatives, which are in particular suitably for women;
- Encouraging women's social entrepreneurship and cooperatives in urban and rural areas and training for women to launch business initiatives in this field.
- Mapping and promote good and innovative models of female creativity.
- The introduction of gender sensitivity in entrepreneurship education and

training and raising the level of competence of teachers for entrepreneurship.

- Encouraging and supporting the participation of girls and women in education for occupations that provide great added value, such as engineering and new technology, mathematics.

Strategy and its Action Plan started from the thesis that "the causes of discrimination against women are unequal power relations between women and men based on subordinate role that women play in the patriarchal gender regime, with gender stereotypes and with gender prejudices." This thesis is legally recognized and established in many international conventions, declarations and recommendations (Gasmi, 2012). Consequently, gender equality is very important social, but also an economic theme that promotes the basic values of a democratic society, such as equity, equality and non-discrimination. Within gender equality, the issues of advancement female entrepreneurship have positive impact on complete social and economic development, not only at national, but also at global level.

REFERENCES

1. Ascher J, (2012), "Female Entrepreneurship – An Appropriate Response to Gender Discrimination", Journal of Entrepreneurship, Management and Innovation (JEMI), Volume 8, Issue 4, 2012: 97-114
2. Blagojević M, (2006), "WOMEN ENTREPRENEURS IN SERBIA: "How to make virtue from necessity?" in collection of proceedings edited by Srdić M, Women's entrepreneurship in Serbia – Chances and prospectives", Belgrade
3. Bruni, A., Gherardi, S., & Poggio, B. (2004). Entrepreneur-mentality, gender and the study of women entrepreneurs. Journal of Organizational Change Management, 17(3), pp. 256-268.
4. Buttner, E. H. & Moore, D. (1997) Women's organizational exodus to entrepreneurship: Self-reported motivations and correlates with success, Journal of Small Business Management, vol. 35, no .1, pp.34- 46.
5. Chamlee-Wright, E., (1997), The Cultural Foundations of Economic Development: Urban Female Entrepreneurship in Ghana, Routledge, New York.
6. Dafoe, S. (2001) The Financial Dilemma of Women Entrepreneurs, quoted in : Vujučić S, Kvrgić G, Ivković D, Vujadin R, (2012), "The Development of Female Entrepreneurship in the Function of Overcoming Unemployment of Women in Serbia", Journal of Women's Entrepreneurship and Education (2012, No. 3-4, 1-16), Belgrade
7. Farr-Wharton, Brunetto, (2009), Female entrepreneurs as managers: The role of social capital in facilitating a learning culture", Gender in Management: An International Journal, Vol. 24. Issue 1, 2009, Australia.
8. Gasmi, G., (2012), "Convention of the Council of Europe on preventing and combating violence against women and domestic violence – Legal Commentary", UNDP, Belgrade
9. Jennings J. & Brush C., (2013), "Research on Women Entrepreneurs: Challenges to (and from) the Broader Entrepreneurship Literature?" , The Academy of Management Annals, 2013, Vol. 7, No. 1, 661–713, http://dx.doi.org/10.1080/19416520.2013.782190,

Routledge Group, London and NY.
10. Kelly, Brush, Greene and Litovsky (2011), Global Enterpreneurship Monitor, GEM 2010 Women's Report, CWBR, Babson The Center for Women's Leadership, USA.
11. Kirkwood, J. (2003). The motivation of entrepreneurs: Comparing women and men. Proceedings of the 48th World Conference of the ICSB, Belfast.
12. Lee, M., Rogoff, E. (1997), "Do Women Business Owners Require Special Training? An Empirical Comparison of Men and Women Business Owners in the United States", In: Journal of Small Business and Entrepreneurship, 14(1), pp- 4-29.
13. McAdam M., (2013), Female entrepreneurship, Routledge Group, London and NY.
14. McKinsey Global Institute, (2015), "The power of parity: How advancing women's equality can add $12 trillion to global growth", www.mckinsey.com/mgi, accessed on 14th November 2016.
15. Pantić-Popović S., (2014), „Preduzetnice doprinose razvoju ekonomske politike u novom političkom kontekstu", Beograd, Udruženje poslovnih žena Srbije, Narodna Skupština R. Srbije, 2014.
16. Parker, S. C., (2009), "The Economics of Entrepreneurship", Cambridge University Press
17. Pérez-Pérez, C., Aviles-Hernández, M., (2016), „Explanatory factors of female entrepreneurship and limiting elements", http://www.elsevier.es/es-revista-suma-negocios-208, accessed on 20th November 2016.
18. Radović – Marković, M., (2005), „Žene i mali biznis – Od ideje do realizacije", Beograd, Poslovni biro.
19. Reynolds, P.D., Bygrave, W.D., Autio, E., Cox, L.W. and M. Hay, 2002, Global Entrepreneurship Monitor, 2002 Executive Report, Babson College, London Business School and Kauffman Foundation.

Entrepreneurship and Self-Employment of Women and Youth as Choice: a Research of Actual Potential Entrepreneurs in Serbia

ZAKIC Nebojsa[51], VUKOTIC Svetlana[52], ANICIC Jugoslav[53]

Introduction

Generally in the literature (Parker, 2004; Faria et al., 2008; Kritikos, 2014; Andjelic et al., 2015) entrepreneurship is seen as a fundamental force of modern economic growth, factor in development of any society, with long-term impact on reducing unemployment, which is widely accepted by policy creators and key decision makers around the world. Although this positive image dominates the literature, the relationship between entrepreneurship and employment is complex. Some studies have found that unemployment leads to an increase in entrepreneurial activity (Blau, 1987, Reynolds et al., 1995), while in other studies the opposite effect have been observed (Garofoli, 1994). Entrepreneurial opportunities are seen in the antitheses of hypothesis of push and pull effect. Push effect signifies the situation in which an individual can be encouraged to establish a new company in conditions of negative job prospects (unemployment, job insecurity), whereas in the case of a pull effect an individual is primarily driven by business prospects, which are likely to happen in times of economic prosperity.

Many factors, which are affecting the relations between entrepreneurship and unemployment and which may fall within the broad categories of economic, political, technological, personnel and others, have been areas of focus for researchers. In recent decades, the importance of various demographic factors has been observed, and in this paper we are focusing on age (young generation) and gender.

According to studies, young people have favourable attitudes towards entrepreneurship, but they are not accompanied by action to undertake entrepreneurial ventures. Greene (2005) points out that the rates of latent entrepreneurship among young are high, but the actual action towards self-employment is much lower. Blanchflower and Oswald (2007) state that youth under 25 prefer self-employment when compared to those older than 25 years

[51] "Union - Nikola Tesla" University, Beograd, Serbia, nebojsa.z@fpb.edu.rs
[52] "Union - Nikola Tesla" University, Beograd, Serbia, cecavukotic@gmail.com
[53] "Union - Nikola Tesla" University, Beograd, Serbia, ajugoslav@yahoo.com

of age. However, in all countries investigated, the rate of self-employed under the age of 25 is considerably lower. Similarly, researchers talk about the great potential of female entrepreneurship as well as the insufficient utilization of it. Allen et al. (2008), having examined 43 countries, indicated that in all of them the level of female entrepreneurship is lower than men's. According to the OECD (2004) female entrepreneurship is an important but untapped source of economic growth, as it creates new jobs for entrepreneurs and others and also contributes to the society with a variety of solutions for management, organization and business problems.

Certainly the situation among the countries is different. Thus, women's participation in entrepreneurship varies considerably when comparing different countries, in Zambia, 40% in Pakistan, 1% (Kelley et al., 2013). Research on entrepreneurship and unemployment in different countries has shown that each country has its own peculiarities ranging from the economic situation and the level of development to the national culture.

Serbia is a country in which the economic flows are generally unfavourable for more than two decades. The process of economic transition started in 2000 and is still awaiting completion. According to Đuričić and Vuksanović (2013) the economic crisis in Serbia is not cyclical but structural in its nature.

The effect of the global economic crisis which coincided with an under-reformed economic environment led to a significant decline in economic activity and a sharp drop in employment. Serbia is in a group of five least developed European countries, and the indices of bureaucratization and corruption show Serbia in the same class as underdeveloped African countries (Union of Employers of Serbia, 2013). One of more serious consequences of the crisis is the high unemployment rate. The unemployment rate in the second quarter of 2014 was 20.8%, placing it among the highest in Europe (in EU countries, Greece and Spain have higher unemployment rates of 27.0% and 25.6% respectively, Eurostat, 2014).

Entrepreneurship can be a key factor in desirable changes in Serbia.

Especially youth entrepreneurship offers plenty of potential for young people, and women's entrepreneurship is a large untapped potential in Serbia.

However, youth entrepreneurship does not have adequate support. Also, female entrepreneurship is only sporadically recognized as a significant potential. Affirmation of youth and female entrepreneurship may contribute to a new progressive, creative and pragmatic transformation and transition of Serbian society towards the developed world.

The aim of our study is to evaluate the effect of the studied demographic factors (age and gender) on the relations of entrepreneurship and unemployment

in Serbia and highlight the need to improve the policy and incentive measures for youth and female entrepreneurship in Serbia. Increase in the participation of young entrepreneurs and women entrepreneurs and their ability to create jobs for themselves and others is important, both in terms of growth in economic activity and prosperity of the overall economy in Serbia, as well as improving their overall position in society. Due to the large regional differences in Serbia, currently an issue of high importance, this study included the regional aspect.

Suggestions are made as to the future activities of policy makers and other relevant subjects, taking into account the European and world experience.

The paper is structured as follows: after the introduction, the second part refers to the current environment in which to develop youth and female entrepreneurship in Serbia; Serbia's economy is beset by numerous problems over a long period of transition. The following section explains the applied methodology. The fourth section presents the results and discussion of research findings. The paper ends with concluding remarks and recommendations.

Entrepreneurship of youth and women in serbia

The overall economic environment for entrepreneurship in the Republic of Serbia is unfavourable. Changes in the business environment for more than two decades often led to the contraction in economic activity. In the early nineties, with the disintegration of the federal state, wars and international sanctions, there has been a dramatic decline of the economy. Changes in the economy of Serbia since 2000 have been shaped by the transition process which is not yet completed. The economic system of Serbia is burdened by structural discrepancy, out-dated technology, high production costs, inefficiency, low investment and low exports. In such circumstances the entrepreneurial climate in Serbia is not satisfactory, as shown by the report Bobera et al. (2009) in which the index of entrepreneurial activity in Serbia in 2009 amounted to 4.9 and shows that out of 100 adults less than 5 are entrepreneurially active.

Unemployment is one of the key economic and social problems in Serbia.

Unemployment has been high for many years as a result of the slow and ineffective implementation of the reform process. Unfavourable structural trends and rising unemployment significantly reduce the effects of economic growth and macroeconomic stability in the country. Solving the problem of unemployment is made difficult due to the simultaneous action of two negative causes: structural and cyclical. This makes the problem far more complex than in developed countries, where the effect has only one cause – business cycles.

The unemployment rate in Serbia since the beginning of the global economic

crisis is given in table 1 (Statistical Office, 2015).

Table 1. *Rate of unemployment in Serbia for the period 2008 - second quarter of 2014*

Year	Unemployment rate
2008.	13.6
2009.	16.1
2010.	19.2
2011.	23.0
2012.	23.9
2013.	22.1
2014.	18.9

Source: Republic Statistical Office of Serbia, the Labour Force Survey (2015)

The data in Table 1 indicate high unemployment rates. Unemployment in female population is 21.3% and 19.5% in males. Unemployment rate by region is as follows: in the Belgrade region it was 18.3%, 21.6% in the region of Vojvodina, Šumadija and Western Serbia had 18.3% unemployment rates and Southern and Eastern Serbia 23.3% (Labour Force Survey, 2015).

In line with global trends in the Serbian scientific community and among policy-makers, entrepreneurship is seen as a key factor in economic growth and an employment generator. The priorities of the National Strategy for Sustainable Development (2008) are the development of a competitive market economy and balanced economic growth, and the key actions to achieve them are the development of SMEs, fostering innovation and promoting entrepreneurship.

Strategy for Development of Competitive and Innovative Small and Medium-Sized Enterprises (2008) is based on the promotion of entrepreneurship and the establishment of new businesses. The following strategies are devoted to the issue of youth employment and support entrepreneurship: the National Youth Strategy (2008), Strategy for Development and Promotion of Corporate Social Responsibility in the Republic of Serbia for the period 2011-2015, the Strategy of Career Guidance and Counselling from 2010 to 2014 and others.

However, despite the proclaimed support for entrepreneurship, compared to other countries in transition, Serbia is not so successful in creating new businesses and new jobs. Participation in self-employment outside agriculture is about 5% in Serbia, while over 10% in Slovenia, Hungary, Poland and the Czech Republic, and around 14% in OECD countries and EU-15 (Brkanović et al., 2007).

Adequate financial support to entrepreneurship involves a wide range of loans, which are characterized by flexible terms tailored to the business needs of entrepreneurs. In addition to the interest rate, another necessary condition is the harmonization of the loan term structure with the duration of the business cycle or project. For investment loans, such as the purchase or construction of office space and equipment, it is necessary to have an appropriate grace period.

Bank loans in Serbia are too expensive for starting entrepreneurial activities, and financial support coming from state institutions is insufficient (Fund for Development, the incentives for self-employment, local authorities). Hence, young people express fear of bankruptcy or loss of property due to the lack of initial equity capital.

Doing business in Serbia is burdened by high taxes. A particular problem that discourages starting a business, and thus employment, are taxes and contributions on wages that are 65% in magnitude. Despite the various forms of taxation that are established on the republic (VAT, property tax, income tax) and local (tax on a firm, the fee for the plot) level, a large part of the economy takes place outside the control of the tax authorities, in the so-called informal, grey economy. In the last year, or two, legislative amendments to corporate income tax have abolished incentives for investment in equipment and investment in underdeveloped areas, with a significant increase in the property tax, which had a negative impact on investment activity in the country.

According to a study on youth employment and migration in Serbia (Vladisavljević et al., 2010) entrepreneurship has been increasingly seen as a result of the push effect, i.e., the need for work and survival, rather than as a result of the pull effect or the recognition of business opportunities in the market. Unemployed youth have less access to business information and much worse or no access to resources. Programs of grants to beginners starting their own business are still not sufficiently developed.

Table 2. *Unemployed persons by age and sex at the end of 2013*

Total	Women	15-19		20-24		25-29		30-34	
769,546	393,500	Total	Women	Total	Women	Total	Women	Total	Women
		22,190	9,349	82,261	39,393	104,391	57,314	94,963	53,453

Source: National Employment Report for December 2013

Youth unemployment is a serious challenge given that the number of unemployed people aged 15 to 35 at the end of 2013 was 303,705, which represents 39.47% of the total unemployed (Table 2). The highest number of unemployed youth belongs to the 25-29 (34.36%) age group. Most unemployed women also belong to this age group (35.93%).

Despite the high percentage of unemployment among young people in the Republic of Serbia, there is no suitable environment that will encourage young people to start entrepreneurial initiatives. The question of entrepreneurial culture of young people is quite a complex area, because it is limited by several factors that create an environment for their encouragement such as: the existence of an adequate program to encourage entrepreneurship among young people, existence of institutions to support young people in starting their own businesses, the existence of financial support for young people to start a business, promotion of entrepreneurship among young people, creating a legal framework for entrepreneurship among young people (Bogetić et al., 2013).

According to Stanković et al. (2015) there are number of obstacles which must be solved at the level of authorities.

According to the Union of Employers of Serbia (2012) the self-employment rate among young people in Serbia (below 6%) was significantly lower than the average level of self-employment of young people in other countries (about 12%). Such a low rate is the result of several factors. Most young people come from families with no entrepreneurial experience because most jobs were concentrated in state-owned enterprises. Also, the adverse regulatory framework inherited from the last decade of the twentieth century, the lack of funding for start-ups and weak business advisory services hinder youth entrepreneurship.

Table 3. *Unemployed persons by duration of unemployment and sex at the end of 2013*

Total	Women	Up to 3 months		3-6 months		6-9 months		9-12 months	
769,546	393,500	Total	Women	Total	Women	Total	Women	Total	Women
		93,967	44,409	61,543	29,933	50,035	24,098	51,985	23,956

Source: National Employment Report for December 2013

Unfavourable economic environment in Serbia, lasting almost two and a half decades, has had a negative impact on the employment rate of women. Even young women with a college education (although true for both sexes) have a hard time finding a job. According to the National Employment Service (2013) data presented in Table 3, 51.13% of the total number of registered unemployed at the end of 2013 were women. Of the total number of unemployed women, 31.10% wait for a job up to 12 months and 68.90% have long-term status of the unemployed, lasting more than a year (Table 4). The situation is similar when comparing the different areas in Serbia, which means that even urban areas are not in better position. Also, there is less interest in specific issues and barriers faced by women entrepreneurs (Babović, 2012).

Serbia needs women entrepreneurs, they may be crucial for economic

growth and development including the development of undeveloped/rural areas, contributing to increased employment, improved quality of life and overall wealth. Society that does not recognize this enough, according to the study from the Union of Employers of Serbia (2013) female entrepreneurship is only sporadically recognized as a potential, so there is no systematic and comprehensive support. Although the statutory provisions prohibit gender discrimination, social milieu and tradition are still in favour of men, viewing the role of women in society first as mothers and then as someone who take care of the housework.

Serbia is a country of great regional differences. Regional disproportions in the level of development in Serbia are among the highest in Europe.

Underdeveloped municipalities belong to traditionally undeveloped areas, characterized by very poor infrastructure, financial, economic and human resources. This is reflected in an extremely unfavourable position compared to the rest of Serbia. Today, between 40 and 45 municipalities have the classic attributes of underdevelopment (Spatial Plan of the Republic of Serbia 2010-2014-2021, 2010).

Regional differences are clearly visible from the economic characteristics of the different regions, urban centres and rural areas. According to data from 2006, the city of Belgrade had 21.0% of the total population of the Republic, employing 29.6% of the population, accounted for 25.6% of national income coming from the processing industry, and more than half of highly educated workers were employed in Belgrade. On the other hand, in underdeveloped parts of central Serbia 8% of the total number of workers were employed, which contributed only 5% of the national income of the processing industry.

One of the problems of underdeveloped areas of Serbia was the observed above-average lack of entrepreneurial initiative (National Economic Development Strategy of the Republic of Serbia 2006-2012, 2006).

Regional disparities have affected the migration of young people from underdeveloped areas to urban areas that have the greatest potential for development. According to the last census held in Serbia in 2011 (National Bureau of Statistics, 2012) of 176 municipalities, the population has increased in 22 municipalities, mostly cities, while all other municipalities declined or stagnated.

Methodology

The subject of our study are attitudes of the respondents. The research for this study was carried out on several occasions during the period from

December 2014 to the second half of 2015. We have set the condition that the respondents are not older than 30 for both sections of the sample. Both groups were given a questionnaire, which differed only in the time scale. For students, future tense was used as a verb form, and for entrepreneurs present was used in the questionnaire.

First, we dealt with the opinion of the potential entrepreneurs- students.

There were 203 final-year students of higher education institutions in Serbia who participated in this part. The gender structure of the sample consisted of females - 50.2%, males - 49.8%.

Chronologically, the second section of the research investigated actual entrepreneurs and 222 of them completed the questionnaire. The gender structure of the sample consisted of women - 50.5% and men - 49.5%.

To process the data collected in the survey the chi-squared test (χ^2) was used. To determine the relationship between the two variables we also used chi-square test, and Pearson's contingency coefficient (C). Given the small differences in the sample size between the students and the actual entrepreneurs we descriptively compared the findings between the two groups.

Exploring the regional aspect we determined the areas that gravitate to the cities of Beograd, Novi Sad, Niš and Kragujevac to be urban centres, as they are the biggest university centres in Serbia. Everything else we territorially classified in the other part of Serbia. According to the last census (National Bureau of Statistics, 2012) 34.38% of the total population live in these cities.

Demographically, the rest of Serbia has a larger population (65.62%).

In order to equalize and compare, urban centres and the rest of Serbia were analysed identically and in both samples. Based on these variables, we recruited subjects in the field so that 36.9% are dealing with entrepreneurship in urban centres, and 63.1% in the rest of Serbia. The proportion is determined in this manner to indicate the representativeness of the sample.

Results and discussion

Although entrepreneurship in strategic documents of state institutions is given great importance as a factor of economic growth and unemployment reduction, our research has shown that the actual situation is quite different.

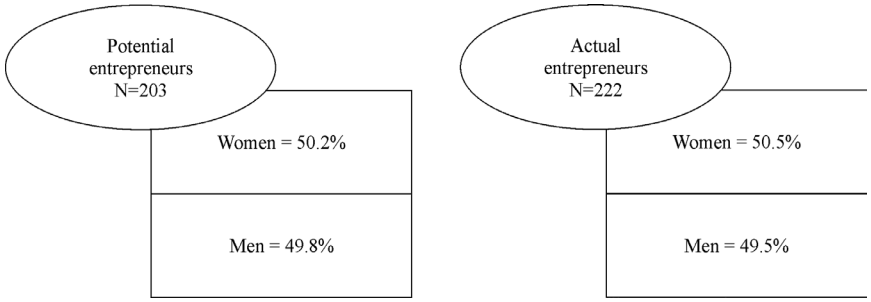
Economic environment has been unfavourable to entrepreneurship throughout the transition period and particularly since the economic crisis broke out. Economic policy has given preference to the services sector, while the real sector lost its priority, especially industry. The consequences of such a policy are underdeveloped productive entrepreneurship and an inferior position of the

entrepreneurship sector to large companies, retail chains and banks. Therefore, a large percentage of entrepreneurial ventures ends up in bankruptcy in the early stages of development, from the third to the fifth year of operation.

In the researched samples female respondents slightly outnumbered the male ones. For comparison, we explored approximately the same percentage of women and men both among actual and among potential entrepreneurs.

These relations are given in Figure 1.

Figure 1. *The gender structure of potential and actual entrepreneurs*



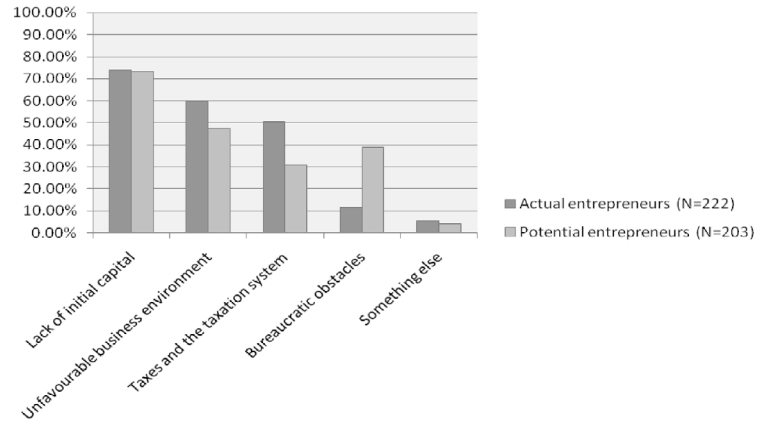
Source: Research of authors

The first question concerned the professional plans of the respondents. There is a difference in the number of respondents who planned and who did not plan to become entrepreneurs ($\chi^2 = 27.405$, df = 1, N = 222, p <= 0.000). This means that the majority of respondents did not plan to become entrepreneurs during education, with only 32.4% of respondents having such plans. Unlike them, the respondents who are at present studying are planning to become entrepreneurs, 53.7% of them answering positively. Slightly more than half of tested students are planning to become an entrepreneur. 46.3% of them answered no to this question ($\chi^2 = 1.108$, df = 1, N = 203, p = 0.292).

The research revealed poor cooperation between universities and research institutions on the one hand and industry on the other. Entrepreneurial sector in order to survive in the market requires new knowledge and skills, adapted to the demands of modern business. An adjustment of the entire school system is required, as well as subsequent training tailored to the needs of industry and entrepreneurs.

Of the possible obstacles for entrepreneurship the following were offered in the questionnaires: the lack of initial capital, unfavourable economic environment, taxes and the tax system, bureaucratic obstacles and other (Figure 2).

Figure 2. *The biggest obstacles young people face in entrepreneurship*



Source: Research of authors

Lack of initial capital is the dominant and almost identical response with N = 222 and with N = 203, i.e. more than 70%. The disposition does not change, meaning unfavourable economic environment is in second place in both samples, but with actual entrepreneurs rating it 12% higher. Actual entrepreneurs rated taxes 20% higher than students. This may indicate that the problem increased when respondents were directly confronted with it, compared to the perception of those who have not been yet engaged in entrepreneurship.

Bureaucratic obstacles, on the other hand, are a much bigger issue for students (approximately 27%), because they do not know what to expect, than for those who are already engaged in entrepreneurship. Something else was ranked similarly both with N = 203 and N = 222 with no major percentage difference.

In our study, most respondents highlighted the lack of initial capital as the biggest obstacle. Serbia subsidizes job creation, especially for foreign investors. This measure has not produced the expected effects, because the number of unemployed increased continuously over the entire period. It is our opinion that much larger effects could be provided by long-term financing of SMEs and entrepreneurs in sectors that create higher added value, especially industry, agriculture, construction, or in labour-intensive activities (production of footwear, textiles etc.). Through the National Employment Service beginners are given start-up loans of symbolic value for serious entrepreneurial business. All this resulted in less than modest results in the development of entrepreneurship, especially concerning young people.

At the regional aspect, we have explored three alternatives. We were interested in where the respondents who plan to become entrepreneurs wanted to locate their business. There are differences in the number of students

planning to pursue entrepreneurship in a city centre and the rest of Serbia (χ^2 = 65,148, df = 1, N = 203, p <= 0.000). Most of our respondents are engaged in entrepreneurship in the rest of Serbia (63.1%), while 36.9% of respondents are engaged in entrepreneurship in a city centre. The third alternative that we were interested in is where the actual entrepreneurs would like to do business.

Slightly more respondents would like to engage in entrepreneurship in a city centre than in the rest of Serbia. More specifically, the percentage of 56.8% of respondents wants to engage in entrepreneurship in a city centre, and 43.2% in the rest of Serbia. The difference was statistically significant (χ^2 = 4.054, df = 1, N = 222, p = 0.044).

There can be seen a great similarity in the responses of entrepreneurs and students, i.e. over 70% are oriented to urban centres, and over 20% to the rest of Serbia. However, respondents from the field would accept to become entrepreneurs in the rest of Serbia, almost 20% of them (63.1% become entrepreneurs in the rest of Serbia, and 43.2% would prefer to). According to the results of the census in 2011, out of all researched centres, Belgrade has a population of 1.659.000, Novi Sad – 372.000, Niš 260.000 and Kragujevac – 180.000.

The question of promoting entrepreneurship among young people is underdeveloped, and even institutional arrangements are not satisfactory.

Young people give priority to employment in the public sector for reasons of job security, viewing the state as the largest employer, since most of the actual and potential entrepreneurs come from families with no entrepreneurial experience.

Concerning the perception or opinion of the respondents whether there are specific barriers for women in dealing with entrepreneurship, a slightly higher percentage of students think that there are barriers to women (30.5%). 69.5% of respondents gave a negative answer. Statistically there is a difference between people who think there are obstacles for women (χ^2 = 30.744, df = 1, N = 203, p <= 0.000). The actual entrepreneurs had more negative responses, i.e. 75.7% of them think that there are no particular obstacles to women. The difference was statistically significant (χ^2 = 58.541, df = 1, N = 222, p <= 0.000). It may be noted that both samples deny specific barriers for women. Even 6.2% more of those who become entrepreneurs think there are no barriers when compared to the sample of potential entrepreneurs.

Gender has no impact on the professional commitment of respondents in relation to entrepreneurship, i.e. there is no correlation between sex of respondents and whether they plan to become entrepreneurs (χ^2 = 2.637, df = 1, N = 203, p <= 0.104). In both samples there is no relationship between gender

and occupational plans ($\chi^2 = 0.444$, df = 1, N = 222, p = 0.505).

Likewise, in the field there is no correlation between gender and specific barriers for women ($\chi^2 = 0.056$, df = 1, N = 222, p = 0.813). However, among potential entrepreneurs there is a difference and a connection exists ($\chi^2 = 13.037$, df = 1, N = 203, p <= 0.000, C = 0.246, p <= 0.000). 42.2% of women think that there are obstacles, and 57.8% said they do not exist. In men, 18.8% believe that there are obstacles, and 81.2% replied negatively. This large difference of 23.4% in the opinions of male and female students suggests that women expect certain barriers to their entrepreneurial career.

Regarding the current situation in Serbia, the state of the development of female entrepreneurship is low. Entrepreneurial activity of women is significantly less than in men, partly because of tradition and social attitudes and prejudices regarding the place of women in the society. Particularly institutional support that is tailored to the specific needs of women, in terms of training for entrepreneurship, business hours etc... is important for the development of women entrepreneurship.

Serbia is characterized by large regional disparities in terms of economic development. Some undeveloped areas are characterized by underdeveloped infrastructure and lack of material resources. Consequently, these areas are characterized by a large depopulation, the population migrating to larger, more developed urban areas. Migration of young people is taking place in the same direction, and brain drain is particularly worrisome because usually highly educated young people migrate abroad. Of course that reduces the human resources potential for successful entrepreneurship. For these reasons, in the underdeveloped areas there is no domestic or foreign investment and the regional economic policy has a difficult task to neutralize these differences.

Our research has shown no connection between plans to become entrepreneurs and the lack of initial capital ($\chi^2 = 2.465$, df = 1, N = 222, p = 0.116). This may indicate that although the major problem of youth for starting entrepreneurial ventures, according to the respondents, is the lack of initial capital that does not demotivate them and does not affect their plans.

Financing of self-employment in Serbia is carried out under conditions of high budget deficits, from limited resources, and so availability and use are not sufficiently aligned with the needs and expectations of the unemployed. There is no continuity in the supply of resources, so state funding cannot be counted on filling the needs of potential entrepreneurs.

Among potential entrepreneurs there is a connection between their plans for entrepreneurship and lack of initial capital ($\chi^2 = 8.228$, df = 1, N = 203, p <= 0.004, C = 0.197, p <= 0.004). Among these respondents, 65.1% of those

who plan to become entrepreneurs believe that the lack of initial capital is a problem, and 34.9% said it was not. Of those who do not plan to become entrepreneurs, 83.0% think that lack of initial capital is a problem, and 17.0% do not.

Of actual entrepreneurs who previously planned to become one, 41.7% believe that the unfavourable environment is a problem, and 58.3% consider it not to be. Of those who did not plan to be entrepreneurs, 68.0% believe that the unfavourable environment is a problem, and 32.0% do not. There is a correlation between the plans and the unfavourable economic environment (χ^2 = 13.995, df = 1, N = 222, p <= 0.000, C = 0.244, p <= 0.000). 26.3% more of those who did not plan to become entrepreneurs emphasized the economic environment as a problem than those who planned to become entrepreneurs.

It may also mean that those who planned had considered the problem of the economic environment. Therefore those who did not plan were more surprised by the adverse economic environment. Among potential entrepreneurs no connection between plans to become entrepreneurs and unfavourable economic environment exists (χ^2 = 3.310, df = 1, N = 203, p = 0.069).

The education system in Serbia in many respects is not adapted to modern requirements of business entrepreneurship. While on the one hand there is huge unemployment, on the other hand a large number of unemployed have qualifications and skills that do not meet the current demands of employers.

In order for education not to become the bottleneck of economic development, a joint strategy of employment, education, scientific and technological development is needed. Regional chambers of commerce, development agencies and local governments must contribute more to the provision of necessary services to entrepreneurs especially in the affairs of networking, association, and successful business development in the long run.

Among actual entrepreneurs, there is no correlation between the lack of start-up capital, taxes and tax systems (χ^2 = 2.649, df = 1, N = 222, p = 0.104), as well as bureaucratic obstacles (χ^2 = 2.530, df = 1, N = 222, p = 0.112) on the one hand, and whether the respondents had planned to become entrepreneurs, on the other hand.

Among potential entrepreneurs there is a connection between professional plans for entrepreneurship and possible problems with taxes and tax systems (χ^2 = 7.084, df = 1, N = 203, p <= 0.008, C = 0.184, p <= 0.008). Of those who plan to become entrepreneurs, 38.5% believe that taxes are a problem, and 61.5% do not. Of those who do not plan to become entrepreneurs, 21.3% believe that taxes are a problem, and 78.7% do not.

Tax policy in the transition period has often been changed. The general

conclusion is that the tax liabilities as a whole increased significantly, regardless of the often proclaimed statement of unburdening the economy. During the year 2013 state increased the general rate of VAT from 18% to 20% and income tax rate from 10% to 15%. Local authorities have also increased the rate of taxes under their jurisdiction (tax on the company, plot), and increased the tax base of small entrepreneurs, so called lump tax. All of these changes have affected the entrepreneurial sector most, so that, according to the Union of Employers, the SME sector is most affected by the economic crisis. On the other hand, the slow transformation of the tax administration takes away a large part of micro and small entrepreneurs' time spent in the performance of tasks related to tax administration. Some improvement occurred at the beginning of 2014 with the introduction of mandatory e-business.

In our study, the bureaucratic obstacles are much like taxes. When the plans are coupled with bureaucratic obstacles for potential entrepreneurs there is a correlation of 0.05 ($\chi^2 = 4.587$, df = 1, N = 203, p = 0.032). 32.1% of those who plan to become entrepreneurs consider them a problem, as well as 46.8% of those who do not plan to do so. Comprehensive regulatory reform in Serbia is still in the initial stage. This issue has not been seriously raised in state institutions, regardless of the existence of oversized administrative apparatus.

Recommendations and conclusions

The youth unemployment rate in Serbia is one of the largest in Europe.

Comparative empirical data show that in countries with higher general unemployment rate the vulnerability of young people in the labour market is significantly higher. A complex situation and unfavourable indicators of the labour market, the incompatibility of educational system and vocational education with the EU regulations are challenges that we are going to face in the future. Therefore, it is necessary to change the priorities of economic and social policies so as to set an increase in employment and improvement of its quality as the central goal of economic development. Serbia's economy due to the difficult economic situation will, viewed in the short term, not be able to create a significant number of jobs, so the importance of encouraging youth entrepreneurship and self-employment is even larger.

Relevant institutions should support the unemployed who want to start their own business. Combining programs of initial and continuing vocational education and training with subsidies for self-employment, would contribute to greater sustainability of start ups. It is necessary to perform a detailed analysis of the causes and problems of high youth unemployment, which is of particular

importance from the aspect of the structure of investment in job creation, and from the standpoint of creating adequate measures to overcome the situation.

Strong promotion of entrepreneurship to a greater extent can be supported by local governments by creating an stimulating environment at the local level. Experience in Serbia shows that many local governments fail to create favourable conditions for local economic growth and this has had negative effects on employment. The results of our study clearly showed the tendency of young people to conduct business in the major urban centres and their willingness to leave their local environment in order to do business in major cities. These trends lead to an even greater gap in development across the country, leaving smaller communities without serious prospects of economic development.

It is crucial for the success of self-employment to create a stimulating business environment, which would support entrepreneurship and private sector and encourage investors. It requires a high degree of coordination of various policies, such as education policy, innovation policy, issues of access to financial resources, issues of administrative framework for business, tax policy and more.

Development of manufacturing entrepreneurship has a special importance in Serbia, because the economic policy in the transitional period neglected the development of the manufacturing sector, especially industry. Production entrepreneurship can contribute not only to the financial stabilization, but also to the social and political, as the creation of new jobs releases creative energy, restores faith in their own strength, stopping the brain drain and the like.

Among young people there are under-developed entrepreneurial skills as a result of the lack of appropriate educational programs in secondary schools, which would influence the development of young people. Therefore, it is necessary to create special programs to promote youth entrepreneurship.

Special programs, national and local, should also encourage innovation among young people and support those projects that in the long term boost employment and local economic development in a sustainable way.

In the forthcoming period ambivalent trends in the labour market in the Republic of Serbia are expected because re-industrialization brings a decrease in demand for flexible employment, while restructuring in the service sector (from traditional to modern) can bring an increase in flexible forms. Therefore, it is necessary to encourage self-employment in the modern private sector of manufacturing and services, which would be accepted by some of the unemployed young people and women who decided to start their own business.

All of the above indicates the need to harmonize the education system with

the real needs of the economy. It is essential that the education system ensures output competencies necessary for functioning in the workplace.

Changes in education that can be achieved by introducing practical skills in real working conditions and adapting educational program requirements to trends in the economic environment are a necessary precondition for successful entrepreneurial ventures. Attitude towards education and the importance it has in the EU can be seen from the quotation of the new EU Strategy for 2020: "Investing in entrepreneurship education is one of the highest return investments Europe can make" (European Commission, 2013).

The research revealed that the obstacles to the development of entrepreneurship in Serbia today are almost the same as at the beginning of the transitional period, which testifies that this problem has not been given an adequate treatment by economic policy. High tax liabilities and unfavourable financing conditions remain the key obstacles for dynamic development of entrepreneurship. Potential entrepreneurs lack the initial capital and the lending of capital in Serbia is too expensive. On the one hand there are unfavourable terms of lending to start-up business, and on the other a very high interest rate. In such a business environment, a good part of entrepreneurs choose their own business out of the need to survive, which is why a large percentage of businesses fail in the first few years after starting.

In order to create a more effective combination of measures to encourage self-employment and other measures, it is necessary to create and implement systemic solutions for monitoring and evaluating the impact of the measures in relation to different categories of users. In Serbia, there is no adequate system of monitoring and evaluation of these measures due to a weak institutional capacity for their design and implementation, resulting in the lack of knowledge about the effects and limitations in the design and combination of measures and programs.

Female entrepreneurship in Serbia is still insignificant and does not receive the attention that it should, given the potential that it has. Pursuing the goal of economic development and acceptance of modern social trends, Serbian society has an obligation to review certain taboos and habits in order to help women to participate equally in the world of entrepreneurship. It is necessary, above all, to improve the institutional framework for women entrepreneurship.

The first step should be a better inter-agency cooperation between relevant ministries (finance, business, labour and employment, social policy) and the Gender Equality Committee. It is necessary to elaborate the strategy and action plan for the development of women entrepreneurship, taking into account the specific needs of women entrepreneurs. Also, it is recommended to synchronize

the functioning of certain institutions that would facilitate reconciliation of work and family life of entrepreneurs.

Promotion of women entrepreneurship is needed at all levels, among youth who are still studying, among those in the labour market, but also in the general public. Media support for women entrepreneurship is particularly important in breaking down traditional prejudices that still exist in Serbia. Lack of time is a big problem for entrepreneurs, so it is necessary to organize training and education at the local level, through tele-learning, mentoring, and the like.

Training is needed at all stages of the business – from start-ups to capturing new technologies and markets to the development and enlargement of business.

Our research confirmed that lack of finance is frequently an insurmountable obstacle to starting a business for many entrepreneurs, especially long-term unemployed and those who lose their jobs. There is insufficient information for potential entrepreneurs about available funds and loans in the later stages of company development. The negative trend of sustainability of women entrepreneurship causes restraint and hesitancy among potential entrepreneurs.

Therefore, it is important to educate entrepreneurs how to apply for bank loans or government subsidies.

Direct exchange of experiences is a valuable source of information and business networking, and association of women entrepreneurs is a way to strengthen their performance in public. Therefore, it is advisable to promote the existing associations of entrepreneurs, encourage their mutual cooperation and exchange of information and services, as well as to encourage connections with associations of women entrepreneurs in other countries for possible business expansion in foreign markets. The success of the conquest of new markets depends on the skills of presenting the services/goods offered, so it is necessary to assist entrepreneurs in acquiring these skills.

In Serbia, it is necessary to implement and monitor statistical data on women entrepreneurship with respect to its potential on the one hand, and lack of indicators, on the other hand. For this purpose, it is necessary to amend legislation so that it would allow keeping statistics on women entrepreneurship, to integrate the data in one place so that it can be made available to interested users. This approach will contribute to the volume, variety and quality of research on women entrepreneurship, and thus facilitate the identification of steps for its further development.

Acknowledgements

This paper is the result of the project 47007/III funded by the Ministry of Education and Science of the Republic of Serbia

REFERENCES

1. Allen, I. E., N. Elam, N. Langowitz, and M. Dean. (2008). Global entrepreneurship monitor 2007 – Report on women and entrepreneurship. Babson Park, MA: Babson College & London: London Business School.
2. Andjelic, S., Cukanovic Karavidic M., Karavidic S. (2015). Organizational support and institutional environment for entrepreneurship development. International Review, 3-4, pp. 8-14.
3. Babović, M. (2012). Polazna studija o preduzetništvu žena u Srbiji [Baseline Study on Women's Entrepreneurship in Serbia]. Beograd: Program Ujedinjenih nacija za razvoj [United Nations Development Programme].
4. Blanchflower, D. and A. Oswald. (2007). What makes a young entrepreneur? pp. 188-200. Furlong, A. (ed.). Handbook of youth and young adulthood: New perspectives and agendas. London: Routledge.
5. Blau, D. M. (1987). A time series analysis of self employment in the United States. Journal of Political Economy, 95(3), pp. 445-457.
6. Bobera, D., B. Leković, N. Vunjak, P. Tumbas, S. Bošnjak, and S. Marić. (2009). Global Entrepreneurship Monitor – Serbia National Report 2009. Subotica: Faculty of Economics.
7. Bogetić, S., D. Đorđević, and D. Ćoćkalo. (2013). Unapređenje preduzetničke kulture mladih u funkciji regionalnog razvoja [Improving the entrepreneurial culture of young people in Regional Development], Ekonomski vidici [Economic perspectives], 18(2-3), pp. 381-391.
8. Brkanović, I., M. Lalović, A. Lakić, and S. Tilger. (2007). Mikro-finansijska podrška preduzetnicima početnicima u Srbiji [Micro-financial support to entrepreneurs beginners in Serbia]. Beograd: Centar za razvoj preduzetničkog društva [Centre for Development of Entrepreneurial Society].
9. Đuričić, D., and I. Vuksanović. (2013). Reindustrialization strategy of Serbia: How to get it and how to use it. Ekonomika preduzeća [Entreprise Economics]. 61(5-6), pp. 289-308.
10. European Commission (2013). Entrepreneurship 2020 Action Plan. Brussels.
11. European Commission (2013). Young people and entrepreneurship. Luxembourg: Publications Office of the European Union.
12. Eurostat. (2014). Euro area unemployment rate. 52/2014. Brussels.
13. Faria, J. R., J. C. Cuestas, and E. Mourelle. (2008). Entrepreneurship and unemployment: A nonlinear bidirectional causality? Nottingam Trent University Discussion paper in economics. No. 2008/6, pp. 1-33.
14. Garofoli, G. (1994). New firm formation and regional development: The Italian case. Regional Studies, 28(4), pp. 381-394.
15. Greene, F. J. (2005). Youth entrepreneurship: Latent entrepreneurship, market failure and enterprise support. CSME Working paper No. 87. Coventry: University of Warwick.
16. Kelley, D. J., C. G. Brush, P. G. Greene, and Y. Litovsky. (2013). Global Entrepreneurship Monitor 2012 – Women's report. Babson Park, MA: Babson College & London: London

Business School.
17. Kritikos, A. (2014). Entrepreneurs and their impact on jobs and economic growth. Bonn: IZA World of Labor.
18. Ministry of Envinronment and Spatial Planning of the Republic of Serbia. (2010). Prostorni plan Republike Srbije 2010-2014-2021 [Spatial plan of the Republic of Serbia 2010-2014-2021]. Beograd.
19. Ministry of Labour and Social Policy of the Republic of Serbia. (2011). Strategija razvoja i promocije društveno odgovornog poslovanja [Strategy for development and promotion of socially responsible business]. Beograd.
20. Ministry of Youth and Sports of the Republic of Serbia. (2008). Nacionalna strategija za mlade [National strategy for youth]. Beograd.
21. National Employment Service. (2013). Izveštaj za decembar 2013 [Report for dec. 2013]. Beograd.
22. Organisation for economic co-operation and development – OECD. (2004). Women's entrepreneurship: Issues and policies. 2nd OECD Conference of Ministers Responsible for Small and Medium Sized Enterprises, 3-5 June, Istanbul, Turkey.
23. Parker, S. (2004). The economics of self-emlpoyement and entrepreneurship. Cambridge, Cambridge University Press.
24. Reynolds, P., B. Miller, and W. R. Maki. (1995). Explaining regional variation in business births and deaths: U.S. 1976-88. Small Business Economy, 7(5), pp. 389-407.
25. Serbian Governement. (2008). Strategija razvoja konkurentnih i inovativnih malih i srednjih preduzeća 2008-2013 [Strategy of development SME competitiveness and innovation 2008-2013]. Belgrade.
26. Serbian Government. (2006).Strategija privrednog razvoja Republike Srbije 2006-2012 [Strategy for economic development of the Republic of Serbia 2006-2012].Beograd.
27. Serbian Government. (2008).Nacionalna strategija održivog razvoja [National strategy of sustainable development]. Beograd.
28. Serbian Government. (2010).Strategija karijernog vođenja i savetovanja [Strategy for career guidance and counseling].Beograd.
29. Stanković, R., Dedinjski S., Klijenak Vojteški D. (2015). Entrepreneurial values research in Serbia. International Review, 1-2, pp. 63-73.
30. Statistical Office of the Republic of Serbia. (2012). Uporedni pregled broja stanovnika 1948, 1953, 1961, 1971, 1981, 1991, 2002 i 2011 [Comparative population in 1948, 1953, 1961, 1971, 1981, 1991, 2002 and 2011]. Beograd. 26
31. Statistical Office of the Republic of Serbia. (2015). Anketa o radnoj snazi [Labour Force Survey]. Beograd. 16
32. Union of Employers of Serbia. (2012). Osnovne karakteristike položaja mladih na tržištu rada [Main characteristics of the youth labour market]. Beograd.
33. Union of Employers of Serbia. (2013). Stavovi poslodavaca o poslovnom okruženju [Attitudes of employeers about business environment], Beograd, 2013.
34. Vladisavljević, A., B. Krsmanović, M. Stojanović, T. Azanjac, (eds.). (2010). Izveštaj o zapošljavanju i migracijama mladih u Srbiji [Report on employment and migrations of young people in Serbia 2010]. Beograd: Građanske inicijative [Civic initiatives].

Analysis of the Entrepreneurial Potential of Female Students at the Business Schools

KASTRATOVIC Edita[54], DRAGIC Milan[55], MILETIC Lidija[56]

Introduction

Entrepreneurship is the basis of social development at both the local and global levels. The market economy requires changes, development, progress, and the prerequisite of this is a developed entrepreneurial culture. The specific objectives are the basis for the meeting of a common goal, which refers to the community on the city level, the municipality, the region, the country and even beyond.

Entrepreneurs create business ventures by detecting, identifying and exploiting business opportunities, with the main objective to achieve growth and profitability (Coulter, 2010, p. 312). Entrepreneurship is a platform that accepts diversity in terms of gender, age, religion, and culture. With the establishing of a market trading system, the company encourages creative, ambitious, energetic and intelligent people to take advantage of its ability to gain profit. The tax system in capitalist society creates the right balance between the successful and less successful members of society and enables a proper functioning of the community.

An entrepreneurial plan or vision are the ability to identify needs that are not met and which can satisfy both the entrepreneur to make a profit and be a benefit to others (Maslow, 2004, p. 268).

Entrepreneurial activity resembles a natural struggle for sustainability, dominance and the control of a certain territory. The constant need to retain a certain position or even win an even better position on the market requires creativity, flexibility and the ability of the entrepreneur to identify opportunities at the right moment. Entrepreneurship is a creative action. It is an enterprise for stakeholders (owners, managers) to identify opportunities for success through perception, encouragement, perseverance, dedication and hard work and finally take a risk (Anđelić, S., et al., 2015, p. 8). Although rooted in the distant past, entrepreneurship now has a more important role than ever, as it follows the latest trends in terms of innovative technologies. The reason for this is the fact that the essence of entrepreneurship is creativity and innovation (Kastratović et al., 2015, p. 206).

[54] Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, kastratovice@yahoo.com
[55] Faculty for Business Economics and Entrepreneurship, Belgrade, Serbia, milan.dragic@gmail.com
[56] Information Technology School, Belgrade, Serbia, lidocka28@gmail.com

By the changing of cultural and civilizational patterns, the roles of men and women in the modern economic environment also change. Modern capitalist machinery does not accept the traditional forms in which the role of the economic support of the family was exclusively held by the male. The reduction of available resources, monopolistic policies of major corporations, as well as a demographic explosion are just some of the factors that have contributed to reducing the standard of living. It is the falling of the standard which has directly caused the need for the involvement of women in the process of securing the family budget. The 21st century represents a century for the expansion of entrepreneurship and an opportunity for women to express and present their creativity and innovativeness.

Theoretical background

Prejudices about the ability of women in entrepreneurial activities have existed for a long time. It is thought that women do not have the skills and abilities that are necessary for success in entrepreneurship. There was a similar position in regards to the inferiority of women in terms of leadership teams, leadership skills and the like. There were also certain methodological obstacles in terms of the interest of male researchers relating to the ability of women in entrepreneurial terms.

Researchers got very interesting answers to the question "Can women lead?" by giving a list of successful female leaders:

- Meg Whitman – the former CEO of eBay
- Andrea Jung – the former CEO of Avon
- Hillary Rodham Clinton – the presumptive nominee for US president
- Condoleezza Rice – former US Secretary of State
- Ann Dunwoody – a general in the US army
- Wendy Kopp – the CEO of Teach For All (Northouse, 2008, p. 183).

These are just some examples of successful female leaders in the United States. The list of successful women - leaders in the world would be very long and would render an explanation for the significant change in terms of attitudes toward women and leadership, entrepreneurship, and the like.

Over time, prejudices about women's capacity in terms of leadership disappeared or at least were significantly reduced. Proof of this is the fact that, for example, in the US women occupy more than half of all managerial positions (50.3%) and account for almost half of the total work active population in the United States (46.4%). Critics view this data with reserve, highlighting the specific circumstances that confirm the phenomenon of a

"glass ceiling" as a term that emphasizes a distorted picture of gender equality in terms of managerial positions. The term "glass ceiling" refers to the global phenomenon of disproportion that emphasizes a greater representation of women in lower level leadership positions in contrast to male leaders who often occupy managerial positions at senior management levels.

In European countries, women entrepreneurs have experienced an expansion in the early nineties when a third of companies in the Netherlands, Denmark and Germany were founded by women. It is a similar situation in the women-managed businesses in France and the UK, where the head of one of four companies is a woman, while in Japan such an input is expressed by 23 percent. This trend was also recorded in China, where as many as 25 percent of firms were founded by women, while in Africa, Asia and Latin America, generally speaking, women are dominant in activities related to manufacturing, marketing and food sales.

According to available data in Serbia, 30 percent of the companies are owned or managed by women within the total number of registered small and medium sized enterprises. However, the problem that is evident in Serbia is the rate of female-owned companies being closed down, which is 47 percent.

The sustainability of these companies is an imperative for all institutions that deal with policy creation and the entrepreneurship development policy, especially regarding female entrepreneurship in Serbia.

In an interesting research about female entrepreneurship, freedom and individuality, the respondents took the stance that stimulating innovativeness and personal development creates a special value which is initiated by entrepreneurial activity. Based on the research results, it was concluded that the development of women's entrepreneurship must be based on their economic position, along with support for self-employment. This, however, is impossible to carry out without the support of the government, schools and organizations concerned with women's rights (Marković, M. et al., 2012).

A research which involved a comparative analysis of the stances of Turkish and Serbian students in regards to entrepreneurial ambition produced some interesting results. These were related to the position of the students about the readiness of initiating a private business after their studies ended. Some 29% students from Turkey replied with a 'Yes' (they were ready) and 71% with a 'No' (they were not ready). Unlike them, Serbian students mostly answered positively (90%) along with a small number of students (10%) who had a negative response (Radović Marković, et al., 2012). These results indicate a very unconstructive economic situation, which to a certain extent impact the ambition of young people to secure an existence by starting their own

businesses.

In the research of entrepreneurial values in Serbia, the positive attitude of young people towards entrepreneurship was confirmed. The research results point toward the position of young people regrading the obstacles in enterpreneurial activites. The respondents expressed their opinion that a lack of capital, unfavorable loans, an adverse economic climate, corruption, legal and political insecurity are the main obstacles in the development of entreprenuership in Serbia (Stanković, R. et al., 2015 pp. 63-74).

In Serbia the year 2016 was proclaimed as the Year of Entrepreneurship by the state. On offer were different programs whose aim is to strengthen entrepreneurial strengths, help entrepreneurs start a business or have, to a certain extent, already developed as well as providing financial and non-financial support for long-term development of the entrepreneurial spirit, as well as special resources allocated to female entrepreneurship.

Research methods

The survey included 110 respondents (students) in the period from April 5-May 15, 2016 with the aim to test their self-assessment in terms of entrepreneurial skills and the traits they possess.

Data obtained from the survey were analyzed by the descriptive statistical process in regards to frequency (N), the arithmetic mean (M), the standard deviation (SD), minimum and maximum values and their percentage (%).

Research hypotheses

H1 – Female students, as potential entrepreneurs have the necessary potential for starting their own businesses.

H2 – Female students, as potential entrepreneurs, have no confidence in regards to acquired entrepreneurial knowledge and skills.

Research results

Descriptive statistics included dependent variables from Table 1. Descriptive statistics presented the following data: Frequency (N), minimal and maximal values, the arithmetic mean (Mean) and the standard deviation (Std. Deviation).

Table 1. *Descriptive statistics*

	N	Minimum	Maximum	Mean	Std. Deviation
Business plan	110	1.00	3.00	2.5091	0.86465
Market analysis	110	1.00	3.00	2.4727	0.86427
Entre. inclinations	110	1.00	3.00	1.7455	0.97149
Balance sheet	110	1.00	3.00	2.1000	0.89801
SWOT analysis	110	1.00	3.00	2.2727	0.80033
Creative person	110	1.00	2.00	1.4636	0.50096
Energetic person	110	1.00	2.00	1.4000	0.49214
Persistent person	110	1.00	1.00	1.0000	0.00000
Valid N (listwise)	110				

Based on the data from Table 1, it can be concluded that the respondents had some knowledge necessary for entrepreneurial activity but they were not completely confident in the realistic application of such knowledge. Data on arithmetic means of the tested variables indicate that the female respondents were not confident in terms of their knowledge of making a business plan, market analysis, a balance sheet and income statement as well as a SWOT analysis. On the other hand, the respondents assessed themselves as persons with entrepreneurial inclinations, who are creative, energetic and absolutely persistent.

Table 2. *Frequency – business plan*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	27	24.1	24.5	24.5
	PARTLY	83	74.1	75.5	100.0
	Total	110	98.2	100.0	
Missing	System	2	1.8		
Total		112	100.0		

The results from Table 2 show that women present their uncertainty openly and thus show willingness for further work and developing the knowledge which they need to succeed in entrepreneurship. This conclusion is confirmed by the results from Table 10 and 11 which present the traits of energy and perseverance.

It is these qualities that are an important basis of success in entrepreneurship, due to changing circumstances and challenging conditions on modern markets.

Knowledge regarding the correct definition of the business plan is the starting point for an entrepreneurial approach. Beginners in entrepreneurship apply for certain financial resources from some of the available funds and thus attain a starting position in the market race. A properly written business plan gives an

excellent insight into the intentions, potential and willingness of entrepreneurs to start their own business. Consequently, entrepreneurs devote considerable attention to creating a business plan. Given the importance of a business plan in entrepreneurial business, data from Table 2 shows the need for even greater attention in terms of acquiring theoretical but also practical knowledge.

Table 3. *Frequency – market analysis*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	27	24.1	24.5	24.5
	NO	4	3.6	3.6	28.2
	PARTLY	79	70.5	71.8	100.0
	Total	110	98.2	100.0	
Missing	System	2	1.8		
Total		*112*	100.0		

Market analysis enables obtaining very valuable information about the competitors, the offer and demand, trends, buyers, and similar. It is necessary to dedicate significant attention to practical exercises within the study program, which would focus on acquiring specific, empirical skills in regards to marketing and market analysis. Practical exercises, which would offer a simulation of real factors and situations from daily entrepreneurial practice, would enable the achieving of a desirable level of student confidence in view of the issue. By carrying out exercises in simulated conditions, students would acquire skills and confidence necessary for carrying out business activities in a variable environment.

Table 4. *Frequency – balance sheet and success*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	39	34.8	35.5	35.5
	NO	21	18.8	19.1	54.5
	PARTLY	50	44.6	45.5	100.0
	Total	110	98.2	100.0	
Missing	System	2	1.8		
Total		112	100.0		

A business balance sheet is a detailed and complex economic analysis and thus the data in Table 4 indicates the expected small number of respondents who are confident about their knowledge of the field. Entrepreneurial success is conditioned by an adequate analysis of the balance sheet and income statement, whereupon the entrepreneur can rely on the service analysis performed by professional agencies dealing with it. Furthermore, entrepreneurs must have

basic knowledge in this field in order to periodically control employees who perform these tasks. Entrepreneurs who have adequate knowledge in the field of balance sheet analysis can independently perform these analyses and thus reduce operating costs.

Table 5. *Frequency – SWOT analysis*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	24	21.4	21.8	21.8
	NO	32	28.6	29.1	50.9
	PARTLY	54	48.2	49.1	100.0
	Total	110	98.2	100.0	
Missing	System	2	1.8		
Total		112	100.0		

A SWOT analysis is a detailed breakdown of real parameters in the form of strengths, weaknesses, opportunities and threats to the market covered by the analysis. With an adequate analysis, entrepreneurs receive very significant data on the basis of which they can make correct strategic decisions. Some 8% of the respondents said they would not have known to do a SWOT analysis and 48.2% claimed that they knew to do so only partly. If we take into consideration that the answer in part means that these respondents were not able to do a SWOT analysis as well as they should, then we can conclude that it is necessary to change the system of acquiring knowledge in this field by intensifying practice and exercises. Looking at the alarmingly low percentage of respondents who are confident in their knowledge in terms of all the parameters examined (business plan, market analysis, analysis of the balance sheet and income statement and SWOT analysis), it can be assumed that the knowledge of the potential female entrepreneurs who were not in touch with economic subjects (within the system of education) was alarmingly insufficient.

Entrepreneurs should also have top personal qualities, which combined with the necessary skills enable a successful entrepreneurial market performance. Energy is a personal trait of every successful entrepreneur, as it enables a constant endeavor for perfection and progress in every segment.

Entrepreneurs have full work days and they must have enough energy for all the activities awaiting them. Numerous meetings, analyses of results achieved, communication with business partners and clients and a host of other everyday activities require from entrepreneurs a high level time management.

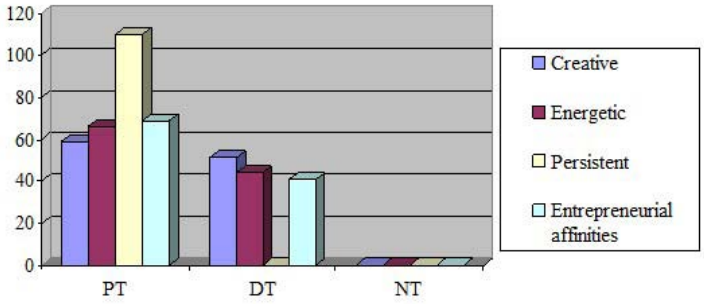


Figure 1. *Frequency – Creativity/energy/persistence*

Creativity, energy and persistence are important features in the entrepreneurial business. The modern environment requires persistent and unrelenting commitment to diversity and specificity on the fairly saturated market, regardless of the area of operations. Thus, an energetic manner and persistence contribute to better results of teamwork. Women tend to implement a more democratic and participatory management style than male leaders.

Female managers encourage more participation of subordinates in planning and decision-making and they are prone to power-sharing and delegation, which results in excellent relationships in the group and a great exchange of information (Robbins, 2005, p. 444).

Developed entrepreneurial abilities and skills represent a significant item in terms of success in entrepreneurial activities, but the basis of all is a good quality and organized market environment supported by the local government.

The necessary institutional support for female entrepreneurship development

Entrepreneurship development is one of five main potentials (the others being work, technology, capital, land) of the development of Serbian economy.

In the practice of developed countries that have economic and social stability, development of entrepreneurship and private business has a crucial, primary role in development, adaptation to European norms, employment increase, a higher standard, economic growth and development of entrepreneurs, family members, and the local community, i.e. state (Stevanović, M. et al., 2015, p. 89).

Local governments must provide an adequate entrepreneurial environment, both in terms of simplifying procedures for starting a business, as well as the lack of adequate stimulus loans, subsidies, tax incentives and the like. It is very important to begin the process of training potential entrepreneurs, starting from

management, marketing, business plan development, as well as establishing and cultivating business contacts, negotiation skills, etc. It is also necessary to create a guarantee fund on the municipal level, financed from the budget of the Republic of Serbia and the municipal budget.

As the SME sector represents the framework of economic development, it is necessary to support the development of small and medium enterprises, especially in transition countries where development is mostly supported by foreign investments or state interventions and where there is economic recession and unemployment (Vujičić, Nikitović, 2014, p. 165).

Research of the development of underdeveloped regions indicates that the strengthening of local economic development and reducing local unemployment should be based on the development of the following sectors:

a. production of biologically healthy food based on raw materials from the local area,
b. strengthening of primary agricultural production,
c. strengthening the capacity of agricultural processing,
d. development of fruit production,
e. cultivation and collection of herbs and wild berries,
f. the production of potable water,
g. the development of tourism (transit, hunting, school, ethnic and health),
h. rational exploitation of forests,
i. organization of producers in associations and other professional organizations in the interest of a better and more harmonized use of resources and an increase in supply as well as an organized performance on the market in the country and the region (Kastratović et al., 2014, p. 96).

In most of the above mentioned sectors, women entrepreneurs can handle the market with their creativity, proper planning, and leadership, along with strong entrepreneurial skills.

Conclusion

Research results indicate that the respondents have knowledge which relates to significant elements of entrepreneurship: a business plan, market analysis, SWOT analysis, a balance sheet. The results also show that the respondents were not entirely confident that they could apply their acquired knowledge in the best possible way onto a real market situation. The mentioned results confirm hypotheses H1 and H2, along with the conclusion that it is necessary to undertake a series of measures so that the female students, as potential entrepreneurs, would transform the acquired theoretical knowledge into

adequate skills. It is necessary for practical classes to encompass a number of hours for a comprehensive learning and acquiring skills necessary for entrepreneurship. The skills are acquired by practice, situational exercises and methods of group testing. Creative workshops, game methods, role play and other methods can help female students acquire self-confidence, assurance, and freedom of expression. This research points to the necessity of adapting learning to contemporary conditions and needs. The significance of entrepreneurial potential of young people in the economic development of Serbia imposes the need for a meaningful concretization of learning in the aim of achieving market effective skills.

REFERENCES

1. Anđelić, S., et al. (2015), Organizational support and institutional environment for entrepreneurship development, International Review, 3-4: 8.
2. Vujičić, S., Nikitović, Z. (2014), The significance of small and medium enterprises and entrepreneurship for increasing the competitiveness of the Republic of Serbia, Innovative Behavior, Entrepreneurship and Sustainable Development, Sofia: Bulgarian Academy of Sciences and Art, p. 165.
3. Maslov, A. H. (2004), Psihologija u menadžmentu, Novi Sad: Adižes.
4. Northouse, P. G. (2008), Liderstvo, Beograd: Data Status.
5. Radović Marković, Mirjana, et al. (2012), Freedom, Individuality and Women's Entrepreneurship Education, Entrepreneurship Education - A Priority for the Higher Education Institutions, Forthcoming et al.
6. Radović Marković, Mirjana, et al. (2012), Fostering Entrepreneurship in Higher Education through E-Learning: Case Study of Serbia and Turkey, 1st Annual International Conference on Employment, Education and Entrepreneurship.
7. Robbins, S. P., Coulter, M. (2005), Management, Beograd: Data Status.
8. Stevanović, M. et al. (2015), Significance and role of the state in development and growth of SMEs and entrepreneurship, challenges to promoting entrepreneurship, leadership and competitiveness, Belgrade: Faculty of Business Economics and Entrepreneurship, p. 89.
9. Stanković, R., et al. (2015) Entrepreneurial values research in Serbia, Belgrade: International Review (No. 1-2), pp. 63-74.
10. Kastratović, E., et al. (2015), Research on entrepreneurial students tendencies, creative education for employment growth, Belgrade: Faculty of Business Economics and Entrepreneurship, p. 206.
11. Kastratović, E., et al. (2014), Strategic Priorities, Measures and Instruments Necessary for The Development Of Underdeveloped Municipalities, Technical - Technologies Education Management, 9(1): 96.
12. Coulter, M. (2010), Strategijski menadžment na delu, Beograd: Data Status.

The Challenges of Start-Up Entrepreneurship in Post-Transition Period: Evidence of the Republic of Serbia

VUKOVIC Darko[57], RANISAVLJEVIC Dusko[58], HANIC Edin[59]

Introduction

According to Carland and Carland (2004), in many countries small and startup companies contributed to employment growth. Konings (1995), Hughes (1993), and Robson and Gallagher (1994) found that small firms became the key to employment growth in the Britain during the 1980s. Baldwin and Picot (1995) found the same pattern in Canada and, Bais, Bangma and Verhoeven (1997) reported on the importance of small firms in the Netherlands in the early 1990s. This was apparently not the case in Germany (Wagner, 1995), but aside from its experience, small firms have created most of the new jobs in Europe and North America (Audretsch & Thurik, 2000).

Entrepreneurship has long been viewed as an engine that drives innovation and promotes economic development (Reynolds, 1997; Schumpeter, 1934) as also social development (Audretsch, 2016). The fact that SMEs would emerge as becoming more important in a knowledge based economy seems to be contrary to many of the conventional theories of innovation. Entrepreneurship can be defined from the outcomes that different types of entrepreneurship can have on the economy (Naude, 2008). These definitions are based on the realisation that not all forms of entrepreneurship are good for economic development.

Entrepreneurship is a term that can generally be defined as a process of starting a new business or venture in order to generate revenue (Andersson and Wictor, 2003; Meyer et al. 2016).

Acs (1992) and Aronson (1991) argue that entrepreneurship research has focused broadly on the development of smaller firms and more narrowly on the founding and success of firms that are introducing new products to the marketplace (Schumpeter, 1934). A basic premise of much international management research has been that firms are embedded in country-specific institutional arrangements (Busenitz et al. 2000). According to this statement and support by other research (Aronson, 1991; Rondinelli & Kasarda, 1992),

[57] Perm National Research Polytechnic University, Department of Economics and Industrial Engineering, Perm, Russian Federation, vdarko@hotmail.rs; Geographical Institute Jovan Cvijic of Serbian Academy of Sciences and Arts, Belgrade, Serbia.
[58] Faculty of business, University of Singidunum, Valjevo, Serbia.
[59] Belgrade Banking Academy, Belgrade, Serbia.

certain types of start-ups may be more successful in one country than in another. In other words, some countries have an institutional environment that supports the development of entrepreneurship. In such cases, small companies effectively use the funds received from the government agencies. Even more, according to Busenitz et al. (2000) differences in national institutions may also bring about different levels of entrepreneurial activity across countries.

The regulatory dimension of the institutional profile consists of laws, regulations, and government policies that provide support for new businesses, reduce the risks for individuals starting a new company, and facilitate entrepreneurs' efforts to acquire resources (Busenitz et al. 2000).

What is the role of entrepreneurship in economic development and how they are connected? The theoretical framework linking entrepreneurship and economic growth is provided by the new theories of industry evolution (Jovanovic, 2001; Lambson, 1991; Hopenhayn, 1992; Audretsch 1995; Klepper, 1996; Ericson and Pakes, 1995). Entrepreneurship is a "catalyst" for economic development through job creation which helps alleviate poverty and generates income in developing countries (Adenutsi, 2009; Grubisic et al. 2011). While traditional theories suggest that entrepreneurship will retard economic growth, these new theories propose exactly the opposite – that entrepreneurship will stimulate and generate growth.

According to Naude (2008), over the past fifty years or so the world has experienced a wide diversity of development experiences, from successful economic structural transformations, mixed-success transformations, and rapid innovation episodes – sometimes accompanied by high growth, but also growth stagnation, collapse and persistent conflict. Economic development theory can still be argued to lack a 'general theory' of entrepreneurship, one that could encompass a variety of development outcomes, progress has been made in extending the notion and understanding of entrepreneurship in economic development. In developing countries the concern is with (entrepreneurship) starting and accelerating growth, and in providing impetus to the structural transformation of economies; in the advanced economies the concern is largely with obtaining new sources of productivity growth (Naude, 2008).

In the post-transition period, a large number of state owned companies, ceased to exist. This influenced on increasing in unemployment. Many workers which worked for decades in a variety of state-owned enterprises lost their jobs and faced the labour market, which is still in its developing. A significant number of these persons worked for many years of in one system and they are not able to cope in the new circumstances. The reasons are the inability to re-training, lack of knowledge and skills for current jobs.

Another negative effect is reflected in the fact that in the same period of time, new, young generation did not have the opportunity to acquire any business experience.

During the 1990s, Republic of Serbia and other former constituent republics successive start the process of ownership transformation and transition of the economy. Bearing in mind this process in the last fifteen years, one of the main goals of strategy of economic development is to promotion and encouraging entrepreneurship. Entrepreneurship is recognized as the best way to increase employment as also to increase the social welfare. During this period of time, a number of entrepreneurial start-up companies are established. Some of them survived, but also significant number of experienced business failure.

The subject of this paper is primarily focused on the success of all 44 credited start-up companies, for a period of two business years (2014 and 2015).

The essence of the analysis are key business parameters and trends during the first two full business year that follows the year in which the loan was granted (in our case 2013). The purpose of our analysis is to determine the success rate of business firms from sample and conclude what is the real effect of start-up lending through state development funds into the post period in the Republic of Serbia.

Specific conditions for entrepreneurial decision-making

In this part we will discuss about specific conditions necessary for entrepreneurs to makes the decision to initiate and develop business.

To understand this, it is necessary to analyze the following parameters.

The motive of every entrepreneur to start their own business comes to the desire for higher earnings. In addition to earnings, there are other motives, such as personal and professional affirmation. In many cases in Serbia (and similar transition countries) entrepreneurs decide to start business in the emergency due to the fact that they have no other possibility of profit. If an entrepreneur "willingly" decide to start a certain activity, his approach to planning and organization of work will be significantly more comprehensive than those entrepreneurs who start a business from other motives (unwillingly or out of necessity). A comprehensive approach is rational consideration of resources, capacities and capabilities of the entrepreneur himself to the entrepreneurial idea. A significant number of entrepreneurs in the Republic of Serbia started business out of necessity. Moreover, increased unemployment in the post-transition period influence on increasing of start-ups. The main motive of majority of entrepreneurs from this group, is connected with the

solely existential nature.

A feasible strategy is necessary for growth and development when entrepreneurs start their own business. This strategy implies that the entrepreneurs have a concrete and achievable plan on of developing business, organizing a business process and available resources. The most important segment of every entrepreneurial strategy is the realization of the rate growth of the business. In Serbia, the largest number of entrepreneurs experiencing the collapse of their work in the first two years of existence (for example: the desire for a rapid increase in market share and profits, which is not accompanied by adequate resources).

Sources of funding for entrepreneurial activities are the most important parameter of successful business. It is well known that there are two sources of financing of the business: own and borrowed funds. The practice has shown that entrepreneurs beginners mostly make mistakes in the budgeting of initial funds to start the business. Unforeseen costs and additional investments are the most common reasons for lack of funds in the early stages of the transaction.

Initial financial resources of entrepreneurs in Serbia could be provided on several ways: sale of assets, savings, retirement etc. For the borrowed funds are available three types of financing: Development Funds (Fund for Development, credit lines through state institutions), commercial bank loans, and equipment financing by leasing companies. From these credit sources of financing start-up the most accessible resources are development funds.

Commercial banks rarely support this type of lending. In the Republic of Serbia, commercial banks do not directly support start-up, except for additional security. It is usually contracted guarantee in combination with additional collateral (mortgages, special purpose deposit and so on). The explanation for this attitude of banks towards the start-up is in the reason that commercial banks lending of start-up considered highly risky. Leasing companies have a slightly "softer" approach to support start-up entrepreneurship. Most often they financed equipment, which also use as security for the leasing of the loan.

This collateral is more liquid. If entrepreneurs have an adequate business plan, they can apply for long term loans that are granted through the Development Fund of the Republic of Serbia. These loans have low interest rates, imply a grace period of one yea and the mortgage is collateral. The grace period given to the entrepreneur is actually a period of stabilization of start up businesses. To the maturity of first credit annuity an entrepreneur can stabilize their cash flow.

Government incentives are recognized as the necessary to develop entrepreneurship and their sustainable growth. One of the incentives

conducted by the Government of the Republic of Serbia was subsidizing loans to commercial banks for current assets and investments. Under this program in the period 2010-2015, commercial banks granted loans to entrepreneurs at lower interest rates (3.5-5%), with no indexation of loans in foreign currency.

The difference between the market interest rate and offer interest rate is paid by the Ministry of Finance. Companies (lenders) received less expensive loans and banks invested assets with the basis of market conditions. Unfortunately, this type of lending was not available to start up companies.

The analysis of support of development fund of the republic of serbia to start-up companies

The Development Fund of the Republic of Serbia is a state-owned institution established as a legal person engaged in financial activities which business is regulated by the Law on the Development Fund of the Republic of Serbia of 2010 (Official Gazette of RS, No 36/2009 and 88/2010).

The Activity of the Fund is supervised directly by the Government, which adopts the Fund's work, program and annual report. The goals of The Fund are mainly achieved by providing subsidized financing on most favourable terms for programmes related to economic, regional and SME development, increasing competitiveness and related activities. The credits disbursed may be provided by another institution to the Fund on a commission basis or from the Fund's own resources (Jovanovic et al, 2012).

For the purposes of our analysis, we used data from The Development Fund of the Republic of Serbia (http://www.fondzarazvoj.gov.rs/) in the period 08.05.2013-22.07.2013. Data on the legal status of borrowers we retrieved from The Serbian Business Registers Agency (SBRA), data on balance sheet indicators from also The Serbian Business Registers Agency and informations about blockades of company accounts from the National Bank of Serbia.

The Fund was approved in four sessions start-up loans for a total of 44 start-up companies. The total amount of approved loans is RSD 95,341,000.00.

From 44 approved requests, the 26 used companies and 18 used entrepreneurial stores. Regarding the intentions of approved start up loans, 34 companies raised a loan for the purchase of equipment and 10 used loans for the purchase, construction, renovation or reconstruction of fixed assets (Table 1).

According to the approved loan amount, in the structure of the sample we have: four loans amounts to 1,000,000.00 RSD, twenty-nine loans amount from 1 to 5,000,000.00 RSD and eleventh amount from 5 to 10,000,000.00

RSD. As regards collateral for the loan, from 44 loans 38 is provided as "solid" collateraled, i.e. mortgage, while 6 loans are secured with guaranty. Under the terms of the approval of the Development Fund, the companies that granted a start-up loan were obliged to employ 154 new workers. All loans were approved in 2013 (the seventh month), so its assessment that the loans have been realised at the end of 2013 (after the establishment of mortgages and other guaranties). From total approved loans of 95,341,000.00 RSD, the entrepreneurial shops relating 21.605,700,00 RSD while companies 73,735,340.00 RSD.

Our analysis observed that a large number of companies account got into blockade in a relatively short period of time. From forty-four companies, only eight companies have never been blocked, while thirty-six have been in larger or smaller interruptions. On 11.14.2016. the total amount of the blocked companies amounted to 14,737,000.00 RSD (according to NBS, https://www.nbs.rs). Also, thirty-one companies either been blocked or the account is inactive due to liquidation or deletion from the register. Only thirteen companies from sample were not blocked. According to SBRA (2016), only 18% of firms in sample were not blocked. Three years after taking loans in 2013, the credit ratings of companies is relatively weak. According to same data and our analysis, 70.45% of firms are with blocked account or their account exists only formally. These companies in the sample does not perform payment transactions or a business activity, only three years from the approval and implementation of start-up loans.

Table 1. *Data and results of the analysis*

Description of parameters of analysis	The number of samples	% of the samples
The total number of companies in the sample (summary)	44	100%
The number of active companies on the day 14.11.2016	35	79,84%
Companies in liquidation or deleted from the register	9	20,45%
Loans for fixed assets (structures)	34	77,3%
Loans for current assets (structure)	10	22,7%
Loans secured by mortgages	38	86,4%
Loans secured by guaranty	6	1,6%
The total amount of the blockades/total outstanding loans	-	15,45%
Number of blocked companies from the sample on the day 14.11.2016	31	70,45%
The number of firms in the sample without blockades	8	18,18%
The number of companies with a blockade > RSD 1 million per day 11/14/2016	5	11,3%
Number of firms with the final balance sheet	27 (from 44)	61,36%
Companies that reported a profit in 2015	7 (from 27)	26%
Companies that reported a loss in 2015	20 (from 27)	74%
The negative net working capital in 2015	24 (from 27)	88,8%
The growth of operating revenues in 2014/2015	8 (from 27)	29,6%
The decline in operating revenues in 2014/2015	6 (from 27)	22,2%
Positive cash flow (indirectly method) in 2015	3 (from 27)	11,1%
Companies with expressed “0” (zero) the amount of revenue in 2015	13 (from 27)	48,1%

Source: The National Bank of Serbia, the Serbian Business Registers Agency and Development Fund of the Republic of Serbia (retrieved on14.11.2016.)

Conclusion

We can conclude by the preliminary analysis that in the 44 approved start-up loans in 2013. more than half of companies got into liquidity problems, which manifest with the poor balance indicators, blockades of their accounts.

All of these lead to termination of the status of these companies. Furthermore, the companies will not meet the objective set up by granting credit, which are: development of certain economic areas, increasing employment, contribution to GDP, increasing fiscal revenue etc.

Analyzed start-up companies have become the cause of a significant percentage of illiquidity in the broader system of payment. According to the current amount of blockages and balance indicators point that more than half of the approved start-up loans will not be returned. These companies will

become permanently irrecoverable debtors for their suppliers as also to the tax authorities, employees, etc. Financing start up a business should be transferred from development funds to development banks, which would significantly stricter criteria and more detailed analyzes, granted start up credit requirements.

Also, in our research we found that the instruments and measures of regional development by the Development fund were mostly (65.31%) allocated to the beneficiaries in the most developed units of local self-government in which the level of development was more than 80% of national average, while only 23.35% were allocated to the users in local self-government units in which the level of development was below it. According to Vukovic (2013) and Jovanovic et al (2012), institutional incentives of regional development in Serbia have not been allocated in compliance with the set priorities of even regional development in Serbia and that thus they cannot contribute to the harmonization of regional development in Serbia.

Acknowledgement

This paper is the result of the project 47007 funded by the Ministry for Education and Technological Development of Republic of Serbia and support by the Ministry of Education and Science of the Russian Federation PNIPU under Grant #1487 on the task #2014/152.

REFERENCES

1. Acs, Z. J. (1992), Small business economics: A global perspective, *Challenge* 35(6): 38-44.
2. Adenutsi D.E. (2009), Entrepreneurship, job creation, income empowerment and poverty reduction in low-income economies, Accra, Ghana: Glisten Strategic Solutions.
3. Aronson, R. L. (1991), *Self-employment: A labor market perspective*. Ithaca, NY: ILR Press.
4. Audretsch, D.B. (2010), Sustaining Innovation and Growth: Public Policy Support for Entrepreneurship, *Industry and Innovation*, 11(3): 167–191.
5. Audretsch, D.B. (1995), *Innovation and Industry Evolution*. Cambridge, MA: MIT Press.
6. Audretsch, D.B., Thurik, A.R. (2000), Capitalism and democracy in the 21st century: from the managed to the entrepreneurial economy, *Journal of Evolutionary Economics 10*: 17-34.
7. Baldwin, J., Picot, G. (1995), Employment generation by small producers in the Canadian manufacturing sector, *Small Business Economics 7*(4): 317-331.
8. Bais, J., Bangma, K.L., Verhoeven, W.H. (1997), Het belang van bedrijfstypen voor de werkgelegenheidsontwikkeling. EIM, Zoetermeer.
9. Busenitz, L.W., Gomez, C., Spencer, J.W. (2000), Country institutional profiles: unlocking entrepreneurial phenomena, *Academy of Management Journal* 43(5): 994-1003.
10. Carland, C. J., Carland, J.W. (2004), Economic Development: Changing the Policy to

Support Entrepreneurship, *Academy of Entrepreneurship Journal* 10(2): 105-114.
11. Ericson, R., Pakes, A. (1995), Markov-perfect industry dynamics: a framework for empirical work, *Review of Economic Studies*, No. 62: 53–82.
12. Grubisic, Z., Zaris, S., Vukovic, D.B. (2011). FDI Inflow in see Countries and its Consequences in the Context of the Financial Crisis. Finance and the Performance of Firms in Science, Education, and Practice. Tomas Bata University in Zlin, Faculty of management and economics, Czech Republic. (edt.) Drahomira Pavelkova, (Proceedings paper), pp. 116-129.
13. Hopenhayn, H.A. (1992), Entry, exit and firm dynamics in long run equilibrium, *Econometrica*, 60: 1127–1150.
14. Hughes, A. (1993), Industrial concentration and small firms in the United Kingdom: the 1980s in historical perspective. In Z. Acs, & D.B. Audretsch (Eds), *Small firms and entrepreneurship: An east-west perspective*, 15-17. Cambridge, MA: Cambridge University Press.
15. Jovanovic, B. (2001), New technology and the small firm*, Small Business Economics,* 16(1): 53–55.
16. Jovanovic, A., Vukovic, D., Zakic, N. (2012), Allocation problems of institutional support for regional development financing in Serbia, *Actual problems of economics*, 138: 370-380.
17. Klepper, S. (1996), Entry, exit, growth, and innovation over the product life cycle, *American Economic Review*, 86(3): 562–583.
18. Konings, J. (1995), Gross job flows and the evolution of size in U.K. establishments, *Small Business Economics 7*(3): 213-220.
19. Lambson, V.E. (1991), Industry evolution with sunk costs and uncertain market conditions, *International Journal of Industrial Organization*, 9: 171–196.
20. Law on Development Fund of the Republic of Serbia (2010), Official Gazette of RS, No 36/2009 and 88/2010.
21. Meyer, N., Meyer, D.F., Molefe, K.N. (2016). Barriers to small informal business development and entrepreneurship: The case of the Emfuleni region, *Polish journal of management studies*, 13(1): 121-133.
22. Naude, W. (2008), Entrepreneurship in Economic Development, Research Paper No. 2008/20, UNU-WIDER, Helsinki, Finland.
23. Reynolds, P. D. (1997), New and small firms in expanding markets, *Small Business Economics*, 9: 79-84.
24. Robson, G.B., Gallagher, C.C. (1994), Change in the size distribution of U.K. firms, *Small Business Economics 6*(4): 299-312.
25. Rondinelli, D. A., Kasarda, J. D. (1992), Foreign trade potential, small enterprise development and job creation in developing countries, *Small Business Economics*, 4: 253-265.
26. Schumpeter, J. A. (1934), *The theory of economic development*. Cambridge, MA: Harvard University Press.
27. Vukovic, D. (2013). Model of regional competitiveness: theoretical-methodological analysis and possibilities of application in Serbia, Doctoral dissertation, Faculty of Economics, University of Kragujevac.
28. Wagner, J. (1995), Firm size and job creation in Germany. *Small Business Economics 7*(6): 469-474.

The Development Fund of the Republic of Serbia http://www.fondzarazvoj.gov.rs/

The Serbian Business Registers Agency (SBRA)
http://pretraga2.apr.gov.rs/ObjedinjenePretrage/Search/Search
The Serbian Business Registers Agency (SBRA) (2)
http://pretraga2.apr.gov.rs/pretragaObveznikaFI/
The National Bank of Serbia (NBS) https://nbs.rs/internet/cirilica/67/rir.html

The Sensory Gardens as the New Direction for Ecological Entrepreneurship Development

VUKOVIC Natalia[60], HANIC Aida[61]

Introduction

Mother Nature teaches us that we don't expect from her more than we gave her. In that case humans have an obligation to correct harmonic relationship with nature that they violated because of the megalopolis processes such as industrialization, urbanization and pollution. One of paramount problems of modern landscape architecture and green economy is to maximize preservation or to create a new natural zones and complexes in city space. Because of the technological development, the health status of the population in cities is getting worse every year, especially in psychological and emotional terms.

Human population needs new ideas how to live with nature and ecological entrepreneurship is a concept that is not interested only in making profit but also takes care about environment. Ecological entrepreneurship is relatively new term and some authors uses different terms such as "green entrepreneurship" or "environmental entrepreneurship" or "ecological entrepreneurship".

Anderson (1998) said that both entrepreneurship and environmentalism are based on a perception of value. The attitudes which inform environmental concern create areas of value that can be exploited entrepreneurially.

"Environmental Entrepreneurs" not only recognize opportunity, but construct real organizations to capture and fix change in society. According to The Organisation for Economic Co-operation and Development (OECD), SMEs participate actively in the emerging green industries, such as renewable energy production, smart metering, building refurbishment, cleaner cars, wind and solar installations, and battery development. For example, in the European Union (EU) entrepreneurship is highly important because 99.8% of Europe's private companies are SMEs. In 2014 EU adopted "The Green Action Plan (GAP)" with the aim to help small and medium-sized enterprises to take advantage of resource efficiency improvements.

[60] Ural Federal University, Ekaterinburg, Russia,e-mail: shpak17121978@gmail.ru

[61] Institute of Economic Sciences, Belgrade, Serbia and a PhD Student at School of Economic and Business, University of Sarajevo, Bosnia and Herzegovina, aida.hanic@ien.bg.ac.rs

"Ecological entrepreneurship is a reward – based approach to addressing environmental problems, rather than a punitive approach, and may prove more successful at changing attitudes and practices in the long run."(http://enviroeducation.com/resources/ecological-entrepreneurship-academic-requirements-professional-outlook). One of the ways of achieving this balance is the development and the use of sensory garden. Sensory garden is a specially organized natural territory where a favourable condition for a close communication with the natural environment is created. John Dewey in his work Experience and Nature (1925) said that "we cannot separate organic life and mind from physical nature without also separating nature from life and mind. The separation has reached the point where intelligent persons are asking whether the end is to be a catastrophe, the subjection of man to the industrial and military machines he has created." Since ancient times, philosophers and Aesculapius of the whole world showed interest in the nonconventional ways of improvement, promoting a quicker restoration of a mental and physical condition of the patient. It was considered that the nature, with her elements, such as: plants, sunlight, water, sand, birds chirping, animals and her many other components, are very effective as therapeutic addition to a traditional method of treatment. The history of emergence of sensory gardens leaves by times of the Roman Empire. People used garden therapy since ancient times.

The term "sensory gardens" began to use in science in the mid-seventies.

Today sensory gardens are one of the perspective directions of development of landscaping. Unique sensory gardens are created on each continent of Earth and the quantity of them constantly grows. The word "Sensorics" in translation from Latin means the "perception" which is performed by means of sense of organs. The person obtains information from the outside world by means of five main sense organs: eyes (sight), ears (hearing), language (taste), nose (sense of smell), skin (touch, tactile feelings) and it becomes more active when it beholds the nature or has a rest in a garden because the nature and a surrounding landscape, inevitably cause emotions.

The aim of this paper is to explore the meaning of the sensory gardens and how they can be used as a new concept of ecological entrepreneurship.

Literature review

Business society is constantly changing and in that process business activities of companies are changing as well. OECD uses term of "green entrepreneurship" which could be defined in terms of the technology used for production in any sector of the economy, or in terms of the sectors firms are

active in, in which case our attention is restricted to parts of the economy producing specific types of output. Valeryanovna (2012) says that ecological entrepreneurship is associated with an activity, which is conducted for minimizing risks of the influence on all components of the environment with due regard to ecological preferences in the system of economic relations, and which is aimed at systematic gaining of profits on efficient use of property, natural and secondary resources, sale of goods, and performance of work and services. Auerswald (2015) states that a favorable business climate depends on entrepreneurship and that entrepreneurship policy potentially can increase economic vibrancy by enabling entrepreneurial ecosystems.

Larson (2000) extends this view to environmental entrepreneurs describing how they may be able to restructure the relationship between business and environment in ways that simultaneously create private economic value and public environmental value. Taragola and group of authors (2010) say that sustainable entrepreneurship is a key driver for economic, ecological and social sustainability. According to Walley and Taylor (2002), there are three types of typologies to boost green entrepreneurship:

a. compliance-based, new market opportunities emerging as an outcome of changes to government regulation and legislation requiring environmental improvement,
b. market-driven, new market opportunities emerging from the positive impact that more environmentally beneficial behavior can bring to customers,
c. value-driven, market opportunities opening up in the face of demand due to changes in consumer preferences and tastes for more environmentally-friendly products or services.

Walley and Taylor (2002) explain that the emergence of green entrepreneurship is a result of internal and external influences on the individual where the external influences include regulations, economic incentives and the moral demands of consumers and the internal influences include family and friends, past experiences, personal networks and education. In the case of sensory gardens, the idea is to combine both of these elements.

Scientific understanding of sensory gardens dates back to 1970. Stoneham (1996) stated that the initial idea of sensory gardens was derived from the horticultural therapy movement, which was developed in the United Kingdom in the 1970s. Horticultural therapy was focused on special environments, i.e. hospitals and rehabilitation units and, as a result, it developed more rapidly than sensory gardens. One positive aspect of sensory gardens was the genuine response to meet the needs of visually-impaired people. Stoneham added, however, there was not really much thought given to the design of these

gardens. Another scientists as Barker (1968), Gibson (1986) and Hart (1979) started to show how useful sensory garden can be for a society.

The first projects of sensory gardens were often located in public parks because the local authority decided that it was a way of showing that they were implementing inclusion strategies. In the 1980s Stoneham added that, visually-impaired people challenged the initial ideas about 'gardens for the blind' because the issue of being segregated from able-bodied people was itself beginning to be challenged. It is now widely understood that disabled people don't want to be segregated from able-bodied people in their enjoyment of green areas. O'Connell and Spurgeon (1996) said that the idea is to integrate green areas that allow an enhanced sensory experience, which will make for a sustainable and inclusive approach rather than making 'special' provision for disabled people. Nowadays the most published international scientist in the questions connected with sensory garden is Hussein Hazreena, but she continue the line of the first specialist in sensory garden and concentrate on using of sensory garden for the people with special needs. However, the approach that implies that sensory garden are used only for therapy of some diseases, is not entirely accurate, because people in urban areas are exposed to high levels of stress which led that sensory garden became more widely. For example, Sikorskaya (2013) says that in Russia sensory garden started to use for children development at the end of XX century.

In countries like Germany, French, Czech Republic, Italy, sensory garden are being designed for all society and for the different group of people, especially by the age, because this project may enable population in the cities to be in harmony with nature. People today are ready to pay their own money for the possibility to spend their time at the nature especially with kids. For example, in Russia there is active developing chain of mobile sensory garden, which works as the successful business project, which is located mainly in different regions of Moscow and also is developing in other Russian cities like Voronezh and others. Main business in these projects is based on the satisfaction of modern family's needs, combining interactive education and rest in the nature, created for the whole for family.

Methodology

To analyse the potentials of sensory gardens, as a type of an ecological entrepreneurship, a research was conducted in Yekaterinburg, Russia in the period of 01.7 – 01.8.2016, in the sensory garden of Rastorguyev – Kharitonov Estate in Yekaterinburg.

Table 1. *Summary of the data collection at the case study site (Yekaterinburg, Sensory garden, 2016)*

METHOD	RESPONDENT	OBJECTIVES
Interview with the landscape visitors to the garden:	Landscape architecture (n=3)	To investigate the design process and landscape architect's intention; To allow subsequent assessment of whether users, especially kids.
Interview with the teachers	Teachers (n=3)	To enquire into their experience of and benefits in having the sensory garden; To plan educational activities for kids the sensory garden.
Interview with the visitors	Grown up (n=32) Kids(n=20)	To understand how visitors behave in the sensory garden thus providing information that observation alone cannot provide; To get information first hand from the visitors and to obtain their own responses for forecasting plan of activities in sensory garden.
Observation and behavioral mapping	All users of the case-study sensory Garden (58)	To plan and forecast the future number of visits of people to sensory garden and to use it for business-planning. To estimate the possible catalog of service in sensory garden and future level of prices for this service

Source: Author, 2016

Due to the lack of information on the subject of 'sensory gardens', the limitations of time for research and the difficulties surrounding communication between the researcher and the visitors with speech, language and communication difficulties, two methods were thought to be the most appropriate: "Interview/ Walk-through interview".

The method "Interview with the visitors" was used when gathering information from the landscape architects, teachers and kids.

Method "Observation and behaviour mapping" – was used when collecting data of the users using the sensory gardens, particularly kids, when the researcher found that it was difficult to get first-hand information from those who were interviewed, see Table 1. Affordance theory was used in conjunction with these methods, in order to find out which prospects for business development can be used by entrepreneurs in sensory gardens.

Results and discussion

The result of the conducted research, by using two methods such as "Interview/Walk-through interview", show that people are interested in visiting sensory garden 10-30 times per year with middle duration of about 20-40 minutes; see Figure 3; and they are ready to pay EUR 3-7 per one lesson at sensory garden; see Figure 4.

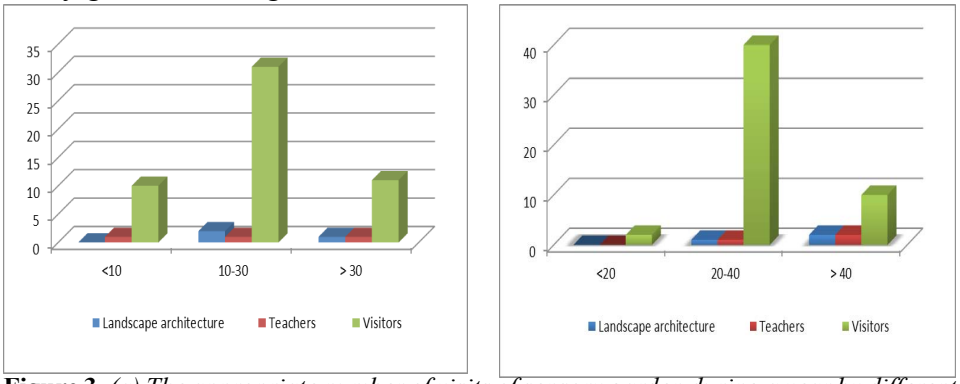


Figure 3. *(a) The appropriate number of visits of sensory garden during a year by different interviewed groups (number of visits per year)*
(b) The appropriate duration of one lesson at sensory garden (minutes)
Sources: Author (2016)

One person who is interested in visiting sensory garden, on that occasion can spend from EUR 30 till 210 per year. Due to recommendation by our research, duration of 1 lesson at sensory garden is about 40 minutes (see Figure 3 (b), visiting the capacity of sensory garden (small, ordinary, sensory garden can accommodate about 15-20 people without any discomfort.) for one day sensory garden can service approximately 120-160 people. If people are interested to visit sensory garden minimum 10 times per year, with appropriate period of 5 month, we can forecast that one sensory garden can be useful for the territory with the population of 1800-2400 people. It means that two to three thousand people can use the effects, especially in the terms of therapy, of the sensory garden.

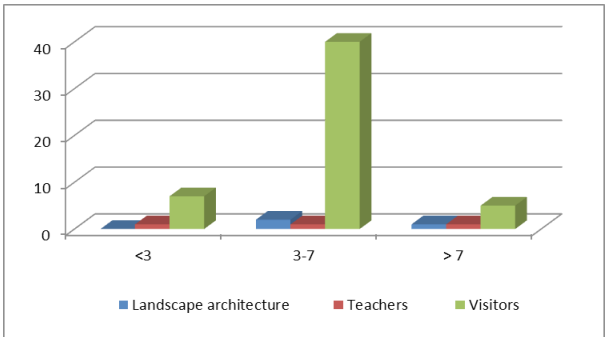


Figure 4. *The attractive cost of one lesson in sensory garden for different interviewed groups Sources: Author (2016)*

The revenue of one middle sensory garden, per year, due to our research results, can be between EUR 5. 400-16. 800 per year. It depends of the quality of garden design and its marketing and promotion. Middle investments to sensory garden are about EUR 1.214. So we can summarise that investment project of sensory garden can return investment in the first year with good profit and this direction is very prospective for entrepreneurship.

Conclusion

Quality environment provides, not only the health of the population, but may form the basis for economic growth and development of the country, especially in the field of entrepreneurship. One such example is the encouragement and development of ecological entrepreneurship. The use of the term ecological entrepreneurship is recent but it is based on the principle that profit is not the only and ultimate goal, nor to create the harmony with the nature.

One such an example is the use of sensory gardens, which is a specially organized natural territory where a favourable condition for a close communication with the natural environment is created. Today sensory gardens are one of the perspective directions of development of landscaping. Unique sensory gardens are created on each continent of Earth and the quantity of them constantly grows. At the begging of use, sensory gardens were created only for therapy of some diseases, but that approach is not entirely accurate, because people in urban areas are exposed to high levels of stress which led that sensory garden became more widely. People today are ready to pay their own money for the possibility to spend their time at the nature especially with kids.

In order to explore that possibility, a research was conducted in the sensory garden of Rastorguyev – Kharitonov Estate in Yekaterinburg, Russia, in the

period from July until August of 2016. Because of the lack of information on the subject of 'sensory gardens', the limitations of time for research and the difficulties surrounding communication between the researcher and the visitors with speech, language and communication difficulties, in the research there were used two methods: "Interview/Walk-through interview".

The result of the conducted research shows that people are interested in visiting sensory garden 10-30 times per year with middle duration of about 20-40 minutes and are willing to pay EUR 3-7 per one lesson at sensory garden.

According to that, one person who is interested in visiting sensory garden, on that occasion can spend from EUR 30 till 210 per year where the revenue of one middle sensory garden, per year, due to our research results, can be between EUR 5.400-16.800 per year.

Based on the previous data, sensory gardens are a good possibility from both sides: they improve ecological standards in the society and they are profitable in the long run.

REFERENCES

1. Anderson, A. (1998), "Cultivating the garden of eden: Environmental Entrepreneuring", Journal of Organizational Change Management, 11(2):135–144
2. Auerswald, P.E. (2015) Enabling Entrepreneurial Ecosystems, Kauffman
3. Foundation Research Series on City, Metro, and Regional Entrepreneurship
4. Barker, R. (1968) Ecological psychology: Concepts and methods for studying the environment of human behaviour. California: Stanford University Press.
5. Barker, R. (1976) On the nature of the environment. In Proshansky, H.M., et al. (eds.) Environmental psychology: Man and his physical setting. New York: Holt, Rinehart and Winston, Inc.
6. Ecological Entrepreneurship: Academic Requirements, Professional Outlook. Online at http://enviroeducation.com/resources/ecological-entrepreneurship-academic-requirements-professional-outlook (accessed 20 September, 2016).
7. Gibson, J.J. (1979/1986) The ecological approach to visual perception. New Jersey: Lawrence Erlbaum Associates.
8. Hart, R. (1979) Children's experience of place. New York: Halstead Press
9. Hussein, Hazreena. "Sensory Garden in Special Schools: The issues, design and." Journal of Design and Built Environment Vol. 5, 2009: 77-95.
10. Larson, A.L. (2000). „Sustainable Innovation through an Entrepreneurship Lens," Business strategy and Environment, 9(5): 304-317.
11. O'Connell, J. and Spurgeon, T. (1996) Gardens for all. Landscape design: Journal of Landscape Institute, No. 249, April 1996.
12. OECD (2011), Entrepreneurship at a Glance 2011, OECD Publishing. http://dx.doi.org/10.1787/9789264097711-en
13. Stoneham, J. (1996) Grounds for sharing: A guide to developing special school sites. Winchester: Learning through Landscapes.
14. Stoneham, J. (1997) Health benefit. Landscape design: Journal of Landscape Institute, No

249, February 1997.
15. Sikorskaya, G. (2013) . Polysensory Technology of Interaction with World of Nature in Noospheric Education Practice. Scientific dialogue: Psychology of. Pedagogics. - No. 4 (16), 109-125.
16. Valeryanovna, S.P., 2012. Ecological entrepreneurship as a basis for social responsibility of business. International Journal of Economic Sciences, I(1), pp.56–64.
17. Walley, L. and Taylor, D. (2002), "Opportunists, Champions, Mavericks?: A Typology of Green Entrepreneurs", Manchester Metropolitan University Business School Working paper Series Online.

Part IV
ENTREPRENEURSHIP EDUCATION

The Impact of Education on Entrepreneurs Activity and Employment Among Marginalized Groups: an Evidence of Serbia

RADOVIC-MARKOVIC Mirjana[62], RADOVIC Gordana[63], DAMNJANOVIC Aleksandar[64]

Introduction

Measuring human development and well-being is based on a numerous of indicators of social inclusion (Lelkes 2006). Mostly significant indicators of well-being include employment, health and education. When any individual or group is excluded from education or it is employed below the level of expertise, we can talk about the "marginalization". Groups or individuals can be excluded from society on gender, religious and ethnic grounds or on the basis of a refugee status, physical and mental disabilities. There are multiple factors that make an impact on social exclusion. Most of all, economic restructuring of a system excludes certain groups from the labour market due to the fact that their skills and education level do not match the requirements of the new system.

Beside that, certain population groups can be discriminated against because of various stereotypes, stigma and prejudice. In other words, various stereotypes, stigma and prejudice can be among the factors leading to their social and economic vulnerability. Therefore, reaching equality among all population groups and the absence of discrimination in contemporary society represent moral imperatives. Accordingly, the Europe 2020 Strategy pays special attention to social programs for the most sensitive social groups.

These programs should enable their accelerated employment. Also, they are aimed at fighting all types of discrimination that exists. Addressing this issue is of special importance for Serbia on its path to EU accession.

Despite the Anti-discrimination law was adopted in 2009, Serbia is still not among the most liberal and tolerant societies in Europe, where gender, age and other differences are respected. In line with this, educational institutions should play an important role and become more responsible in terms of providing support to the Romani, the disabled and those who are excommunicated and are not in an equal position with other groups.

[62] Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, mradovic@gmail.com
[63] "Dnevnik-Poljoprivrednik" AD Nov Sad, Novi Sad, Serbia, gordana.radovic09@gmail.com
[64] Faculty of Economics "Dositej", Belgrade, Serbia

This is, perhaps, where we can find the key to overcoming inequalities and discrimination that starts back in school (Furlong *et al.* 2011).

In this paper, special attention was paid to the following issues. These are: (a) the issues of determining the form of social exclusion that is the most common in Serbia; (b) determining the cause of the faster leaving the educational processes of marginalized groups compared to other population groups; (c) defining the development directions (forms and types) of education that would encourage learning and greater inclusion of these groups; (d) identifying the causes of difficult employment of marginalized groups in Serbia; (e) examining the possibilities for faster employment by fostering entrepreneurial activity and work in social enterprises.

Literature review

Fostering inclusion through active participation in the economy involves increasing access to opportunity by greater numbers of workers, entrepreneurs, and consumers in ways that generate additional economic growth (Bettcher, Mihaylova 2015). Namely, economic inclusion (integration) of marginalized communities has the ultimate goal to provide for such communities an equal (or at least improved) access to jobs, education, and health services (Economic Commission 2011). In addition, the opinion of a number of scientists is that creators of social and economic policies and the inadequacy of implemented programs are largely responsible for differences in terms of opportunities for people to achieve equal rights (Hastings 1998). "Social entrepreneurship is one the main topics in scholarly discussions of entrepreneurship." (Zare, 2013, p.106)

The literature overview shows that marginalization of population can be determined based on a combination of relevant indicators, such as indicators of high rate of long-term unemployment, low level of education, discrimination, high exposure to health risks or lack of access to health care (Economic Commission 2011). Employment is essential not only to achieve economic security of the individual, but also for his or her physical and mental health, personal well-being and the sense of identity. Numerous studies have shown that the relevant education can lead to improvements in self-esteem (Carlton, Soulsby 1999; Dench, Regan 1999), communication skills (Emler, Fraser 1999; Radovic-Markovic 2011a), the sense of belonging to a social group (Emler, Fraser 1999; Jarvis, Walker 1997), as well as the achievement of personal identity (Radovic-Markovic *et al*. 2012b). Also, education that accompanies the needs of the individual encourages creative and logical thinking (Radovic-

Markovic 2012c). Education programs that are oriented toward individuals' interests play an important role in preparing them to take part in the mainstream economy (Bettcher, Mihaylova 2015). In the modern economy, which is often called the knowledge economy, "the most important is to quickly and efficiently respond to the anticipated and unusual demands of the market.", and "an important factor is the providing of knowledge that adds value." (Tisen et al., 2006, pp. 10-16). Therefore, it can be concluded that proper education leads to improvements in social, economic and personal lives.

Basic life skills may include capabilities such as the development of communication skills, respect for the work ethic, developing the ability to resolve conflict situations or making decisions. They can include management skills that support business development, with emphasis on developing entrepreneurial capabilities. Programs tailored to their needs are very expensive and in many developing countries state funding is insufficient to meet the high cost of equipment, materials, infrastructure and training of instructors to work with these groups. These groups often have better access to informal education, organized by NGOs, than to formal ones. It is necessary to define the standards of quality of informal training programs and carry out monitoring of complying to these standards. This will facilitate the integration of these groups into the labour market and lifelong learning (Bessette 2011). Research conducted by The World Bank (2006) showed that greater inclusion of marginalized groups consequently leads to inclusive growth and economic and social development of a country. Due to these reasons, policy makers, more than ever, deal with the issues of social inclusion. "Few field studies were conducted in Algeria to study the socio-cultural change and its impact on the attitudes and behaviours of women entrepreneurs in a traditional Arab-Muslim male environment." (Ghiat, 2014, p. 90).

Social exclusion and discrimination in employment in serbia

Many studies have shown that there are many kinds of discrimination in European countries, which particularly became evident during the economic crisis. Discrimination mostly affects the Romani people, i.e. between 70 and 80 percent of Europeans voted against the Romani in the research (VOA 2009).

According to some indicators, the highest level of discrimination against the Romani people is evident during the process of their employment.

This is especially manifested in Romania and Bulgaria, where the Romani people make up the highest percentage in the total population of the listed countries.

Recent literature states that age discrimination occurs when age is taken into account in decision-making in employment, rather than the decision is made on the basis of individual merits, experience and quality in performing tasks pointed out visible socio-psychological and physiological differences that are taken into account in connection with age discrimination (Radovic-Markovic 2012).

Various forms of discrimination in employment can be observed in Serbia, too. It is especially It is especially the case of younger women in reproductive period. They are often offered part time employment, to minimize the cost of paying for pregnancy and maternity leaves. Older persons are also at high risk of marginalization, as well as women over 55 years of age. In this context and according to our research, there is still discrimination against persons between 55 and 64 years of age in employment in Serbia (Radovic-Markovic 2011).

The reasons for this are multiple. First of all, it is believed that older workers are less productive, do not have adequate knowledge, are slower to accept change and are not willing to improve and adapt to the current demands of the workplace (Radovic-Markovic 2012a). Also, our research conducted in 2012 has shown that women in this age group are not sufficiently prepared to meet their workloads, are not sufficiently physically attractive, do not have contemporary knowledge and are not ready to be trained. Accordingly, the unemployment rate of persons older than 55 years of age has almost doubled in the last ten years (Figure 1).

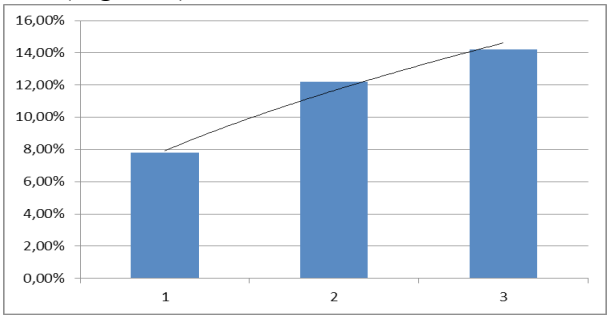


Figure 1. *Unemployment rate of people aged 55+ in Serbia, (2004-2014)*

Source: Author on the basis of the data provided by the National Employment Service (NES)

Many people with disabilities are also not able to find employment in Serbia. Around 15,500 of disabled people in Serbia waited for a job (on June 31, 2014), out of which there were about 5,000 women, while in Vojvodina there were about 5,300 people with disabilities without job, including 1,500 women. According (Labour source survey 2014 and 2015, Statistical Office of the Republic of Serbia, Belgrade, pp. 15-18) can be seen that women's

unemployment rate in 2014 was 19.2% and in 2015 was 17.8%.

That was higher than the men's unemployment rate, as well as the average unemployment rate in rural areas. This suggests that there is working rural population in rural areas of the Republic of Serbia which is a potential resource for female entrepreneurship. Primary restriction to female entrepreneurship development in the Republic of Serbia is the lack of strategy which is directly and exclusively related to female entrepreneurship development. In this respect, the Republic of Serbia should follow the example of its neighbouring countries, primarily Montenegro and Republic of Srpska, which adopted these development acts. (Radovic, Radovic-Markovic, 2016).

The social position of the Romani people in Serbia is also very unfavourable.

The latest data showed (on June 31, 2014), that there were about 23,706 Romani people without a job, out of which 10,800 women and in Vojvodina there were 6,150 unemployed Romani people, among them about 2,900 women (Centre for Development of Syndicalism, 2014).

Methodology

The research was carried out in 10 NGOs and associations of the Romani people, persons with disabilities and the displaced people from the territory of the Republic of Serbia. Our qualitative approach included using in-depth interviews with the persons among the disabled, Roma and refugees.

The interviews were scheduled as formal and informal using the research questionnaire designed specifically for this study. Document analysis was a systematic procedure for reviewing documents both printed and electronic (computer-based and internet-transmitted) material.

The sample encompassed 104 respondents, among which 62% of women and 38% of men in both groups.

The study started from the hypothesis:

H1: Lack of appropriate educational programs according to the needs of maginalized groups in Serbia is the main cause of their social exclusion and inability to find employment.

H2: Marginalized population groups in Serbia see the greatest opportunity for employment in social entrepreneurship.

H3: People with disabilities cannot find employment due to a stereotype that they lack working skills and as such represent a cost to the employer, not the resource.

For all questions in the questionnaire there is an answer by which the respondents evaluated how much they agree with the above statement in the

form of a quarter-point Likert scale (1 small, 2-intermediate 3-important, 4-very important).

Key finding

The survey has shown that respondents consider that the minimum exclusion is based on economic status (1), and the largest based on age and education (3) and (4). They are followed by the exclusion based on health handicap (2) (Figure 2).

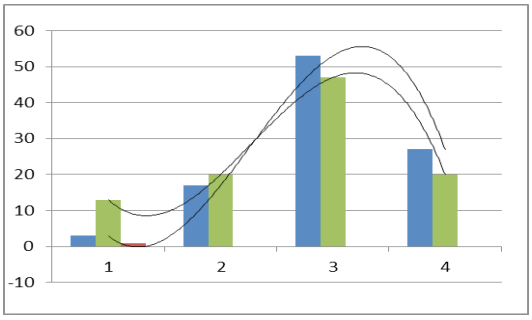


Figure 2. *Exclusion of marginalized population group based on economic status, age, education and health handicap*
Source: Author

The exclusion on the basis of education and age is the most common in the opinion of the respondents due to the fact that it is most about young people that leave educational process, as well as persons older than 50 that are mostly low qualified. Among the people who leave school, the Romani are most frequent.

The reasons for leaving educational process can be manifold:

- The way teachers treat them (with no respect).
- Students react to racial harassment that are not well handled by schools.
- They are not successful at doing homework.
- The absence of parents' cooperation and support to children to educate that results in their leaving school.

They should be added to the reasons of other nature, such as:

- The lack of qualified educational programs for the Romani people and other marginalized groups.
- Low level of self-esteem and desire to acquire knowledge.
- The shortage of material conditions necessary for education.

The subject of our research in this paper are four factors from (v) to (viii), and the results are shown in Figure 3.

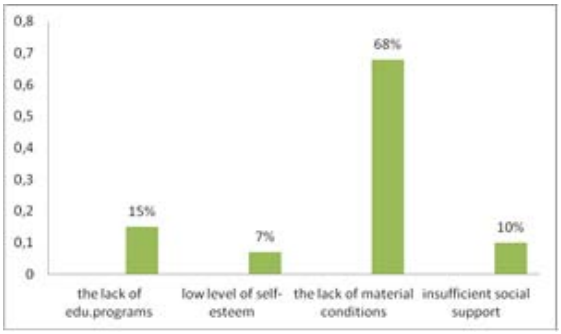


Figure 3. *Why do marginalized population groups leave educational process faster compared to other population groups?*
Source: Author

When asked why marginalized groups leave the process of regular education most frequently, the majority of respondents (68%) considers the lack of material conditions and the lack of social support to be the main cause of such a state. They are followed by the lack of educational programs (15%), inability to educate due to the fact that they have to work to provide for themselves (10%) and the lack of desire to acquire new knowledge (7%).

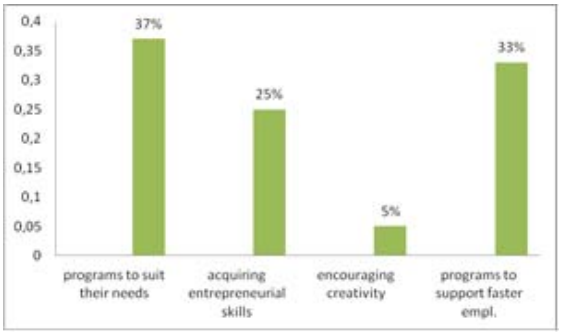


Figure 4. *In which direction should educational programs be changed in order to encourage learning and inclusion of marginalised population groups?*
Source: Author

The analysis done on the basis of the respondents' answers to the question in which direction to change the educational programs in order to encourage learning and inclusion of marginalized groups has shown that the respondents consider that it is almost equally important to provide programs to suit their needs (37%) and those that contribute to faster employment (33%). The third most important is acquiring entrepreneurial skills (25%), while they think that encouraging creativity and cognitive abilities should not be among the priorities (5%) (Fig. 4).

From the presented data we can see that the participants are fully aware that without the appropriate programs that address their needs their faster employment cannot be expected, which is one of the basic dimensions of exclusion and poverty.

In order to test which causes difficulty in recruiting marginalized population groups in Serbia, we offered respondents four possible answers:

1. the untimely adoption of appropriate legislation.
2. the negative impact of employers' attitudes towards this population group.
3. stereotypes of other employees in terms of their difficult adjustment and integration into work teams.
4. insufficient protection mechanisms against discrimination against them in the process of employment (Figure 5).

The largest number of respondents stated that due to the existence of stereotypes it was difficult to obtain a job in formal economy (50%).

In addition, our research has shown that although there are appropriate laws, they are not respected enough. With that in mind, they feel sufficiently protected in terms of their discrimination in employment.

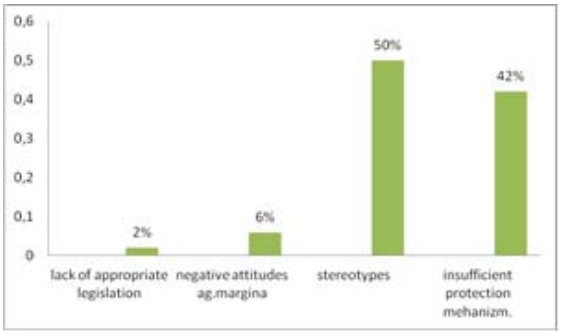


Figure 5. *Why is the employment of marginalised population groups in Serbia hard? Source: Author*

There is an opinion that this problem would be significally reduced by applying severe penalties for employers who determine the age limit, sex, religious or ethnic affiliation in the recruitment process (Radovic Markovic 2012). However, Serbia has not yet developed legal mechanisms against discrimination, which is characterized by a small number of prosecuted offences.

Also, regulations are often misunderstood and misinterpreted.

Therefore, a lot is expected from the implementation of the Strategy of prevention and protection against discrimination, which was adopted in Serbia for the period 2013-2018. It provides highlights of the plan to prevent

discrimination and identifies nine vulnerable groups (the Romani people, refugees and internally displaced persons, persons with disabilities, rural population, the rural population in South East Serbia, the rural population that owns no land, the uneducated, as well as women, young people (aged 15-24) and older people (aged 50-64) and provides measures to improve their situation (EurActiv 2013).

When asked who is the most responsible for improving the situation of this population group, the respondents opted most for governmental bodies and institutions (57%). First of all, they thought of creating a special fund to finance the training of these individuals, then the state should provide more flexible working conditions (working from home, flexible working hours etc.) Immediately after the government bodies they listed educational institutions (33%), which must work in the cooperation with governmental institutions on programs that should accelerate the inclusion of marginalized groups (Figure 6).

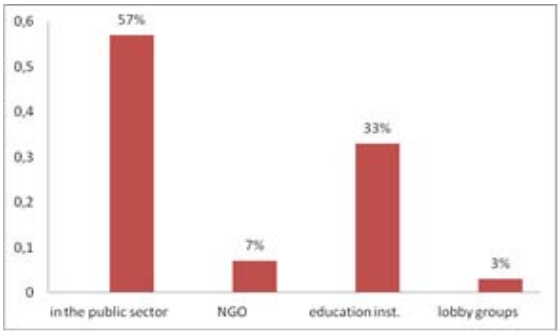


Figure 6. *Who is the most responsible for improving the position of this population group? Source: Author*

Our respondents see the greatest opportunity in employment in the public sector, that they find that it should be better utilized for their involvement in the process of work (41%) (Figure 7).

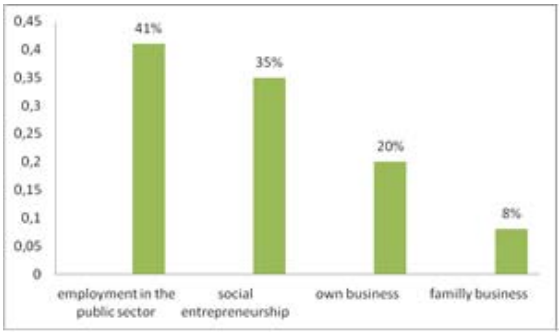


Figure 7. *Where should marginalized population groups find their chance in employment? Source: Author*

Such high commitment to employment in public sector can be explained by the fact that generally the unemployed in Serbia, including marginalized groups, prefer permanent employment and choose state companies for the employer, to work in the informal sector or under contract. Namely, the state is considered desirable employer because of regular monthly income. In addition, a number of respondents believes that social entrepreneurship could also absorb a substantial number of unemployed disabled persons, the elderly and refugees, as well as others who are socially excluded or 35%. Social entrepreneurship can greatly serve as a tool, which is to catalyze social transformation of society through the employment of persons with disabilities and other marginalized groups.

It can offer new programs for employment and cooperation between public and private companies. In this way, social enterprises are efficient business model that reduces poverty. Apart from emphasized social segments, they earn their income on economic business principles, which helps them have a significant role in increasing the GDP (NES 2014). Beside NGOs, hybride organisations, which combine profit and non-profit elements, such as "safe houses" that are starting with business trainings and employment of their residents are also included in social entrepreneurship (Radović-Marković 2009). However, according to numerous experts, the potential of social entrepreneurship is not used sufficiently in Serbia (Radović-Marković 2009; Milanović 2012).

The reason for this is primarily to be found in the lack of a clearly defined legal framework for the development of social entrepreneurship.

The reason for the fact that a small number of respondents opted to start their own business can be explained by the lack of entrepreneurial skills and knowledge that often prevents them in their entrepreneurial intentions. Namely, the above mentioned and similar studies conclude that training in the field of entrepreneurship and acquisition of practical knowledge directly influence the entrepreneurial competence.

To get the proper education that would be in function of their employment, a special fund is expected to be established to finance the training of these individuals and monitor the quality of the training programs in accordance with pre-set standards. Otherwise, education will still not be equally accessible to all, which will result in their exclusion. Respondents also expect that the state should provide more flexible working conditions (working from home, flexible working hours etc.) as well as to use all mechanisms to protect them from marginalization in employment.

The biggest number of respondents thinks that the position of marginalized

groups in Serbia has been improving slowly due to the lack of financial means (64%) and because they are not singled out as priority issue for resolution, while other reasons are almost negligible.

Discussion

Based on our review, hypothesis H1 is partially confirmed. The lack of appropriate educational programs tailored to the needs of marginalized groups in Serbia is not the only major cause of social exclusion. Namely, the reasons for the high rate of unemployment of marginalized groups should be sought in a large number of factors that are closely linked. These include the decline in gross domestic product, decreased productivity, high overall unemployment, the existence of budget deficits, the lack of social support, then the existence of stereotypes relating to their working and other abilities, the lack of implementation of measures and mechanisms of their protection, the absence of interest of employers to invest in their training etc. According to all these reasons that underlie the high rates of unemployment, the economic development of Serbia would be the basis for more investment in the education of these groups and raising the level of their knowledge and qualifications.

The main resultant of all this would be their higher employment, decrease of poverty and social inclusion.

The hypothesis H2 that marginalized groups in Serbia prefer to find their chance in employment in the social entrepreneurship is not confirmed by our respondents. In fact, they gave preference to the public sector compared to social entrepreneurship. This is explained by the fact that they are not sufficiently informed about the possibilities which it provides, but also by its underdevelopment in Serbia. According to the recent survey indicators, social enterprises in Serbia contribute with 0.2% to gross domestic product (GDP) and account for 0.6% of employment (EurActiv 2013).

H3 hypothesis that persons with disabilities cannot be employed because of the stereotypes that they lack the capacity for work has been fully confirmed by this study. There is a special exclusion of persons with higher degree of disability and women, given that there dominates a stereotype among employers that they represent a cost because they do not have working capacity.

That is crucial in their engagement. However, disabled persons can be useful both for themselves and their families and the society as a whole through appropriate training and employment that matches their competencies and work skills. Accordingly, it is necessary to encourage employers to opt for employment of persons with disabilities instead of paying the penalty fund,

specifically to help large companies and systems that, within their organization, can have the whole workshop staffed by disabled persons. Partnerships with NGO and with local governments should be made in order to give employers better information about legal opportunities and working abilities of persons with disabilities.

Conclusion

The results of our study showed that education does not follow the needs of marginalized groups in a sufficient way. Also, on the basis of these results we can see that the participants are fully aware that without the appropriate programs adapted to their needs their faster employment cannot be expected, which is one of the basic dimensions of exclusion and poverty.

In addition, the respondents did not show the expected interest in self-employment and business start-ups. The reason for this can be found in the lack of entrepreneurial skills and knowledge, which tend to undermine the entrepreneurial intentions. Accordingly, this information can be very stimulating for higher education institutions to invest in these programs in formal and informal education.

This research also has shown that marginalized groups expect more state responsibility and resolving their status. First of all, they require better material conditions to continue their education process and develop the necessary skills and knowledge and abilities. This is the first prerequisite needed for their economic and social inclusion. In line with this,it can be concluded that social exclusion issues should be dealt with mutually by the government and business and education sectors in order to assist marginalized groups on their way to their social inclusion.

REFERENCES

1. Bettcher, K.; Mihaylova,T.2015. Economic Inclusion: Leveraging Markets and Entrepreneurship to Extend Opportunity, CIPE.
2. Berghman, J.1995. Social Exclusion in Europe: Policy Context and Analytical Framework' in Room G. (ed.) Beyond the Threshold: The Measurement and Analysis of Social Exclusion, Bristol, The Policy Press.
3. Bessette, G., 2011. Skills for the Marginalized Youth: Breaking the Marginalization Cycle with Skills Development', in NORRAG NEWS, Towards a New Global World of Skills Development? TVET's turn to Make its Mark, No. 46, September 2011, pp. 66-68, Available from Internet: http://www.norrag.org
4. Carlton, S.; Soulsby, J. 1999. Learning to grow older and bolder. Leicester: NIACE.
5. Centar za razvoj sindikalizma 2014. Manje „magle" u spisku nezaposlenih, 31.avgust

2014.
6. Cvejić, S. 2013. Platforma za sindikalno organizovanje osoba sa invaliditetom', Forum mladih sa invaliditetom, Beograd.
7. Cvejić, S.; Babović, M.; Pudar, G. 2010. Studija o humanom razvoju – SRBIJA 2010-izvori i ishodi socijalnog isključivanja, UNDP, Srbija.
8. Dench, S.; Regan, J. 1998. Learning in later life: motivation and impact. Institute for Employment Studies.
9. Desai,S.; Kulkarni, V. 2008., Chanjing Educational Inequalities in India in the Context of Affirmative Action, Demography, May 2008,45(2):45-270.
10. Economic Commission, 2011. Guidance note on the implementation of Integrated housing interventions in favour of marginalised communities under the erdf. Available from Internet:http://www.euromanet.eu/upload/86/94/Guidance_note_Housing_interventions_art__7_2_ERDF.pdf
11. Emler, N.; Fraser, E. 1999. Politics, the education effect. Oxford Review of Education, 25(1/2): 251-273.
12. EurActiv 2013. Diskriminacija-problem srpskog društva. Available from Internet:http://www.euractiv.rs/ljudska-prava/4514-diskriminacija-problem-srpskog-drutva-
13. Furong, A; Ferguson, B.; Tilleczek, K. 2011. Marginalized Youth in Contemporary Educational Contexts: A Tranquil Invitation to a Rebellious Celebration, CEA, Canada. Available from Internet: http://www.cea-ace.ca/education-canada.
14. Ghiat B., 2014. Social change and women entrepreneurship in Algeria, International Review (2014.No1-2) Faculty of Bussiness Economics and Entrepreneurship, pp.90-100.
15. Gutek, B.A.; Guillemard, A.-M.; Walker, A. 1994. Employers' Responses to Workforce Ageing-A Comparative Franco-British Exploration. Paris and Sheffield:University of Paris and Department of Sociological Studies, University of Sheffield
16. Hastings, A. 1998. 'Connecting Linguistic Structures and Social Practices: A Discursive Approach to Social Policy Analysis', Journal of Social Policy, 27(2): 191-211.
17. Jarvis, P.; Walker, J. 1997. When the process becomes the product: Summer universities for seniors. Education and Ageing, 12: 60-68.
18. Kirova, D.2014. A bleak reality. The European.Available from Internet: http://www.theeuropean-magazine.com/dessislava-kirova/8466-discrimination-against-roma-in-europe.
19. Labour source survey 2014, Statistical Office of the Republic of Serbia, Belgrade.
20. Labour source survey 2015, Statistical Office of the Republic of Serbia, Belgrade.
21. Lelkes, O. 2006. Socijalna ekskluzija u centralno-istočnoj Evropi - koncept, merenje i politika intervencije, PANOECONOMICUS, 2006, 2:131-159.
22. NES 2014, Okrugli sto o socijalnom preduzetništvu-Model za smanjenje nezaposlenosti. Available from Internet: http://www.nsz.gov.rs/live/info/najnovije-vesti/model_za_smanjenje_nezaposlenosti.cid17002?page=0
23. NES 2014, Nezaposlenost i zapošljavanje u Republici Srbiji ,No.16.Available from Internet:http://www.nsz.gov.rs/live/digitalAssets/2/2860_bilten_nsz_10_2014.pdf
24. Ngo, H.Y.; Tang, C.; Au, W. 2002. Behavioural responses to employment discrimination: A study of Hong Kong workers. International Journal of Human Resource Management, 13: 1206-1223.
25. Paugam, S. 1995, 'The Spiral of Precariousness: A multidimensional approach to the process of social disqualification in France', in Room G.(ed), Beyond the Threshold: The Measurement and Analysis of Social Exclusion ,Bristol,The Policy Press.

26. Radovic-Markovic, M. 2012. Age discriminaition in employment of women in Serbia, Institute of Economic Sciences, Belgrade
27. Radović – Marković, M.; Markovic, D. 2012c. Creative Education and New Learning as Means of Encouraging Creativity, Original Thinking and Entrepreneurship, World Academy of Art and Science. Available from Internet: http://www.worldacademy.org/files/Montenegro_Conference/Creative_Education_and_New_Learning_as_Means_of_Encouraging_Creativity_by_Mirjana_Radovic.pdf
28. Radovic G.; Radovic-Markovic M. 2016. Significance of rural tourism for female entrepreneurship development in the Republic of Serbia, Journal of women`s entrpreneurship and education, Institute of Economic Sciences, Belgrade
29. Radović–Marković, M.; Lindgre, E.C.; Grozdanic, R.; Markovic, D.; Salamazdeh, A. 2012b. Freedom, Individuality and Women's Entrepreneurship Education. У: CATALIN, Martin (ed.), DRUICA, Elena (ed.). Entrepreneurship education-a priority for the higher education institutions. Bologna: Medimond.
30. Radović-Marković,2012a. Diskriminacija – prvi korak na putu do posla?, Internet portal „Šta žene žele?„ Available from Internet:http://stazenezele.rs/diskriminacija-prvi-korak-na-putu-do-posla/
31. Radović-Marković ,M.2011. Education System and Economic Needs in Serbia in Collected papers: Active measures on the labor market and employment issues (edited by Jovan Zubovic), Institute of Economic Sciences, Belgrade, pp. 27-42.
32. Radović-Marković, M. 2011a. Critical Approach towards the Employment Analysis in Theory Methodology and Research in Conference Proceedings: Influence of the Humanities and Social Sciences on Business and Societal Change, Naujosios Kar-tos Mokslo ir Verslo Klasteris", Vilnius, Lithuania.
33. Radovic-Markovic, M. 2011a. Critical employment analysis: Theory , Methodology and Research, Journal of Security and Sustainability Is-sues(2):37–45 Available from Internet:www.lka.lt/index.php/lt/217049/
34. Radović Marković, M; Silver Kyaruzi, I. 2010. "Female Entrepreneurship & Local Economic Growth", Outskirts Press, United States.
35. Radović Marković, M.; Chair S. 2010a. Country Note: Serbia, OECD, Paris.
36. Riger, S.; Galligan, P. 1980. An exploration of compet-ing paradigms. American Psychologist, (35): 902-910.
37. RS Official Gazette 33/2010.
38. RS Official Gazette 36/2009, Zakon o profesionalnoj rehabilitaciji i zapošljavanju lica sa invaliditetom Republike Srbije.
39. Tisen R., Andriesen D., Lekan Depre F., 2006. Dividenda znanja, Adižes, Novi Sad.
40. UNDP 2010. Marginalised minorities in Development Programing, New York.
41. World Bank, World Development Report 2006.; Equity and Development,Washington D.C.World Bank,2005.
42. World economic Forum 2013,The Global Gender Gap Report 2013.Available from Internet: http://www3.weforum.org/docs/WEF_GenderGap_Report_2013.pdf
43. VOA 2009. Evropska unija: Brojne vrste diskriminaci-ja.Available from Internet: http://ba.voanews.com/content/a-29-2009-11-10-voa5-86124282/679972.html
44. ZARE S.B., 2013. Performance Measures for Social Entrepreneur Institutions:Case of Iranian National Commission for Unesco, International Review (2013.No1-2) Faculty of Bussiness Economics and Entrepreneurship, pp.96-109.

Entrepreneurship Education as a Factor of Regional Economic Development

MAVRINA Irina Nikolaevna[65], MINGALEVA Anna Dmitrievna[66]

Introduction

The adverse trends and problems of the labour market in Russia are: weak intersectoral and interregional labour mobility; lack of a clear migration policy governing the regional dynamics of the population structure and workforce in accordance with the long tasks of the labour market, reducing the inflow of young people in the industry fields which require highly skilled labor.

The mismatch of vocational education system to current and prospective tasks of creating productive jobs in certain territories in the long term may worsen this adverse trends and problems of the labour market.

In many regions of Russia are currently there was a significant imbalance in the use of labor, which is manifested in the excess of labor in comparison with the available number of jobs. Imbalance as a result of further globalization of the economy tends to increase, since large-scale creation of new competitive jobs meeting modern requirements is not planned in these areas. The solution to this problem lies in strengthening the training system of people in the field of entrepreneurship. Introduction of entrepreneurial behavior is an important factor of society development, and entrepreneurship education is a factor and simultaneously a prerequisite for improving the competitiveness of people in life and on the labour market.

All the above demonstrates the need for the formation and implementation of the territorial aspects of the universities' strategy of providing the coordination of interests in a specific economic area.

The theory

Research of many scientists from different countries in the last years are devoted to the analysis of entrepreneurship education and training programs (Azzahra, and Dhewanto, 2015; Caliendo, et al., 2016; Francoise, et al., 2016).

[65] Ural Federal University named after the first President of Russia B. N. Yeltsin, Ekaterinburg, Russia, iraika@bk.ru

[66] Ural Federal University named after the first President of Russia B. N. Yeltsin, VShEM, Ekaterinburg, Russia, mingaleva.ann@yandex.ru

Russian researchers have noted the existence of problems in training for small and medium businesses, of problems in entrepreneurship education and training programs, of problems of Russian system of education (Aydrus, 2010; Gnevasheva, 2009; Mingaleva and Mirskikh, 2012). The researchers said the low level of interaction between government, business and educational institutions in solving problems for the competitive development of territories dominates (Mokronosov and Vershinin, 2014).

T.C. Brown and D. Hanlon developed behavioral observation scales of for grounding entrepreneurship education and creating special training programs of entrepreneurship. This scales consist of 9 dimensions and 47 behaviors.

They validated the behavioral observation scales using 12 performance measures and a national survey of 149 entrepreneurs (Brown, and Hanlon, 2016). T.C. Brown and D. Hanlon proved that all behavioral observation scales dimensions, as well as the total score on the behavioral observation scales, correlated significantly with many of the 12 non behavioral performance measures.

These behavioral observation scales are the special and effective instrument of entrepreneurship education that can be used to educators with a validated and systematically developed instrument of education programs. The results of research of T.C. Brown and D. Hanlon can be to use in Russian entrepreneurship education system.

In the research of S. Imaginario, E.Cristo, S.N. de Jesus and F.Morais proved the role of promoting creativity and entrepreneurship as being essential for the development of countries. On the example of Portugal shows to it is crucial to implement entrepreneurship educational training projects (Imaginario, et al., 2016).

Nieminen, L and Hytti, U in their study of the commitment to an entrepreneurship training programme for self-employed entrepreneurs have revealed that the participation in entrepreneurship training programme was "a double-edged sword: it allowed those who were not active in entrepreneurship to explore entrepreneurship, but for those who were active in entrepreneurship and in professional communities, their participation represented a potential liability and a threat to their image as a credible entrepreneur" (Nieminen and Hytti, 2016).

The paper of E.Tovar, N. Piedra, J. Lopez, and J. Chizaiza, reveals the role and importance of entrepreneurship in Europe (Tovar, et al., 2016). Using the idea a priority of the entrepreneurship as a powerful driver of economic growth, job creation and to reduce unemployment, they showed the increasing demand in the entrepreneurship training programme, including the open education

practices and StartUp model based on an open learning architecture.

Fairlie, R.W., Karlan, D., Zinman, J. tested the heterogeneous treatment effects from the promotion of entrepreneurship training programs in the United States based on the theories of market failures. They find no strong or lasting effects on those most likely to face credit or human capital constraints, or labor market discrimination, do find a short-run effect on business ownership for those unemployed at baseline, do not find effects on business sales, earnings, or employees. Treatment effects on the full sample are also short-term and limited in scope, but this dissipates at longer horizons (Fairlie, et al., 2015).

Methodology

The main theoretical and methodological approach of the research was the concept by Y. Schumpeter, according to which the essence of entrepreneurship is the connection of different types of resources on a new basis and continuous reforming of production, management, technological solutions in a rapidly changing combinations and options.

Factor analysis as a research method was used to identify and determine the important elements of entrepreneurship education.

Methods of functional analysis were used to determine the social and economic role of entrepreneurship at the level of individuals as a means of realization of personal qualities of innovating entrepreneurs and art of their business activity and the three basic functions of business: the creative function, an innovative feature and commercial function.

Also, methods of functional analysis were used to identify current goals and objectives of entrepreneurship education.

The surveillance and analytical methods of formalization and axiomatization were used for the analysis of statistics and survey data.

From the standpoint of the theory of self-organization in the study areas of entrepreneurship development training in universities, two such areas were identified:

- entrepreneurship, which is expressed in the orientation of scientific, educational and commercial activities to more fully meet the demand of both private and institutional actors on the educational market and the labour market, and
- intrapreneurship, which is focused on organizational innovations, restructuring of internal conditions and factors of reproduction of scientific and educational services (Manchuk, 2008).

Research and Results

State policy in the support of entrepreneurship in Russia is currently being implemented in two interrelated and interdependent areas. The first direction involves the active alignment of the socio-economic situation of regions at the expense of state support for weaker regions, and the second is to concentrate resources on the regional "poles" of development in regional entrepreneurship.

A research of level and factors of economic activity of the population in 4 regions of the Urals Federal District was held to evaluate the effectiveness of business support measures in Russia, identify individual business potential of small and medium-sized businesses and ways of its development, key indicators studied in the research included the quantity of individual businesses, their revenue volumes, the average number of employees and turnover of small businesses. A research of the status and dynamics of small businesses, micro-enterprises and individual entrepreneurs, is based on the fact that in periods of economic crisis small and medium enterprises offset their negative impact faster than other business entities, adapting to the new conditions and ensuring the preservation of employment and income of the majority of the population.

Results of the study are shown in *Figure 1* and *Tables 1-3*.

Picture 1 reflects the level of economic activity of the population in 4 regions of the Urals Federal District in 2000-2015, on average per year (compiled from Rosstat data).

The study of the dynamics of the economic activity level of the population in 4 regions of the Urals Federal District for the period 2000-2015 showed the following results.

The greatest reduction in the level of economic activity of the population in the analyzed period was observed in the Kurgan region. In the Sverdlovsk region a steady increase in the economic activity of the population except for the crisis years of 2001 and 2008 was observed, when there was a significant release of labor force from large and medium-sized enterprises in the region, as well as the bankruptcy of many small and medium-sized businesses and individual entrepreneurs. Tyumen region is characterized by the absence of sharp fluctuations in the economic activity of the population (except for the crisis years).

In general, for the whole period since 2000, the level of economic activity of the population in the Chelyabinsk region increased by 9.2%, in the Sverdlovsk region by 6.4%, in the Tyumen region – by 2.3%, while in Kurgan region only by 0.6%.

Thus, in the Russian regions there are areas with significant reserves for

increasing the level of economic activity of the population, i.e. a significant part of the working age population which is not employed in the economy. It is proved, for example, with the results of the analysis of the imbalance of labour demand and supply in the labour market in the context of administrative districts and municipalities of the Urals Federal District for the period 2010-2015 (Mokronosov and Vershinin, 2014).

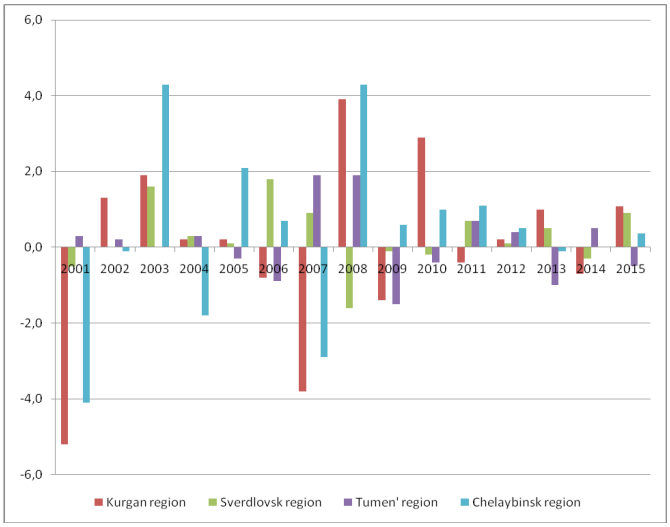


Figure 1. *Economic activity rate in 4 regions of the Urals Federal District for the period 2000-2015, the annual*
Source: Authors, 2016.

With regard to the dynamics of the small enterprises number, including micro-enterprises and individual entrepreneurs, as well as the dynamics of the basic indicators of the work, the analysis of the current situation (in 2013-2014) showed a reduction of all major indicators.

Table 1 presents data on the actual state and dynamics of small enterprises, micro enterprises and individual entrepreneurs (compiled from Rosstat data, 2016)

Table 1. *The number of small enterprises, micro enterprises and individual entrepreneurs in the regions of the Urals Federal District in 2013-2014 (by the end of year), thous*

	Number of small enterprises			Including micro enterprises			Number of individual entrepreneurs		
	2013	2014	The change 2014 to 2013	2013	2014	The change 2014 to 2013	2013	2014	The change 2014 to 2013
Kurgan region	7,4	7,3	-0,1	6,2	6,1	-0,1	13,4	13,4	0

Sverdlovsk region	81,7	81,8	0,1	73,9	75,3	1,4	84,3	78,7	-5,6
Tumen' region	63,9	69	5,1	58	63,1	5,1	49,4	50,6	1,2
Chelaybinsk region	38,6	41,9	3,3	33,8	37,3	3,5	56,6	58,6	2

Source: Author, 2016

Table 2 presents data on the average number of workers at small and micro enterprises in Urals Federal District regions in 2013-2014 (compiled from Rosstat data, 2016).

Table 2. *The dynamics of the average number of workers at small and micro enterprises in Urals Federal District regions in 2013-2014 (by end of year), thous*

	Average number of workers at small enterprises			Average number of workers at micro enterprises		
	2013	2014	The change 2014 to 2013	2013	2014	The change 2014 to 2013
Kurgan region	7,4	7,3	-0,1	59,3	54,9	-4,4
Sverdlovsk region	81,7	81,8	0,1	427,9	406,3	-21,6
Tumen' region	63,9	69	5,1	274,6	260,8	-13,8
Chelaybinsk region	38,6	41,9	3,3	243,9	242,3	-1,6

Source: Author, 2016.

Table 3 presents data on the dynamics of the turnover figures and the volume of revenues of small enterprises, micro enterprises and individual entrepreneurs in the regions of the Urals Federal District in 2013-2014 (compiled from Rosstat data, 2016).

Table 3. *The dynamics of the turnover figures and the volume of revenues of small enterprises, micro enterprises and individual entrepreneurs in the regions of the Urals Federal District in 2013-2014 (end of year), thous. rub*

	The turnover of small enterprises			The turnover of small micro enterprises			The turnover of individual entrepreneurs		
	2013	2014	The change 2014 to 2013	2013	2014	The change 2014 to 2013	2013	2014	The change 2014 to 2013
Kurgan region	66,1	65,5	-0,6	19,1	21,4	2,3	65,9	68,7	2,8
Sverdlovsk region	1034,6	973,5	-61,1	514,6	471,5	-43,1	607,6	627,2	19,6
Tumen' region	741	733	-8	224,6	225,5	0,9	333,1	373,4	40,3
Chelaybinsk region	483,1	496,6	13,5	152,2	167	14,8	317	319,4	2,4

Source: Author, 2016.

Study of the dependence level of population economic activity, particularly individual entrepreneurs, managers of small and medium-sized enterprises and micro-enterprises, in the surveyed regions revealed that their success was largely dependent on the availability of special education in the field of entrepreneurship. The study of the relationship between the system of Entrepreneurship Education and regional economic development, including employment and self-employment, economic activity has shown the following results.

The survey of individual entrepreneurs, managers of small and medium-sized enterprises and micro-enterprises about their special entrepreneurship education, about the level of satisfaction of the training courses, about the shortcomings of the educational programs showed the following.

Results

The majority of respondents reported that they took part in special education courses (programs) devoted to entrepreneurs training at different times. The majority of such responses was given in Ekaterinburg and Chelyabinsk.

However, due to the higher competition in Ekaterinburg many individual entrepreneurs are not able to implement their plans successfully to conduct business. Also, many respondents indicated a weak correlation between the content of educational programs for entrepreneurs and regional peculiarities of doing business and competition.

The results obtained in the process of research prove the conclusion given by L.Nieminen and U. Hytti, that «that entrepreneurial activities and a strong attachment to entrepreneurship may detach entrepreneurs from an entrepreneurship community» (Nieminen and Hytti, 2016). Just as in the study L. Nieminen and U. Hytti, russian respondents appreciated the social aspect of learning, confidence-building and peer support, provided by the special entrepreneurship education program in Russian universities.

Studying the experience of organizing the system of entrepreneurship education in Russian universities showed the following (Clark, 2011; Mokronosov, et al., 2011).

Vocational education performs the important economic function of providing economic growth of the society, which is necessary as a base for a high quality of life, the continuity of the process of economic development and its acceleration, human adaptation to changing economic and technological space in terms of the comparability of individual and social benefits.

In this case the functions of the teacher are also transformed: his

entrepreneurial competence as a researcher, consultant, a head of innovation projects come to the forefront. This is particularly important in entrepreneurship education systems.

However Russian entrepreneurship education system is characterized with a number of peculiarities.

The dual nature of the educational sector should be noted.

At first, it aims at the formation of the individual and should provide the appropriate tools of influence on the person, and also meet the individual needs of people (Mingaleva, et al., 2013).

Secondly, the education sector and the entrepreneurship education systems needs to ensure the quality and continuity of the economic development of society and to respond to the needs of society as a whole.

Opportunities for entrepreneurial activities by the University itself are determined with the presence of significant economic autonomy that was granted to universities. The autonomy of universities allowed them in accordance with the law to open of accounts in credit organizations, to receive income from the use of property in state or municipal ownership, as well as income from the provision of paid educational services and to dispose of the profit.

An autonomous institution is entitled to act as a legal person with the respective share capital, to use borrowed capital in the form of a bank loan in its financial and economic activities, to allocate funds subsidies for the implementation of the state order. Thus, the relationship between higher education institutions, government and service consumers have become contractual in nature, which determines their entrepreneurial nature.

Thirdly, serious preconditions for intensive development of the programs of entrepreneurship education and of entrepreneurship activities have been developed in the sphere of higher professional education in Russia in the recent years.

The concept of "Entrepreneurship of the University" is not confined to only commercial activities and relations like "producer – consumer of educational services", it has a broader context. Under the term "Entrepreneurship of the University", we understand the synthesis of creative, innovative, commercial and managerial activities of the University, implemented in conjunction on the market of scientific and educational services, including training people on the basics of entrepreneurship within the framework of basic education programs and various short-term and medium-term courses, the implementation of innovations in practical activities in the course of training with the needs of the labor market.

And, finally, special direction in entrepreneurship education is inculcation

of entrepreneurial culture, learning the ethics and morals of doing business, the principles of fair competition.

Special direction in entrepreneurship education is creating the appropriate business environment in the region. The Russian universities have created and introduced the system of cooperation with representatives of the regional community, including business, on matters relating to training of entrepreneurs.

Entrepreneurial orientation in the formation and development of training programs in Russian universities is focused on external demands of society.

The role of the Universities as a subject of socio-economic development of the region is enhanced. A set of program activities aimed at learning entrepreneurship is developed.

The creation of University-based centers of interaction of educational institutions with the business community, the organization of the innovation scientific-educational-production cluster should be noted among the program activities with a strong entrepreneurial nature. Training of operators, setters, programmers, technologists in such centers among University students, on the one hand, solves the problem of staff shortages in the relevant profile in production; on the other hand it promotes accelerated development of the domestic economy through transfer of new technologies. In addition, the activities of such centers allows to carry out orders of the enterprises for production of products of high complexity, giving students extra chances to become specialists of high qualification.

Similar problems are solved with other scientific and educational centers organized in cooperation with innovative enterprises in the region.

All the above demonstrates the need for the formation and implementation of the territorial aspects of the universities' strategy of providing the coordination of interests in a specific economic area.

The urgency of the task is stipulated also with the fact that the current perspective of regional innovation development program (program for the creation and modernization of highly productive jobs, the program of development of industry and science etc.) affecting the development of human resources, have priority in the frames of sectoral approach over territorial one.

In particular, at the level of municipalities there is no scientifically grounded analysis of matching jobs and workers, tools of methodological analysis reflecting the main aspects of advancing the development of personnel potential of the territory are poorly designed, an insufficient level of interaction between government, business and educational institutions in solving problems for the competitive development of territories dominates. This is manifested in the weak conjugation of professional educational programs of universities with the

strategic targets of socio-economic development of territories, lack of resource provision of vocational education institutions in certain areas, low activity of the employers in realization of innovative projects in vocational education.

Discussion

The basis of our approach to the organization of the system of entrepreneurship education is the concept given by Y. Schumpeter, according to which the essence of entrepreneurship is the connection of different types of resources on a new basis and continuous reforming of production, management, technological solutions in a rapidly changing combinations and options.

This process of successive waves of innovation was, called by Schumpeter "a continuous storm of creative destruction" that is the expression of effective competition (Schumpeter, 1942). Thus, in the process of entrepreneurship education it is needed to develop such essential characteristics of the process of entrepreneurship as:

- innovativeness (innovation is the process of developing and implementing innovations);
- creativity (creativity reflects a creative aspect of entrepreneurship, the ability to create intellectual products);
- initiative (initiative is determined as readiness to the systematic, purposeful work on the implementation of innovations in conditions of risk and uncertainty).

As for the functions of the entrepreneurship, then:

- *Creative* function of the entrepreneurship is stipulated with the increasing role of knowledge in socio-economic development, patterns of transition from "consumer society" to "intellectual society", it is linked to the ability of the entrepreneur to create a new, the most important intellectual products, which is a kind of stars on the business horizon.
- *Innovative* function of entrepreneurship is associated with its innovative aspect, the ability of the market launch of new products, technologies, creation of innovative combinations of production factors.
- *Commercial* function of the entrepreneurship lies in the ability of financial support of innovative projects, their orientation towards increasing business income or other socially useful effect, in the provision of intermediary services related to the promotion of goods and services on the market, their transfer in the socially acceptable form from the direct producer to the consumer.

These three essential characteristics of the process of entrepreneurship are

closely related to those of the basic conditions for entrepreneurship as economic freedom, innovation and competition.

The solution to this problem lies in strengthening the training system of people in the field of entrepreneurship.

At the level of individuals' entrepreneurship can be seen as a mean of implementing the personal qualities of the entrepreneurs, the innovators and the art of their business activity.

Thus, shaping the goals and objectives of entrepreneurship education, the emphasis should be made on training people to perform three basic functions of entrepreneurs: creative, innovative and commercial ones.

Currently, the process of modernization of Russian higher education directly affects the importance of entrepreneurship for economic development and sustainability of society and economics activity in Russian regions.

It is manifested in two ways.

The first direction is associated with the growing global trends of intellectualization, information economy, manifested in substantial growth of the extent and dynamics of high-tech industries, increasing the scope of knowledge-intensive services and innovation activity (Mingaleva, and Mirskikh, 2012). High-tech economy developing on the basis of science and technology requires workers with high adaptability to changes, specific skills of search, evaluation and implementation of innovations. In this context, universities have become part of the innovation system, entered a network of knowledge management, supporting the production and transfer of new knowledge and technology. And training programs should include teaching innovation skills.

The second direction is connected with the peculiarities of the market-oriented model of the Russian professional education reformation, using the mechanisms of competition as a necessary condition to ensure high quality educational services, increase of efficiency of activities of national universities and stimulation economics activity in regions.

Conclusion

The analysis showed that most of the territories of Russia can be attributed to the territories with a high or critical level of imbalance, which is manifested in the excess of labor in comparison with the available number of jobs. Imbalance as a result of further globalization of the economy tends to increase, since large-scale creation of new competitive jobs meeting modern requirements is not planned in these areas.

State policy in the support of entrepreneurship in Russia is currently being implemented in two interrelated and interdependent areas. The first direction involves the active alignment of the socio-economic situation of regions at the expense of state support for weaker regions, and the second is to concentrate resources on the regional "poles" of development in regional entrepreneurship.

Under conditions of limited resources the second area is currently considered as a priority one.

The research proved the need for the formation and implementation of the territorial aspects of the universities' strategy of providing the coordination of interests in a specific economic area.

The development of entrepreneurship education programs in high schools at the level of individuals' entrepreneurship can be seen as a mean of implementing the personal qualities of the entrepreneurs, the innovators and the art of their business activity.

This approach will allow providing quality training of people for entrepreneurship adequate to the requirements of modern development of the entrepreneurship.

REFERENCES

1. Azzahra, S., Dhewanto, W. (2015). Entrepreneurship Training for Community in Rural Area: Motivation and Knowledge of Entrepreneurship. Advanced Science Letters, 21 (6), 1858-1862. DOI: 10.1166/asl.2015.6137
2. Aydrus, I. (2010). The global market for higher education at the present stage. Journal of higher education. Alma mater. 1, 53-56.
3. Brown, T.C., Hanlon, D. (2016). Behavioral Criteria for Grounding Entrepreneurship Education and Training Programs: A Validation Study. Journal of Small Business Management, 54 (2), 399-419. DOI: 10.1111/jsbm.12141
4. Caliendo, M., Kunn, S., Weissenberger, M. (2016). Personality traits and the evaluation of start-up subsidies. European Economic Review, 86 (SI), 87-108. DOI: 10.1016/j.euroecorev.2015.11.008
5. Clark, B. (2011). Creating entrepreneurial universities: organizational pathways of transformation. Moscow: Publishing House. State House - Higher School of Economics, 240 p.
6. Fairlie, R.W., Karlan, D., Zinman, J. (2015). Behind the GATE Experiment: Evidence on Effects of and Rationales for Subsidized Entrepreneurship Training. American Economic Journal-Economic Policy, 7 (2), 125-161. DOI: 10.1257/pol.20120337.
7. Francoise, U., Janviere, N., Ding, D.H. (2016). African S&T Professionals Trained in Chinese Universities: Orientations towards Entrepreneurship. Science Technology and Society, 21 (2), 296-314. DOI: 10.1177/0971721816640630
8. Gnevasheva, V.A. (2009). Education as a factor of production in the Information Society. Journal of higher education. 4, 5-20.
9. Imaginario, S., Cristo, E., de Jesus, S.N., Morais, F. (2016). Entrepreneurship education:

economic analysis of on entrepreneurial training program based on pupil enterprises in Portugal. Journal of Spatial and Organizational Dynamics, 4 (1), 102-114.
10. Manchuk, E.P. (2008). The meaning of intrapreneurship in business university system. Economics. 4, 41-52.
11. Mingaleva, Zh., Bykova, E., Lobova, G. (2013). Motivation Processes of Educational Activities in Russia. Procedia-Social and Behavioral Sciences, 83: 985-989. doi:10.1016/j.sbspro.2013.06.183
12. Mingaleva, Zh., Mirskikh, I. (2012). Globalization in education in Russia. Procedia-Social and Behavioral Sciences, 47: 1702 – 1706. doi: 10.1016/j.sbspro.2012.06.886
13. Mokronosov, A.G., Vershinin, A. (2014). Demand and supply of labor in the regional and local labor markets. Proceedings of the Ural State Economic University. 4, 73-78.
14. Mokronosov, A.G., Mavrina, I.N., Dolzhenkova, E.V. (2011). Entrepreneurship as a vector of strategic development of the university. Education and Science. Math. Ural Branch of the RAO 10 (89): 28-39.
15. Nieminen, L., Hytti, U. (2016). The commitment to an entrepreneurship training programme for self-employed entrepreneurs, and learning from participation. Education and training, 58, 7-8: 715-732. DOI: 10.1108/ET-02-2016-0036
16. Rosstat, 2015. http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/publications/catalog/doc_1135087342078
17. Schumpeter, J. A. (1942). The Process of Creative Destruction. Unwin.
18. Tovar, E., Piedra, N., Lopez, J. anf Chizaiza, J. (2016). Open Education Practices as Answer to New Demands of Training in Entrepreneurship Competences: The Role of Recommender Systems. Computer supported education, CSEDU 2015, 583: 3-18. DOI:10.1007/978-3-319-29585-5_1.

Education and Entrepreneurship

ANDJELIC Slavica[67], BRNJAS Zvonko[68], DOMAZEt Ivana[69]

Introduction

Entrepreneurship development is conditioned by finding a balance between long-term sustainability of the production process of a particular product or service, environmental and social dimensions of development. Improving economic performance, reduce production costs, promotion of innovation and increased market orientation through diversification of economic activities are important for improving the quality of life and better environment.

The attractiveness of certain areas requires the promotion of sustainable growth and development and the search for new employment opportunities.

Entrepreneurship development starts from the point where people are now, with vision and dreams for their future and is based on two things build resources and pooling. The concept of entrepreneurship development is in its infancy. The experience of the European Union designed mostly to policy development and financial support are the result of a successful economy.

The aim of this research is to find the potential of young people and the education of entrepreneurs who represent the base of development. One million unemployed, with a tendency to increase this number, clearly indicates that the workforce greatest potential for economic development of Serbia.

For the stature of the workforce, its general education and vocational training were made huge investments that not only have the opportunity to fully express themselves in increasing production and labor productivity growth, but the unemployed emerge as consumers and producers who are not. Therefore, unemployed labor is not only the most abundant and untapped production potential of more social troubles of enormous proportions, which does not create a favorable social climate for successful economic development.

Education

Education acquired in secondary schools and colleges has not adapted to international standards and is not adequately trained individuals to work in

[67] Higher business school of vocational studies "Prof. dr Radomir Bojković", Krusevac, Serbia, slavica.andjelic@indmanager.edu.rs
[68] Institute of Economic Sciences, Belgrade, Serbia, zvonko.brnjas@gmail.com
[69] Institute of Economic Sciences, Belgrade, Serbia, ivana.domazet@ien.bg.ac.rs

the profession. The existing education system, teaching methods and curricula are many established during the socialist period, from 1945 to 2000. Do some reforms in education had taken place during the nineties, but this reform did not reflect the real needs of society, that did not produce radical changes in education that were necessary for the improvement of education system in the country. The education system in Serbia is left without the implemented mechanism for recovery and development.

Stratification, impoverishment of society and economic instability have created a wrong value system. Due to lack of funds and the struggle for existence, there has been a degradation of the quality of educational content, teaching staff and deficits in education in every respect. In the last decade started with serious reforms that are aimed to completely shift the current education system and to approach the educational systems of developed countries.

The basic right of all citizens before the start of their professional career is to provide the opportunity to acquire the necessary knowledge and skills that would enable them to adequately and competently perform the tasks for which they have chosen. The knowledge acquired must be sufficiently applicable to the labor market and in accordance with the needs of society. The quality of education must be subjected to constant control and improvement.

"The institutions of formal education must provide all the necessary theoretical basis which should be complementary to the practical application of knowledge and skills. Formal education should not be based solely on knowledge unworkable". Young people should be allowed to gain knowledge that will give them the flexibility of the labor market and easier adaptation to the business environment.

Non-formal education in the form of professional practice, or professionally trained some activities that could better equip candidates for its future position and to facilitate the process of getting a job is not enough present in our educational system. Non-formal education is an educational activity with certain cognitive elements outside the established formal education system with the aim to provide additional education to develop independence, professionalism and work ethic. Implementers informal type of education should be: student clubs, student associations, universities, secondary schools, companies and other organizations that benefit from the realization of these activities. Under this kind of education to include: seminars, trainings, creative workshops, professional practice, tours etc.

The main problem in the realization of this idea is a limited supply of organizations engaged in informal education as well as the lack of interest of existing institutions, such as state universities, to such an idea into practice.

These programs and organizations are poorly available to the public, so that young people who are interested in an informal type of education are not sufficiently informed about them or have this information available to a very small number of students or pupils. The drawback is the lack of cooperation between schools and related organizations in the implementation of the idea of non-formal education as well as institutions dealing with the status of young people in society. The consequence of the negligence of the competent institutions, both governmental and private, are not sufficiently promoted and valued volunteer work.

Formal education in an environment with rapidly changing significantly slower changes according to the needs of society and it is also the main drawback of formal education. Due to the lack of an efficient model of flexible formal education, informal education is one that directly reduces the gap between existing and required education with the wishes of young people.

In order to improve the existing form of informal forms of education, it is necessary to seriously approach its thorough reform. The aim of these reforms is to enable more intensive cooperation between secondary schools and universities and the state as well as with various other organizations engaged in informal form of education. It also needs to support and encourage the participation of young people in a variety of educational programs and training.

We should emphasize the importance of evaluation of volunteer work, as well as the acquired knowledge and skills during youth activities outside the classic educational system (Anđelić, 2016, p. 70).

Education as important for development of entrepreneurship

The situation in the field of employers' needs and offers professional education in Serbia until 2020, should be viewed as a development process, starting from a few universal features of the education system, such as quality, effectiveness and flexibility. European Framework for Quality Management, EFQM contains the basic principles of the field of operation of vocational schools and the application logic called RADAR (Results – Approach – Deployment – Assessment – Review). (Www.efqm.org/the-efqm-excellence-model)

The principles of the EFQM model are: focus on results, focus on students and the social partners, leadership and consistency, making decisions based on the facts in order to achieve sustainable results, the development of the participation of employees, fostering creativity and innovation, developing

partnerships and taking some responsibility for the development of the social environment.

Improving cooperation between businesses and other interested partners in the process of creating a range of educational profile that is consistent with the needs of sustainable development makes sense in the above principles. In order to obtain the desired output it is necessary to optimize the processes that are based on management leadership, defining policies and strategies, involving employees in the process of cooperation and provision of resources. Flexibility is an important indicator of educational institutions, which demonstrates the ability of the education system to monitor the state of the market, adapt to and answers their needs.

Schools are expected to find themselves in the middle of intertwined and mutually conditioned relationship, involving a number of institutions at the local, regional and national levels. A network of institutions that surrounds the educational system should be continuously monitored, analyzed and improved (Anđelić, Gajić, 2016, p. 70). Most of the learning is focused on the new rules, which direct the changes. They point to the rights and choices they have every user of our products and services (Krause, 2012, p. 29).

Education of entrepreneurs in serbia

In Serbia, there are eight public universities with 90 faculties and eleven private universities with 50 faculty members. In addition, there are high school academic study of 6 and high school vocational studies a total of 75. In this very extensive network of senior and high school is a very large number of institutions that organize studies in the field of management. In the last few years, there has been a rapid expansion and opening of institutions and directions in various areas of management. A large number of former high schools transformed and opened up a three-year study (on the principle of the Bologna Process) for a wide range of managerial profiles – from general management to sports and the arts. (www.edufair.rs/komisija for accreditation)

Analysis of three- and four-year undergraduate studies in management at the state and the Private higher education institutions shows that such studies are organized at 43 higher education institutions in Serbia. This analysis included only higher education institutions recognized by the Ministry of Education and Sports. Academic programs shows that there are three categories of programs:

- Studies of general management, which may be the main program or the basic direction of the higher education institutions, the study of certain areas of management (strategic management, financial management, manufacturing/

industrial management, service management, entrepreneurial management)
- Study of management in specific industries or areas of human activity (tourism trade, hospitality, sport, art, culture, ecology). Depending on which of these categories belong to different study programs are structured and designed. Given the diversity and razunenost study programs it is difficult to single out any common denominators in the curricula for all higher education institutions (Maksimovic, 2006, pp. 121-135).

Doctoral studies should be one of the oslobnaca to set up national technology platform Serbia. Small and medium enterprises and other economic entities should be allowed to tax under favorable conditions employing doctors and invest in research through doctoral studies. Condition that the projects that are directly related to the development of products and services are financed from the funds (such as the Innovation Fund) must include doctoral students (Ministry of Education and Science of the Republic of Slovenia, 2012, pp. 11-19).

The disconnect economy and education system

Education plays an important role in human development in terms of incentives for people to improve their goods and actively participate in building the nation (Marković Radovic et al., 2012, p. 24). More and more organizations realize that learning never stops and that this should become the norm in order to survive the increasing competition. Learning can take place formally (for example, through a course of training) or informally (through learning and development on the job). It seems that the need for continuous training is especially important for companies that provide support services expertise, for the purpose of their services depends largely on human talent, knowledge and expertise of the members of the organization. Continuous learning would give a better result for the effectiveness of the work, satisfaction with the provision of high-quality creative services to clients, the possibility of career advancement, and through to a greater commitment to the organization (Burke, 1995, p. 83).

When twenty years ago, Hon Zifrid (Siegfried Hoehn), Director for Strategy and Investment at Volkswagen (Volkswagen), asked his advisor Professor Sung-Jo Park, why the Japanese always pobenuju in business negotiations with the Europeans, jesledeći got the answer: "In east Asia the best students, after graduation, they go into business; slightly weaker – in the state administration; bad students – remain at universities and engaged in teaching, and the worst – they become politicians. In Europe, most students stay at the university making scientific careers; slightly weaker gain positions in the state administration,

poor – go to businessmen, students and the poorest - are engaged in politics.

Accordingly, at the negotiating table when the business negotiations between Japanese and Americans (or Europeans) in progress – one against the other seat brilliant Japanese students on the one hand and weak European students, on the other hand. Therefore, the results are clear and expected, concluded Professor Park (Jovanović, 2000, p. 152).

In our country, the economy and the education system are the two "disconnected world," which is why most young people are suffering and the economy. A mismatch between the education system with the needs of the economy, leads young people at a disadvantage, while the economy becomes uncompetitive. One can say that there are elements essential for the establishment of cooperation, however, the coordination of the education and the economy is small or non-existent. Correction of educational institutions and the economy there are no structured links from which arises a problem that requires urgent attention. The gap that exists Ozmen educational institutions and industry does not regulate the number of qualifications and professions of future generations of participants in economic activity.

The big challenge viskokog education is to establish solid cooperation between universities and industry, which should be effective and ongoing both at national and regional level. This cooperation must provide transverse knowledge. In the future development of competitiveness is a key element – how to transfer knowledge from universities to business. They recognize the two mechanisms which it could provide - licensing of university intellectual property and "spin-off" and the formation of companies.

However, there is still not enough information as to use the results of research in the field of entrepreneurship. According to some data, less than 5% of innovative companies look at the data and information from research institutions or universities and institutions of higher education as an essential source of information (The role of the universities in the Europe of knowledge, 2003, pp. 16-19).

Directions and development needs of the economy

The national economy must be considered from different angles if we want to have as complete an objective picture (Knežević et al., 2013, p. 8).

There is no adequate system of forecasting needs for staff by employers and the economy. Statistics fail to record future demand by companies that are struggling with difficult business conditions and economic crisis. Schools can not solve this systemic problem, but i can not rely on some information and

initiate change at the municipal level in order to encourage local authorities to carry out research into the needs of the economy for the staff.

It is desirable to orient to the analysis of available data on the needs and plans of economic development in the municipality. Local governments prepare strategic documents that define development priorities and measures and instruments that lead to the achievement of these priorities. Analysis of strategies for local economic development, employment strategies and similar documents issued by a municipality, can point to the schools that will have a primary industries claim Oblas support.

If such data are not available or are not reliable enough, this step may involve examination of the need for local knowledge and skills. In carrying out the research necessary to have trained people, which could be one of the tasks in the process of supporting the schools (Ristic et al., 2013, p. 58).

At least once in four years, preferably every two years, the local government should conduct research on the forecast staffing requirements over the next four years and over. This study should include at least 15% of companies in the territory of local self-government in all industries. Local governments must constantly scans the structure of the local economy by analyzing data in the Business Registers Agency.

Through the survey entrepreneurs need to say that they needed staff in the future, as well as to state deficits in the education of personnel who currently have enough. In this way the local community receives a clear picture of the direction in which will move its economic activity in the next four years and over. Consideration of Results of these surveys when creating school enrollment plans may reflect favorably on the budget while making huge savings (state, local government and employers).

Local entrepreneurs should commit an act of local government to respond to these surveys, as well as the required respond to the survey Republika Srpska Institute of Statistics. It is important to bear in mind that if this is left exclusively to schools, a local government does not oblige employers to their choices, schools will in practice very difficult to collect this data, because it will depend on the good will of entrepreneurs, who themselves difficult to organize their time and have numerous obligations. Local governments and offices for local economic development are paid from the budget by citizens and businesses to provide local economic development, and on the first place means that the local economy can be developed, and citizens have a job, which leads to the higher standard of living and prosperity local self-government.

School directors are employed by the education legislation and their primary business obligation is not to provide economic development, but also to provide

quality education to its students. They should be required to participate in this process, but can not keep the nature of their job. The role of the school in this process may be to advocate to establish a sustainable system for forecasting development directions and needs of the economy at the local and regional level. It is estimated that such an analysis at the level of the country with 10 million people will cost between 4 and 6.5 million euros a year, or savings that the state and its economy can achieve on an annual basis were 60 to 110 times higher.

Self-employment

In the last decade, except for sporadic exceptions that are able to implement the desired ideas, their serious involvement of youth in the process of self-employment is not enough. Insufficient number of young people who have managed to establish their own business and is significantly lower than in developed countries. The state should stand behind the idea of young people start their own affairs and to provide them with all necessary assistance to make their ideas into action.

The country is in the past is not aganžovala sufficiently afimisanju the idea ofentrepreneurship among young people. The essence of each project self-employment and entrepreneurship development are the ideas that young people in Serbia are not missing. However, most young people have already abandoned at the first obstacle, usually because of the great differences that exist between the development of the initial idea and its implementation.

The road from idea to its realization is not an easy path.

The cause of the insufficient involvement of young people in the development of entrepreneurship can be found in the lack of adequate training or knowledge gained from operating, entrepreneurial and managerial skills, which brings us back to the question of education reform. If they are in a separate subject in secondary vocational schools and some universities adopt entrepreneurial knowledge and skills or introduced model of virtual enterprises, students would have been encouraged by the completion of secondary schools and colleges begin their first independent steps in the labor market.

If one were to add and labor market knowledge and skills of active job, the young would have been significantly qualified to navigate the labor market.

The State should transparently performances and make available all information and the benefits that will be helpful for the development of entrepreneurship among young people. The most common reason that young people are referred to as the inability to exercise self-employment is the lack of

financial resources. The state should their actions obstacles that young people cited as insurmountable, make more bearable or, at best, to remove them (Damnjanović et al., 2013, pp. 848-856).

Development of family enterprises

In a capitalist economy, companies have individuals. Companies are only legal entities; ultimately, business owners are the ones who are responsible for his behavior, and business owners are the ones who reap rewards or pay the costs of such behavior. Owners of family businesses are usually directly involved in daily operations, and are in a position to carry out the work of any targets set by the company. As a rule, the owners will be interested in maximizing the profits of their companies or, if they are non-profit goals, make sure they can enjoy the fruits of your effort (Varian, 2008, p. 331).

Family-owned company has business and family goals. Business objectives are profitability and survival of the company, and family goals are well-being and prosperity of the family members. The family enterprise, family and business as separate institutions overlap and influence each other (Ostojic, Damnjanović, 2013, pp. 60-73).

The researchers suggest several rules, which are called "best management practices" family business, the implementation of which contributes to the realization of business objectives and allows the family to maintain its integrity. Those are: to encourage a new way of thinking and take into account the long-term business and family interests, attract and retain quality managers, who need not be members of the family, create a flexible, innovative organization, acquire and preserve the earned capital, prepare the successors of family businesses, take advantage of the power and advantages of the family business. Family reasons shall not affect the neglect of the rules of professional management. (Ostojic, 2010, pp. 26-29)

By improving a favorable business environment for entrepreneurship development is currently dealing with municipalities, regional agencies, regional chambers of commerce, associations of industrialists and entrepreneurs, the Department of National Employment Service, and a small number of non-governmental organizations. In addition to local and regional institutions, it is the primary task of the Government of the Republic of Serbia.

However, despite a number of these institutions and progress on creating an entrepreneurial environment, much remains to be done. The main objections and obstacles relate to: high local taxes and fees, illiquidity in the economy, inefficiency of local authorities in issuing various permits for business activities,

lack of equipped sites for construction, with appropriate zoning permits, other procedures for obtaining building permits, inadequate understanding of the needs of entrepreneurs, inefficient work of the judicial authorities in certain commercial disputes, corruption, inadequate procedures in public procurement, lack of favorable sources of financing, supporting entrepreneurs is often more verbal than real.

Entrepreneurial development is often not seriously considered by the local authorities. Cooperation and coordination among various stakeholders and institutions in this area is far from necessary to ensure the effectiveness of these processes. Municipalities may have a department for economy and business, but, globally speaking, their role is unclear, insufficient and often contradictory. These departments dealing with registration and the provision of a small number of necessary services to entrepreneurs.

A large number of municipalities in Serbia lacks clear policies and development plans, as well as the understanding of the need for the establishment of partnerships in promoting the development of entrepreneurship. Municipal officials usually lack education in this field. Steps towards improving the development of entrepreneurship could be the following: harmonization of laws in Serbia with the practice and legislation in the EU, standardized preparation of development strategy, building partnerships, taking positive experiences of other communities, adapting the structure of municipal government development needs.

Through the coordination of activities in the field of development, underdeveloped areas may become attractive places for entrepreneurs who can create new jobs and welfare for all citizens. Development results are visible and have a direct impact on citizens' lives (Živković, 2008, p. 306).

Conclusion

Raising the country's competitiveness and development innovation did direct links between education and the economy. Through the cooperation of companies, countries and education systems in the areas of: factories of the future, energy efficiency and renewable energy sources, development of agriculture, ie. technology platform for the production of food – to create a new generation of managers trained to develop new technologies for more efficient transfer of technologies and their incorporation into the production system of Serbia. Education entrepreneur runs parallel with the development of science and technology. In the nineties there was a need for permanent education of entrepreneurs, with a focus on those who have worked in the manufacturing

process. Later emerged the first business school that had a university program.

Inevitably, the need for a more precise definition of the level of education of entrepreneurs. Education of entrepreneurs contribute to the optimal use of planning, organization and control of the overall business process.

Acknowledgment

This work was written as a part of the research projects III47009 and OI179015 financed by the Ministry of Education, Science, and Technological Development of the Republic of Serbia.

REFERENCES

1. Anđelić, S., Gajić, A., (2016), Education as a leader of economic development activities, International scientific conference LEADERSHIP AND ORGANIZATION DEVELOPMENT Kiten, Bulgaria, 16 -: 19 June 2016, pp. 70s.
2. Burke, Roland J., (2006.) Benefits of formal training courses within a professional, Belgrade
3. Damnjanović, N., Somborac, B., Ostojić, S. (2013) The problem of youth unemployment in Serbia, the Council of Labour, No. 5/2013, Vol. 10 UDC: 331.567-053.6 (497.11), p. 848-856.
4. Jovanović, M., Organizational ponašanje- new concept Ringtones companies,
5. Knežević, V., Kvrgić, G., Ivkovic, D., (2013), Serbian contemporary economics - regional comparative analysis, International Review No. 1-2 / 2013, Belgrade, Faculty of Business Economics and Entrepreneurship
6. Krause, H., (2012), Organizational culture and entrepreneurship, International Review No. 3-4 / 2012, Belgrade, Faculty of Business Economics and Entrepreneurship
7. M. Zivkovic, Bevanda V., (2008), Development nović forms of business in the function of local economic development, Dopuđa, A., Trošić, B. (ed.), Developmental strategy of enterprise and industry, Belgrade, Megatrend University, 297-307.
8. Maksimović, I., Education Manager for the 21st century, Singidunum University
9. Markovic, Radovic, M., Grozdanić, R., Kvrgić, G. Marković, D., Vujicic, S., (2012), New educational strategies versus the traditional method, International Review No. 1-2 / 2012, Belgrade, Faculty of Business Economics and Entrepreneurship
10. Ministry of Education and Science of the Republic of Serbia, Strategy for the Development of Education
11. Ostojic, S., (2010), working capital in small business, Belgrade, Megatrend University
12. Ostojic, S., Damnjanović, N., (2013), Famili potential as a base for rural development, Second International Scientific Conference of Employment, Education and Entrepreneurship (JPC 2013) in Belgrade, Serbia, 16-18 October 2013, p. 60-73.
13. Ristić, Z., Rajic, D., Pavlović, Lj., (2013.) Better conditions for youth employment, the Union of Employers of Serbia, Belgrade
14. The role of the universities in the Europe of Knowledge, Communication from the Commission, EU, Brussels, 05.02.2003COM, 2003rd
15. Varian, H., (2008), Microeconomics, Belgrade, Faculty of Economics
16. http://www.edufair.rs/komisija for Accreditation and Quality Assurance, June, 2010.
17. http://www.efqm.org/the-efqm-excellence-modelin Serbia until 2020., 2012th

Entrepreneurial University: the Model of Russian Education

ALEKSANDROVNA Shindina Tatyana[70]

Introduction

Within the case of the Russian university education model we consider an example of one Ural University. The University was founded in 1943, in the period of the Great Patriotic War and was as a platform for training of skilled workers capable to solve industrialization tasks and provide industrial Ural plants. The Soviet system made it possible to solve the following tasks: transfer scientific universities from Russian centre to Ural and create traditions of scientific ideas generating. The scientists who moved to Ural by order of the party, have created scientific groups and grew followers, however, expected progress was replaced by "Perestroika" and new economic climate promoted the University to a new stage of development – intellectual entrepreneurship.

The year of entrepreneurial development at the university was in 1987 when the faculty "Entrepreneurship and law" was formed; there was rapid university structures development; there was chaotic development of research regulated by market and the internal intellectual capital.

For almost 30 years the University was a free business structure where the scientist was able to express his point of view, could afford to experiment and he was independent from plans. The unique structure of financial-economic activities was built where all subdivisions had their sub-accounts and could freely operate the account, spending on researching their resources.

The beginning of the stagnation of entrepreneurial activity was in 2014, when there were demographic problems, and qualitative growth led orientation system to the Bologna principles, level program of training and rating boosting "races". Generated intellectual ideas have become plans, if there are no financial resources for idea's realization. The point of amendment of the system (end of the cycle) is software changes that are based on the principles of specialization and optimization. The changes involve the exception from inefficient directions and focusing on efficient contract and competitive system of integration into a plan for holding research. But the question arises: where is the new point of intellectual entrepreneurship growth at the University?

[70] South Ural State University, Department "Economics and management in construction and land development" Chelyabinsk, Russia, shindina@74.ru

Methods

The key characteristics of a competitive person in knowledge society are the intellectual entrepreneurship and awareness of personal success criteria.

"Developing these characteristics, a person "does not run from freedom", fixing the frame of his being, but he constantly goes outside the framework, actually making his freedom unlimited. Searching harmony of individual strategic intentions of smart entrepreneurs is the essence of business in a knowledge-based economy." (Konstantinov, Filonovich, 2005, p. 6). University enterprise (as an object where the intellectual entrepreneurship is accumulated), is characterized by freedom within the framework of the established rules for carrying on business and it is self-regulating system (Fuller, 2005; Konstantinov, Filonovich, 2007; Serbinovskii, Ozdoeva, 2010; Shevchenko, 2014).

The basis of the intellectual entrepreneurship is the head of scientific university or head of department that should serve as a leader (Akhtyamov, Yuldasheva, 2011; Gollay et al., 2016; Konstantinov, Filonovich, 2005; Vlasova et al., 2016). From the standpoint of methodological bases of research of innovative entrepreneurship, it is appropriate to apply method of obtaining knowledge that includes systematization and analysis of the knowledge about the success stories of Russian universities.

Results

Features of intellectual entrepreneurship in the organizational structure of the University

According to organization theory there are the following types of organizational structure: linear, functional and matrix, however, from a position of intellectual entrepreneurship, the opportunity to change the type of the structure depending on solved tasks is more important than the order of links in the structure. Therefore, in our opinion, one of the most important features of the intelligent entrepreneurial University is continuous designing of infrastructural links. Also, a manifestation of this feature is the possibility of clustering, or on the contrary, the individualization of elements in the common system. The important things here are the right to choose a partner for research, minimizing bureaucratic manifestations and task performance of top team.

The second feature is the delegation of key powers. In accordance with the job description all rights and obligations are hardcoded, but they differ significantly in different economic conditions. The main things are resources and decision-

making power. The right to make decisions leads to responsibility for them, and as a result, not everyone wants to get such authority. The third feature is the security of smart results. The products of the intelligent entrepreneurship are ideas so the issues of copyright and patents on publications, research results etc. are very important for a scientist.

The above mentioned features create conditions for intellectual entrepreneurship and help to organize the process of generating ideas.

Distinctive features of the University collective that tends to the intellectual entrepreneurship

The notion "research" is already connected with intelligent entrepreneurship.

However, not every university lecturer wants to research. Therefore, intellectual entrepreneurship at University is characterized by the existence of a person with entrepreneurial skills. In most cases, around this person a small research group is appeared that is a department or a research laboratory. In this regard, the interesting issue is systematization of person qualities that will turn the team into a group of smart entrepreneurs.

An example. For 3 years I was a Head of Department which was located at the territory of all-Russian nuclear Center. We learned the children and grandchildren of scientists and among them there were the descendants of one of the leaders of the Center – the renowned scientist, nuclear-physicist.

The guys didn't tend to physics at all. So where is the inherited intellect? Getting a better look I drew attention to their other qualities such as decency, ability to get on well with people, the ability to protect in some situations.

They were the souls of the whole group. They had the unique ability to choose the best. It was easy for them to take tests and their colleagues helped them to solve typical tasks.

There are interesting facts about other children and grandchildren of famous people and heroes of our country, all of them have the inner strength and it is the entrepreneurial capacity of the individual.

The Lab Manager should possess such qualities as decency, courage, intellect. Unlike an outlook, which you can expand and skills you can get, these qualities of the entrepreneur are permanent in a changeable environment.

According to person qualities there are signs of intellectual entrepreneurship at University such as intelligent fearlessness, information literacy, tolerance to uncertainty and information redundancy, the ability to generate new knowledge (Konstantinov, Filonovich, 2005, p. 2). And the main characteristics of the processes at University are decision-making freedom, the ability to generate

ideas, and the presence of the system of "knowledge distribution".

The correlation of the notions "process" and "result" in the system of intelligent entrepreneurship

What is the major driving force of the intellectual entrepreneurship: the process of searching new knowledge or the result of this search? This is a very debating point. Can an entrepreneur work 8 hours according to schedule? Who is right: who regards work as a process providing his life with resources and enjoys his life or who thinks that searching new knowledge is a life?

Today there are both types of people at the universities: the one focus on the process: the longer they work, the more satisfied they are; the other focus on the result: the faster they implement the project, the stronger they want to realize new ideas.

Negative manifestations of intellectual entrepreneurship at the universities

The psychology of social behavior is associated with positive and negative manifestations. The higher the success of the project, the more random people are concentrated around it especially in knowledge-based economy. The success of intellectual entrepreneur, like a sponge attracts envy, greed of power-holding people, cynicism in the team and the entrepreneur is experiencing periods of burnout. The toughest business system is in knowledge enterprise (according to my sociological research on the basis of the Russian Chamber of Commerce and industry).

A sign of the disintegration of the system is the inability to hold balance and strengthening "military" behavior in the University management system.

An interesting quality is "manageability" of an entrepreneur. The more talented and creative person, the more difficult his behavior is predictable.

It annoys followers of military regime, based on the principle of "senior decisions are not debated, they are executed". In my opinion, it is one of the main reasons of the collapse of the intellectual entrepreneurship system.

Implementation the principles "From each according to the ability, fair do's" and "All people are equal" is a sign of reduction the intellectual entrepreneurship at the university. A comparison creates a competitive environment, though in practice it often instigates people to take offense.

New knowledge is important under the conditions of intellectual entrepreneurship, however, the winners in ratings are who monitor the system, rather than who are in search of the unknown. Thus, a well-developed

entrepreneurial system attracts people focused on using someone else's results, and at some point, when there is a critical mass of people focused on the "process" as opposed to researchers who are "result-oriented", the system destructs itself.

Little investigated scientific phenomenon is a plagiarism and its influence on the intellectual entrepreneurship. On the one hand, the use of others thoughts leads researchers agree or disagree with colleagues so it makes them to reason and as a result to express their views. But on the other hand, retelling someone else's ideas in simple words becomes clearer for society and faster gets publicity, but it's not your own results. Mankind can mechanically compare the phrases in texts with cumulative knowledge data base, but people are not yet able to compare the essence of the idea and give an opinion about the source.

I suppose the creation of scientific laboratories under the guidance of leading scientists that is "inoculation" at the area of new scientific ideas and traditions is interesting. Does it generate innovative entrepreneurship and make the new groups to get a new angle on acquiring new knowledge processes? Or is it a special kind of plagiarism?

Conclusion

The future of innovative entrepreneurship of Russian universities

In my opinion, a new cycle of intellectual entrepreneurship development in Russian universities is connected with the development of network forms of researching and teaching. Technology development of networking educational systems allows you to achieve a new level of business tasks. Networking cooperation focuses on the opportunity to make knowledge sharing more accessible where there is no scientific university of the required research area. However, in practice it is much easier to create "a clone of a scientist", which as a videotape reproduces knowledge than to refer a group of students to the original source. In this regard, vertical networks are promising that unlike horizontal networks allow to apply the conception "education through life". Vertical networks (different level of competencies) in which different skills are generated, can complement each other and exempt partners from unnecessary commitments. As a comparison, horizontal networks (equal to the tasks) develop competitiveness and reduce the openness of intelligent results.

REFERENCES

1. Akhtyamov, M., Yuldasheva, O. (2011), Innovative development of entrepreneurship in the knowledge-based economy. M.: Creative economy.
2. Fuller, S. (2005), What is the unique character of universities? Renewal the ideal of in the era of entrepreneurship. Educational questions.
3. Gollay, I., Gollay, A., Shindina, T., Salimonenko, E., Chuvashova, A. (2016), Priority areas of analysis of the external environment of a company – the innovator depending on a type of innovations introduced. Polish Journal of Management Studies.
4. Konstantinov, G., Filonovich, C. (2007), What is the entrepreneurial University? Educational questions.
5. Konstantinov, G., Filonovich, S. (2005), Intelligent entrepreneurship, or principles for gaining competitive advantage in the new economy. Harvard Business Review.
6. Poleshchenko, K., Verhoglyad, E. (2011), Intelligent entrepreneurship: conceptual and educational aspects. The Herald of the Omsk University.
7. Serbinovskii, B, Ozdoeva, A. (2010), The strategy of intellectual leadership of the new type University at the educational and scientific services market. Novocherkassk: SRSPU (NPI).
8. Shevchenko, L. (2014), Universities as subjects of intellectual entrepreneurship .Theory and practice of the law. 1 (5).
9. Vlasova, G., Kolmakova, E., Kolmakova, I., Orlova, N., Shindina, T. (2016), Labour and social relations as the economical category and the efficiency of the regional system of labour and social relations. Journal of Applied Economic Sciences 11(4).

ISBN 978-88-95922-84-3

€ 20,00