

# ***INNOVATIONS IN THE FUNCTION OF DEVELOPING COMPETITIVENESS AND EFFICIENCY IN THE REPUBLIC OF SERBIA***

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**Abstract:** According to the Report on competitiveness made by World Economic Forum for the year 2012, Serbia takes the 95th place on the list that comprises 144 countries. The leading places at the list are taken by countries which are led by innovations and which invest in innovations, because they are extremely significant factor of competitiveness, both at the national and global markets. For every entrepreneurial activity, innovations are a challenge and it is also crucial to connect technical possibilities to the needs of a market. Since SMEs are potential generator of new ideas and innovations it is very important to create possibilities for development of innovative activities in this sector.

This paper shows the significance of innovations and the development of innovative activities in Serbia with the aim of improving the competitiveness and efficiency of the economic system of the Republic of Serbia<sup>16</sup>.

**Key words:** Innovation, Competitiveness, Competitive Advantage, Efficiency, Serbia

**JEL classification:** O31

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## ***INTRODUCTION***

Competitiveness of the country is area of economic theory, which analyzes the facts and policies that create the country's ability to shape and maintain an environment that creates more value for both sides, the enterprise and population. Serbian rating in Competitiveness Report shows that Serbia has very poor competitive advantage.

It is obvious that the present situation in the world market is characterized by fierce competition, ie. everything has turned into a competition. The global market has become a place of competition after the disappearance of many barriers in international relations.

Nowdays meaning that you're rich does not mean that you are competitive.

Perspective for Serbian economy in order to be competitive in today's conditions, is in economy growth based on inovation, in increasing productivity and promoting export.

Therefore it is very important to create conditions for the development of innovative activities in our country, because the creation of a favorable climate for the development of this activity can lead to innovation and thus better position Serbia on the world market.

## ***LITERATURE REVIEW***

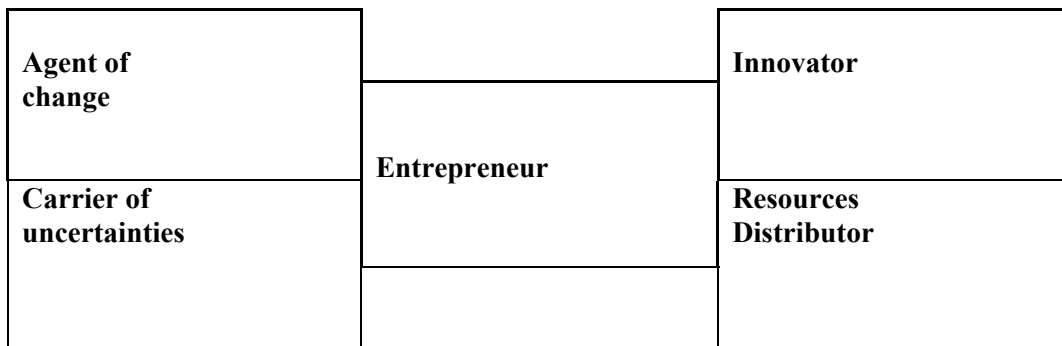
There has been a lot of talk today on competitiveness. The competitiveness has become a concept that can be said to be frequently analyzed whether the firm or national competitiveness is in question. The difference between country's competitiveness and firm's competitiveness is the place which occupies in the creation of economic value in a society. The assumption is that only companies create economic value, and the country can establish an environment that encourages or discourages activities of the companies.

Adam Smith, the first representative of the classical theory, attempted to explain the competitiveness and said that the country enjoys an absolute advantage in goods that produce more efficiently and therefore less expensively than other countries (1976). D Ricardo (1817) believes that a country should always produce what it does best, even if there are countries that are better. Comparative advantage measures the costs of producing products in a non-monetary way with reference to the lost opportunity to produce something else. Country should use those factors of production which have in abundance. According to J. Schumpeter (1942) innovations are very important factor for the development of competitiveness, in addition to entrepreneurship and technology. P. Drucker (1969) and A.P. Sloan (1963) developed the concept of management as a key factor of competitiveness. The creator of the theory of national competitiveness M. Porter (1990) argues that the theory of comparative advantage seems appealing but it is limited to the factors of production such as land, labor, natural resources and capital. In his opinion the country has a significant impact on the competitive advantage of an industry depending on four factors:

- 1) conditions and factors of production;
- 2) nature of domestic demand;
- 3) existence of supporting and related industries;
- 4) conditions for the formation and organization of corporations in the home market, their management and the nature of competition in the country.

His point of view does not bring into question the theory of comparative advantage but explains why particular industries have or don't have the competitive advantage in the world economy. His basic message is that a relatively long-term competitive advantage is created through the constant innovations.

According to many authors the basis of competitive advantage are innovations. Those include not only the use of new technologies, but also the implementation of new production processes, new organizational design, new methods in the resource management, etc. (Vujicic, Djuricic & Vukadinovic, 2013). Stevenson and Gumpert (1985) further indicate that innovation is the "heart of entrepreneurship". The entrepreneurship might be involved in an economic function, as bearer of uncertainty, as distributor of resources or as innovator. It might also refer to certain behaviour, inherent characteristics, creation of new organizations or the role of an owner or manager of a company (Karlsson, Fris & Paulsson 2004 (Figure 1).



*Figure 1: Characteristics of the entrepreneur*

*Source: Karlsson C., Friis C., Paulsson T (2004). Relating entrepreneurship to economic growth, September, [www.businessgrowthinitiative.org](http://www.businessgrowthinitiative.org).*

Different studies have examined various factors that could improve the chances of success for entrepreneurs (Elyas et al., 2012). Determining the type of ownership, purpose or goal, size of the organization and so on is necessary for an organization to establish its identity and illustrate its identity to the public (Milos, 2013). These days, people want to work for organizations that represent their values and ethics and respect their voices (McMillian, 2012). Today, innovations are one of the most important components of entrepreneurship and a basis of competitive advantage of organizations.

There is data to support this conclusion. There are many definitions of innovation and the main difference lies in the type of innovation which is being defined or which dimension has more importance according to its author (Vujicic, Djuricic & Vukadinovic, 2013). Mezas and Glynn (1993) define innovation as significant, non-routine and intermittent organizational changes that embody new ideas which are not consistent with the current concept of operations within an organization. Drucker (1996) points out that "innovations are everything that endows the existing resources with a new capacity to create wealth". Freeman (1997) defined innovation in relation to innovation activities and processes, highlighting that innovation includes the technical

design, production, management and commercial activities involved in the marketing of a new or enhanced product or the first commercial use of a new or enhanced process or equipment. Emphasizing the importance of innovations for a company, he formulated the famous thesis that made him well-known in the literature: "Not to innovate is to die".

„Innovation is the successful exploitation of new ideas”, (DTI, 2003). From the perspective of management the innovations are defined as "the process of application of new solutions that enhance processes, products and services" (Certo & Certo, 2006). Encyclopedia Wikipedia (2011) says that innovation is a change, introduction of something new or a process of making changes.

All the above definitions of innovation show that innovation is something new that brings a change that will improve the process, product or service (Vujicic, Djurcic & Vukadinovic, 2013).

Besides Drucker (1998), Levitt (1963), Pearson (1988) and Hamel and Prahalad (1994) wrote about the importance of innovation and competitive advantage. Schumpeter (1982) argued that economic development brings qualitative changes which are essential, and they are encouraged by innovations in different historical eras.

On the other hand, innovation by itself is a feature composed of three main factors: firstly, the creation of the new knowledge in science, technology and management (as basics for innovations), and secondly, the availability of a highly educated, self-programmed workforce that can use the new knowledge in order to enhance productivity (as a result of quality or quantity of the education system), and thirdly, the existence of entrepreneurs able and willing to take the risk of transforming innovation into business (Zjalic, 2007).

Organizations need more return on their investments; therefore, they accept any new ideas to make substantial changes in their businesses (Yousefirad et al.,2013). Organizations depend on interaction and coordination among individuals to accomplish their goals (Stojanovic et al.,2013).

Certo & Certo (2006) define innovation as "the process of applications of new solutions for the improvement of processes, products or services. The following figure illustrates innovation process according to Couger. This model includes the copyright protection as an important element of innovation.

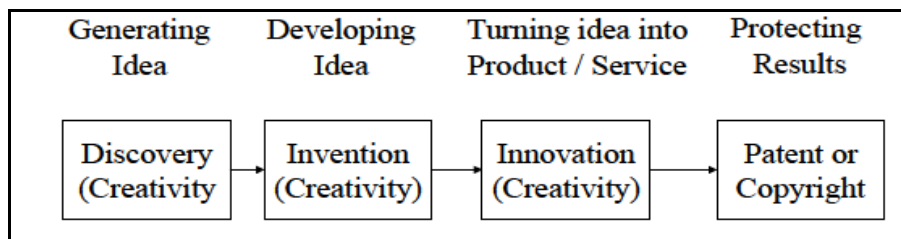


Figure 2: Innovation process

Source: Couger, J. D., 1995. *Creative Problem Solving and Opportunity Finding*. Boyd and Fraser Publishing Company, USA.

P. Drucker (1996) points out that there are seven sources of innovative possibilities (Figure 3). The first four sources can be found within the company and they are the indicators of the changes that have already taken place (internal sources), or can occur with little effort. Other sources come from the environment (external sources).

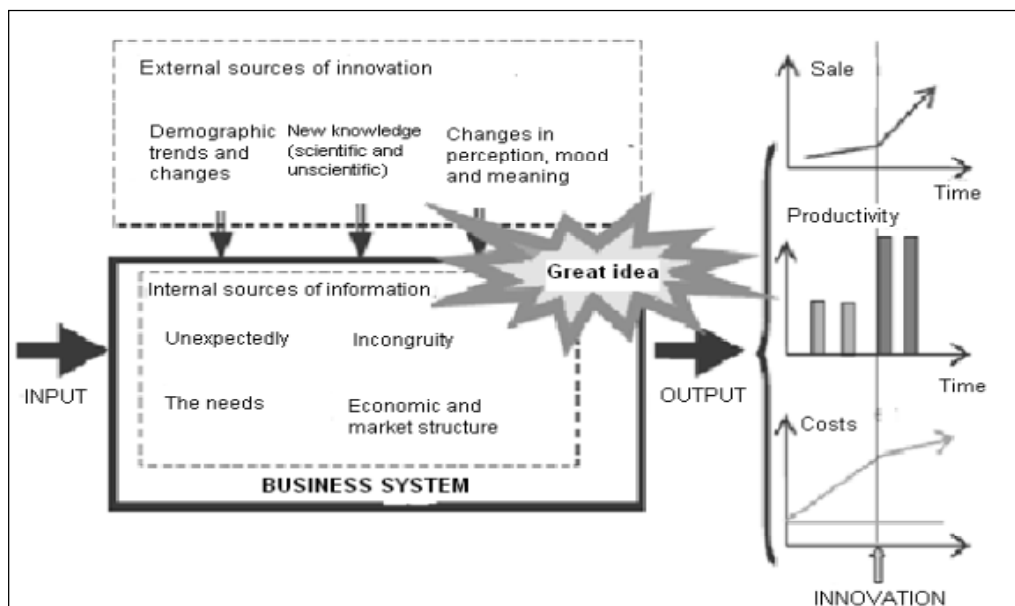
Those sources are (Krstic, 2012):

**Internal:**

1. unexpected
  - 1.1. unexpected success,
  - 1.2. unexpected failure,
  - 1.3. unexpected external event,
2. incongruity - between reality as it is now and what it should be,
3. innovation based on the need of a certain process,
4. changes in the structure of the economy or the markets that come as a surprise to everyone.

**External:**

5. demographic trends – changes,
6. changes in perception, mood and meaning,
7. new findings: scientific and non-scientific.



*Figure 3: Sources of innovative possibilities of the business system according to Drucker*

*Source: Krstić M. (2012), „Upravljanje inovacijama“, Visoka škola za poslovnu ekonomiju i preduzetništvo, Beograd*

Generally speaking, innovation is a solution successfully implemented in practice. High quality traditional entrepreneurship education can be used as a means to obtain new skills for entrepreneurs or necessary to foster alternative ways of education (Radovic Markovic et al.,2012).According to the Organization for Economic Cooperation and Development (OECD) and the Oslo manual for measuring innovation, there are four different types of innovation:

– **product innovation:** this is a new or improved product or service in terms of technical specifications, components, material, software, and user friendliness or other functional characteristics;

– **process innovation:** is implementation of a new or improved production method, in terms of technology, equipment or software.

– **marketing innovation:** is the implementation of a new marketing method involving changes in the product design or packaging, its launch, promotion or price.

– **organizational innovation:** refers to the new organizational methods in a firm's business practices, workplace organization or external relations.

Type of innovation selected by the company is essentially a function within the nature of innovation, impact of the actors in the value chain, competence and knowledge of the company in the field of innovation (Levi-Jaksic, 2001). Plans predetermine the course of action and this reflects on the organizational objective (Omolaja et al,2012).

## **COMPETITIVENESS**

Competitiveness is defined as a set of institutions, policies and factors that ensure the productivity of the country (Djukic & Crljić, 2011). The productivity level determines the rate of return, and if the rate of return is the key to economic growth, the economy that achieves faster medium-term and long-term growth is more competitive (Sala et. all, 2011).

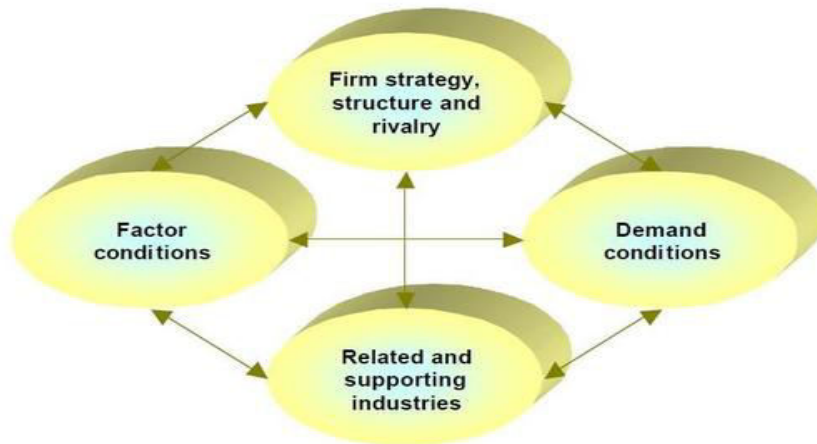
Competitiveness can be viewed from the macro and the micro perspective. The macro competitiveness refers to the competitiveness of the national economy among other national economies, while the term micro competitiveness refers to the business performance of a company in comparison with the business performance of foreign companies (Bjelic, 2008). Porter (1990, in his book "The competitive advantage of Nations" describes the determinants of national advantage of countries. According to Porter (1990), the presence or absence of particular attributes in individual countries influence the industry development, not only the ability of individual companies to create a core competency and competitive advantage. These attributes are:

**1. Factor conditions** - position of the country in terms of factors of production, such as labor or infrastructure, necessary for competition in a particular industry (activity).

**2. Demand conditions** - the nature of domestic demand for goods and services

**3. Related and supporting industries** - the presence or absence of inter-related industries that are competitive with each other, and

**4. Firm strategy, structure and rivalry** - conditions which guide the creation, organization and management of companies and the nature of local competition in the country (Figure 4).



.Figure 4 : The determinants of national competitive advantage

Source:Porter,1990

These attributes Porter calls the "diamond". The "Diamond" shapes the environment in which companies compete. Porter (1990) argues that country with the best "diamond" is one that can realize the advantages from these events and turn them into a competitive advantage.

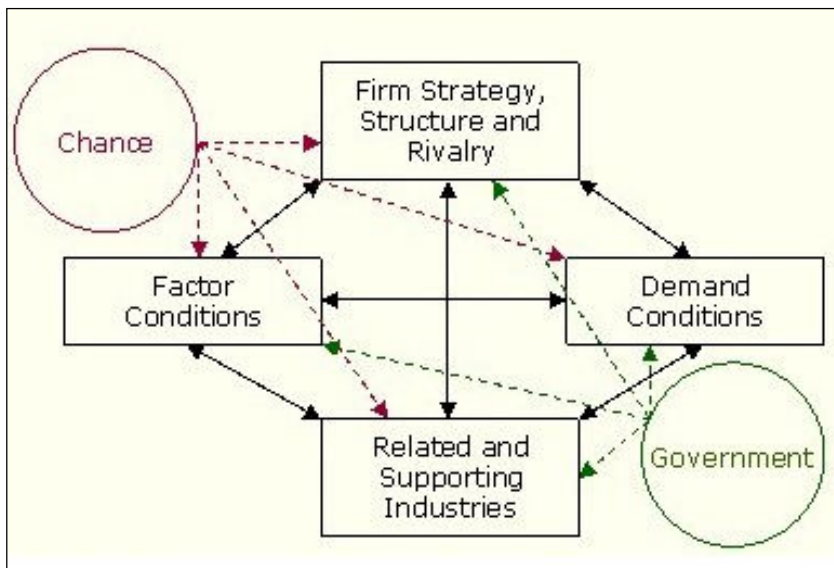


Figure 5 : The complete system of the determinants of national competitive advantage

Source: Porter, M.E. (1990, 1998) "The Competitive Advantage of Nations", Free Press, New York, 1990.

Determinants of national competitive advantage are an interactive system in which the activities in any of these four elements of "diamond" exercise influence on all other elements, and vice versa.

According to M. Porter, the competitiveness as a term is exclusively linked to the productivity and defines macro competitiveness as the ability of the national economy to generate high ongoing productivity (Bjelic, 2008). Macro competitiveness is increasingly more important so the first reports on competitiveness of the national economies have been created. In the beginning it was thought that the competition should be linked to the ability to achieve a positive trade balance. However, the US Council on Competitiveness (1985) states the following, "Competitiveness cannot be defined as the ability of the national economy to achieve positive foreign trade balance, as some very poor countries are able to achieve it" (Kovacevic, 2010). Defining competitiveness today encompasses the entire economic environment that should provide the basis for development of a successful business. According to Radojevic (2011) competitiveness often implies the ability of the national economy to ensure steady growth in production, employment and prosperity of the local population through competition with the foreign economies on the world market. International Institute for Management Development (IMD) defines the national economic competitiveness as "the ability of a nation to create an environment that sustains more value creation and more prosperity for its people." The World Economic Forum defines competitiveness as "the set of institutions, policies and factors that determine the level of productivity of a country" (WEO, 2012).

All definitions of competitiveness suggest that competitiveness is the main regulating force of the market today.

## ***COMPETITIVE ADVANTAGE OF SERBIA***

Serbia's economy in recent years has not been in a state that can be described as satisfactory. Numerous economic difficulties reflected in the situation of the whole society and conditioned political instability as well as the deterioration of the country's international position (Knezevic et al,2013).

As already mentioned, the World Economic Forum defines competitiveness as the set of institutions, regulations, and other factors that determine the productivity level of the country. Indicator of competitiveness level is called the Global Competitiveness Index and is considered the best and most comprehensive indicator of a country's competitiveness given that quantifies the macro and micro driving forces of competitiveness, which are separately evaluated on a scale from 1 to 7. All measuring indicators are grouped into twelve pillars, reflecting various aspects of the complex economic reality:

- I - Institutions
- II- Infrastructure
- III – Macroeconomic environment
- IV – Healthcare and primary education
- V – Higher education and training
- VI – Goods market efficiency



- VII – Labour market efficiency
- VIII – Financial market development
- IX – Technology readiness level
- X – Market size
- XI – Business sophistication
- XII – Innovations

*According to the World Economic Forum report for the year 2012 ranked 95th on the list of 144 countries with a Global Competitiveness Index (GCI) of 3.87.*

*Table 1: Global Competitiveness Index (2007-2012)*

	Slovakia	Albania	Croatia	Slovenia	<b>Serbia</b>	Greece	Romania	Montenegro	Hungary	F.Y.R. Macedonia	Bosnia and Herzegovina
2007	4,45	3,48	4,20	4,48	<b>3,78</b>	4,08	3,97	3,91	4,35	3,73	3,55
2008	4,40	3,55	4,22	4,50	<b>3,90</b>	4,11	4,10	4,11	4,22	3,87	3,56
2009	4,31	3,72	4,03	4,55	<b>3,77</b>	4,04	4,11	4,16	4,22	3,95	3,53
2010	4,25	3,94	4,04	4,42	<b>3,84</b>	3,99	4,16	4,36	4,33	4,02	3,70
2011	4,19	4,06	4,08	4,30	<b>3,88</b>	3,92	4,08	4,27	4,36	4,05	3,83
2012	4,14	3,91	4,04	4,34	<b>3,87</b>	3,86	4,07	4,14	4,30	4,04	3,93

*Source: WEF (2007,2008,2009,2010, 2011, 2012)*

In comparison with the year 2011 according to the Global Competitiveness Index, Serbia retained the same 95th position in the year 2012. Progress in the year 2012 was achieved by Bosnia and Herzegovina and Slovenia.

*Table 2: The ranking of countries according to the Global Competitiveness Index (2007-2012)*

	Slovakia	Albania	Croatia	Slovenia	<b>Serbia</b>	Greece	Romania	Montenegro	Hungary	F.Y.R. Macedonia	Bosnia and Herzegov.
2007	41	109	57	39	<b>91</b>	65	74	82	47	94	106
2008	46	108	61	42	<b>85</b>	67	68	65	62	89	108
2009	47	96	72	37	<b>93</b>	71	64	62	58	84	96
2010	60	88	77	45	<b>96</b>	83	67	49	52	79	88
2011	69	78	76	57	<b>95</b>	90	77	60	48	79	78
2012	71	89	81	56	<b>95</b>	96	78	72	60	80	89

*Source: WEF (2007,2008,2009,2010, 2011, 2012)*

If we take a look at the structure of the GCI in 2011 and 2012 \_ by the pillars of competitiveness , we can see that there haven't been any major changes.As for innovation in the year 2012 there was a drop in comparison with the year 2011 of 0.11.

Table 3: The value of the GCI by the pillars of competitiveness

	2011	2012
Institutions	3,15	3,16
Infrastructure	3,67	3,78
Macroeconomic environment	4,18	3,91
Health system and primary education	5,82	5,73
Higher education and training	3,98	3,97
Goods market efficiency	3,49	3,57
Labor market efficiency	3,94	4,04
Financial market sophistication	3,74	3,68
Technological capability	3,63	4,10
The market size	3,61	3,64
Business sophistication	3,08	3,11
<b>Innovations</b>	<b>2,90</b>	<b>2,81</b>

Source: WEF (2011, 2012)

Each of the marked pillars influences individually the competitiveness, but also through the interaction with the other pillars. Factors are measured using the so-called "hard data" (inflation rate, number of internet users, life expectancy, etc..) and so-called "soft data" (result of questionnaires done on executives, conducted each year by the World Economic Forum, where the current condition of important social and economic phenomenon such as corruption, trust in institutions, is quantified in values from 1 to 7) (Cvetanovic & Sredojevic, 2012).

Importance of competitiveness factors depends on the economic development of the country. The factors are divided into three groups that are key to the different ways of managing the economy, and have different weights when calculating the global competitiveness index.

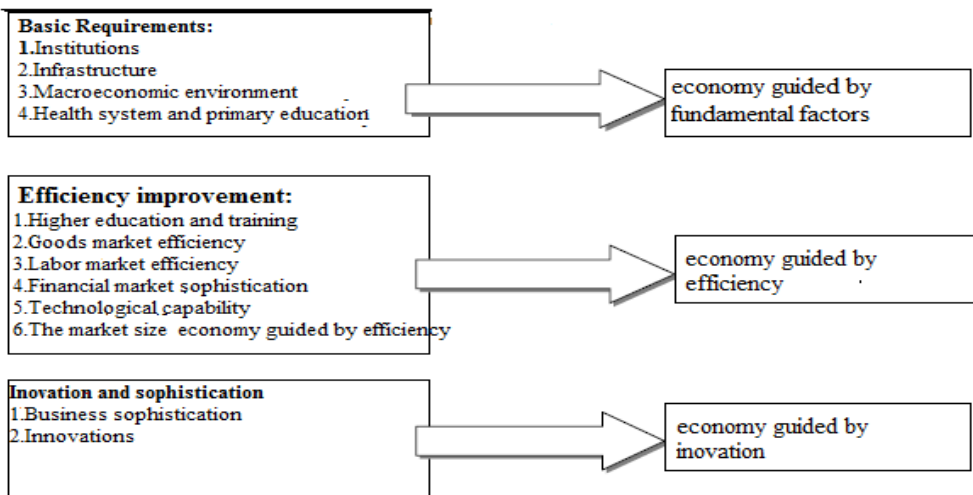


Figure 6: Pillars of GCI and stages of economic development

*Table 4: The weights for the formulation of GCI*

	Factor-driven economies	Efficiency-driven economies	Innovation-driven economies
Basic requirements	60%	40%	20%
Efficiency enhancers	35%	50%	50%
Innovation and sophistication factors	5%	10%	30%

*Source: Global Competitiveness, World Economic Forum, 2011.*

Stage of development of a country is determined by the level of GDP per capita (*Gross domestic product per capita (GDPpc)*). In the following figure we can see how GDPpc expressed in U.S. \$ determines the position of a country. Based on this figure, we can conclude that the economy of a country is in the first stage of development, if its annual GDPpc is less than USD 2000. Countries with the annual GDPpc between USD 2000 and USD 3000, are on the transition from the first to the second stage of development, while countries with annual GDPpc between USD 3000 and USD 9000 are in its second stage of development. Countries with GDPpc between USD 9000 and USD 17000 thousand are in the transition to the third stage, while the developed countries are the states with the annual GDPpc larger then USD \$ 17000.

Stage of development	GDP per capita (in US\$)
Stage 1: Factor driven	< 2,000
Transition from stage 1 to stage 2	2,000–3,000
Stage 2: Efficiency driven	3,000–9,000
Transition from stage 2 to stage 3	9,000–17,000
Stage 3: Innovation driven	> 17,000

*Figure 7: Stage of economic development based on GDPpc*

*Source: Global Competitiveness report 2010- 2011, World Economic Forum.*

Table no. 5 shows the ranking of the countries that are not EU members, by the Growth Competitiveness Index in 2010-2011 and the place occupied following the sub-indices. Serbia occupies the 88th place for innovation leaving behind the countries such as Bosnia, Macedonia and Albania.

*Table 5: Ranking of the Western Balkan countries (non-EU members) according to the Growth Competitiveness Index (GCI- shown in brackets) in 2010-2011*

	Serbia	Croatia	BIH	Montenegro	Macedonia	Albania
<b>Subindex : Basic conditions</b>	93	50	98	<b>45</b>	70	75
	(4,15)	(4,78)	(4,05)	<b>(4,90)</b>	(4,45)	(4,38)
- Institutions	120	86	126	<b>45</b>	80	63
	(3,19)	(3,65)	(3,13)	<b>(4,46)</b>	(3,75)	(3,96)
- Infrastructure	93	<b>41</b>	98	67	91	89
	(3,39)	<b>(4,63)</b>	(3,16)	(3,85)	(3,45)	(3,46)
- Macroeconomic stability	109	51	81	<b>37</b>	47	101
	(4,05)	(4,82)	(4,48)	<b>(5,09)</b>	(4,91)	(4,21)
- Health and primary education	50	48	89	<b>33</b>	69	56
	(5,95)	(6,02)	(5,43)	<b>(6,19)</b>	(5,67)	(5,87)
<b>Subindex: Ways to improve efficiency</b>	93	76	100	<b>64</b>	83	89
	(3,75)	(3,97)	(3,57)	<b>(4,08)</b>	(3,84)	(3,77)
- Education and training	74	56	88	<b>52</b>	72	84
	(4,01)	(4,35)	(3,80)	<b>(4,51)</b>	(4,04)	(3,86)
- Goods market efficiency	125	110	127	<b>44</b>	57	63
	(3,57)	(3,78)	(3,56)	<b>(4,39)</b>	(4,24)	(4,19)
- Labor market efficiency	102	113	94	<b>39</b>	71	63
	(4,06)	(3,90)	(4,17)	<b>(4,69)</b>	(4,38)	(4,46)
- Financial market sophistication	94	88	113	<b>28</b>	87	100
	(3,84)	(3,96)	(3,47)	<b>(4,68)</b>	(3,97)	(3,74)
- Technological capability	80	<b>39</b>	85	44	64	72
	(3,41)	<b>(4,23)</b>	(3,36)	(4,09)	(3,60)	(3,53)
- The market size	72	<b>70</b>	93	129	106	103
	(3,60)	<b>(3,62)</b>	(3,10)	(2,10)	(2,80)	(2,84)
<b>Subindex: Innovations and sophistication</b>	107	85	120	<b>56</b>	97	104
	(3,04)	(3,32)	(2,93)	<b>(3,67)</b>	(3,20)	(3,09)
-Business sophistication	125	92	115	<b>70</b>	96	87
	(3,15)	(3,56)	(3,27)	<b>(3,86)</b>	(3,52)	(3,61)
- Innovations	88	70	120	<b>45</b>	97	121
	(2,93)	(3,08)	(2,59)	<b>(3,48)</b>	(2,88)	(2,57)
Rank among 139 countries	96	77	102	<b>49</b>	79	88
	(3,84)	(4,04)	(3,70)	<b>(4,36)</b>	(4,02)	(3,94)

*Source: World Economic Forum, Global Competitiveness Report 2010-2011*

*We have already seen in the Table 3 that Serbia in 2012 had innovation subindex 2.81, which shows that the country needs to invest more in innovation in order to improve its position.*

## **INNOVATION IN SERBIA**

Recognizing the key role of innovation for the growth and development of each country, the Confederation of Indian industry (Confederation of Indian Industry) together with INSEAD (Business School for the World), and Canon India has developed the Global Innovation Index (Global Innovation Index - GII) (Radukić, Radovic 2011). This index aims to point out the growth of innovation in countries. Basic principles on which the Global Competitiveness Index is based on are as follows (Radukić, Radovic, 2011):

1. There is a difference between the input and the outcome when measuring innovations in the economy. Entries represent the factors that contribute to the enhancement of innovation, while outcomes show the results of innovativeness within the economy.

2. The Global Innovation Index observes five input factors: institutions and their business policies, human capital and research, general and information and communication (IT) infrastructure, market and business sophistication.

3. GII shows the two output factors that make up the results of the innovativeness of the economy based on the development of knowledge, competence and wealth creation, and they are: scientific results, which cover different aspects of knowledge (creation, dissemination and impact) and creative results (intangible assets, as well as goods and services).

Based on the values of the indicators of innovation and the analysis of innovative trends, countries are classified into one of four categories (Report on SMEs, 2011):

- Innovation Leaders (Innovation Leaders): Denmark, Finland, Germany, Sweden, whose performances are at least 20% above the EU-27 average;

- Innovation followers ( Innovation followers): Austria, Belgium, Cyprus, Estonia, France, Ireland, Luxembourg, the Netherlands, Slovenia and the United Kingdom, whose performances are around average, or less than 20% above and more than 10% below the EU average -27;

- Moderate innovators (Moderate innovators): Czech Republic, Greece, Hungary, Italy, Malta, Poland, Portugal, Slovakia and Spain, whose performances are below the EU-27 average, between 10% and 50% below the EU average and

- Modest innovators - the countries joining innovators (Modest innovators - Catchingup countries): Bulgaria, Latvia, Lithuania and Romania, whose performances range is far below the EU-27 average, more than 50%.

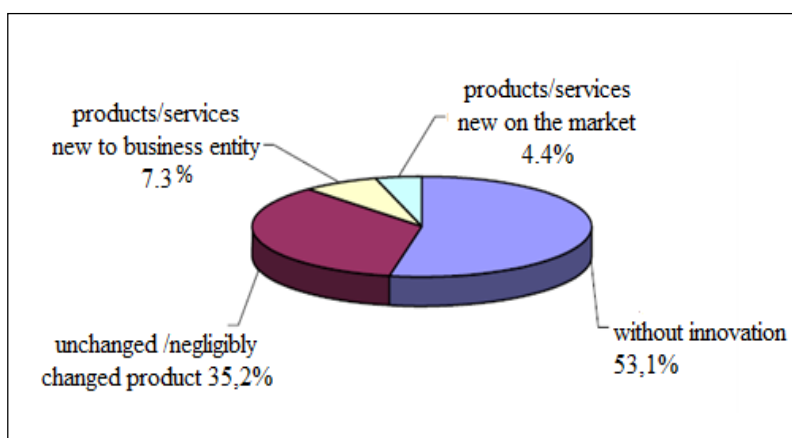
According to the Global Innovation Index for the year 2012 Serbia ranked 46th in the world out of 141 countries studied while by the index of innovative activity (IEI) Serbia occupied the high 7th place.

The research of the State Bureau of Statistics on the indicators of innovative activities in the Republic of Serbia in the period between the years 2008-2010 , showed that 70% of large business entities are innovative, while 44% of small and 57% of medium business entities are.

Table 6: Business entities according to innovation, activity and size, 2008-2010

	Total	Innovators	Business entities that are not innovative	The rate of innovators
Total	12141	5812	6329	47.9
Small business entities	9347	4143	5204	44.3
Medium business entities	2237	1280	957	57.2
Large business entities	557	389	167	69.8
Manufacturing business entities	4141	2314	1827	55.9
Service business entities	8000	3498	4502	43.7

The same survey showed that the revenue structure of innovative business entities is dominated by the share of sales income of unmodified or slightly modified products , which is around 35%, while the share of sales of products / services that are new for the business entity is 7.3%.



Graph 1: The structure of the income of innovators

Source:

[http://webrzs.stat.gov.rs/WebSite/repository/documents/00/00/55/83/IA01\\_2010\\_srb.pdf](http://webrzs.stat.gov.rs/WebSite/repository/documents/00/00/55/83/IA01_2010_srb.pdf)

The following table shows the same research on the most important effects of introduced innovations (increasing the range of products and services, replacing outdated products and services, improving the quality of products and services, etc.).

*Table 7: The most important effects of introduced innovations*

EFFECTS	TECHNOLOGICAL INNOVATORS			
	TOTAL	SMALL	MEDIUM	LARGE
Increase in the range of products and services	24.0	21.8	29.7	29.6
Replacement of outdated products or processes	20.0	18.9	21.3	26.7
Access to new markets and increase in market shares	15.6	13.1	21.1	23.7
Improvement in the quality of products or services	29.7	28.2	30.9	42.4
Increase in the flexibility of products or services	17.7	17.6	15.9	24.2
Increase in production capacity/volume of services	18.4	16.3	23.8	22.9
Reduction of labor costs per unit of product	15.2	14.0	18.0	18.5
Reduction of the cost of materials and energy per unit of product	11.6	10.3	14.1	17.5
Reduction of the damaging impact on the environment	14.2	12.5	17.2	21.9
Improvement of the health of employees	17.0	15.4	20.7	22.1

Source: [http://webrzs.stat.gov.rs/WebSite/repository/documents/00/00/55/83/LA01\\_2010\\_srb.pdf](http://webrzs.stat.gov.rs/WebSite/repository/documents/00/00/55/83/LA01_2010_srb.pdf)

Serbia needs to develop a competitive economy based on knowledge, innovation and new technologies in order to achieve economic growth and development.

Introducing innovation in companies operating in Serbia is a prerequisite for its competitiveness. Innovations are the components that enable companies to create added value and to satisfy the needs of users and companies.

## ***CONCLUSION***

The economic progress of Serbia and other countries can be achieved with a constant technological progress or innovations. Innovations are the drivers of the new economy. In order to achieve competitive economy it is essential for the country to have a climate that encourages development of innovative enterprises. Why is it so? The answer is simple. The survival of small and medium enterprises in the less developed economies or those that operate on the small domestic market (such as Serbian market) is possible only if these enterprises focus on the international market. However, entry into foreign markets requires innovation and technological progress. Innovation policies in SMEs enable them to implement changes and innovations in business operations with the aim to improve the situation and achieve competitiveness. Directing the country's development towards innovation should be an indispensable basis for carrying out activities in the economy and society. Generally speaking, it can be said that the wealth of the people in one country depends on the country's ability to encourage and support the initiative for innovation in the first place, but also on the ability to transfer knowledge and introduce new technology.



## REFEFENCES

- [1] Bjelić, P.(2008) *Međunarodna trgovina*. Beograd: Centar za izdavačku djelatnost Ekonomski fakultet
- [2] Certo,S.,Certo,T.(2006),, *Modern Management*, 10<sup>th</sup> ed., Pearson Prentice Hall, New Jersey
- [3] Cvetanović, S., Sredojević,D.(2012) ,, *Koncept nacionalnog inovacionog sistema i konkurentnost privrede*,, Časopis ,, *Ekonomske teme*,, br.2,str. 167-185, Univerzitet u Nišu, Ekonomski fakultet Niš
- [4] Cvetanovic, S...The concept of national innovation systems and economic competitiveness, *Journal, Economic issues*, No. 2, p. 167-185, University of Belgrade, Faculty of Economy Nis
- [5] Drucker, P.(1969) “The Age of Discontinuity”
- [6] Drucker P.F., (1998.), *The Discipline of Innovation*, *Harvard Business Review On PointEdition*, Product no. 3480, pp. 3-12.
- [7] DTI (2003) ,, *Inovation Report*,, *Competing in the global economy.the innovation challenge*, Department of Trade and Industry, UK
- [8] Elyas. G. M, Ansari M, Mafi V.(2012): *IMPACT OF SOCIAL CAPITAL ON THE IDENTIFICATION AND EXPLOITATION OF ENTREPRENEURIAL OPPORTUNITIES*, *International Review* (2012 No.3-4), pp. 5. ISSN 2217-9739, COBISS.SR-ID 192516620
- [9] Freeman, C.(1997) *Economics of Industrial Innovation*, 3rd Revised Edition. Routledge
- [10] Garelli,S.(2009) ,,The Fundamentals and history of competitiveness, *IMD World Competitiveness Yearbook*
- [11] Hamel G., Prahalad C.K., (1994.), *Competing for the Future*, *Harvard Business ReviewOn Point Edition*, Product no. 4929, pp. 2-11
- [12] International Institute for Management Development – IMD. *The World Competitiveness Yearbook*. <http://www.imd.org/research/publications/wcy/index.htm>
- [13] Knezevic V, Kvirgic G, Ivkovic (2013): *Serbian Modern Economy – regional comparative analysis*, *International Review* (2013 No.1-2) ISSN 2217-9739, pp. 7. COBISS.SR-ID 192516620
- [14] Kovačević, M.(2001) *Uzroci niskog nivoa i mere za povećanje konkurentnosti Srbije*, u *Kako povećati konkurentnost privrede i izvoza Srbije*(ur.) Naučno društvo ekonomista
- [15] Levitt T., (1963.), *Creativity Is Not Enough*, *Harvard Business Review On Point Edition*,Product no. 1628, pp. 15-28.
- [16] Levi-Jakšić M.(2001), *Strateški menadžment tehnologije, Inovacije, menadžment i preduzetništvo*, FON, Beograd
- [17] Mezas S.J., Glynn, M.A. (1993): *The Three Faces of Corporate Renewal: Institution,Revolution, and Evolution*, *Strategic Management Journal*, 14, pp 77-101.
- [18] McMillian L.(2012): *Gender, Organizational Behavior &, Organizational Culture: What Studies Tell Us About How Women Lead in Business*,

- International Review (2012 No.1-2) pp. 33. ISSN 2217-9739, COBISS.SR-ID 192516620
- [19] Omolaja M, Marković D, Vučeković, M.(2012): IMORTANCE OF INFORMATION FOR AN ORGANIZATION, , International Review (2012 No.3-4), pp. 19. ISSN 2217-9739, COBISS.SR-ID 192516620 Oslo Manual. (2005). Organisation for Economic Co-operation and Development
- [20] Porter, M.(1990) “The Competitive Advantage of Nations”
- [21] Pearson A.E., (1988.), Tough-Minded Ways to Get Innovative, *Harvard BusinessReview On Point Edition*, Product no. 1636, pp. 29-39.
- [22] Radovic Marković, Grozdanić R, Kvgić G, Marković D, Vujičić S,(2012): New educational strategies versus the traditional methods, International Review (2012 No.1-2) pp. 23. ISSN 2217-9739, COBISS.SR-ID 192516620
- [23] Ricardo D.(1817) Law of Comparative Advantage, “Principles of Political Economy and Taxation”
- [24] Sloan A.P.,(1963)“My Years at General Motors”
- [25] Smith, A. (1776), “An Inquiry into the Nature and Causes of the Wealth of Nations”
- [26] Sala-I-Martin, X., J. Blanke, M. D. Hanouz, T. Geiger, I. Mia and F. Paua, (2011)“The Global Competitiveness Index: Measuring the Productive Potential of Nations”, u: Porter, M. E., X. Sala-i-Martin and K. Schwab, eds., Global Competitiveness Report
- [27] Stojanovic T , Djokic A, Djokic S.(2013) : Organizational Behavior-Creative Tool for Creating Value, International Review (2013 No.1-2) ISSN 2217-9739, pp. 74. COBISS.SR-ID 192516620
- [28] Šumpeter J. (1982)Kapitalizam, socijalizam i demokratija, Globus Zagreb
- [29] World Economic Forum; *Global Competitiveness Report*, više godišnjih izvještaja. <http://www.weforum.org/issues/global-competitiveness> Global Competitiveness, World Economic Forum (2011)
- [30] Yousefirad M. Sarlak M.A., Feizi T.(2013) : Establishing Hospital Information Systems and Creating Patient Loyalty through Improvements in Services: Evidence from Iranian Hospitals, International Review (2013 No.1-2) ISSN 2217-9739, pp. 110. COBISS.SR-ID 192516620
- [31] Zjalić I.M.(2007) Inovativnost –nezaobilazan činilac razvoja,Međunarodni problemi, Vol59,br.1, Beograd