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ORIGINAL SCIENTIFIC PAPER

Innovation Analysis of the Sector of Small and Medium Enterprises and Entrepreneurs (SMEs) in the Republic of Serbia

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ABSTRACT – *Innovations have become not only an important determinant of a company's successful development but also their requirement. Today, innovative enterprises are the key driver of competitiveness, increased productivity, employment and overall economic development. Research shows that Serbia belongs to the group of less developed European countries whose development is not driven by knowledge and innovation. Therefore, the main objective of this paper is to look at the current state of innovation in small and medium companies and enterprises in the Republic of Serbia and the factors that affect this situation. In terms of methodology, this work is based on the use of existing literature and available statistical data. Based on the analysis, it was concluded that the small and medium enterprise sector (SME) in Serbia has a very small number of innovative companies. By using the tool INNOVATE in a selected organization, it has been attempted to highlight the opportunities that this tool offers to improve innovativeness of an organization*

KEY WORDS: *innovation, small and medium enterprises, entrepreneurs, Serbia, INNOVATE*

Introduction

Innovation in today's business environment is one of the most important factors for the survival and development of enterprises and entrepreneurs because it makes it possible to quickly adapt to constant changes in the environment and respond to market demands, which are becoming increasingly complex. According to Narayanan (2001), innovation is important for the company because it allows it to cope with the competition in the increasingly demanding market. The modern concept of innovation promotes the view that innovations are the introduction of all novelties in the structure and functioning of enterprises, which contribute to increasing the economic efficiency and effectiveness of business operations (Betz, 2001). The ultimate goal of any innovation is to improve business (Milosevic, Vujičić, 2012). With the help of innovations it is possible to quickly adapt to changes in the environment, satisfying the needs and demands of customers, improving

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business and operation of enterprises and the development of the economy .Successful innovation in the SME sector provides a sustainable competitive advantage and encourages their growth and development. The company's work on the realization of innovative activity leads to improve overall performance of the enterprise. It is safe to say that innovation (Vujicic, Djuricic, Vukadinovic, 2013) is located in the heart of success of any organization, as it allows the organization to improve product quality and reduce costs, increase efficiency and increase sales. Innovation must be a continuous process. The implementation of an innovative culture that includes all segments of the organization would favour conditions for the development of creative individuals. The organization will become innovative with the possibility of relying on its own resources and will further enable even faster development of innovations (Vujicic, Djuricic, Vukadinovic, 2013).

Literature review

In today's business environment, innovations are considered as one of the most important factors for the survival and development of enterprises (Vujicic, Nikitovic, Minkov, 2016). Schumpeter (1942) claimed that innovations include: product innovation, process innovation, organizational innovation and innovations that lead to the opening of a new market and ensure the development of new sources of supply of raw materials. Drucker (1996) believes that innovation is a specific tool for entrepreneurs; the means by which they use change as an opportunity for the execution of various production or service activities. Tidd and Bessant (2009) point out two key characteristics of innovation, which we must be aware of:

- Innovation is not a single event; innovation is a process that must be managed.
- Impacts on the process must be managed in order to influence the outcome, which means that the process must and can be managed.

A greater degree of innovation represents greater investments and higher risk, which is why the results of research aspects of innovation risks have an analytical approach, and should be based on (Liberatore 1990):

- identification of current and prospective challenges for at least the next 3-5 years in order to take in account the fact that the competitors are likely developing their own program; assessment of the relative strengths and weaknesses of the company compared to the competitors for each product line and each market, as a basis for assessing the corresponding benefits which would result in increased investment in this area;
- estimation of risks, costs and problems for different combinations of investments, including adaptation (acceptance) of already developed technologies and initialization of your own research, again in comparison to analogue activities of competitors;
- researching the changes that should be made in the fields of finance, marketing, personnel and organizational elements that are determined to be necessary for the appropriate use of innovation potential.

Schumpeter (1982) claimed that economic development brings qualitative changes that are crucial and they are driven by innovation in different historical periods. Innovation itself

is a function of three main factors: first, the creation of new knowledge in science, technology and in management (basis of innovation); Secondly, the availability of highly educated, programmed workforce capable of using new knowledge to improve productivity (may be a result of the quality and quantity of the educational system); Third, the existence of entrepreneurs capable and willing to take the risk of transforming the innovation into business (Zjalić, 2007).

Generally speaking, innovation is an idea which has been successfully applied in practice. According to Organization for Economic Cooperation and Development (OECD) and the Oslo Manual for measuring innovation, there are four different types of innovation:

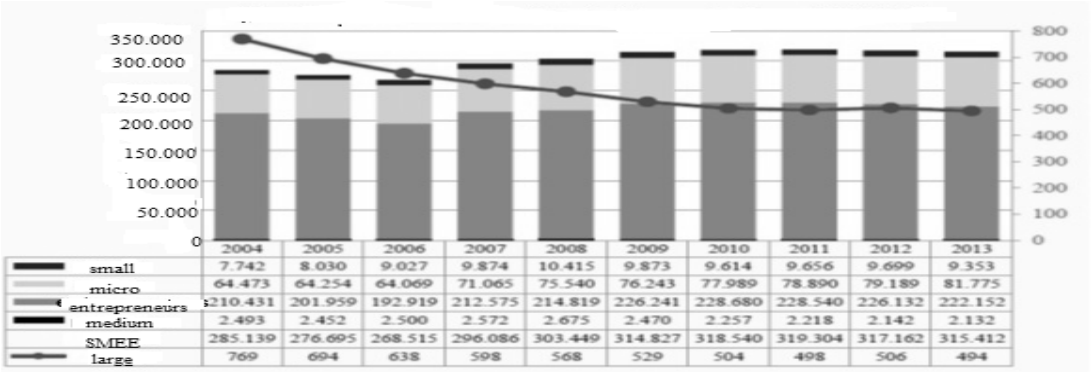
- **Product Innovation:** it represents a new or improved product or service, in terms of technical specifications, components, materials, software, adaptation to the needs of users or other functional characteristics;
- **Process Innovation**: it refers to new or improved method of production or delivery, in terms of techniques, equipment or software.
- **Innovation in Marketing**: includes new marketing methods related to changes in the design or packaging of the product, its launch, promotion or price.
- **Innovation in the Organization**: refers to the new organizational method in the firm's management, workplace organization or external relations.

The type of innovation for which the company defines is essentially a function of the nature of innovation, the impact of changes on the players in the value chain, competence and the company's familiarity in the field of innovation (Levi-Jaksic, 2001).

Analysis of the sector of small and medium enterprises and entrepreneurs (SMEs) in the Republic of Serbia

SMEs are very important economic segment of each country and their primary role is similar for each country in which they operate (Milošević, Vujičić, 2012).The small and medium enterprises and entrepreneurs in Serbia achieved steady growth and we can say that it is one of the most important drivers of economic growth and development of Serbia because it makes 99.8% of active companies, employs nearly 2/3 of employees in the non-financial sector and accounts for about 30% of GDP in the formation of Serbia (Ministry of Economy, National Agency for regional development, 2014). In Serbia, in 2013, operated 315 906 economic entities, which is 1,762 less than in 2012. It is estimated that in 2013 SME sector accounted for about 34% of the GDP of the Republic of Serbia. Observed by company size, there were no significant changes compared to the previous year.

Figure 1. Number of economic entities in the period from 2004 to 2013.



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
small	7.742	8.030	9.027	9.874	10.415	9.873	9.614	9.656	9.699	9.353
micro	64.473	64.254	64.069	71.065	75.540	76.243	77.989	78.890	79.189	81.775
entrepreneurs	210.431	201.959	192.919	212.575	214.819	226.241	228.680	228.540	226.132	222.152
medium	2.493	2.452	2.500	2.572	2.675	2.470	2.257	2.218	2.142	2.132
SMEE	285.139	276.695	268.515	296.086	303.449	314.827	318.540	319.304	317.162	315.412
large	769	694	638	598	568	529	504	498	506	494

Source: Report on SMEE for 2013, 2014.

The structure of the largest SMEs are micro enterprises (303,927), while small and medium enterprises (11.485) dominate in all the observed indicators (53.6% of employment, 60.9% of turnover, 60.8% of GVA, 75.2% of exports, 76.1% of imports MESP (Ministry of Economy, National Agency for regional development, 2014)

Table 1. Indicators of the SME sector in 2013 by enterprise size

	Micro		Small		Medium		SME	
	value	%	value	%	value	%	value	%
Number of enterprises	303.927	96,4	9.353	3,0	2.132	0,7	315.412	100
Number of employees	356.384	46,4	189.172	24,6	222.994	29,0	768.550	100
Turnover (din/mil)	2.232.361	39,1	1.745.887	30,6	1.735.609	30,4	5.713.857	100
BDV (din/mil)	377.823	39,2	269.095	27,9	317.088	32,9	964.006	100
Employment	1,2	-	20,2	-	104,6	-	2,4	-
Salary per employee din/k	754,1	-	813,0	-	938,5	-	822,1	-
Turnover per enterprise	7,3	-	186,7	-	814,1	-	18,1	-
BDV per enterprise (din/mil)	1,2	-	28,8	-	148,7	-	3,1	-
Export (din/mil)	128.861	24,8	143.028	27,6	247.187	47,6	519.076	100
Import (din/mil)	224.003	23,9	338.892	36,1	375.291	40,0	938.186	100
Balance (din/mil)	-95.142	22,7	-195.864	46,7	-128.104	30,6	-419.110	100
Export/import coefficient	-	57,5	-	42,2	-	65,9	-	55,3

Source: Ministry of Economy, National Agency for regional development (2014)

If we make a comparative analysis of the basic indicators of the SME sector in selected countries of the EU and Serbia in 2013, we can conclude that the qualitative indicators of the level of development of the sector (employment by the company and GVA per employee) are lower than the EU average and most of the observed countries (table 2.)

Table 2. Basic indicators of business activities of the SME sector in chosen EU countries and Serbia in 2013.

	EU 27	Bulgaria	CZE	Hungary	Poland	Romania	Slovenia	Serbia	
								2012	2013
Entreprises no in 000	20614.1	314.0	948.3	570.0	1391.0	532.5	106.5	317.2	315.4
Employes no in 000	87092.3	1474.1	2376.8	1809.9	5494.0	2717.2	413.9	782.0	768.6
BDV billion EUR	3430.0	12.1	47.9	26.6	89.8	26.7	11.9	8.6	8.5
SME on 1000 inhabitants	41.0	43.1	90.2	57.5	36.1	26.6	51.7	44.1	44.1
Employees no per entreprise	4.2	4.7	2.5	3.2	3.9	5.1	3.9	2.5	2.4
BDV per employee in 000 EUR	39.4	8.2	20.2	14.7	16.3	9.8	28.8	11.0	11.1
PARTICIPATION IN NON FINANCIAL SECTOR IN PERCENTS									
Entreprises no	99.8	99.8	99.9	99.9	99.8	99.7	99.8	99.8	99.8
Employees no	66.7	75.9	69.7	73.0	68.1	67.0	70.3	65.1	64.9
BDV	57.8	61.9	55.5	53.8	51.8	52.2	62.7	55.8	54.1

Source: Ministry of Economy based on data from EUROSTAT, DG Enterprise and Industry and SORS

With the analysis of the total turnover of the SME sector in 2013, it can be concluded that a decisive influence on the turnover of SMEs in 2013 was made by micro enterprises (39.1%; 39.3% in 2012) and by type of organization DOO (68.0 %; 72.0% in 2012).

Table 3. Total turnover SME sector in 2013 according to the size and organizational structure of business entities

Organizational form	Micro	Small	Medium	Total	
	bill. din	bill. din	bill. din	bill. din	structure %
Enterprise	1.328,0	1.745,9	1.735,6	4.809,5	84,2
Joint stock	33,4	108,6	296,5	438,5	7,7
LLC	1.091,8	1.455,8	1.337,1	3.884,7	68,0
The rest	202,8	181,4	102,0	486,3	8,5
Enterpreneurs	904,4			904,4	15,8
Total bill. dinars	2.232,4	1.745,9	1.735,6	5.713,9	100,0
Structure	39,1	30,5	30,4	100	

Source: Ministry of Economy based on SORS

Small companies with limited liability generate 25.5% of the turnover of SMEs, or 6.4% of the turnover of non-financial sector (Ministry of Economy, National Agency for Regional Development, 2014).

Innovation in SME sector in Serbia

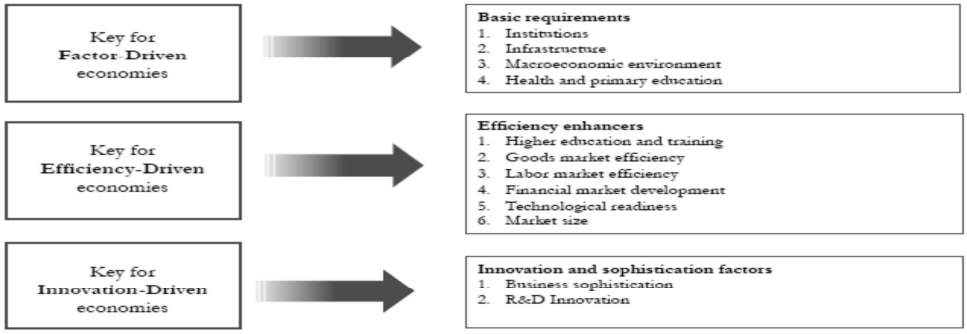
Serbia is, according to the World Economic Forum for 2015, ranked 94th position on a list of 140 countries, i.e. maintained the same position as in 2014 (144 countries) with the value of the Global Competitiveness Index of 3.89. The Global Competitiveness Index (The Global Competitiveness Index - GCI) measures the average multiple Macroeconomic and

microeconomic components, which are individually evaluated on a scale from 1 to 7. All measured parameters are grouped into twelve pillars:

Pillar 1 - Institutions;
Pillar 2 - Infrastructure;
Pillar 3 - Macroeconomic environment;
Pillar 4 - Health and Education;
Pillar 5 - Higher education and professional training;
Pillar 6 - The efficacy of the market goods;
Pillar 7 - Labor Market Efficiency;
Pillar 8 - Financial market development;
Pillar 9 - Technological readiness;
Pillar 10 - Market size;
Pillar 11 - Business sophistication;
Pillar 12 - Innovation (Nešić, 2008).

These twelve pillars of competitiveness are grouped into three separate units, depending on the manner of economy management: fundamentals driven economy, efficiency driven economies and innovation driven economy.

Figure 2. Consolidated GCI pillars



Source: Drzeniek-Hanouz, M. Dusek, M . The Arab World Competitiveness Report 2013.

Serbia is among the countries with the efficiency-driven economies. The stage of development in which the economy of a country is located, is thereby determined by the level of annual gross domestic product per capita (GDPpc). The economy of a country is said to be located in the first phase of development, its annual GDPpc is less than 2,000 USD. Countries whose annual GDPpc is between 2000 and 3000 USD, are on the transition from the first to the second phase of development, while countries with annual GDPpc between 3,000 and 9,000 fall within the second phase of development. Countries transitioning to the third phase are those with GDPpc between 9000 and 17000 thousand USD, while highly developed countries are countries with annual GDPpc more than 17,000 USD (Albijanić, 2011) (Figure 3).

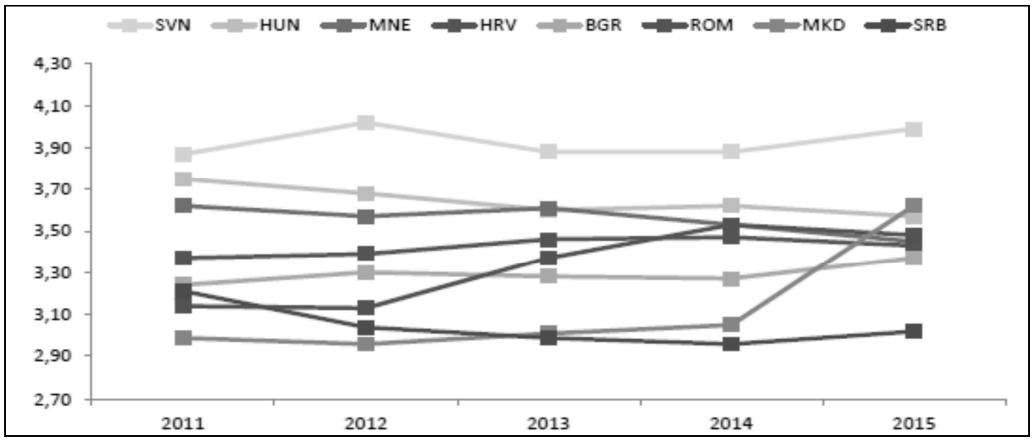
Figure 3. Stages of Economic Development to GDP

Stages of development	GDPpc (in USD)
Phase I- Factor driven economies	**< 2000**
The transition from phase I to phase II	**2000- 3000**
Phase II- efficiency driven economies	**3000- 9000**
The transition from phase II to phase III	**9000- 17000**
Phase III-Innovation driven economies	**> 17000**

Source: Klaus & Xavier, 2011, p. 10

Compared to 2014, Serbia has the biggest decline in the value of the index recorded in the field of business sophistication (-0.13 index points), followed by -0.09 in the macroeconomic stability pillar, institutions lost -0.03 index points. Slight decrease was recorded in health and primary education (-0.02), Higher education and training (-0.02), technological readiness (-0.02), market size (-0.02) and the smallest decline in the value of index points was recorded in the field of innovation (-0.01). In 2011, Serbia had the innovation factor 2.99, 2.96 in 2012, and in 2013, 2014 and 2015 it increased again. Macedonia has the largest increase in the last five years (2010 105th Place, and in 2015 62) and Serbia is almost back to the same ranking as in 2011 (95th place 2011, 94th place 2015) (Figure 4).

Figure 4. Index value of factors of innovation for Serbia and neighboring countries in the period 2011-2016.



Source: Global Competitiveness Report 2011—12, Global Competitiveness Report 2012—13, Global Competitiveness Report 2013—14, Global Competitiveness Report 2014—15, Global Competitiveness Report 2015—16

Analysis of innovation in the SMEs in Serbia

Research on innovation activities in businesses in Serbia in the period 2010-2012, conducted by the Republic Statistical Office on a sample of 3,500 businesses (Sample frame were active business entities obtained from the Statistical Business Register, which contains 11841 business entity with 10 or more employees) showed the highest participation in innovative activities of big businesses. Organizations research has shown that manufacturing businesses are more innovative than service businesses.

Table 5. Business entities by innovativness, activity and size, 2010-2012

	Total	Innovators	Non innovated businesses	Innovators' participation
Total	11841	5280	6561	44,6
Small businesses	9057	3691	5366	40,8
Average businesses	2264	1245	1019	55,0
Large businesses	520	344	176	66,2
Manufacturing businesses	4122	2007	2195	48,7
Service businesses	7719	3273	4366	42,4

Source: http://webrzs.stat.gov.rs/WebSite/repository/documents/00/01/21/40/IA01_285_srb=bkorekt.pdf

Results of research on innovation activities in businesses in Serbia in the period 2012-2014, conducted by the Republic Statistical Office on a sample of 3587 businesses (Sample frame were active business entities obtained from the Statistical Business Register, which contains 16659 business entity with 10 or more employees) have shown that the size of the business entity is a key factor for innovative activities of enterprises (Table 6). According to this study, there were 37.4% of small business innovators, 52.7% medium enterprises innovators and 68.1% of large companies innovators.

Table 6. Business entities by innovativness, activity and size, 2012-2014

	Total	Innovators	Business entities that have not innovated	Participation of innovators
Total	16659	6739	9920	40,5
Small businesses	13863	5182	8681	37,4
Medium businesses	2253	1187	1066	52,7
Large businesses	543	370	173	68,1
Manufacturing businesses	4865	1977	2888	40,6
Service businesses	11794	4762	7032	40,4

Source: http://webrzs.stat.gov.rs/WebSite/repository/documents/00/01/89/77/IA01-276-Inovacije_2014.pdf

Research in the period from 2012-2014.godine showed that over 68% of large businesses are innovative, just over half of medium-sized businesses and more than 37% of small businesses. Innovative activities are equally represented at manufacturing and service businesses, where innovation was introduced by just over 40% (SORS, 2015).

Looked at the representation type of innovation towards the territory and the size of the business entity, it is noticeable that share of businesses (innovators) in product and process innovations is same as well as that share of innovative businesses decreases with decreasing their size.

Table 7. Representation of types of innovations in Serbia according to the size of a business entity

Territory	Size	Businesses – innovators					
		Product/service innovations	Manufacturing process innovations	Abandoned innovations	Organizational innovation	Marketing innovation	Non innovators
Republic of Serbia	Total	20,4	20,2	10,9	24,9	23,8	59,5
	Small	18,5	17,4	9,6	21,9	21,2	62,8
	Medium	27,8	31,2	13,4	37,9	35,8	46,5
	Large	39,4	43,1	32,6	47,1	37,9	31,8

Source: Republic Statistical Office, 2015.Stated by - Innovative activities of enterprises 2012-2014.

Of the total number, 18.5% of small companies have introduced product innovation or service, 17.4% the production process innovation, 21.9% innovation in the organization, 21.2% innovation in marketing. In medium-sized enterprises 27.8% of companies have introduced innovative products or services, production process innovation 31.2, 37.9% innovation in the organization and 35.8 % marketing innovation (National Bureau of Statistics, Press - Innovative activities of enterprises 2012-2014, 2015).

However, research over a period of 2012-2014.godine showed that there were factors that hinder innovation, such as lack of own financial resources and difficulties to obtain government grants and subsidies (Table 8).

Table 8. Factors that were obstacles to innovation activities, 2012-2014.

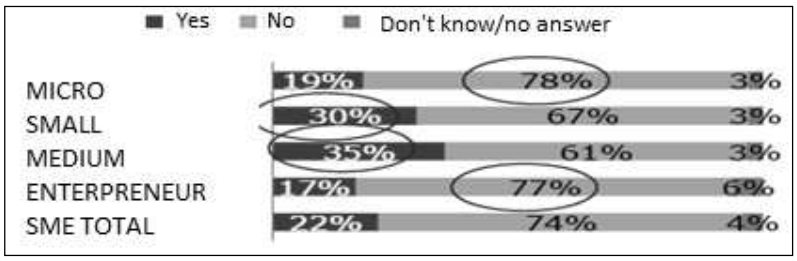
Factors	Significance			
	Large	Medium	Small	Irrelevant
Lack of own finances	67,6	18,4	11,0	3,0
Lack of credit	44,4	31,6	17,1	6,9
Lack of personnel	11,7	43,8	22,8	21,7
Government grants and subsidies issue	55,6	25,2	10,2	8,9
Partnership issue	20,2	33,8	27,5	18,5
Uncertain requirement for innovations on the market	37,2	31,8	18,6	12,4
High competition	26,0	39,7	17,5	16,8

Source: http://webrzs.stat.gov.rs/WebSite/repository/documents/00/01/89/77/IA01-276-Inovacije_2014.pdf

Factors that were an obstacle to innovation activities (Table 8.) can be divided into internal and external. On internal factors, companies can directly influence and neutralize them, while the external obstacles can not be directly affected; they have already been forced to adapt to them if possible.

Research on the status, needs and problems of small and medium enterprise (SME) which was conducted in 2013 on a sample of 2555 SMEs found that SMEs are not as committed to innovative business because only every fifth company has enforced its own innovative activities, and every sixth realizes innovative collaboration with other companies or institutions. The same survey showed that the majority of innovative companies operate within the surveyed SMEs (Figure 5).

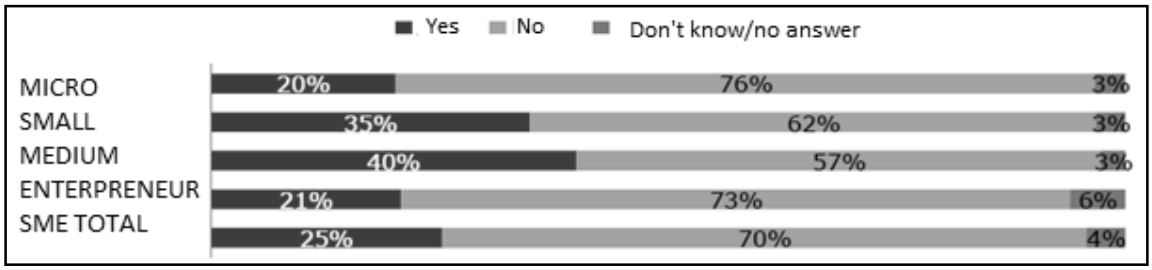
Figure 5: Innovative Actions to the shape the economic entity



Source: National Agency for Regional Development, 2013

As for the introduction of a new product or service, small (35%) and medium-sized enterprises (40%) indicated that they have introduced a new product, process or service which has led to improvements in their business.

Figure 6: New product / process or service according to the shape of the economic subject



Source: National Agency for Regional Development, 2013

After a number of innovative activities, in the period 2010-12. with 47.5% Serbia was located between the member states (behind Germany, Luxembourg, Ireland and Italy, and in front of the Bulgarian, Polish and Romanian) (http://ec.europa.eu/eurostat/statistics-explained/index.php/Innovation_statistics).

Figure 7. Share of innovative enterprises by main type of innovation, 2010–12 (% of all enterprises)

	Innovative enterprises (including enterprises with abandoned / suspended or on-going innovation activities)	Product innovative enterprises	Process innovative enterprises	Organisation innovative enterprises	Marketing innovative enterprises
EU-28	48.9	23.7	21.4	27.5	24.3
Belgium	55.6	31.5	31.1	29.3	21.9
Bulgaria	27.4	10.8	9.3	12.4	14.2
Czech Republic	43.9	25.3	24.0	20.5	22.4
Denmark	51.1	24.8	22.9	32.2	29.4
Germany	66.9	35.8	25.5	32.2	34.4
Estonia	47.6	20.7	23.8	21.7	21.9
Ireland	58.7	27.8	25.9	21.8	35.7
Greece	52.3	19.5	25.6	30.2	36.8
Spain	33.6	10.5	15.1	19.4	13.2
France	53.4	24.2	24.1	34.2	25.4
Croatia	37.9	16.4	19.0	22.9	23.5
Italy	56.1	29.1	30.4	33.5	31.0
Cyprus	42.1	20.9	28.2	26.2	29.5
Latvia	30.4	10.4	12.7	16.9	16.5
Lithuania	32.9	11.6	13.1	17.5	19.3
Luxembourg	66.1	30.3	32.8	46.8	32.4
Hungary	32.5	10.6	8.3	16.5	19.7
Malta	51.1	23.9	26.4	34.7	32.6
Netherlands	51.4	31.9	25.9	27.3	23.2
Austria	54.4	26.6	28.7	36.4	29.5
Poland	23.0	9.4	11.0	10.4	10.6
Portugal	54.6	26.0	33.5	32.8	32.8
Romania	20.7	3.4	4.6	14.1	13.8
Slovenia	46.5	23.6	22.5	26.3	28.5
Slovakia	34.0	14.4	13.5	18.6	19.3
Finland	52.6	31.0	29.3	29.7	26.5
Sweden	55.9	31.5	23.9	25.3	30.4
United Kingdom	50.3	24.0	14.1	34.2	16.8
Norway	44.7	19.1	11.9	21.7	23.2
Serbia	47.5	24.5	22.0	32.6	32.2
Turkey	48.5	17.7	20.4	31.7	34.7

Source: Eurostat, 2015

Analyzing innovative enterprises by type of innovation in some countries in the period of 2010-2012, we can see that companies in Serbia had the highest organizational innovations and then marketing innovation (figure 8).

The growing importance of innovation in business requires that management innovation activities line-up with the necessary seriousness at the company level. Since the company emerged as an entrepreneurial form of organization of economic life, had a growing active attitude towards innovation. "Such an approach is constantly gaining in importance, and we are approaching a stage where there will be only innovative companies, because all the other will just collapse due to neglect innovation. In other words, we approached when innovation becomes the essence of existence"(Pokrajac, 2002) because innovations are enabling companies to create added value, meet the needs of consumers and the needs of the company. If Serbia want to make economic progress and development, it is necessary to develop a competitive economy based on knowledge, innovation and new technologies (Ivkovic, Čukanović, Vujicic, 2012).

Improving the innovation activities of companies by applying the tool INNOVATE

INNOVATE is a tool that was created with the support of ICIP project (Improving innovation and competitiveness of small and medium enterprises) and the SECEP (Support to Enterprise Competitiveness and Export Promotion Agency) funded by the European

Union. It is used for diagnosis, which encourages Serbian companies to improve their innovation management in order to improve competitiveness. This tool can be applied to all organizations and can be used with or without external assistance and without relying on the financial data of the organization.

INNOVATE tool provides information on the performance of the organization in the management of twenty-one aspects or "dimensions" of management innovation, comparing its current practice with one of the four pre-defined reports that can be easily represented graphically. It was designed to achieve two objectives:

1. It helps the owner / manager of the company estimate the extent to which the company currently holds with 21 dimensions of innovation management (Objective 1);
2. It helps to decide how to raise the company to a higher level (objective 2).

By using the INNOVATE questionnaires, 21 dimensions of innovation management are considered. After interpreting the results obtained, economic entities can be divided into four levels, namely:

1. Innovative companies with an international perspective (level 4);
2. Companies that have a strategic view of the business (level 3);
3. Companies that accept external advice and the need for planning (level 2);
4. Non innovative traditional companies (level 1).

This tool is completely free and available on the website of the National Agency for Regional Development (http://narr.gov.rs/index.php/Aktivnosti/Podrshka-preduzetnishtvu/Alat-za-dijagnostifikovanje-inovativnosti) for all organizations wishing to carry out their own self-assessment. INNOVATE also contains a number of templates that can help the company to develop and implement an action plan to improve innovation management, using:

- SWOT analysis - version of the familiar tool that helps management detect the strengths and weaknesses of the company, together with the potential threats and opportunities.
- PEST analysis is a powerful technique used to analyze the external (macro) environment in which each company operates (works). It complements the SWOT analysis that examines the internal environment. PEST analysis allows the company to identify important trends (movements) and drivers that shape the external environment.
- Tool for Strategic Analysis and the "road map" - a tool for analysis which indicates long-term strategic goals of the company (whether they are harder or easier to achieve), and then their relation to the key short-term objectives, to barriers and competition and to the markets and partners.
- Action plan turns a road map to a concrete action plan. It includes a clear specification of all project tasks and their time schedule, where the responsible personnel and deadlines are clearly defined.
- Resource detector that helps the company identify the resources to which it is entitled, and which will assist in the implementation of the action plan (http://www.preduzetnickiservis.rs/).

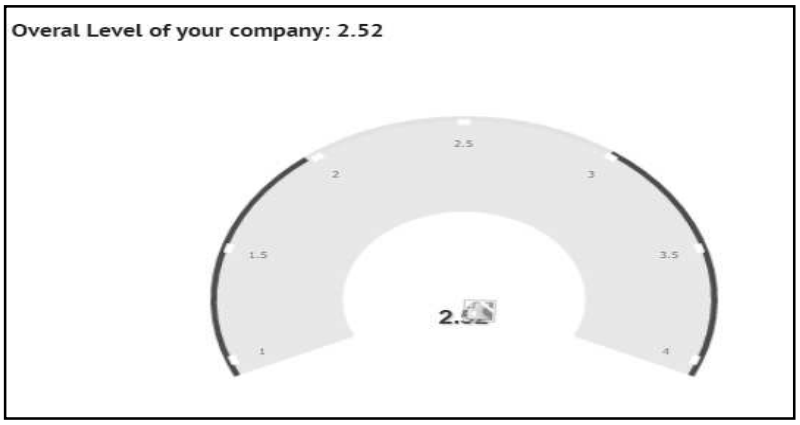
Applying the tool INNOVATE for the analysis of Innovation management in the organization - a case study

By applying the tool INNOVATE which contains 21 questions (ANNEX 1) a conclusion was reached about where the analyzed organization is standing. By filling out the questions that are classified in the following groups:

- Innovation Strategy, managing ideas and attitude to changes
- Development Of products and application technology, intellectual property, IT systems management
- Clients and products database, market horizon, awareness and perception of the market
- Expectations regarding the company's growth, internal investment in innovation and finance growth
- Planning, decision making, external advice
- Qualifications and employee training in connection with the academic environment, business networking
- Reputation

it has come to the position of the organization within the given dimensions of innovation management. Compared to the 4 levels, this organization is located between level 2 and level 3. Level 2 includes organizations that accept external advice and the need to plan for a level 3 organizations with a strategic view of the business. The results showed that this organization is between levels 2 and 3 (Figure 9).

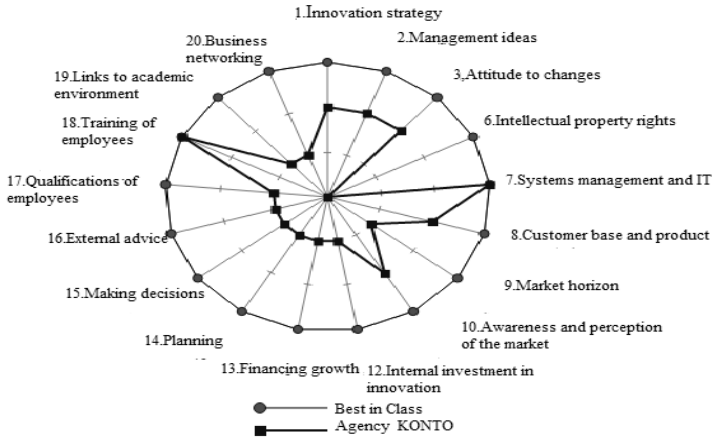
Figure 9. Position of the organization in relation to the 4 levels of innovation management by applying the tool INNOVATE



Source: Authors based on data the tool INNOVATE

RADAR diagram in Figure 10 shows the different aspects of innovation in the respective organization based on the "best in class" (Level 4). Diagram resource measures dimensions which are under the direct control of the company.

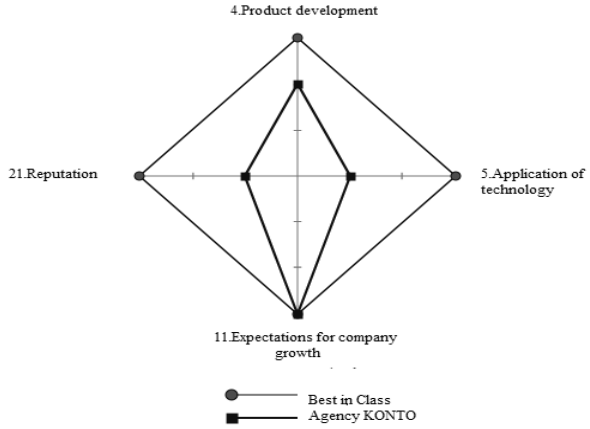
Figure 10. Dimensions of innovative resources-management in the organization by using the tool INNOVATE



Source: Authors based on data the tool INNOVATE

Based on the RADAR charts it was concluded that the observed organization has the best results in the training of employees, management systems and information technology. There is room for improvement in decision-making, planning, financing growth and internal investment. The highest attention should be paid to intellectual property where they recorded the worst results. INNOVATE tool shows the "results" as a result of "Resources". The advantage of "Resources" is that they can be improved using feedback from the "Results". Results obtained by INNOVATE questionnaire in the observed organization showed where the organization is located based on the development of products, application of technology, expectations regarding the company's growth and reputation in relation to the company best-in-class (Figure 11). Based on Figure 11. it can be concluded that the observed organization achieved the best results with the expectations of growth for the company and that all of the other dimensions should be improved.

Figure 11. Results



Source: Authors based on data the tool INNOVATE

Conclusion

Large competition in the market compels companies and entrepreneurs to develop innovative industry because innovations are not only a successful development and implementation of ideas and knowledge but also the basis of competitive advantage. Innovation in companies that do business in Serbia is a prerequisite for its competitiveness because of these innovations enable companies to create added value, meet the needs of consumers and the needs of the company. Good innovation policy will allow the introduction of changes and innovations in the way of doing business with the aim to improve the situation and achieve a competitive edge.

Research conducted in recent years in Serbia has shown that innovation in SMEs in Serbia is at a low level, as a company's development of innovation is far behind compared to the same sector in developed countries. Accordingly, it is necessary to create favorable conditions for innovation, raising awareness about the necessity of innovation, creating a favorable climate that supports and encourages innovation. In the process of the development of innovation for SME the state should take a leading role and provide conditions for dynamic development, innovation, innovative SMEs and competitive economy based on knowledge and innovation.

References

Albijanić M. 2011. "Kvantifikacija uticaja intelektualnog kapitala na konkurentnost." PhD dis. Beograd: Univerzitet Singidunum.

Drucker, P. F. 1996. *Inovacije i preduzetništvo, praksa i principi*. Beograd: Grmeč

Drzeniek-Hanouz, M., Dusek, M. 2014. The Arab World Competitiveness Report 2013.

Eurostat, Statistics Explained, http://ec.europa.eu/eurostat/statistics-explained/index.php/Innovation_statistics ((accessed May 5, 2016)

Global Competitiveness Report 2011—12, Global Competitiveness Report 2012—13, Global Competitiveness Report 2013—14, Global Competitiveness Report 2014—15, Global Competitiveness Report 2015—16

Hausman, A. 2005. "Innovativeness among small business: Theory and propositions for future research." *Industrial Marketing Management*, 34 (8), 773-782.

Ivković D., Čukanović Karavidić, M.,Vujičić, S. 2012. "Small and medium-sized enterprises as a factor of serbian economy." *Economic Analysis*, 45 (3-4): 27-40, ISSN 1821-2573, COBISS.SR-ID 195852812. Beograd: Institut ekonomskih nauka.

Jakšić-Levi, M. 2001. *Strateški menadžment inovacija*. Beograd: FON

Klaus, S., & Xavier, S. 2011. Global Competitiveness report 2010- 2011. World Economic Forum 2011.

Liberatore M., ed. 1990. *Selection and Evaluation of Advanced Manufacturing Technologies*. Springer-Verlag.

Milošević D., Vujičić S. 2012. *Menadžment malih i srednjih preduzeća*. Beograd: Visoka škola za poslovnu ekonomiju i preduzetništvo.

Ministarstvo privrede, Nacionalna agencija za regionalni razvoj. 2014. Izveštaj o malim i srednjim preduze ćima i preduzetništvu u 2013., Beograd

Narayanan, V. K. 2001. *Managing Technology and Innovation for Competitive Advantage*. New Jersey: Prentice-Hall Inc.

National Agency for Regional Development. 2013. Report on SMEE for 2012

National Bureau of Statistics. 2015. Press - Innovative activities of enterprises 2012-2014

Nešić, S. 2008. *Konkurentnost privrede Srbije*. Beograd: Srpski ekonomski forum.

Pokrajac, S. 2002. *Tehnologija, tranzicija i globalizacija*. Beograd: Savez naučnih stvaralaca Srbije.

Republic Statistical Office. 2015. Stated by - Innovative activities of enterprises 2012-2014.,

RZS. 2014 http://webrzs.stat.gov.rs/WebSite/repository/documents/00/01/89/77/IA01-276-Inovacije_2014.pdf

RZS. 2015.
http://webrzs.stat.gov.rs/WebSite/repository/documents/00/01/21/40/IA01_285_srb=bkorekt.pdf

Schumpeter, J. A. 1942. *Capitalism, socialism and democracy*. New York: Harper.

Tidd J., Bessant J. 2009. *Managing innovation: Integrating technological, market and organizational change*. Chichester: J. Wiley and Sons

Vujicic, S., Djuricic, Z.,Vukadinovic, S. 2013. , THE SIGNIFICANCE OF INNOVATION AND PROJECTS FOR DEVELOPMENT OF ENTREPRENEURSHIP IN SERBIA,, AVADA 2013, Conference ,,Current Interdisciplinary Research in Management and Administration, Litvanija

Vujici, S., Nikitovic, Z., Minkov, Đ. 2016. ,,Influence of innovation on the competitiveness of small and medium enterprises and entrepreneurs in Serbia." INTERNATIONAL SCIENTIFIC CONFERENCE LEADERSHIP AND ORGANIZATION DEVELOPMENT, Kiten, Bulgaria

Zjalic, Lj.M. 2007. "INOVATIVNOST NEZAOBILAZAN ČINILAC RAZVOJA." M*edjunarodni problem*, 59 (1): 155-182

http://www.preduzetnickiservis.rs

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