



INTERNATIONAL CONFERENCE  
Employment, Education  
and Entrepreneurship

# **EMPLOYMENT, EDUCATION AND ENTREPRENEURSHIP**

15-17 October 2014 Belgrade Serbia

## **ECONOMIC GROWTH AND SUSTAINABLE DEVELOPMENT CHALLENGES: SERBIA AND WESTERN BALKAN COUNTRIES**







Faculty of Business Economics and Entrepreneurship (BEE) from Belgrade, Serbia  
[www.vspep.edu.rs](http://www.vspep.edu.rs)

International Research Institute for Social Entrepreneurship & Economic Development  
 (IRISEED), Birmingham, United Kingdom  
[www.iriseed.org](http://www.iriseed.org)

International College of Interdisciplinary Sciences, United States  
<http://www.americanschoolofgenealogy.com>

Faculty of Entrepreneurship, University of Tehran, Iran  
[www.ut.ac.ir](http://www.ut.ac.ir)

College of Economics and Management, Northwest University, China,  
 Yangling, Shaanxi, China  
<http://en.nwsuaf.edu.cn>

University of Business Engineering and Management, Banja Luka, Bosnia i Hercegovina,  
[www.univerzitetpim.com](http://www.univerzitetpim.com)

Sofia University „St.Kliment Ohridski,, Faculty of Philosophy, Sofia, Bulgaria  
<http://phls.uni-sofia.bg>

ECSB - European Council for Small Business and Entrepreneurship, School of Economics,  
 University of Turku, Finland  
[www.ecsb.org](http://www.ecsb.org)

**jointly organize**

**The Third International Scientific Conference  
 EMPLOYMENT, EDUCATION AND ENTREPRENEURSHIP  
 (EEE 2014)**

## **EDITORS**

***Tatjana Brankov, PhD***

***Full Professor Edita Kastratovic, PhD***

***Katarina Kanjevac-Milovanovic, PhD***

## **INTERNATIONAL SCIENTIFIC COMMITTEE:**

***Academician Professor Mirjana Radovic Markovic, PhD***, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia (president)

***Academician Professor Radmila Grozdanic, PhD***, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia

***Academician Professor Slavko Karavidic, PhD***, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia

***Full Professor Krum Krumov, PhD***, St. Kliment Ohridski University in Sofia, Bulgaria

***Full Professor Imani Silver Kyaruzi, PhD***, Institute of Social Entrepreneurship (IRESEED), Great Britain

***Full Professor Ayinla Omolaja Muhammed, PhD***, International College of Management and Technology, Nigeria

***Full Professor Ugur Demiray, PhD***, Anadolu University, Turkey

***Full Professor Emine Demiray, PhD***, Anadolu University, Turkey

***Full Professor Sofronija Miladinovski, PhD***, Faculty of Tourism and Hospitality, Ohrid, Macedonia,

***Full Professor Nezameddin Faghieh, PhD***, Faculty of Entrepreneurship, University of Tehran, Iran

***Full Professor Radovan Pejanovic, PhD***, University of Novi Sad, Serbia

***Full Professor Vljako Petkovic, PhD***, Faculty for Business Economics and Entrepreneurship, Belgrade, Serbia

***Full Professor Edita Kastratovic, PhD***, Faculty for Business Economics and Entrepreneurship, Belgrade, Serbia

***Full Professor Radojko Lukic, PhD***, Faculty of Economics, University of Belgrade, Serbia

***Full Professor Hasan Hanic, PhD***, Belgrade Banking Academy, Belgrade, Serbia

***Associate Professor Beatrice Avolio, PhD***, Faculty of Entrepreneurship, CENTRUM Católica, Lima, Peru

***Associate Professor Mohammad Reza Zali, PhD***, Faculty of Entrepreneurship, University of Tehran, Iran

***Associate Professor Dragana Vojteski Kljenak, PhD***, Faculty for Business Economics and Entrepreneurship, Belgrade, Serbia

***Associate Professor Milan Krstic, PhD***, Faculty for Business Economics and Entrepreneurship, Belgrade, Serbia

***Associate Professor Slavoljub Sljivic, PhD***, Faculty for Business Economics and Entrepreneurship, Belgrade, Serbia

***Associate Professor Natasa Tanjevic, PhD***, National Bank of Serbia, Belgrade, Serbia

***Associate Professor Isiaka Esema, PhD***, Prentice Nigeria Ltd, Lagos, Nigeria

***Assistant Professor Reza Mohammadkazemi, PhD***, Faculty of Entrepreneurship, University of Tehran, Iran

***Assistant Professor Plama Hristova, PhD***, St. Kliment Ohridski University in Sofia, Bulgaria

**Assistant Professor Dragan Milosevic, PhD**, Faculty for Business Economics and Entrepreneurship, Belgrade, Serbia  
**Assistant Professor Almir Pestek, PhD**, Faculty of Economics, University of Sarajevo, Bosnia and Herzegovina  
**Assistant Professor Vera Karadjova, PhD**, Faculty of Tourism and Hospitality, Ohrid, Macedonia  
**Assistant Professor Zélia Breda, PhD, Department** of Economics, Management and Industrial Engineering of the University of Aveiro, Aveiro, Portugal  
**Assistant Professor Neven Vidakovic, PhD**, EFFECTUS University College, for Law and Finance, Croatia  
**Lecturer Vasileus Kallinterakis, PhD**, University of Liverpool Management School, Liverpool, Great Britain  
**Tatjana Brankov PhD**, Institute of Agricultural Economics, Belgrade, Serbia  
**Lecturer Dusan Markovic, MSc**, Belgrade Business School, Belgrade, Serbia  
**Lecturer Aidin Salamzadeh, MSc**, Faculty of Entrepreneurship, University of Tehran, Iran  
**Prof. Boufeldja Ghiat, PhD**, Faculty of Social Sciences Oran University, Oran, Algeria  
**Prof. José G. Vargas-Hernández PhD**, University Center for Economic and Managerial Sciences, University of Guadalajara, Guadalajara, Jalisco, México

#### **ORGANIZING COMMITTEE:**

**Full Professor Goran Kvrpic, PhD**, Faculty for Business Economics and Entrepreneurship, Belgrade, Serbia  
**Assistant Professor Dusan Cogoljevic, PhD**, Faculty for Business Economics and Entrepreneurship, Belgrade, Serbia  
**Assistant Professor Dragica Jovancevic, PhD**, Faculty for Business Economics and Entrepreneurship, Belgrade, Serbia, president of the Organizing Committee  
**Assistant Professor Djordje Minkov, PhD**, Faculty for Business Economics and Entrepreneurship, Belgrade, Serbia, PR of the Conference  
**Assistant Professor Zorana Nikitovic, PhD**, Faculty for Business Economics and Entrepreneurship, Belgrade, Serbia  
**Sladjana Vujicic, MA**, Faculty for Business Economics and Entrepreneurship, Belgrade, Serbia  
**Marija Petrovic, MA**, Faculty for Business Economics and Entrepreneurship, Belgrade, Serbia

**PUBLISHING AND ORGANIZATION**

Faculty of Business Economics and Entrepreneurship  
8 Mitropolita Petra Street  
11000 Belgrade, Serbia

**PERSON RESPONSIBLE FOR PUBLISHING**

**Full Professor Goran Kvrđić, PhD**, Director of Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia

CIP - Каталогизација у публикацији  
Народна библиотека Србије, Београд

338.1(082)  
338.43(082)  
502.131.1(082)  
338:339.137.2(082)

INTERNATIONAL Conference Employment,  
Education and Entrepreneurship (3rd ; 2014 ;  
Belgrade)

Economic Growth and Sustainable  
Development Challenges : Serbia and Western  
Balkan countries / #[The #Third]  
International Conference Employment,  
Education and Entrepreneurship [EEE 2014],  
15-17 October 2014 Belgrade Serbia ;  
[organizer Faculty of Business Economics and  
Entrepreneurship ; editors Tatjana Brankov,  
Edita Kastratovic, Katarina  
Kanjevac-Milovanovic]. - Belgrade : Faculty  
of Business Economics and Entrepreneurship,  
2014 (Valjevo : Valjevoprint). - 356 str. :  
graf. prikazi, tabele ; 25 cm

Tiraž 250. - Str. 9: Foreword / Tatjana  
Brankov. - Napomene i bibliografske reference  
uz tekst. - Bibliografija uz svaki rad.

ISBN 978-86-6069-104-2

1. Brankov, Tatjana [urednik] [аутор  
додатног текста] 2. Visoka škola za poslovnu  
ekonomiju i preduzetništvo (Beograd)  
a) Економски развој - Зборници b) Привреда  
- Конкурентност - Зборници c) Пољопривреда  
- Економски аспект - Зборници d) Одрживи  
развој – Зборници  
COBISS.SR-ID 210544396

Copyright© 2014

Faculty of Business Economics and Entrepreneurship, Belgrade.

All rights reserved.

Printing 250 copies

## **CONTENTS**

<b><i>I PART. FACTORS AFFECTING ECONOMIC GROWTH AND COMPETITIVENESS .....</i></b>	<b><i>11</i></b>
<b><i>THE EVALUATION OF SUSTAINABLE COMPETITIVENESS OF THE WESTERN BALKANS COMPARED WITH THE EU .....</i></b>	<b><i>13</i></b>
VLADIMIR KNEZEVIC, PhD DRAGAN IVKOVIC, PhD	
<b><i>COMPETITIVENESS AS THE SYSTEM OF PROPERTIES AND CHARACTERISTICS OF THE MARKET ECONOMY ENTITIES .....</i></b>	<b><i>31</i></b>
MILOS LUCIC, MSc SLAVKO KARAVIDIC, PhD	
<b><i>THE FACTORS OF THE COMPETITIVENESS OF THE NATIONAL ECONOMY IN CONDITION OF GLOBALIZATION .....</i></b>	<b><i>48</i></b>
ZORAN KARAVELIC, PhD DEJAN KARAVELIC, MA	
<b><i>INNOVATIVE PROPENSITY OF THE WESTERN BALKANS .....</i></b>	<b><i>63</i></b>
DRAGAN IVKOVIC, PhD VLADIMIR KNEZEVIC, PhD	
<b><i>STRATEGIC IMPORTANCE OF OPEN INNOVATION FOR SMES ..</i></b>	<b><i>88</i></b>
BORIS JEVTIC, MSc RADMILA GROZDANIC, PhD	
<b><i>DELEVERAGING OF THE PUBLIC SECTOR AND THE OUTLOOK FOR ECONOMIC GROWTH IN SERBIA .....</i></b>	<b><i>106</i></b>
SLAVOLJUB SLJIVIC, PhD DRAGANA VOJTESKI-KLIJENAK, PhD	
<b><i>TOURISM AS A RESOURCE FOR SUSTAINABLE ECONOMIC DEVELOPMENT IN THE REPUBLIC OF SERBIA .....</i></b>	<b><i>122</i></b>
FILIP RADOTIC, MSc ZORAN MASIC, PhD	
<b><i>THE LEGAL NATURE OF EUROPEAN UNION .....</i></b>	<b><i>148</i></b>
ALEKSANDAR MINKOV ANA OPACIC, PhD	
<b><i>A COMPARATIVE ANALYSIS OF MACROECONOMIC FORECASTS ACCURACY IN SPAIN AND ROMANIA .....</i></b>	<b><i>168</i></b>
MIHAELA SIMIONESCU, PhD ELENA JOVICIC	
<b><i>THE IMPACT OF GLOBALIZATION ON THE SOVEREIGNTY OF THE REPUBLIC OF SERBIA AND NEIGHBORING COUNTRIES..</i></b>	<b><i>182</i></b>
BORISLAV GALIC, MA	

<b><i>II PART. CREATING AND GROWING A SUSTAINABLE AGRIBUSINESS.....</i></b>	<b><i>195</i></b>
<b><i>ENVIRONMENTAL ASPECTS OF SUSTAINABLE DEVELOPMENT OF COMPANIES .....</i></b>	<b><i>197</i></b>
KATARINA KANJEVAC MILOVANOVIC, PhD ALEKSANDRA KOKIC ARSIC, PhD	
<b><i>RURAL DEVELOPMENT STRATEGY IN THE LIGHT OF SERBIA JOINING EUROPEAN UNION .....</i></b>	<b><i>214</i></b>
MARKO PROTIC, MSc GORAN DIMIC, MSc	
<b><i>PUBLIC WAREHOUSE SYSTEM IN SERBIA .....</i></b>	<b><i>238</i></b>
ALEKSANDAR TODOROVIC, MSc VLADIMIR VARADJANIN, MSc	
<b><i>THE GREAT INSTITUTIONAL STRATEGIST IN MEXICO: AN EVIDENCE OF MONSATO .....</i></b>	<b><i>255</i></b>
JOSÉ VARGAS-HERNÁNDEZ, PhD HUGO CESAR ENRÍQUEZ GARCÍA	
<b><i>ECONOMICAL ASPECTS OF ORGANIC FOOD PRODUCTION .....</i></b>	<b><i>266</i></b>
MIRELA TOMAS SIMIN, MSc RADOVAN PEJANOVIC, PhD	
<b><i>SUSTAINABLE LIVELIHOOD ASSETS AND WOMEN AGRICULTURAL ENTREPRENEURSHIP .....</i></b>	<b><i>286</i></b>
MOHAMMAD SHAJAHAN KABIR, PhD MOHAMMAD MUSFEQUS SALEHIN, PhD	
<b><i>CRISIS COMMUNICATION IN AGRIBUSINESS, MEDIA AND CONSUMERS .....</i></b>	<b><i>309</i></b>
DRAGANA JOVANOVC, PhD VESNA BALTEZAREVIC, PhD	
<b><i>NEW CRITERIA FOR SUCCESS OF AGRARIAN FIRMS .....</i></b>	<b><i>324</i></b>
GORAN MAKSIMOVIC, PhD RADOVAN PEJANOVIC, PhD	
<b><i>DIAGNOSTIC STUDY OF AGRICULTURAL POTENTIAL OF THE MUNICIPALITY OF BUJANOVAC, IDENTIFYING STRATEGIC VALUES AND STRATEGIC DEVELOPMENT OBJECTIVES IN THE FIELD OF AGRICULTURE .....</i></b>	<b><i>340</i></b>
EDITA KASTRATOVIC, PhD MILAN DRAGIC, PhD	



## ***FOREWORD***

Taking into consideration that the nations of the Western Balkans face significant economic difficulties as well as difficulties in effective implementation of sustainable development objectives, the book named “ECONOMIC GROWTH AND SUSTAINABLE DEVELOPMENT CHALLENGES: SERBIA AND WESTERN BALKAN COUNTRIES” without doubt give an contribution to clarifying the number of thematic multidisciplinary questions. The current economic situation of Serbia is far from great, including forecast budget deficit of 8.3 percent of the GDP, rising public debt and high unemployment rate. That's why any research which would potentially be country's help to become a functioning market economy able to face competitive pressure on the European Union's internal market should be most welcomed.

Sustainable development as a concept which covers a wide range of economic, social and environmental issues is among other our ethical and moral obligation to the future generations. Our needs should be met without compromising the ability of future generations to meet their own needs. Systems will fail if they do not remain in balance. The presented papers share theory and best practices regarding the sustainability challenges facing both developed and developing countries. Special emphasis is given to sustainable competitiveness which could be “the remedy to the cancer of short-termism”.

The papers reviews Serbia's capacity to take on the obligations of membership, i.e. the *acquis* expressed in the Treaties and the policies of the Union, with accent to rural development. The process of transition in the Western Balkan countries lead to unfavorable tendencies in agricultural productivity adversely affected its competitiveness and consequently, the competitiveness of the rural economy as a whole. This means that necessary reconstruction of agriculture is still far from completion. Particular attention in this book is devoted to the use of information and communication technology. Evidence linking information and communication technology to an increase in GDP has spurred its use in agriculture and rural development.

This publication should be seen as a part of collective effort to recommend adequate policies and institutional reforms in order to increase economic growth and innovation. Particular quality is given to this publication by the participation of the foreign authors from the region and other parts of the world.

September, 2014

Belgrade, Serbia

Tatjana Brankov, PhD



***I PART.***  
***FACTORS AFFECTING ECONOMIC GROWTH AND***  
***COMPETITIVENESS***





# **THE EVALUATION OF SUSTAINABLE COMPETITIVENESS OF THE WESTERN BALKANS COMPARED WITH THE EU**

Vladimir Knezevic, PhD<sup>1</sup>

Dragan Ivkovic, PhD<sup>2</sup>

## **ABSTRACT**

*This paper deals with the sustainable competitiveness of the Western Balkans in comparison with the countries of the European Union. One of the aims which is preceded this side view, and a brief introduction of our experts with the relatively new concept of the World Economic Forum - the sustainable competitiveness. The relationship and mutual dependence between environmental sustainability and social sustainability is shown, as well as two equally important elements of long-term competitiveness. Thus, by calculating the SCI, we get a kind of correction GCI to 20% up or down. The first major research results, and the application of these concepts in practice, we get a chance to look at sustainable competitiveness even 121 of the world economy. Given that almost all EU Members and the entire Western Balkans are covered, we have the opportunity to apply the methods of comparative look at long-term perspective of economic competitiveness of these two groups. A very big gap between Serbia and her neighboring countries, which also apply to admission to euro integration, is worrisome. For this reason, and because of the long-term prospects of their economies in terms of globalization, it is essential that in these countries awareness of the importance of sustainable competitiveness is expanded, and to conceptualize and implement measures to improve environmental sustainability and social sustainability in the direction suggested by the World Economic Forum.*

**Key words:** *Western Balkans, The European Union, Sustainable Competitiveness, Environmental Sustainability, Social Sustainability*

**JEL Classification:** *A10, A13*

**UDK:** *338:339.137.2(497) 338:339.137.2(4-672EU)  
502.131.1(497) 502.131.1(4-672EU)*

---

<sup>1</sup>Vladimir Knezevic, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, vknezevic40@yahoo.com

<sup>2</sup>Dragan Ivkovic, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, dragan.ict@gmail.com

## ***INTRODUCTION***

For more than three decades in economic theory, the term of sustainable development appeared. This approach is especially developed since the 80s of the last century, and is widely accepted by most reputable institutions that are involved in the monitoring of the global economy. For the first time in the report on global competitiveness in the world 2011-2012 we come to handle this matter by the World Economic Forum. Specifically, is seen to GCI (Global Competitiveness Index), which is regularly treated in the annual reports of this forum since 2005, do not reflect the long-term perspective of competitiveness, but measures only the current performance of each national economy.

This is the main reason for definition the sustainable competitiveness index SCI, as well as outlining the methodology for its measurement and monitoring. This index includes factors that determine competitiveness in the long run, even if some of them are not integrated in the GCI. This, so to say, the general concept of competitiveness which is preliminary defined "... as a set of institutions, policies and factors that determine the level of productivity of a country, while ensuring the ability of future generations to meet their own needs." (Schwab 2011:54)

The concept of sustainable competitiveness include all factors contained in GCI who have long-term impact on competitiveness, as well as some new ones, concerning the environment, demography and society. Sustainable competitiveness according to this approach relates to the time horizon of the next twenty years. Here we have as many as 17 pillars of sustainable (or long term) competitiveness which are by their nature divided into 5 even groups. (We recall that the already known and mentioned GCI is based on 12 pillars which are grouped into three sections.)

In any case, the interesting original concept of long-term competitiveness index was not operationally useful in 2011, but in this report actually began its development. Then it was noted that there are a whole set of issues that affect this aspect of the competition, but it has not resolved the question of their quantification in a satisfactory manner, and in particular:

1. Frequency of political conflict and mass violence
2. Imbalances in the financial market with crisis potential
3. The frequency of natural disasters
4. Violation of the environment and use of resources
5. Food security
6. The spread of diseases that are not contagious
7. Protection of workers

The presentation that follows will show the importance of this new approach, the prospects of further development of this methodology, the first results of the monitoring sustainable competitive global economy, and especially what we are most interested in, that is, the countries of the Western Balkans in comparison with the EU on this issue.

It is the latter, and is the main goal of our consideration. Since all countries in this region seeking full membership in the regional organization, it is important to determine where they are viewed from this point of view in relation to the Member States.

At the same time we want to emphasize the usefulness of the methodology developed by the World Economic Forum for measuring and monitoring sustainable competitiveness because it is an innovation in economic theory and practice, as far as considering the long-term perspective of the individual economy in global terms.

## ***THEORETICAL BACKGROUND***

In the next Global Competitiveness Report 2012-2013 of the world, the World Economic Forum has continued to work on further development of indicators and effectively established a new concept of sustainable competitiveness. The basic idea in designing the SCI is to show the relationship between economic development, as well as a long-term phenomenon, environmental management and social sustainability. Is therefore led to a kind of redefinition of the very concept of sustainable competitiveness that now, according to the World Economic Forum, means: "... a set of institutions, policies and factors that make up the nation to remain productive in the long run while ensuring social and environmental sustainability." (Schwab 2012:52-53)

This means that the long-term competitiveness is considered as a kind of correction GCI indicators relating to the management of environmental and social sustainability. This is considered that environmental sustainability is: "... the institutions, policies and factors that ensure the effective management of resources to ensure the prosperity of present and future generations." (Schwab 2012, p.52) On the other hand, social sustainability is: "... institutions and policy factors that allow all members of society to live in the best possible health, participation in politics, security, and to maximize their potential to contribute to and use of economic prosperity for the country in which they live." (Schwab 2012:52)

## ***ENVIRONMENT***

First we will say something about the influence of environmental sustainability on the competitiveness of the national economy. In any case, this is theoretically a new approach to studying the relationship between ecology and economy. It departs from the traditional understanding according to which the environment is basically a certain limit of economy growth because it uses non-renewable resources and further narrows the possibility of pollution that causes the economy (Schwab 2013:56). In fact, in practice, we can consider events and trends that we provide for the right to conclude that the environment does not have to be a

limiting factor in the growth of the global economy. It is more of a lower level of economic development, but as a national economy away from the stage, the growing awareness of the need for environmental sustainability, forming the political will in this sense, comes to technological advances and changes in the economic structure ... It is therefore not unrealistic to expect poor countries pressed urgent need to solve their severe economic problems have as their objective the maintenance of the policy environment as a contribution to sustainable competitiveness in the coming decades. In this aspect global cooperation and kind assistance of developed economies is necessary.

In theoretical terms, we could say that environmental sustainability and long-term competitiveness of the national economy has three primary connection as follows:

- Efficiency in the use of natural resources;
- Improving health;
- Biodiversity for innovation.

Efficient use of natural resources involves extremely rational use of non-renewable and renewable resources only within their regenerative capacity in a reasonable time. This means that in terms of the sustainability of the environment necessary to reconcile economic rationality in the present with the needs of future generations of natural resources. This is also the case in further iteration and reducing environmental pollution. To be in this regard to provide sustainable competitiveness, it is necessary to engage all individuals and public and private institutions. The basis for each activity in this direction is primarily regulated the ownership of all economic resources.

Health of the nation is one of the main factors of competitiveness in the short and the long term. Specificity of sustainable competitiveness is that it is environmental sustainability factor that undoubtedly affects the long-term health of the population. This problem is particularly acute in developing countries, where its initial industrialization may even intensify (Pacific Basin). The world's leading economies (the U.S.) awareness of the impact of environmental quality on national productivity is widespread, and conducted a number of analyzes aimed at determining the quantitative relationship between productivity in the national economy and the performance of different natural environments. We could conclude that, in the long term, investment in environment sustainability indirectly means investing in people's health, and the main economic resource from which ultimately depend on sustainable and maximum competitiveness.

Biodiversity in the shortest represents diversity of plants and animals in an ecosystem. It is very important to the very survival of the people in a particular territory. Thus, degradation of the environment in a particular country threatens the long-term productivity and worsening living conditions and work by reducing certain natural populations, and even their complete disappearance. This causes threats to the raw material base for future economic development and even the survival of humanity through have adverse effects on agricultural production. This problem is particularly



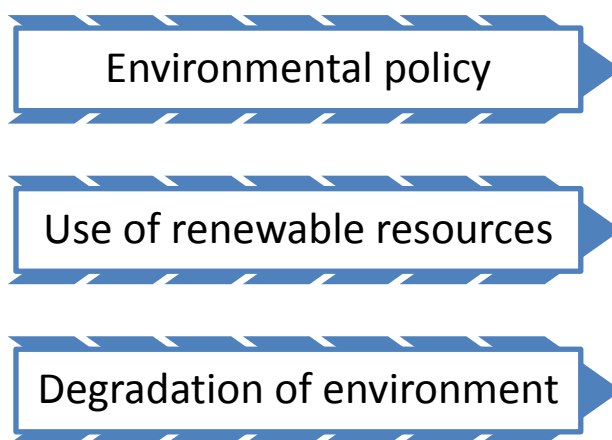
acute in developing countries. For the future of the economy, the most important innovation, a reduction in the diversity of plant and animal life, and reduces the space for innovation and technological advancement, we now feel the most most advanced and tomorrow it may limit competition and other countries.

From all this it follows that the sustainability of the environment, as one of the two elements of sustainable competitiveness has special significance for developing countries as the most direct way threatens the long-term productivity in industries that are highly significant in their economic structure, such as agriculture, fisheries, forestry and tourism.

In addition, the improvement of the environment is another way to contribute to the improvement of sustainable competitiveness, and to the reduction of the occurrence and mitigation of natural disasters should they nevertheless occur. This is primarily to drought, flooding, destructive winds ... Thus is made the protection of all economic resources from destruction, including the most important - people.

It is an undeniable link between environmental sustainability and sustainable competitiveness, which, recall, has a time horizon of two decades. However, it remains questionable how environmental sustainability has an impact on current business productivity. There are indications that this effect, at least at a high level of development, direct and positive (Schwab 2013:58).

Of course, such developed approach to the phenomenon of sustainable competitiveness implies a different methodology for monitoring and measuring. The first we will mention indicators to measure environmental sustainability which are classified into three groups (Figure 1), and then we will analyze the social sustainability as it is understood in the framework of this concept.



*Figure 1. Environmental sustainability*

*Source: Authors*

Each of these groups, however, still consists of three indicators that specifically evaluated.

The policy of environment is monitored and evaluated through:

- Environmental regulations (rigor and application);
- The number of ratified international regulations of environmental protection;
- Protection of the biosphere of the earth.

So, the first indicator shows how much of the territory of a country is environmentally protected, and how these regulations are complied with. This really shows how one country is dedicated to the preservation of its natural resources. Another indicator that shows exactly how much of a total of twenty-five international regulations in the field of a state has ratified, in fact, shows the willingness of the country to international engagement and cooperation in the conservation and enhancement of the environment which is extremely important since it is almost impossible to do so only at the national level. This is closely connected with the protection of the biosphere on earth is practically inseparable, so this whole group of indicators actually assesses the political will of a country to engage in environmental protection.

Using of renewable resources includes:

- The intensity of irrigation in agriculture;
- Forest exploitation;
- Excessive fishry.

As one can see, this group of factors is dealing with rationality, the use of natural resources, and their commercial exploitation. First and foremost is the use of water for agricultural irrigation, which also represents an important element in ensuring food of the population. As for the ecological balance and the impact on the climate, harvesting for commercial purposes is even more important. The data for assessing the value of this indicator is very hard to come by, since the satellite record needed to monitor changes in the size of the territory covered by forests, but must undertake efforts in that direction, considering the great importance. Similarly, the amount of harvested fish, which is economically very important today, but there is a great danger that uncontrolled conger threaten the survival of future generations.

Environmental degradation means:

- The level of air pollution;
- Intensity carbon dioxide emission;
- The quality of the environment.

We can summarize that the first group of indicators that measures the political will to sustain the environment, another measure of economic exploitation of the

most important elements related to environmental sustainability, while the latter measures the actual level already achieved its degradation. This aspect is the most direct way connected with the violation of human health, and is therefore the first indicator related to the concentration of airborne particles harmful to health. It is certain that the deterioration of health of the population today, in the long run jeopardize not only the competition, but perhaps even survival in the future. Therefore, the daily measurement of this phenomenon highlights the growing number of countries. In this connection, the parameter of carbon dioxide in addition to the health component has multiple meanings: represents a measure of energy efficiency, but also the negative impact of climate change that threaten the entire planet. Therefore, the problem of carbon dioxide should be solved globally.

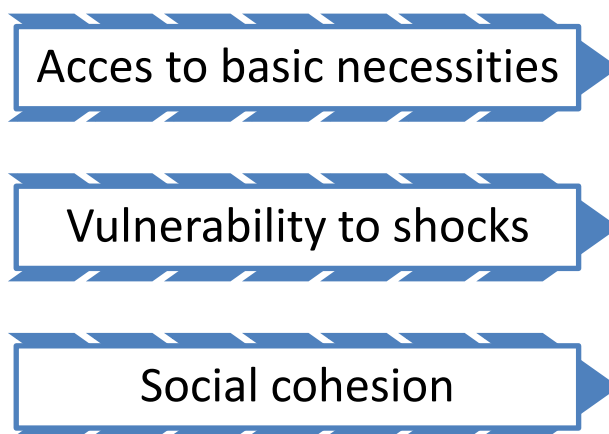
## ***SOCIAL SUSTAINABILITY***

Interest in social sustainability is also recently increasing, but the study of this issue is still very limited. There is a number of reasons. Probably the main two. Firstly, the social dimension of economic growth is due to its specific nature, partly as a side item of theoretical study and economists, and other social sciences. It is located "somewhere in the middle," to think about science among many, therefore, as often happens, remain inadequately treated since it requires a multidisciplinary approach. Second, the social dimension of competitiveness, and the economy in general, probably from all the other factors that affect economic performance, perhaps to a greater extent and more directly related to policy, and also because it is possible that the "pure scientists" avoid shrinking from giving political ocean specific business systems, which in this case is almost impossible to avoid. Therefore, the social dimension of economic development in the second decade of this century has become a subject of serious academic study by renowned international artists and institutions.

Although, as we have already mentioned, every branch of science has its own perspective and its own criteria, time to equalize and standardize in the scientific community is increasingly accepted definition of social components essential to the long-term functioning of the national economy. Human rights, economics, equality and social justice are the common elements of all approaches to this problem.

The inquiry of science is to verify the empirical relationship between social sustainability and its impact on long-term economic performance of national economies, which primarily refers to the economic development and competitiveness, which in this century of globalization of world economic trends are increasingly becoming synonymous. The importance of the social component in the economic outlook of different countries in different parts of the world is becoming more visible to the naked eye, but, as we are still at the beginning of the relevant scientific verification, systematization and quantification of relationships between these phenomena. For now it's only safe to uneven distribution and social unrest block most valuable resource, people, to fully contribute to the economy, and to use the fruits of economic progress.

As for the indicators which are used for evaluating and quantifying the viability of the social, they are grouped as shown in Figure 2



*Figure 2. Social sustainability*

*Source: Authors*

Each group is consisted of three indicators. We'll hold on to them in more detail.

Accessing basic needs, which in fact is a measure of distance from the poverty line, includes:

- Sanitary equipment;
- Availability of healthy drinking water;
- Health care.

Satisfaction of the basic needs for all citizens of a country, in addition to the aforementioned removal of poverty, is also a kind of measure of inclusion. Of course it would be desirable to include here certain indicators related to access and quality to meet some other basic needs, such as, above all, housing and food, but it is estimated that the operating data for most countries currently unavailable. So here they are included in the conditions that are the basis for the development potential of a country.

Sensitivity to the social turmoil among them is a kind of feeling of social safety, and involvement in the economic activities of the country, and is measured by:

- The share of „vulnerable“ employment;
- Size of the shadow economy;
- Degree social protection.

The first indicator measures the percentage of the workforce that provides their livelihood through small enterprise, either through self-employment, either through a small family business. This indicator is important because it is estimated that this type of provision is extremely sensitive to the existence of social turmoil. Representation of underground economy in the national economy is here taken as a measure of social integration of the workforce in legal institutions. The workers in the gray area of economy are almost completely socially neglected, making them extremely vulnerable to any economic disruption. The third indicator measures the ability to protect families from poverty in times of crisis, as well as the ability of individuals to these conditions out of economic difficulties.

Social cohesion is measured by:

- GINI index;
- Social mobility;
- The rate of youth unemployment.

GINI index, as the most popular indicator of equality (inequality) in the distribution of income in talks about poverty rate in one country and poverty is what closes the perspective of vulnerable families. This indicator is highly associated with social mobility. Unlike the index, which is a statistical category, the second indicator, which is evaluated on the basis of the survey, it is estimated the chances of individuals to overcome their social progress status of families from which they originated, which is extremely important for the long-term competitiveness of each national economy. Low social mobility threatens valuable potential of each company, and these are young people, who are poor in terms of social mobility, passivate, emigrate or surrender socially harmful activities, all of which leads to an increase of tension and political destabilization. In this context, it adds a third indicator that literally measures the perspective of a society in the long run. Youth unemployment is a significant loss in the present, it can be a significant part of the workforce permanently passive, vulnerable part of the population to hinder and prevent starting a family and raising productive offspring.

## ***RESULTS OF MEASURING SUSTAINABLE COMPETITIVENESS***

The methodology of already known and standardized Global Competitiveness Index (GCI) is extended in this way, using social pillar of sustainability and environmental sustainability, to get to the complex measures of sustainable competitiveness, and to the sustainable competitiveness index (SCI). The SCI is the average value of two custom GCI: correction using social sustainability and adjustments based on environmental sustainability. In doing so, it assumes that both approaches are equally affect the correction. This shows us the concept that the two sustainability, social, and sustainability of the environment, correcting the

current competitiveness of the national economy in the long term, and help to assess the competitiveness of a particular national economy in the future, ie the next 20 years.

Also, all the above-mentioned indicators of social sustainability, a total of nine, and as many indicators of environmental sustainability, which are described above, are of equal influence. For each national economy scores are measured from 0 to 7 that is the end of all quantified after mathematical operations, as well as the overall social and environmental sustainability of concrete industry, as a kind of correction coefficients, whose values can range from 0.8 to 1.2.

At the end the GCI is multiplied by the corresponding coefficients (0.8 to 1.2) in accordance with the value of the two new pillars of sustainable competitiveness (social viability and sustainability of the environment). These two resulting values are added together and divided by two. In this way, finally, in total, raised, or lowered, a basic value of the Global Competitiveness Index to a maximum of 20%.

Pilot study was carried out in 79 countries, according to available data, 2012, and in 121 countries in 2013. Superficial glance at these figures tells us that the availability of data for evaluation of sustainable competitiveness for far weaker than those required for the calculation for standard index of global competitiveness, given that the country coverage is lower. However, it also noted the significant progress in this respect in a relatively short period of time. However, it is still very difficult to draw conclusions about the movement of sustainable competitiveness in some countries. This is because period of only two years is relatively short, and about a relatively modest number of countries included in both of these reports.

## ***SUSTAINABLE COMPETITIVENESS INDEX OF THE WESTERN BALKANS AND THE EUROPEAN UNION***

We will take this opportunity to keep the results of the first countries in the Western Balkans, during which we will illustrate the foregoing restrictions. In both World Economic Forum report concerning sustainable competitiveness does not include all the Western Balkan countries (non-EU), namely, to remind: Serbia, Bosnia and Herzegovina, Montenegro, Macedonia and Albania. Coverage of the region by measuring the sustainable competitiveness is partial, as observed in the first report includes data for only three countries, and only in the following are all represented.

According to the Report on competitiveness in the world, for all the countries of the Western Balkans are forward-exposed methodology observed the following assessment of environmental sustainability:

*Table1. Sustainable competitiveness in the Western Balkans*

County	SCI	Impact on GCI
Montenegro	4,13	Neutral
Macedonia	3,91	Negative
Albania	3,76	Neutral
Serbia	3,66	Neutral
Bosnia and Herzegovina	3,55	Negative

*Source: Schwab, 2013:68-69*

When considering sustainable competitiveness in the Western Balkans we should remind that all these countries are relatively low ranked according to the value of the Global Competitiveness Index. In the same year in which the related data in the table is a country best placed Montenegro in 67th place, and even the weakest Serbia 101st place out of 148 surveyed countries. Also here we can see that the index value is relatively low, given that the scale of 1 (lowest) to 7 (strongest). In the column "Impact", we can see if sustainable competitiveness factors affect positively or negatively the ongoing competition, ie, whether it is in a country's sustainable competitiveness is better or worse than the current one. It's kind of mark perspective of competitiveness for an economy. And here we have a very poor country in this area. So, not only is their competitiveness, as we have seen, weak current period, but of prospects in this regard are not great. Specifically, we see very easily how none of the five observed economy does sustainable competitiveness better than the current. Even in Macedonia and Bosnia and Herzegovina, see, you are in great danger of their competitiveness in the decades to weaken the influence of the factors explained above environmental sustainability and social sustainability.

Thus, we may conclude in general that the Western Balkans constitute uncompetitive economy with poor prospects, and therefore all should make efforts to improve the environment and society as a whole, which can fix the long term in this unsatisfactory situation. This is especially true of Bosnia and Herzegovina and Macedonia, which have good prospects declining competitiveness of the present study. In fact, as is seen from the table above, in these countries the factors of sustainable competitiveness in the long term negative impact on competitiveness. And the rest of the economy from groups currently have no prospect of improving the competitive position since the sustainable competitiveness factors do not affect them positively in this regard.

As for the countries of the European Union, they are not immune to the lack of relevant data for calculating sustainable competitiveness index. In fact the observed, the most complete report of the World Economic Forum's Global Competitiveness for the 2013-2014 year, five EU countries are not ranked due to lacking complete data for these purposes. These are Greece, Romania, Slovakia, Luxembourg and Malta. Other countries have a sustainable competitive as shown in the following table.

*Table2. Sustainable competitiveness in European Union*

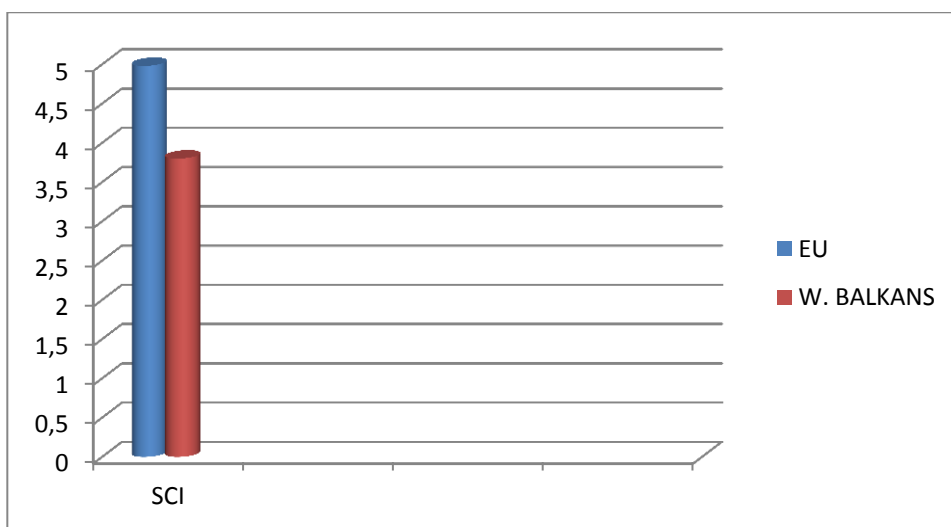
Ordinal	Country	SCI	Impact
1.	Finland	6,40	More positive
2.	Germany	6,23	Less positive
3.	Sweden	6,21	Less positive
4.	Netherlands	6,13	Less positive
5.	Austria	5,98	More positive
6.	United Kingdom	5,85	Less positive
7.	Belgium	5,67	Less positive
8.	Denmark	5,66	Less positive
9.	France	5,56	Less positive
10.	Ireland	5,32	Less positive
11.	Estonia	4,93	Less positive
12.	Latvia	4,80	Less positive
13.	Czech Republic	4,77	Less positive
14.	Lithuania	4,76	Less positive
15.	Spain	4,71	Neutral
16.	Slovenia	4,64	Less positive
17.	Portugal	4,53	Neutral
18.	Poland	4,50	Neutral
19.	Italia	4,50	Neutral
20.	Cyprus	4,42	Neutral
21.	Hungary	4,37	Neutral
22.	Bulgaria	4,25	Neutral
23.	Croatia	4,24	Neutral

*Source: Schwab, 2013:68-69*

At first glance we could conclude that the sustainable competitiveness of EU member countries (for which data are available) is satisfactory. The worst ranked country among them, according to this criterion, is the youngest member Croatia that has the index value sustainable competitive 4.24. The best among them Finland's even one in the world according to this criterion, just behind Switzerland. Perhaps even more impressive is that the average value of SCI in these countries almost 5, or more precisely 4.98. Even in one of these countries is not sustainable competitiveness weaker than the current, which in itself was a great success. It simply means that the EU in terms of competitiveness is ready for the challenges of the future. In more than half the elements of sustainable competitiveness adjusted current GCI upwards of 5 to 15%. In eight countries which are at the bottom of this table corresponds to a sustainable competitive running, or GCI slightly adjusted up or down to 5%. In the case already mentioned of Finland, and Austria, it is expected that in the coming decades, more significant increase competitiveness, given that in their cases the factors of sustainable competitiveness positively correct the current 15 to 20%, which in this methodology represents the theoretical maximum.



Comparing the countries of the Western Balkans to the EU countries in terms of sustainable competitiveness we see a big lag. It is illustrative that the best ranked country of the Western Balkans, Montenegro has less than SCI lowest rated EU countries, Croatia. We can compare whether the average value for each group the following picture:



*Figure 3. SCI - average for countries in the W. Balkans and EU*

*Source: Authors*

It is necessary to be pointed out that no country in the EU according to this research in the coming decades is not expected to decline in the competitiveness of its economy, because, according to the results of the measurements, in any case, sustainable competitiveness factors have a negative impact on the GCI.

## ***PROSPECTS OF THE WESTERN BALKANS***

In general, we see that countries have weak competitiveness of the EU, both current as well as sustainable. Since all oriented towards full membership as soon as possible in this integration, there is interest in improving the sustainable competitiveness of the economy that will improve their development prospects. The analysis of Table 1 shows that no country in the observed group has no long-term competitiveness better than the current. In Bosnia and Herzegovina, Macedonia, the impact factors of sustainable competitiveness even negative, indicating that the already unsatisfactory competitiveness of these countries in the future may be even worse. This implies in particular the question: how will this country in the foreseeable future

approach to EU membership if we look at the economic criteria. On the other hand, we see that in the leading European countries in terms of the value of SCI, we have a trend of positive impact of social sustainability and environmental sustainability of the GCI observed in the long term.

In addition to a general conclusion about the necessity of improving the sustainable competitiveness of the Western Balkans, would be useful to observe that the elements are particularly evident lag to them in time to come, paid special attention.

*Table3. Social sustainability in the Western Balkans*

County	Score	Impact on GCI
Montenegro	4,20	Neutral
Macedonia	3,99	Neutral
Albania	3,80	Neutral
Bosnia and Herzegovina	3,66	Negative
Serbia	3,58	Negative

*Source: Schwab, 2013:68-69*

As with the overall sustainable competitiveness, the least they placed the same two countries, but they swapped their positions. In both Bosnia and Herzegovina and in Serbia just social sustainability long-term negative effect on competitiveness. It is particularly worrying that this Serbian lowest vote. Therefore, this implies the necessity for making special efforts to expand access to basic needs, reducing susceptibility to social turmoil and greater social cohesion. All this is necessary in order for the two countries in the future in terms of competitiveness even closer Montenegro, if not in the foreseeable future EU.

*Table 4. Environmental sustainability in the Western Balkans*

County	Score	Impact on GCI
Montenegro	4,13	Neutral
Macedonia	3,83	Negative
Serbia	3,74	Neutral
Albania	3,72	Neutral
Bosnia and Herzegovina	3,44	Negative

*Source: Schwab, 2013:68-69*

Here we see that in terms of environmental sustainability have several characteristic in relation to the overall sustainable competitiveness. Montenegro and Bosnia and Herzegovina cling to their positions, but the situation of other countries are different. Macedonia right policy environment, the use of renewable resources and prevent harm to the environment that may be long-term and most competitive economies in the region. On the other hand, the situation in Serbia is not so difficult in

this area, as is often the public represents, if we take into account comparable economies. Regarding environmental sustainability, the country is placed exactly in the middle, a long-term impact on the competitiveness of the neutral current.

In any case, we hope that further development of the monitoring and reporting of the World Economic Forum on the sustainable competitiveness of countries in the world even more to help these countries in improving their otherwise weak competitiveness in the long term. For now, as we have seen, we just want to know how and how much a country is lagging behind in terms of social sustainability or environmental sustainability, but when we have an overview of the results and the methodology for the detailed elements that make up these factors, it will be a valuable guideline for taking concrete steps in this direction.

This is important, as we have seen, for all the countries of the Western Balkans, and particularly for those that are rated at least one of the two basic elements of sustainable competitiveness in those where the impact is negative. We expect, therefore, that perhaps in the next report on Global Competitiveness issued by the World Economic Forum, meet with the results of the sustainable competitiveness of the first level of decomposition of the sustainability of the environment and social sustainability, namely, to remind:

1. Environmental policy;
2. Use of renewable resources;
3. Degradation of environment;
4. Access to basic necessities;
5. Vulnerability to shocks;
6. Social cohesion.

Already to this level of data availability allow a more detailed analysis of the problems each country in determining the size of the impact, the direction and strength of action for each of the listed elements individually, which is the first prerequisite for overcoming the problem.

Specifically, for Serbia, as the lowest-ranked country on social sustainability, in addition to the negative impact, it would be very useful to see the reviews, and the importance of her singles have: Access to basic necessities, Vulnerability to shocks and Social cohesion. Similarly, in Bosnia and Herzegovina would be important information relating to its Environmental policy, Use of renewable resources, and Degradation of environment.

Of course, if the methodology for measuring and reporting the World Economic Forum on the SCI values for the global economy develops as is the case with the GCI, we expect all complete picture of the world, both in terms of the number of countries covered, as well as the presentation of quantified indicators.

This means it could be expected in the next report, not just the data on six indicators listed above, but very fast and all 18, as already exist in this methodology. As we have seen, each of the primary indicators is decomposed into three. This in short is to be able to expect what is especially important for all the

countries of the Western Balkans, given the current situation in this area has the need for effective action, and that the results are based on the following indicators:

1. Environmental regulations;
2. The number of ratified international agreements of environmental protection;
3. Protection of the biosphere of the earth;
4. The intensity of irrigation in agriculture;
5. Forest exploitation;
6. Excessive fishery;
7. The level of air pollution;
8. Intensity carbon dioxide emission;
9. The quality of the environment;
10. Sanitary equipment;
11. Availability of healthy drinking water;
12. Health care;
13. The share of „vulnerable“ employment;
14. Size of the shadow economy;
15. Degree social protection;
16. GINI index;
17. Social mobility
18. The rate of youth unemployment.

So if, for example, determined, as is the case in the Global Competitiveness Report 2013-2014, the weak sustainable competitiveness of Serbian primarily due to the lowest social stability in the Western Balkans, further analysis may be found that this is primarily due to the strong vulnerability to shocks, and that this, in turn, is primarily caused by the excessive size of the shadow economy, and would then share in the promotion of sustainable competitiveness could be correctly oriented. For now, in the absence of these data, we can only guess. Similarly, we see that the weakest sustainable competitiveness of Bosnia and Herzegovina in the observed group of countries, primarily the result of environmental sustainability. For now, we can only assume that this is most likely due to improper use of renewable resources, primarily excessive and improper exploitation of forests.

We see that the perspective of competitiveness of the Western Balkans largely depends on further progress in the development and application of these methods the World Economic Forum for monitoring and measuring sustainable competitiveness. It would be a valuable basis for taking effective measures to improve the sustainable competitiveness of these countries and their accession to the EU.

## ***CONCLUSION***

In this paper, we briefly introduced our professional public with a relatively new concept of the World Economic Forum, sustainable competitiveness and the first major results of the research, and the application of these concepts in practice. It was pointed out that sustainable competitiveness rests evenly on environmental sustainability and social sustainability, and the data is more detailed elaboration of methodology for measuring and evaluating these basic factors. Despite the lack of a valid database, which typically accompany each initial studies have focused on such a complex and broad issues, the first of a larger report that relates to the 2013-2014 year, it is possible to roughly perceive achievements of the European Union in this field, as and the situation in the Western Balkans. A very big gap between Serbia and her neighboring countries also apply for admission to evrointegration, is worrisome. For this reason, and because of the long-term prospects of their economies in terms of globalization, it is essential that these countries expand awareness of the importance of sustainable competitiveness, and to conceptualize and implement measures to improve environmental sustainability and social sustainability in the direction suggested by the world Economic Forum.

## **REFERENCES**

- [1] Behrad, S. (2013) Performance Measures for Social Entrepreneur Institutions: Case of Iranian National Commission for UNESCO, *International Review*, br. 1-2
- [2] Bošnjak M. (2005) Konkurentnost i razvoj kao poluge evropske perspektive Srbije, *Economic Annals* No. 166, July-September
- [3] Ferbenks, M. i Lindzej, S. (2003) Oranje mora, *Stubovi kulture*, Beograd
- [4] Ivković, D. i ostali (2012) *Privredni sistemi, Visoka škola za poslovnu ekonomiju i preduzetništvo*, Beograd
- [5] Knežević, V. (2012) Contribution of entrepreneurship education competiveness of the economy as a measure of its success in Radovic-Markovic, M. (Eds.), *Education*, Beograd: Faculty of Business Economics and Entrepreneurship, pp.219-240.
- [6] Knežević, V. (2013) Indeks dugoročne konkurentnosti (SCI) i ekologija, *Ecologica*, No-72, Beograd, str.715-719
- [7] Knežević, V., Kvirgić, G., Ivković, D. (2014) Socijalna održivost kao element održive konkurentnosti nacionalnih privreda, *Svet rada*, Vol.11 br. 1/2014, str. 80-87.
- [8] Mazzucato, M. (2013) *The entrepreneurial state*, ANTHEM PRESS, London-New York
- [9] Schwab, K. (Eds.). (2010). *The global competitiveness report 2010-2011* Geneva: World economic forum. Downloaded from: <http://www.weforum.org/reports> (18.03.2014.)
- [10] Schwab, K. (Eds.). (2011). *The global competitiveness report 2011-2012* Geneva: World economic forum. Downloaded from: <http://www.weforum.org/reports> (18.03.2014.)
- [11] Schwab, K. (Eds.). (2012). *The global competitiveness report 2012-2013* Geneva: World economic forum. Downloaded from: <http://www.weforum.org/reports> (18.03.2014.)
- [12] Schwab, K. (Eds.). (2013). *The global competitiveness report 2013-2014* Geneva: World economic forum. Downloaded from: <http://www.weforum.org/reports> (18.03.2014.)

# **COMPETITIVENESS AS THE SYSTEM OF PROPERTIES AND CHARACTERISTICS OF THE MARKET ECONOMY ENTITIES**

*Milos Lucic, MSc<sup>3</sup>*

*Slavko Karavidic, PhD<sup>4</sup>*

## **ABSTRACT**

*The aim of this paper is to highlight the fact that in times of increasing economic instability, strengthening the competitive business environment, as a system of properties and characteristics of market economy entities, means a high level of organizational performance and capacity for efficient market, technological and competitive response to the challenges of times. Growth and development include creating a quality business environment through the development of innovation and competence for decision making by identifying the individual factors of capacity and resources usage of the organization and the increase of business entrepreneurial capacity - manufacturing and technology portfolio and new ways and possibilities of market positioning. According to the research, there is a general conclusion that competitiveness, being a process of bidding and competitive pressure of other entities, is a strong differentiating factor of economic entities in the competition, which makes some of the companies more successful and profitable in comparison to others.*

**Key words:** *Competitiveness, Growth, Development, Positioning, Profitability.*

**JEL Classification:** *A11*

**UDK:** *005.21:339.137 339.9 339.13(100)*

---

<sup>3</sup>Milos Lucic, Faculty of Business, Economics and Entrepreneurship, Belgrade, Serbia, milosmisalucic@gmail.com

<sup>4</sup>Slavko Karavidic, Faculty of Business, Economics and Entrepreneurship, Belgrade, Serbia, skaravidic@gmail.com

## ***INTRODUCTION***

"If you know the enemy and if you know  
yourself, your victory is inevitable"

Sun Tzu

The revised business terms in the late XX and early XXI century in international markets represent the reality companies inevitably encounter. It is the period of increasing globalization, more severe competition, the development of the Internet and the significant strengthening of the role of consumers through sophisticated requirements of new product development and a drastic reduction in product life cycle. As the consequence of dynamic technological development and consumer homogenization, national markets have become tight and thus many companies have expanded their business, finding new markets that have become an important factor.

Responding and adapting to the changes in contemporary conditions of market globalization is the key to successful management and preparation of companies for all market challenges and also the basis for achieving competitiveness in the global market.

Competitiveness arises when organizations are struggling or compete to achieve a desired goal or a particular outcome (Kolter, 2010a:202).

In such a business environment it is necessary to preserve each end customer, and a particular challenge is the "conquest" of new customers in existing but also new markets. Modern market economy means a daily struggle with competition for every consumer, and as a challenge there arises ability to communicate effectively with customers as well as ability to build a brand. The solution is positioning - strategies for taking a specific place in the minds of consumers.

The main challenge of positioning is to define a position among competitors in the market. The ideal position would be that, through the elements of similarity, the company is in a category that is of interest to the customer, and that, through the elements of diversity within the given category, it is the customers' first choice. In other words, a competitive distinction should be very important for a particular consumer, it should be recognizable and credible. In addition to the consumers' perspective, the criteria from the perspective of the company are also important, including: feasibility, communication and sustainability.

First of all, it is necessary to consider completely clearly and accurately a position of the company in the minds of consumers. While looking at the current position, different tools are being used, of which the most common is perceptual mapping. In such circumstances, the most important factor of competitiveness and economic development is knowledge, and the most important forms of competitiveness between companies and countries are taking place in the sphere of knowledge. Knowledge is the factor of crucial importance to the position of company, market positioning and its profitability.



The aim of this paper is to highlight the fact that in times of increasing economic instability, strengthening the competitive business environment, as a system of properties and characteristics of market economy entities, means a high level of organizational performance and capacity for efficient market, technological and competitive response to the challenges of times.

According to the research, there is a general conclusion that competitiveness, being a process of bidding and competitive pressure of other entities, is a strong differentiating factor of economic entities in the competition, which makes some of the companies more successful and profitable in comparison to others.

## ***ENTERPRISE COMPETITIVENESS***

Enterprise competitiveness is the ability of companies to offer products and/or services that meet the quality standards of the local and world markets at prices that are competitive, but that enable business profitability.

Competitiveness is today one of the most important economic issues. The global economic crisis of all economies has contributed to the general effort to be more competitive, ie. better than others.

Porter points out five competitive forces, namely (Porter, 2008:79-93):

- Bargaining power of suppliers
- Bargaining power of buyers
- Threat of new entrants
- Threat of substitutes and
- Rivalry of existing competitors.

The above-mentioned five forces form the structure of each individual production and determine their long-term profit potential.

The essence of competitiveness is in the structure and development of the industry but also in the way with which companies gain and maintain a competitive edge in those segments of the industry where products and processes are created and improved (Porter, 2008:166). The most important goal of a country is to allow its citizens a high standard of living and its steady growth. The ability to do so depends on the productivity with which in a particular country labor and capital are used. It depends on the quality and characteristics of products as well as the efficiency with which these products are provided (Porter, 2007:284).

## ***ELEMENTS OF MICRO COMPETITIVENESS***

Micro competitiveness aims directly at the level of productivity of the company. The most important components of microeconomic competitiveness are:

- Purposeful business and corporate strategy (COS – Company sophistication and strategy);
- Quality of the national business environment (NBE National Business Environment);
- State of cluster development (State of cluster development) (Porter, 2008:213-230).

Purposefulness of the company, represented through the operating practices and strategies of the company, according to Michael Porter is an extremely important component of microeconomic competitiveness. Since the productivity of a country is defined through the productivity of its companies, some economies can be the competitive ones only if the companies that operate within it are competitive, regardless of whether they are domestic or foreign-owned companies.

Productivity will increase if companies improve operational efficiency and adopt best global practices that include unique products and innovative means of production and service delivery, and if it uses low prices of factor inputs, as they contribute to sustainable prosperity.

Quality of the national business environment (NBE) has a direct impact on the productivity of the company. The realization of productive strategies and operational practices of companies is only possible with effective administrative, physical and communication infrastructure, quality suppliers, highly educated human resources, advanced research institutions etc. The quality of the business environment is directly derived from the improvement of all four components of Porter's diamond (Porter, 2008):

- Quality of factor conditions (raw materials, skilled labor, infrastructure)
- Quality of demand conditions (nature of domestic demand with products and services)
- Strategy, structure and rivalry of firms
- The existence of related and supporting activities (related and ancillary branches) with the presence of developed clusters.

State of cluster development is the third element of microeconomic competitiveness linking national business environment and purposefulness of business firms. Clusters represent a natural connection of specialized knowledge, skills, infrastructure and supporting industries, aiming at productivity.

Clusters include horizontal networking of the companies in the same sector at a local regional level, as well as vertical networking of the mutually complementary companies from different sectors. In this way a higher degree of concentration, harmonization and strengthening interaction links between interest-based interconnected companies, scientific research and financial institutions as well as other

government and non-governmental institutions is provided in order to increase the competitive advantage of each participant, but also the cluster as a whole.

Clusters increase the capacity of innovation, technology diffusion, the number of professionals and thus increase productivity. By working together, companies linked to a cluster generate synergy effects arising from the improvement of interaction of mutual ties and the exchange of information, knowledge and personal experiences.

A cluster is a system of interconnected companies and institutions that are taken as a whole, greater than the sum of the parts. Clusters play an important role in the competitiveness, which implies significant consequences for companies, governments, universities and other institutions within an economy (Porter, 2008:267).

## ***COMPETITIVE ADVANTAGE AT THE MICRO LEVEL***

What makes some companies more successful than others? Why do some companies have continuous growth in revenue and profits? Why do some companies regularly carry the title of "best" or "most profitable" companies on the ranking lists?

Almost every company has the ability (capacity) and resources that enable it to deal with its activities. However, not every company is able to effectively utilize the resources or capabilities in possession to gain a sustainable competitive advantage. Competitive advantage, by its nature, involves an attempt to gain an advantage over other competitors.

Warren Buffett, an American businessman and one of the most famous investors, who according to the Forbes list for 2013, is ranked the fourth richest in the world, says he wants to buy only those companies that have the prospect of achieving sustainable value creation. He suggests that buying a business is like buying a castle surrounded by a moat that wants to be deep and wide in order to fend off all competition.

When a company makes a profit that exceeds the average in its industry it is said that it has a competitive advantage over its rivals. One of the factors for increasing the competitiveness of enterprises is the constant increase of their intellectual capital, which is closely related to the innovation capabilities. Innovations include not only new technologies, but also new methods and ways of acting in business practices. They can be manifested through product design, manufacturing process, access to instruments of marketing, new ways of training and organization of certain functions or the entire company. Some innovations create a competitive advantage when the company notices a totally new customer need or meets the needs of a market segment that is being neglected by competitors. Innovations that allow the increase of competitive advantages are often based on new methods and technologies which make the existing resources and facilities outdated.

In an effort to create a sustainable competitive advantage, businesses tend to find a way to stand out from the rest and be competitive. Companies achieve this by applying their competitive strategy.

## ***COMPETITIVE STRATEGIES***

Even though there are countless ways for a company to be a competitive one in the market, the number of competitive strategies is limited. Two popular approaches to defining the competitive strategies are adaptive strategies of Miles and Snow and Porter's generic competitive strategies.

Miles and Snow defined four types of organizations that are grouped as: prospectors, defenders, analyzers and reactors (PADR - Prospector, Analyzer, Defender and Reactor).

Prospectors strategy is used by companies that constantly innovate by searching and taking advantage of new opportunities in terms of products and markets. Competitive forces of prospectors lie in its ability to explore a wide range of rapidly changing environmental conditions, situations and trends, as well as to create new products and services that will meet the needs of the environment.

Competitive strategy of the prospectors is to continually innovate, develop and test new products. The continuous search for innovation creates a sense of insecurity with the competitors.

Organizations that apply this strategy are MTV and Fox Broadcasting Network. Both companies are always ready to "push the boundaries" and are famous for their innovative network programming and willingness to pursue new business directions and develop television program with which they win a wide audience (The Hills and American Idol).

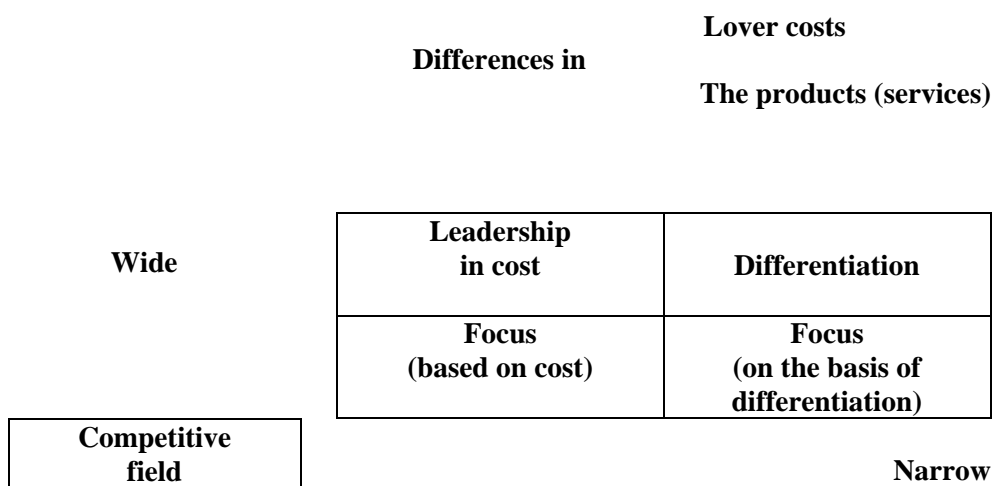
Defenders strategy is used by companies that want to maintain their current market share, insisting on selling the existing products and offering only limited production program. In order to protect their already well-developed business they will take everything needed to aggressively prevent competitors from entering their territory. Large companies with a dominant market share, such as Anheuser-Busch or IBM (International Business Machines Corporation) can use defenders strategy to protect its key markets. Another example is a company Lincoln Electric Holdings from Cleveland which is a leading manufacturer of welding equipment. The company vigorously protects its product line and market share from its competitors by providing excellent customer service and aggressively reducing its prices in line with other companies in the industry.

Analyzers strategy consisting of analysis and imitation (copying others) is applied by Constantino de Oliveira Jr. who built one of the most profitable airlines in the world - Brazil's Gol Linhas Aereas Inteligentes (Gol Intelligent Airlines) company "stealing ideas" of JetBlue and Southwest Airlines company (Dolan, 2005:118-120). Analyzers monitor and analyze successful business ideas of researchers (related to products and services) and before they decide to implement them they systematically examine and assess how these ideas fit their needs. For example, Unilever uses analyzers strategy for its Suave product line of shampoos and hair care products. Suave launches its product range in the market by producing compositions that by packaging, flavor and stability fully match up with rival products.

Reactors strategy is characterized by the lack of a coherent strategic plan or coherent way of competition. Reactors react to changes in the environment and they make certain changes only when circumstances of the immediate environment make them to do so. They are often unable to respond quickly enough to the observed changes in the environment, because they lack the resources – skills are not being developed or used in a proper way. This strategy is not a desirable or advisable competitive strategy for developing competitive advantage. Among the companies that have used the reactors strategy, intentionally or unintentionally, are Sears - a chain of department stores and Sizzler International Inc. - a chain of restaurants which only serve steaks and seafood, as well as Digital Equipment Corporation (DEC ) - a manufacturer of a new line of computers suitable for laboratories and research institutions.

Besides Miles and Snow, Porter's generic competitive strategies are also of great importance. His answer to the question of the “appropriate” competitive strategy is “the one based on the competitive advantage of an organization”. According to Porter, it may originate from one of these two sources: the possession of the lowest costs in its business or the possession of important and desirable differences in comparison to its competitors (Porter, 1985).

Another important factor is the width of the product-market in which the organization wants to compete, or whether is its competitive field wide (covering all or most of the market segments) or narrow (covering only one or a few segments). By combining these factors a basis for its generic competitive strategy is obtained - a strategy of cost leadership, differentiation strategy and focus strategy.



*Figure 1 Porter's generic competitive strategies*

*Source: Porter, M., Competitive Strategy: Techniques for Analyzing Industries and Competitors, The Free Press, 1980.*

## ***COST LEADERSHIP***

Cost leadership strategy (or low cost strategy) is implemented by companies that tend to have the lowest costs in the industry and that offer products/services for a wide range of customers. Their goal is to become a leading low-cost producer in its economic segment. Such companies tend to have the lowest costs in their branch, and the lowest total per-unit cost in its activity,. They are based on the volume or the absolute cost advantages, while their products are mostly standard without any additions. The emphasis is on cost, not on price, but as the cost leader really has the lowest cost in its business, it can make profits even if it charges the lowest prices than its competitors. The cost leader has a better potential to survive in the competitive scene and to continue to make profits even when the rivalry among competitors reaches a critical point.

The cost leader launches its products which are designed for the "average customer". If a company can achieve and maintain a leadership position in terms of cost, it will achieve above-average results in their business segment, provided that it dictates the price of the average or close to average in the sector. At prices that are the same or lower than the competition, business at low cost leads to higher profits. However, even companies that occupy the leading position in terms of costs should not ignore the basic elements of differentiation. If customers do not find a product comparable to the competition, companies that produce it will be forced to lower their prices below the cost of competition in order to achieve sales (Porter, 2007:32).

However, these companies, the cost leaders, do not ignore technological advances, especially if it contributes to a further reduction in production costs. For example, Payless Shoe Source, which generates revenues from sales of footwear in the amount of over \$ 2.6 billion annually, has a modern automated warehouse building directorate, which is located in Topeka, Kansas. With inventory that can be accommodated in this facility, Payless can supply its 4600 objects, shoes of all styles and sizes for just one day ([www.hoovers.com](http://www.hoovers.com)). A surpassing low-cost leader is Wal-Mart, one of the leading retail chains in the world. Their offices are equipped with modern but simple furniture, the employees have no free meals, coffee and juice, and the whole company is focused on the efficient, cost-effective business instead on the image and was able to beat the industry with ruthless competition.

Cost leader characteristics are:

- Paying attention to production control
- Small product differentiation
- Limited market segmentation
- Rigorous use of budget
- Improvement of productivity
- Management of resources, capabilities and core competencies which are located in the field of manufacture and
- Materials management.

The disadvantages of this strategy is that competitors may find ways to lower costs even more than the leader, because the competitive strategies of the cost leaders are considered successful as long as it enables the leader to maintain its cost advantage. Also, competitors can easily copy the tactics that cost leader is applying and thus reduce its cost advantage. Sometimes it does not matter how much a product or service is effectively placed on the market with respect to costs, if no one is willing to buy that product or service, even at the lowest prices.

## ***DIFFERENTIATION***

The aim of this strategy is for the company to recognize some of their traits that customers more appreciate in comparison with the competition and, based on these characteristics, to acquire a unique position in the commercial segment. For example, the most expensive chocolate praline is produced by company "Knipschildt" and 500 grams of these delicacies cost € 1800. "Noka Vintage Collection" makes the best dark chocolate, and its price is € 600 for 500 grams ([www.pressonline.rs/vesti/lola/66585/tajna-koja-se-ljubomorno-cuva.html](http://www.pressonline.rs/vesti/lola/66585/tajna-koja-se-ljubomorno-cuva.html)).

These companies implement a differentiation strategy according to which an organization competes with other competitors by offering the customers different, unique and original products with features that customers value, as they meet their needs and are ready for them to pay a high price. An enterprise that follows the differentiation strategy mostly has a wide range production line, of multiple original models, characteristics, price ranges, etc.

Differentiation is achieved differently in each business segment. This strategy is based on sales system, marketing activities as well as the product itself. The company will achieve outstanding results, if its price premium exceeds the extra costs that are made so that the product would be somehow special. The company must continually look for ways of differentiation that will allow the product price to be higher than the investment costs (Porter, 2007:33).

Differentiation strategy can be quite expensive, so the company following this strategy needs to control costs in order to protect the profit, but not to lose their source of differentiation. One of the drawbacks of this strategy is the fact that organizations must retain its uniqueness in the eyes of customers, otherwise they will not pay premium price for it. For example, Pottery Barn was once considered the undisputed home furniture manufacturer known for its kind of style. When the competitive companies Target and Restoration Store included products similar to these in their own offer but at much more affordable prices the Pottery Barn uniqueness has lost its significance.

## ***FOCUSING***

The focus strategy is applied when a company seeks to achieve any advantage in the cost or any advantage based on differentiation, but in a particular market segment. The company chooses group segments or a segment within an industry, and then it adapts its strategy to work in them excluding the others. It occurs in two forms. Focus on differentiation uses the special needs of customers in certain segments, while focusing on the costs uses the differences in cost behavior of certain segments. The cost focus strategy can be successful even if an organization can produce complex products or products made by order that are not suitable for companies considered to be the cost leaders in overall economic branch can achieve the cost efficiency.

For example, the company Megabus, located in the UK, charges a transportation bus in ten cities on the same principle as airlines that sell tickets with discounts. Ticket prices are only \$ 1.50. In order to maintain such a low price, it reduces its costs by performing on-line booking and the buses stop only at stops along the road and not at the bus station, where retention costs are much higher (Kolter, 2010b:216).

A company following the differentiation focus strategy can achieve differentiation based on any parameter (product characteristics, innovation, product quality, speed of response to customer requirements, etc.) used by a company that follows the differentiation strategy in the whole economic sector. This strategy will fail if the company's target segment, whose advantage is based on the focus, is in no way different from other segments. The company will achieve above-average results in the economic sector only if it can achieve cost leadership or differentiation (Porter, 2007:35).

## ***BUILDING A BRAND***

The other characteristics of companies implementing the differentiation strategy are differentiation of a large range of sizes, and market segmentation in a number of market niches. The word niche has a broad meaning and is used in different contexts. Kavaloni (Vizjak, 2007:37) has defined the niche as company's focus on a small group of customers to which the bidder gives an exclusivity or specialty.

At the same time, the company being differentiated is trying to build brand loyalty, which is reflected in the existence of customers who continually and repeatedly find, buy and use products of a certain brand. Brand loyalty can be quite powerful competitive weapon for a company that was differentiated.

One of the key marketing activity of every company that seeks to grow and be competitive is to create a strong brand. Every company wants their product to be



recognized in the market and to that end seeks to protect their logo, slogan or sign that sets them apart from the competition. Research on what brands make worthy showed that brand awareness (the ability to recall the brand by its name) is by far the most important element, making 53% of the value of the brand.

Brand includes qualities such as appearance, warranty, performance, packaging and other related equipment. Today, of great importance is the awareness or attitude of consumer about a particular brand. In order to promote their products, companies allocate huge funds for their promotion, in order to point out the uniqueness, originality, diversity of these products to consumers and thus consumers opt to buy them. The best way to define the brand is the understanding of the functions that it should perform (Jobber, Fahy, 2006a:148):

- Famous brands facilitate the selection of the product and reduce the time of purchase
- Facilitates differentiation and identity in relation to the competitive bid
- Facilitate the long-term and stable relationships with customers
- Makes enterprises more attractive and promotes it as a market famous actors in relations with other business partners
- Acts as a signal - a sign to draw attention and a reminder of certain benefits that the brand offers
- Protects against aggressive competition and is a barrier to enter the market for those unable to compete with strong brands.

D. Jobber and Fahy J. state that the position of the brand in the market is built on six elements: the domain of the brand, brand value, brand heritage, brand characteristics, a reflection of the brand and brand personality (Jobber, Fahy, 2006b:152). Here the domain brand relates to the selection of the target market (in which the brand competes), while the other five elements are the ways to build a clear competitive advantage with the target customers.

## ***PROFITABILITY OF THE ECONOMIC SEGMENT***

According to Michael Porter, in any economic system, regardless of whether it is a domestic or international one, and whether it produces or services, every economic segment has five factors of competitiveness (Porter, 2007:23):

- Entry of new competitors into the market
- Threat of substitution
- Bargaining power of buyers
- Bargaining power of suppliers and
- Rivalry among existing competitors that determine the profitability of this segment because they influence the prices, costs and return on investment elements

The threat of new competitors - the attractiveness of a segment depends on its input and output barriers. The most attractive are those segments that have high input and low output barrier which means that few new companies can enter the market, while those that do not operate successfully can easily get out. When the input and output barriers are high, the opportunities for big profits are huge, but it is a high risk business. On the other hand, when the input and output barriers are low, operational risk is lower, but the profit possibility is also lower. The most critical situation is when the input barriers are low and the output are high, because then companies are entering the market at favorable terms, but it is difficult to exit in adverse conditions.

Risk of substitution - a market segment is not attractive to that extent for the company if there are actual or potential substitutes for a product. The existence of substitutes limits the possibility of rising prices and profits, so businesses need to constantly monitor the price movement of proper alternative products on the market.

Bargaining power of buyers - the bargaining power of buyers increases when customers are not organized, when the product purchase is a significant cost to the customer, when the product is not differentiated and when the costs of finding new suppliers are low. In such situations, customers usually look for quality improvement and lower product prices. In order to protect themselves, sellers are looking for buyers who have less bargaining power or are developing superior offers that customers cannot refuse.

Bargaining power of suppliers - vendors have strong bargaining power when they are focused and organized, when there is little substitute for their products, when their products are important to customers and when the cost of changing vendors is high. Customers have the opportunity to develop mutually beneficial relationships with existing vendors, but they can apply the model of alternative vendors for certain products as well.

The rivalry among existing competitors - market segment will not be attractive if there are already strong and aggressive competitors, and also if it is stable or declining, if fixed costs are high, if there are high output barriers, if production capacity is suddenly increased, and also when competition shows great interest in survival in that particular segment. Just because of the rivalry in the segment, the mobile phone market has faced stiff competition (Kotler, Keller, 2006:342). These conditions often impose the introduction of new products, competition in advertising and conflicts in the price level.

## ***QUALITY***

Product quality is a multidimensional concept that includes the functionality, durability, reliability, accuracy, ease of use and other characteristics that determine the ability of products to meet the specific needs of consumers. Characteristics that determine the quality are at the same time one of the most important instruments of product positioning "in the minds of consumers."

The improvement of market ratings as well as market shares of companies achieve compliance with one of the most important requirements which is the excellence of the product and the quality, respectively. The quality is the extent to which a product accurately and reliably meets the specifications to which it is produced. Quality is the degree of excellence to which the product or service can level up on the basis of defined characteristics (Mitrović, Mitrović, 2013:263).

Quality is an important determinant of the profitability of the company. On the other hand, competition is "not idle" but is improving the quality of its products and business processes and enterprise as a whole. Therefore, a company should analyze the input requirements for the quality and level of quality of competing companies and thus define the flow of business processes which leads to meeting high requirements in terms of quality (Arsovski, Lazić, 2008:1).

The impact of product quality at a competitive advantage of the company is two-fold. First, it provides high quality of the product, increases the value of such products in the eyes of customers. In this way a customer loyalty is achieved, which is in direct proportion to the quality of the product. Another effect of the high quality on the competitive advantage of the company stems from the high efficiency and lower costs generated through concern about the quality of the product. Avoided costs due to poor quality products, such as dressing, jam, reject, re-check, repair after complaints, the legal responsibility for the quality, the loss of market share and so on directly lower the cost of the product.

Safe and high quality products in two ways contribute to the competitive advantage of the company: the market position of the company, which provides a high sales price and the internal efficiency, which provides low-cost production.

## ***PRODUCT COMPETITIVENESS***

While marketers see themselves selling a product, customers see themselves buying a value or solving a problem. Customers are not only interested in the price, but also in the total cost of acquisition, use and stocking (storage) of products. Customers want their products to be available as favorable as possible. Finally, customers do not want a promotion, they want a two-way communication (Kotler, 1999:96-97).

Policy of the company that is based solely on the domestic market is not in line with modern trends in successful business of global companies. In order to make the company succeed in selling its products within contemporary business, its presence in world markets, mutual trust between businesses and consumers, and the competitiveness of its products globally is quite necessary.

The implementation of the process of internationalization is increasingly becoming a necessity and the assumption of achieving the company's success, as well as achieving its products on the world market (Đorđević, 2001:5).

The key to building trust between businesses and consumers lies in the design and creation of a successful brand that can equally fight with the world's leading brands. Affirmation of the product is of great strategic and competitive importance and it acquires long-term presence in the market and high quality marketing mix combination.

The fate of each product is determined by consumers. Loyalty is a consequence of the high level of satisfaction that a consumer has by using and possessing the product, and loyal customers are the most valuable assets of any company. The company should follow the needs and demands of consumers, and by the end of product life cycle plan not just a simple substitution, but the improvement, modernization of functional and other product properties as well. An example of a successful business is an American sportswear company Nike, which has evolved from a sneaker manufacturer to the marketing machine that drives customers' wishes for a new model sneaker with certainty that in each pair some modern technology will be incorporated. By producing miniature chips that detect the type of terrain on which to walk, it is possible for air to be automatically pumped into the sneaker sole for maximum comfort. In order to maintain the status of fashion icon, the company uses the latest technology to constantly innovate its production.

When it comes to product competitiveness the attitudes of consumers are of great importance. They are not only one of the basic factors of consumer behavior, but they represent a significant indicator of the image analysis of a manufacturer, brand or service. The given results provide the ability for the company to carry out a comparative analysis of their own image and the image of its direct competitors. In this way a diagnosis of the current situation can be made, but also certain advantages and disadvantages can be identified that characterize the operations of a given company. Also, according to research, the future intentions of consumers can be predicted as well as factors that have a dominant influence on their decision-making in buying process.

Regardless of the importance attributed to the analysis of customers for a successful enterprise business, it must not be conducted separately from the analysis of competition. These two segments of business activity represent the basis for achieving the strategic goals of the company. A vital link in an efficient business is testing attitudes and needs of consumers, as well as monitoring of current and future competitors activities which is why they need to be integrated into a single unit.

Vulić, V. (2007) claims that if the business activities of a product were divided between countries, Americans would be responsible for defining customer needs, the British would be able to develop the key features of the product, the Chinese would deal with the production, the product would be packed in Taiwan, while the product control would be done by Germans.

The introduction of new products into the market is the main driver of corporate success. The changing consumer tastes, technological developments and competitive pressures mean that companies cannot only be satisfied with the current and previous success of their products. They have to work on programs for the development of new products.

A new product development process consists of seven steps: generating ideas, testing ideas, concept testing, business analysis, product development, market testing, and commercialization. New products are in some phases kept for extended periods of time while some phases may end very quickly.

Companies can mimic the innovative techniques of other companies or solely use the innovative methods in order to launch a new product in the market. The company that markets out a new product as the first one, or else introduces an innovation is called the first mover. It took more than seven years to build one of the most complex product ever manufactured in the world - the U.S. Navy nuclear-powered Nimitz-class aircraft carrier .

New products shape the market and the competition due to the fact that they substantially differ from the products already on the market. There are four categories of new products:

1. Product replacement - replacement products account for about 45% of all new product and includes revisions and improvements to existing products, repositioning and cost reduction
2. Additions to existing lines - they account for 25% of all new products and they are new products which are added to the existing product lines of enterprises, which results in greater depth product line
3. New product lines - make up about 20% of all new products and are entering a new market
4. Brand new product - make up about 10% of all new products and create completely new markets.

The brand new products carry a high risk because it is difficult to predict the reaction of consumers and it takes some time to make these products accepted (for example Walkman by Sony was initially rejected by the marketing research because wearing headphones at the time in public places was completely strange to most people).

In order for the companies to launch more efficiently a product that would be competitive in the market and would meet customer needs and expectations, which are day by day increasing, it is necessary to procure raw materials in countries where they are the cheapest, to produce in countries where this process is the most effective, and to launch a product in countries where its sales is the most profitable.

## ***CONCLUSION***

Globalization process, namely, the creation of a huge, unique, potential market has forced most companies in the world to perform their business activities outside their national borders. The development of communication technologies, business internationalization and global economic interconnections of different national economies has resulted in giving up the idea of separation between domestic economic activities and the ones in international market so the large number of companies have expanded their business internationally.

In order to rationalize business activities in the international market a necessary condition is the development of competitive capabilities of both individual industrial entities and economic branches, and the national economy as a whole as well. Competitiveness is a concept that explains why some companies, organizations, countries grow faster than others.

In modern business conditions, the most developed economies less frequently base their competitiveness on comparative advantages deriving from natural resources and cheap labor, and more frequently on innovative companies and business strategies they are using.

As the XXI century is the period of increasing economic competitiveness, the economy must be oriented to the recognition of its potential, and the development of their competitive strengths and abilities as well.

Growth and development include the establishment of a quality business environment through the development of innovation and competence for decision making by identifying the individual factors of capacity and resources usage of the organization and increase of the entrepreneurial business capacity - manufacturing and technology portfolio and new ways and possibilities of market positioning. According to the research, there is a general conclusion that competitiveness, being a process of bidding and competitive pressure of other entities, is a strong differentiating factor of economic entities in the competition, which makes some of the companies more successful and profitable in comparison to others.

Since there is no formula to achieve better competitiveness, successful economies and companies are constantly looking for new ways and opportunities to achieve or sustain existing competitive advantage. However, too many companies reposition too frequently, change their visual and other identities, group their offer into too many categories and variants of products, and by acting and not acting their competitive position is impaired. On the other hand, companies should keep the focus and uniqueness as much as possible because only by doing so the competitive position of the company can be maintained and improved. A particular problem is an extension of the brand and an attempt to extract the maximum power from the brand, but the most common effect is weakening competitive position. In the market of the Western Balkans this problem is even more expressed which additionally prevents the possibilities of competitiveness development and the economy of these countries. Nobel laureate Paul Krugman believes that the debate about the competitiveness is an attempt to give simple answers to complex problems.

## LITERATURE

- [1] Arsovski, S., Lazić, M. (2008), Vodič za inženjere kvaliteta, Centar za kvalitet, Kragujevac
- [2] Dolan, K.A. (2005), "From Buses to Planes", Forbes, pp. 118-120.
- [3] Đorđević, M. (2001), Strategije internacionalizacije preduzeća, Ekonomski fakultet Univerziteta u Kragujevcu
- [4] Hoover s Online, [www.hoover's.com](http://www.hoover's.com).
- [5] Jobber, D., Fahy, J. (2006), Osnovi marketinga, DATA STATUS, Beograd
- [6] Kolter, M. (2010), Strategijski menadžment na delu, Data status, Beograd
- [7] Kotler, P. (1999), How to Create, Win and Dominate Markets, The free Press, New York, pp. 96-97.
- [8] Kotler, P., Keller, K. L. (2006), Marketing menadžment, DATA STATUS, Beograd
- [9] Mitrović, M., Mitrović, U. (2013), Menadžment u teoriji i praksi, Fakultet za menadžment malih i srednjih preduzeća i Udruženje menadžera i konsultanata Srbije –UMIKS, Beograd
- [10] Porter, M. E. (1985), Competitive Advantage, Free Press, New York
- [11] Porter, M. (2007), Konkurentska prednost: ostvarivanje i očuvanje vrhunskih poslovnih rezultata, Asee, Novi Sad
- [12] Porter, M. (2008), O konkurenciji, FEFA, Beograd
- [13] Porter, M.E, (2008) "The Five Competitive Forces That Shape Strategy" Harvard Business Review, pp.79-93
- [14] Porter, M. (2008), Clusters and Competition: New Agenda for Companies, Governments and Institutions In: On Competition. MA: Harvard Business Press, pp. 213-230
- [15] Porter, M. (2008) "The Competitive Advantage of Nations". In: On Competition- Updated and Expanded Edition. MA.Boston: Harvard Business School Press
- [16] Vizjak, A. (2007), Pobjednici tržišnih niša: perspektive slovenačkih preduzeća u borbi protiv globalne konkurencije, Fakultet za ekonomiju, finansije i administraciju, Beograd
- [17] [www.pressonline.rs/vesti/lola/66585/tajna-koja-se-ljubomorno-cuva.html](http://www.pressonline.rs/vesti/lola/66585/tajna-koja-se-ljubomorno-cuva.html)
- [18] <http://www.poslovnaznanja.com/objavljeni-autorski-tekstovi/e-magazin/32-sto-je-konkurentska-prednost-kreiranje-vrednosti.htm>.

# **THE FACTORS OF THE COMPETITIVENESS OF THE NATIONAL ECONOMY IN CONDITION OF GLOBALIZATION**

*Zoran Karavelic, PhD<sup>5</sup>*

*Dejan Karavelic, MA<sup>6</sup>*

## **ABSTRACT**

*Globalization as a concept of integration into the world economy depends on five interconnected factors. These are the following: international trade, financial flows, telecommunication, technological advantages in transportation, electronics and population mobility, that is, the work force. The development of international trade of the Republic of Serbia and other Balkan countries in the conditions of globalization is linked with numerous problems of an economic and non-economic nature, among which is the competitiveness of the country and the foreign trade companies. The experience of the majority of countries points to the fact that there is no economic growth and development without a considerable degree of the internationalization of the economy, that is, an export orientation and the improvement of its export performances. Thereby, competitiveness is one of the most important factors which determine the results in trade and consequently its developmental aims. The Republic of Serbia along with the other Balkan countries takes up a relatively poor position in international trade, and thus has the intention to resolve the issue of competitiveness in foreign trade more efficiently, as it is faced with numerous problems on the path to realizing its developmental aims. Beginning from this, the authors have directed their attention towards the analysis of the Serbian global competitiveness index, especially the problem of foreign trade of the Republic of Serbia in the conditions of globalization, with the aim to point to the fact that low competitiveness is the main economic problem and the limiting factor for the development of the national economy.*

**Key words:** *Globalization, Competitiveness, Export, Development Strategy, Economic Integration*

**JEL Classification:** *P33*

**UDK:** *338:339.137.2 339.9*

---

<sup>5</sup>Zoran Karavelic, Faculty of Business, Economics and Entrepreneurship, Belgrade, Serbia, zkaravelic@gmail.com

<sup>6</sup>Dejan Karavelic, Tax Administration, Belgrade, Serbia, d.karavell@gmail.com



## ***INTRODUCTION***

Many controversies on globalization ensue from the feeling that the rules of the game are dictated by others, whether these are international financial institutions, transnational companies, developed Western countries or a combination of all these. Each country faces a strategic choice in stimulating the forces of globalization in the interest of its people. Countries can use various protectionist means which will meliorate the impact of globalization on the existing national groups, including the private sector, state companies, associations and other social groups. But, on the other hand, they can open their economies with a greater participation in the international system. This second choice would lead to a larger competition between companies, as well as an increase of foreign investment, technological transfers, and economic growth. The successes of numerous countries show how a country can direct its strategy in such a way to use the strength of globalization and turn it around in their interest. It without doubt that each country has to choose its own strategy, depending on its economic circumstances and state of affairs. The development strategy of a country in the conditions of globalizations must answer the following question: how to realize the necessary changes, in which direction the country should develop and how to operationalize the set tasks.

In fact, those countries which attempted to disrupt globalization perceived that they can do this only by limiting political, economic freedom, that is, by limiting democracy and market activities. Generally speaking, globalization can be stopped only by denying the universal endeavor for freedom (Romić, 2004:192-197).

Thus, the choice of development strategy represents different ways and methods for realizing the same main aim, which is a maximum meeting of social needs with the available resources during which there is an endeavor to minimize the expenditure of resources for a certain system of social needs.

The choice of the national economy's development strategy in the conditions of globalization is not easy at all. That choice can, and must, be adapted to various conditions and limitations, the competitiveness of the economy and other factors. The foundational course of development depends on the choice between one or another variant which will undoubtedly have an impact on all the segments of the economic system, especially foreign trade.

In regards to development strategy, it is certain that competitiveness today has become the dominant economic topic due not only to globalization but also the world economic recession which all economies are going through.

The Serbian economy is at the level of development on which competitiveness is largely based on production factors. This means that the competitiveness of domestic producers depends primarily on the fact whether Serbia has the relevant production factors. After this, the situation should be looked into in regards to other factors of competitiveness, such as demand, the demand structure, company strategy, etc. On the other hand, in the current conditions, the Republic of Serbia has in front of it two key questions: namely, how to secure a sufficient inflow of foreign investments and to increase export. The inflow of foreign investments depends on the quality of the business environment, while the increase of export can be stimulated by increasing the

demand for domestic products. Common for both is increasing the country's level of competitiveness. During the bringing of business decisions, the investors, among other things, must also take into consideration the level of competitiveness of their potential country-partners, by way of the global competitiveness index (hereinafter: GCI), which is also the subject of our research.

The aim of this paper is to provide useful data and offer a solution for the future strategy of development of the national economy in the conditions of globalization by way of a theoretical analysis of the concept and strategy of the previous development of the Serbian economy, as well as an analysis of Serbia's low GCI, and finally, to point out some underused competitive advantages.

## ***THE CONCEPT AND DEVELOPMENT STRATEGY IN THE CONDITIONS OF GLOBALIZATION***

The first aim of every concept of national economy development is results. There are numerous aims which are common to all development concepts. The increase of the life standard, stability, and economic growth are the aims of the creator of economic and developmental politics of both developed and developing countries.

The development concept of Serbia in the process of globalization according to the assessment of many authors should be directed towards the realizing of the following interlinked aims of economic and social development:

- An accelerated economic and social restoration and reconstruction,
- Boosting efficiency and competitiveness of the economy,
- Forming an economic national trade structure and a greater inclusion in the world economy,
- Maintaining a balance in distribution and
- Affirmation of knowledge, as a factor of economic development.

In order for this to be realized, it is very important to orient development in the conditions of globalization towards creating an open, export-orientated economy and structurally adapt it into the institutional and real sphere which secures quicker changes in the economic system. The structure of economy adapting should and must secure the creating of an efficient export orientated economic structure as a condition for stable economic growth and an efficient inclusion in the globalization process. After democratic changes in Serbia, the economic blockade was quickly lifted and there was a readiness of the developed countries to support the recovery of Serbian economy. In such an environment, privatization and reforms had no alternative, and thus the previous economic and political measures were discontinued in 2001 (Devetaković et al., 2004, p. 368). When considering the concept of development, it is very important to maintain new relations in distribution in order to establish the principle of balance, whereupon consumption must be equivalent with production.

The development of Serbia in the conditions of globalization will have to seek stimulus primarily in its own potential but also in an inflow of means from other countries. An inflow of foreign capital is necessary primarily due to a faster restructuring of the economy and its efficient inclusion in economic flows (Karavelić, Gojković, 2013, pp. 92-96).

Linked with this is the concept of development strategy, as it directs the country to the appropriate course, but this also implies the operationalizing of all set tasks.

Thus, the classifying and creating of the necessary conditions for defining the appropriate national economy development in conditions of globalization needs a complex approach. At the least, it should encompass a total transforming of all the institutional solutions which make up the existing economic system (Rosić, 1996, p. 3).

The openness and export orientation of the national economy in globalization conditions implies its rational linking with European and world economies and its integration into large technological entities. In the development strategy of any country, exporting is the generator of economic growth, as well as an increase of employment and the foreign-economic balance.

In globalization, successful export industries which achieve an optimal price and technological competitiveness of their export products have a special treatment. Viewed from the aspect of the export orientation of the development strategy, structural adapting occurs gradually. The first to adapt is the sector which can realize in the short term the largest net foreign currency effect, and then those who can indirectly help with export expansion.

This means that less developed countries (where Serbia belongs) should not look up to developed countries during the shaping of their economic structure. The sectors which are developed most rapidly in the leading economic industries of the world, such as for example software production, biotechnology, etc. are not suitable for developing countries. The reason for this is because these sectors demand the most contemporary technology and a large investing in research and development – factors in which developing countries are the most lacking, that is, it can be said that they are not competitive in this area (Jovanović-Gavrilović, 1996 pp. 54-58).

The opinion of some authors in regards to this development model of the Serbian economy and the low competitiveness is interesting.

Author Ivan Dujčić asks the question whether the process of globalization is homogeneous or heterogeneous, that is, whether it flows in the direction of strengthening the economic, cultural, political or other forms of identity (Dujčić, 2012:326-337).

A response to the set question demands that the globalization process is understood as a process which flows in parallel, so that it also encompasses modern and post-modern values, as well as adapting to each particular society. According to this author, the position of Serbia in globalization conditions can be optimal if it develops and works out a strategy of managing capital as well as accepting the heterogeneity of the globalization process. Capital and its movement can represent a significant link between the process of globalization and Serbia.

As a small country, Serbia, due to its exceptional geographic position, can impact the globalization process.

The author Hrustić H. points to this fact through the example of the planned South Stream pipeline, as one of the numerous examples of the optimal strategic position of Serbia, which can incur an additional expansion of capital outside of the national borders, contributing to the realizing of a significant income and which in turn would contribute to economic growth and Serbia's stability (Hrustić 2010:28-37).

Each country should decide how to be included and which development model to apply, depending on its competitiveness in the globalization process. Experience shows that developing countries such as Serbia, can achieve the largest economic effects if they are quickly included into Euro-Atlantic integrations, that is, in the integrating of their markets, in the increasing financial flow, and a wide use of technology, knowledge, etc.

## ***ON THE GLOBAL COMPETITIVENESS INDEX***

Competitiveness represents a group of institutions and factors which determine the level of productivity of the national economy. The productivity level establishes the sustainable level of prosperity which the national economy can attain. More competitive economies are capable of producing higher levels of income for their citizens.

The issue of competitiveness of countries within a global framework is linked with the activities of the World Economic Forum and its GCI. This involves a group index based on twelve bearing pillars of competitiveness. These are the following: 1) institutions; 2) infrastructure, 3) macroeconomic stability, 4) health and primary education, 5) university education and training, 6) the efficiency of the goods market, 7) efficiency of the labor market, 8) the sophistication of the financial market, 9) technological readiness, 10) market size, 11) the sophistication of business processes and 12) innovations.

These pillars include microeconomic and macroeconomic factors as well as development factors of institutions which, if taken together, determine the competitiveness of the national economy. Every year, starting from 2005, the World Economic Forum has based its competitiveness analysis on the GCI, as the all-encompassing index for measuring national competitiveness based on the microeconomic and macroeconomic foundations of national competitiveness.

The GCI as the group index is formed on the base of the weighted value average of each of the mentioned pillars. Each of the pillars represents the group index which is formed as the weights average of sub-indicators, whose values are obtained from two types of sources – primary and secondary.

The primary data is obtained based on the standardized questionnaires which are conducted every year in the encompassed countries, which are responded to by representatives of higher company managerial levels.

For the calculation of the competitiveness of sub-indicators such as the inflation rate, tax rate, budget deficit and similar, data is used from the international

comparable data bases (for example, the data bases of the IMF, the World Bank, the International Trade Organization, the UN, and others).

All the data is standardized on a scale from 1 to 7 (1 being the worst score and 7 being the best score). This is the range of possible values for all sub-indicators, competitiveness pillars as well as the GCI.

The competitiveness of each country is established primarily by the productivity of its companies, as it is important to analyze the opinions of the employees regarding the factors which mostly impact the lowering of productivity. Results show that the greatest problems which reduce productivity are the following: corruption (16%), substandard state bureaucracy (12.6%), political instability (10.3%), poor debt conditions (9.1%) and tax regulations (8.9%) (Klaus, Havier, 2011: 294).

## ***ANALYSIS OF THE COMPETITIVENESS OF THE REPUBLIC OF SERBIA***

From the beginning of the economic and financial crisis, the competitiveness of Serbia has been declining in both absolute as well as relative terms.

Competitiveness according to the group of competitive factors in Serbia during the period 2008-2010 is shown in Table 1.

*Table 1: The competitiveness of the Serbian economy – according to the group of competitive factors, 2008-2010*

		2008		2010	
		Ranking	Mark	Ranking	Mark
1.	Institutions	108	3.4	120	3.2
2.	Infrastructure	102	2.7	93	3.4
3.	Macroeconomic stability	86	4.7	109	4.0
4.	Health and primary education	46	5.8	50	6.0
5.	University education and training	70	3.9	74	4.0
6.	Efficiency of goods market	115	3.7	125	3.6
7.	Efficiency of labor market	66	4.4	102	4.1
8.	Development of the financial market	89	3.9	97	3.8
9.	Knowledge and use of technology	61	3.5	80	3.4
10.	Market size	65	3.6	72	3.6
11.	Sophistication of business activities	100	3.5	125	3.2
12.	Innovations	70	3.1	88	2.9

*Source: World Economic Forum, World Competitiveness report (2008-2010)*

In both years, the following groups had the lowest ranking in competitiveness factors: the efficiency of the goods market in 2008 ranked 115, in 2010 it ranked 125; institutions – in 2008 it ranked 108, in 2010 it ranked 120 and business activities sophistication in 2008 ranked 100, and in 2010 ranked 125, etc..

*Table 2: Value and global competitiveness by pillars in Serbia for 2012 and 2013.*

		2012	2013
1.	Institutions	3.16	3.20
2.	Infrastructure	3.78	3.51
3.	Macroeconomic environment	3.91	3.36
4.	Health and primary education	5.73	5.75
5.	University education and training	3.97	4.05
6..	Efficiency of goods market	3.57	3.64
7.	Efficiency of labor market	4.04	3.90
8.	Sophistication of financial market	3.68	3.48
9.	Technological capacity	4.10	3.94
10.	Market size	3.64	3.68
11.	Sophistication of business activities	3.11	3.18
12.	Innovations	2.81	2.85

*Source: World Economic Forum, World Competitiveness report (2012-2013)*

Based on this table, it can be concluded that the most significant difference exist in pillars 2, 3 and 8, while decreases in moderate intensity are present in pillars 6 and 11. The largest changes are in the other pillars. Multiple factors have impacted these decreases. Thus, for example, the significant decrease of the competitiveness pillar which relates to the infrastructure is mostly impacted by the macroeconomic environment, the decrease of the budget deficit from -4% to -7% GDP, and an increase of the total public debt to 63% GDP.

The efficiency of the goods market has made a positive modification. This was influenced by an increase of import from 53.5% to 60.7% GDP. As regarding the other pillars of competitiveness, the changes are minor in the positive or negative directions.

Tables 3 and 4 indicate GCI data and the ranking of Serbia and the surrounding countries during the period 2007-2013.

Table 3: GCI (2007-2013)

	Albania	B and H	Croatia	Greece	Hungary	Macedonia	Montenegro	Romania	Serbia	Slovakia	Slovenia
2007	3.48	3.55	4.20	4.08	4.35	3.73	3.91	3.97	3.78	4.45	4.48
2008	3.55	3.56	4.22	4.11	4.22	3.87	4.11	4.10	3.90	4.40	4.50
2009	3.72	3.53	4.03	4.04	4.22	3.95	4.16	4.11	3.77	4.31	4.55
2010	3.94	3.70	4.04	3.99	4.33	4.02	4.36	4.16	3.84	4.25	4.42
2011	4.06	3.83	4.08	3.92	4.36	4.05	4.27	4.08	3.88	4.19	4.30
2012	3.91	3.93	4.04	3.86	4.30	4.04	4.14	4.07	3.87	4.14	4.34
2013	3.85	4.02	4.13	3.93	4.25	4.14	4.20	4.13	3.77	4.10	4.25

Source: World Economic Forum, World Competitiveness Report (2007, 2008, 2009, 2010, 2011, 2012, 2013).

Table 4: Ranking of countries according to the GCI (2007-2013).

	Albania	B and H	Croatia	Greece	Hungary	Macedonia	Montenegro	Romania	Serbia	Slovakia	Slovenia
2007①	109	106	57	65	47	94	82	74	91	41	39
2008②	108	107	61	67	62	89	65	68	85	46	42
2009③	96	109	72	71	58	84	62	64	93	47	37
2010④	88	102	77	83	52	79	49	67	96	60	45
2011⑤	78	100	76	90	48	79	60	77	95	69	57
2012⑥	89	88	81	96	60	80	72	78	95	71	56
2013⑦	95	87	75	91	63	73	67	76	101	78	62

The report includes 131 countries, 2) 134 countries, 3) 133 countries, 4) 139 countries, 5) 142 countries, 6) 144 countries, 7) 148 countries.

Source: World Economic Forum, World Competitiveness Report for: (2007, 2008, 2009, 2010, 2011, 2012, 2013)

According to the World Economic Forum report for 2013, Serbia was ranked at the 101<sup>st</sup> position, with the report including 148 countries, with a GCI value of 3.72, while compared to 2012, the GCI value was reduced by 0.1 which led to a lower ranking of Serbia to position 6. The fall of the GCI value in 2013 was at the level of the historical minimum (in the period from 2007 to 2013). This result represents in the international context a historical minimum in regards to the ranking of Serbia.

The largest GCI value of 3.90 was realized by Serbia in 2008, before the economic crisis, but in the following year – in 2009, the GCI value fell to 3.77. After this period there was gradual recovery, in order for the GCI value in 2013 to be reduced to the 2009 level once more. As we stressed in the second part of the study, it is without doubt that Serbia will be highly ranked and with a significantly higher GCI, if it becomes export orientated, which implies a rational linking with European and world economies and integrating with large technological entities.

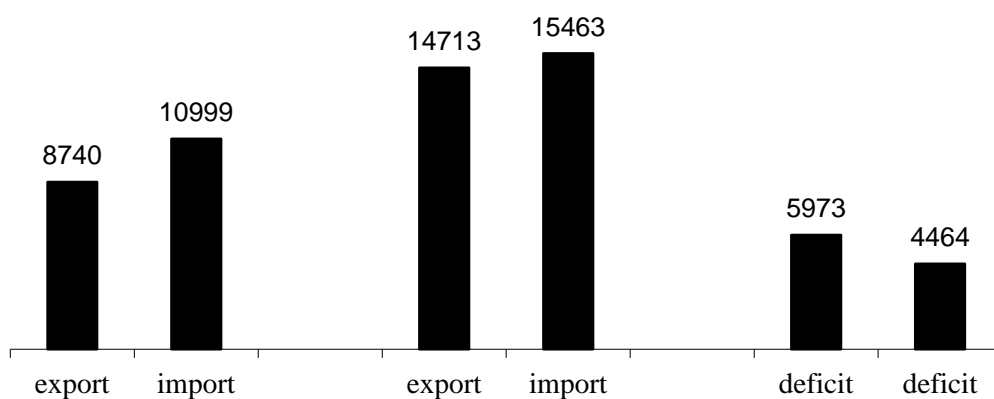


Figure 1: The structure of export and import in 2012 and 2013 in mil. Euros

Source: the Republic Institute for Statistics, social-economic activities in 2014.

Table 5: Structure of Serbian exporting and importing by countries in 2013.

Country	Export	Import
Italy	1,792.5	7,775.2
Germany	1,308.4	1,691.4
B&H	887.6	1,428.6
Russian Federation	799.0	1,136.2
Montenegro	630.8	761.2
Romania	590.0	731.8
Macedonia	427.4	671.9
USA	369.5	473.4
Slovenia	360.4	452.8
Croatia	311.19	437.7

Source: Republic Institute for Statistics, 2014.



*Table 6: Structure of exporting and importing according to production in 2013.*

Product type	Export	Import
Road vehicles	1,637.2	1,876.2
Electrical machines and devices	844.7	1,462.9
Fruit and vegetables	503.7	589.4
Cereals and cereal-based products	497.9	654.8
Non-ferrous metals	487.3	561.2
Metal products	458.2	479.2
Clothing and accessories	453.2	476.2
Various finished products	386.2	453.0
Rubber products	348.7	440.8
Iron and steel	306.2	434.9

*Source: Republic Institute for Statistics, 2014.*

The given indicators show that Serbia has the possibility to realize a significantly larger export than it has done. All the reasons for its lagging behind can be reduced to a common denominator - insufficient competitiveness - not only in regards to EU countries but also in regards to the neighboring countries. This part of the study has the task to identify the key factors which will impact the competitiveness of companies in Serbia and in that way also the total competitive potential of the country. The enabling of export companies is the first condition for dynamizing economic growth and a proper fulfilling of commitments related to the external debt.

The structure of export in the Serbian state of affairs should go in the direction of an intensive growth of participation of industrial products in higher processing phases. Export-orientated profitable programs in the metallurgic and chemical complex, machine building, production of telecommunication equipment have priority, but also the traditional export branches such as the wood industry, textile and leather, non-ferrous metal production and metal processing, etc.

According to data in Tables 7 and 8 taken from WTO and UNCTAD trademap.org (tables and text taken from [www.makroekonomija.org/najvažniji\\_proizvodi\\_u\\_izvozu\\_i\\_uvozu\\_Srbije\\_u\\_2012\\_godini](http://www.makroekonomija.org/najvažniji_proizvodi_u_izvozu_i_uvozu_Srbije_u_2012_godini)), the export of Serbia in 2012 was 8.827,3 million Euros. In comparison, according to RZS data, the export of Serbia in 2012 was 8.740 million Euros, increasing by 373 million Euros compared to 2011. The greatest changes in absolute values were made by the decline in the value of rolled steel products by 297,9 million Euros, polymer of ethylene by 87,2 million Euros, reinforced rolled steel products and copper products by 40.9 million Euros and an increase in motor vehicle export by 273,3 million Euros, corn by 117,29 million Euros, electrical machinery parts and generators by 40 million Euros, etc.

The first ten products, according to the export value, participated with 25.9%. All 50 given products included three-fifths of the total export value.

The growth of car export influenced Serbia to reduce the trade deficit of those products by 390,9 million Euros in 2011 to 57.6 million Euros in 2012. On the other hand, the trade deficit in motor vehicle parts is evident, increasing from 36,6 to 207,1 million Euros. The motor vehicle parts export increased from 89, 5 million Euros in 2011 to 92,5 million Euros in 2012, while import increased from 127,1 to 299,5 million Euros.

The car industry sector is of a crucial importance for economic development and economic recovery, considering the fact that it significantly contributes to the gross domestic product and export due to trade surplus. From the moment of opening a big car factory in the summer of 2012, the export of goods increased by about 30% and industrial production was increased.

This situation should be seen as a possible challenge for Serbia to increase the attractiveness of its locations and to adjust its regulations with business activities for attracting new direct foreign investments in the car industry (Cogoljević et al., 2013).

Agriculture failed in 2012 due to a cold winter and a hot summer which caused a reduced export of fruits and vegetables. The export of frozen fruits fell from 215,3 to 199,3 million Euros. Such a decrease in production and export of agricultural products had a negative impact on the further recovery of Serbian economy, considering the fact that a significant income was expected.

Table 7: Serbia's export per product in the period 2005-2012.

List of products exported by Serbia

Sources: ITC calculations based on UN COMTRADE statistics.  
Unit: Euro thousand

Code	Product label	2005	2006	2007	2008	2009	2010	2011	2012
Ra01	Ubonpti	3,598,701	5,116,840	6,437,893	7,457,219	5,983,720	7,376,034	8,454,274	8,827,254
1	1005	82,919	143,057	62,082	88,068	206,599	252,222	327,034	444,376
2	8344	24,247	53,010	70,884	91,838	92,972	158,022	231,065	319,759
3	8703	2,800	8,437	22,773	24,202	11,337	29,604	36,936	310,239
4	4011	136,580	155,211	172,827	169,717	142,109	180,594	227,417	237,420
5	0811	111,980	125,091	164,639	175,066	189,769	189,696	215,338	199,934
6	3004	80,830	99,221	105,024	129,542	124,538	145,605	148,686	185,870
7	6115	49,293	75,944	113,201	138,312	134,065	143,042	151,000	177,204
8	2710	85,546	93,404	67,434	101,162	107,957	131,875	140,331	157,235
9	1701	131,309	124,011	111,085	104,017	98,552	139,694	115,019	124,077
10	8303	9,026	45,994	89,726	131,118	88,418	61,413	83,675	126,927
11	7606	80,927	112,420	152,578	125,103	79,590	114,660	130,586	123,350
12	8517	686	1,377	7,628	16,416	16,252	29,530	56,730	112,747
13	7204	21,738	51,091	93,390	102,688	53,737	106,625	109,898	105,185
14	7612	5,470	30,936	44,295	39,687	38,057	39,425	96,534	104,805
15	7403	61,113	62,120	61,502	22,494	16,315	59,534	65,278	98,351
16	2716	26,312	56,796	77,602	106,921	143,744	179,070	129,403	97,884
17	7411	33,916	77,419	75,470	83,444	43,602	79,106	109,744	97,735
18	8708	27,383	28,580	43,190	66,429	65,373	75,982	89,484	92,452
19	7208	302,593	447,518	305,064	622,795	256,338	457,705	389,244	91,376
20	3917	18,679	20,426	25,642	38,454	35,600	43,851	63,360	91,134
21	7409	64,043	126,574	100,679	100,743	92,890	135,578	130,469	89,563
22	9401	38,564	39,956	55,711	54,769	55,012	71,822	81,170	88,207
23	3918	70,094	79,533	88,407	100,091	63,820	76,076	81,883	84,133
24	4811	39,722	57,679	66,974	69,919	69,499	69,207	82,562	83,341
26	7207	38	439	159	169	16,388	8,055	48,649	80,387
27	6403	48,230	58,361	64,202	71,421	58,894	59,885	80,827	77,874
28	9999	7,928	1,653	27,651	60,833	84,706	105,749	74,540	77,805
29	6406	35,500	51,704	63,191	73,320	54,089	65,233	77,233	77,160
30	9403	23,287	44,869	63,173	66,514	51,201	57,501	65,048	75,819
31	1001	16,035	7,807	61,689	13,005	25,428	67,439	70,092	75,875
32	8516	7,659	12,987	16,855	22,161	24,009	39,242	61,210	67,718
33	2202	4,180	19,813	36,134	56,908	55,341	54,960	61,806	67,436
34	8536	5,082	10,301	24,023	41,670	45,283	58,475	58,950	67,078
35	1905	34,903	51,082	53,867	60,376	59,032	61,500	64,042	63,252
36	3923	13,044	30,368	38,687	34,137	38,773	46,373	46,373	60,376
37	4418	4,509	22,770	43,409	47,111	39,007	43,745	59,613	58,066
38	2203	22,786	35,803	41,602	51,816	53,809	49,632	57,122	57,441
39	8418	1,695	9,502	44,916	47,782	47,722	55,304	49,771	56,170
40	8413	8,951	10,881	13,191	13,775	10,882	10,167	29,268	55,312
41	7308	11,351	20,500	39,386	55,017	45,750	52,339	52,339	52,168
42	3402	10,460	17,175	36,748	39,972	44,248	47,821	43,222	47,575
43	7404	3,387	9,458	21,356	22,167	18,822	36,747	42,769	47,399
44	7210	103,320	114,867	128,174	141,581	113,221	136,613	131,658	47,121
45	1307	8,161	3,654	20,089	31,280	20,089	31,280	29,819	43,024
46	1806	29,643	39,181	42,252	47,301	49,144	50,315	48,356	45,862
47	8507	5,484	7,867	12,173	17,268	16,306	42,888	49,737	42,702
48	7326	9,449	13,041	18,992	24,031	16,067	18,230	23,577	42,559
49	8716	5,366	8,290	17,045	39,438	21,580	17,356	45,261	42,316
30	8443	2,023	2,660	6,441	20,218	33,213	30,820	37,134	41,496

Source: [www.makroekonomija.org/najvažniji\\_proizvodi-iz\\_izvozu-i\\_uvozu\\_Srbije\\_u\\_2012](http://www.makroekonomija.org/najvažniji_proizvodi-iz_izvozu-i_uvozu_Srbije_u_2012).

Table 8 shows the Serbian export in 2012 was 14.723,7 million Euros, increasing by 264,3 million Euros in comparison to 2011.

Table 8: Serbia's import per product in the period 2005-2012.

**List of products imported by Serbia**

Sources : ITC calculations based on UN COMTRADE statistics.  
Unit : Euro thousand

Code	Product label	2005	2006	2007	2008	2009	2010	2011	2012
1	Ukupno	8,400,014	10,485,662	13,535,431	15,547,292	11,506,587	12,602,301	14,459,307	14,723,699
1	9999 Commodities not elsewhere specified	25,194	11,234	4,674	7,552	2,196,291	2,137,894	807,882	1,318,988
2	2711 Petroleum gases	335,184	531,606	582,404	791,868	549,033	713,929	851,370	848,546
3	2710 Petroleum oils, not crude	241,345	357,160	452,954	618,988	154,589	284,487	738,542	724,931
4	2709 Crude petroleum oils	856,943	925,032	961,071	1,301,521	717,992	819,512	856,551	703,455
5	3004 Medicament mixtures (not 3002, 3005, 3006), pu	172,781	230,390	305,817	361,504	200,887	213,210	436,971	454,816
6	8703 Cars (incl. station wagon)	288,302	410,406	562,958	647,452	324,269	227,455	427,871	367,845
7	8708 Parts & access of motor vehicles	59,072	65,686	83,067	96,534	71,412	73,868	127,089	299,508
8	8517 Electric app for line telephony,incl curr line syste	68,340	72,318	214,663	204,186	169,416	203,486	248,479	235,055
9	2716 Electrical energy	7,422	55,599	125,106	137,293	103,228	153,045	120,783	177,635
10	8544 Insulated wire/cable	26,270	42,527	85,786	78,687	73,000	81,107	136,033	169,894
11	3102 Mineral or chemical fertilizers, nitrogenous	41,472	54,162	71,163	103,681	96,309	42,011	51,479	131,744
12	8471 Automatic data processing machines,optical reade	148,031	172,379	203,026	162,290	116,826	130,617	152,511	130,925
13	3105 Mixtures of .nitrogen, phosphorus or potassium	25,167	36,130	68,642	71,663	56,191	48,122	88,397	128,248
14	3901 Polymers of ethylene, in primary forms	51,928	74,018	91,176	98,207	59,591	79,674	101,111	117,710
15	7601 Unwrought aluminum	64,193	135,966	162,008	142,479	69,320	121,012	130,672	115,594
16	3907 Polyacetal, o polyether, epoxide resin, polycarbona	61,585	73,656	95,504	90,069	64,127	85,422	105,749	103,029
17	7403 Refined copper and copper alloys, unwrought	102,469	78,871	117,528	118,271	79,265	208,765	177,081	91,031
18	4805 Uncoated paper and paperboard nes, in rolls or she	19,289	24,429	34,261	34,754	23,815	28,606	82,678	89,185
19	8503 Parts suitable for use solely/princ with machines o	7,729	8,481	58,248	8,479	12,405	37,296	63,847	87,979
20	6403 Footwear, upper of leather	41,683	53,362	77,824	91,729	56,641	46,082	64,193	85,176
21	3402 Organic surface-active agents, washing & clean pr	57,074	76,846	87,001	83,436	74,760	79,520	80,081	83,181
22	0901 Coffee	46,736	48,187	57,447	71,271	51,118	57,587	78,492	82,875
23	7408 Copper wire	10,386	32,471	61,484	51,783	18,467	31,672	82,711	81,334
24	7308 Structures (rods,angle, plates) of iron & steel nes	51,486	62,547	94,703	103,135	62,471	74,753	109,193	79,856
25	8701 Tractors (other than tractors of heading no 87.09	50,497	73,552	135,807	142,209	21,214	24,900	89,738	77,821
26	4011 New pneumatic tires, of rubber	35,597	42,048	51,864	55,416	42,582	60,480	64,797	75,909
27	3808 Insecticides, fungicides, herbicides packaged for res	48,254	51,616	59,873	74,050	42,173	39,294	59,874	75,211
28	3920 Other plates, sheets, film, foil, tape, strip of plast	39,438	50,142	61,045	81,629	59,956	55,681	71,529	68,534
29	7208 Flat-rolled products of iron/non-al/s width>=600mm	21,812	33,664	60,014	95,886	21,087	21,134	35,441	64,070
30	4002 Synthetic rubber&factice from oil	20,610	20,297	39,063	20,819	25,154	45,424	64,947	63,789
31	4107 Leather of other animals, o/t leather of hd no 41.0	44,875	58,280	69,019	70,530	49,696	56,819	65,078	61,822
32	8704 Trucks, motor vehicles for the transport of goods	80,492	132,482	187,805	225,078	46,267	38,114	80,147	61,100
33	8528 Television receivers (incl video monitors & video	46,280	55,805	95,412	138,765	73,826	69,366	79,108	57,681
34	8504 Electric transformer,static converter (for example	19,066	21,870	37,295	47,390	35,833	53,175	61,651	57,432
35	8603 Self-propelled railway/tramway coache	997	1,539	0	0	0	40	0	20,796
36	8536 Electrical app for switch (ex fuse,switch,etc) no	25,081	32,726	48,770	52,582	35,146	39,308	53,209	57,051
37	7210 Flat-rolled prod of iron or non-al/s width>=600mm, n	23,478	26,241	50,783	56,842	29,843	30,768	47,734	54,939
38	3903 Polymers of styrene, in primary forms	24,194	33,051	39,326	40,452	27,141	35,300	40,525	54,629
39	3902 Polymers of propylene or of other olefins, in prin	17,535	24,534	28,887	33,803	24,918	32,745	46,741	54,600
40	8466 Machinery parts&acce (machinery of hd 84.56 to	5,416	6,076	6,888	7,024	3,921	3,887	76,650	54,426
41	9619 Sanitary towels (pads) and tampons, napkins and r	0	0	0	0	0	0	0	54,389
42	3923 Plastic packing goods or closures stoppers, lids, ca	40,764	36,540	43,754	46,848	34,677	34,594	46,397	54,025
43	8481 Tap,cock, valve for pipe,tank for the like,incl pres	36,143	45,857	59,934	66,785	41,110	45,261	54,355	53,896
44	2106 Food preparations, nes	53,209	42,757	43,328	54,821	30,738	33,304	49,156	53,807
45	3904 Polymers of vinyl chloride/other halogenated olef	30,885	42,381	45,824	52,493	27,029	35,496	45,213	52,233
46	8418 Refrigerator, freezer, etc	65,139	75,011	102,428	107,697	43,827	49,275	50,943	51,861
47	7326 Articles of iron or steel nes	13,223	16,394	25,186	29,006	21,649	23,216	42,049	51,718
48	7606 Aluminum plates, sheets and strip, of a thickness e	13,488	31,248	42,477	40,445	31,528	29,198	43,945	50,894
49	8443 Printing machinery; machines for uses ancillary to	19,082	31,692	71,053	93,497	66,282	53,700	65,160	50,733
50	8479 Machines&mech appl having indiv functions, nes	32,230	39,675	49,459	87,730	56,852	27,554	40,939	50,476

Source: [www.makroekonomija.org/najvažniji\\_proizvodi\\_u\\_izvozu\\_i\\_uvozu\\_Srbije\\_u\\_2012](http://www.makroekonomija.org/najvažniji_proizvodi_u_izvozu_i_uvozu_Srbije_u_2012).

The largest export was recorded in petroleum gas (848), petroleum products (724,9), crude petroleum oil (703,5), medicaments (454,8), motor vehicles (367,8), motor vehicle parts (299,5), telephones (235), electric energy (177,6), wire/cables (169,9) million Euros, etc. The given 50 products participate in the total export by 56%.

As we can see from the tables, there remains a strong external imbalance. A strong growth and a cyclic decline of import should lead to the certain decrease of the trade deficit and the current account deficit.

## ***CONCLUSION***

During globalization and especially during the years after the economic crisis, Serbia was among the last countries according to its competitiveness.

The components of competitiveness are the following: productivity, efficiency, labor force, rentability, profitability, and the quality of the state and institutions in the last couple years which has had a negative impact on developing the national economy.

According to the World Economic Forum report, Serbia is in 2013 on the 101<sup>st</sup> position (from a total of 148 countries) regarding the GCI, which is a drop by 6 places compared to the previous year. When this ranking is viewed in an international context, the 101<sup>st</sup> position unambiguously represents a historical minimum. This decrease can be characterized as significant, considering that the realized value is at the level of the historical minimum in a 7-year period. Thereby, Serbia is at the tail end of the countries in the region.

The factors which have contributed to this are mostly poor economic indicators in 2012 and the state of the infrastructure. Added to this is also an enlarging of the budget deficit, the reducing of national savings, and the increase of the public debt. The infrastructure has been destroyed, for example the port infrastructure, and there is also a problem with mobile and landline telephony.

The authors are in favor of seeking long-term strategic answers to the solutions and the areas which would have an important impact on the further development of the economy and export competitiveness. There are numerous areas which need to be discussed, but the following stand out:

- The implementation of EU national strategies connected to the development of industry;
- The improvement of car industry conditions;
- The improvement of business conditions for agriculture;
- The strengthening of the internal market;
- Industry modernization;
- Realizing benefits for the EU accession process and globalization;
- Realizing benefits of an advantageous geographical position of our country.

The mentioned analysis shows that Serbia is in a very bad position when it concerns competitive advantage, and in order to increase the competitiveness level, it is necessary to change the strategy of future growth and turn to attracting foreign investments which would, via a transfer of contemporary technology, make domestic products more attractive for wider markets. The most significant recommendation for improving the competitiveness of Serbia is linked with the improving of factor conditions, which is primarily related to the infrastructure and institutions. In addition, the weaknesses in the area of administrative and innovational infrastructure have resulted in Serbia losing headway and being at the very bottom of Europe. It is primarily the government who is to take responsibility

for resolving this problem in the near future. When it comes to improving educational and innovational structures and capital markets and the financial systems, the responsibility of the government must be shared with the educational and financial institutions.

Without improving this segment, Serbia cannot escape the trap of its underdevelopment, which additionally narrows down the space for export expansion. The second obstacle relates to the realization of company strategy and company rivalry which also contains significant weaknesses. The problems in these segments are the most stressed and demand urgent and decisive measures.

## ***REFERENCES***

- [1] Cogoljević, D., Grozdanić, R., Karavelić, Z., Čukić, D. (2013), Faktori uticaja na konkurentni industrijski izvoz Srbije, Beograd, ICDQM-2013.
- [2] Devetaković, S., Jovanović-Gavrilović B., Rikalović, G. (2004), Nacionalna ekonomija, Beograd, Ekonomski fakultet.
- [3] Dujić, I. (2012), Globalizacija kao neizbežan proces, međunarodni problem, 3/2012: 326-337.
- [4] Hrustić, H. (2010), Srbija i geoekonomska globalizacija, Zbornik Matice Srpske za društvene nauke, br. 132: 27-37.
- [5] Karavelić, Z., Gojković, Lj. (2013), Institutional environment for the attraction of foreign capital, Annals, of the Radea University, Faculty of Management and Technological Engineering, 2013/2: 92-96.
- [6] Klaus, S., Havier (2011), Global Competitiveness report 2010-2011, World Economic Forum.
- [7] Jovanović – Gavrilović, (1996), Podizanje konkurentnosti Jugoslovenske privrede kao preduslov za povećanje izvoza, Ekonomski anali 128 : 53-59.
- [8] Romić, L. (2004), Oživljavanje privrede u uslovima globalnih ekonomskih reformi i tranzicije, Ekonomski anali: 192-196.
- [9] Rosić, I. (1996), Strategija razvoja i strukturne promene u nacionalnoj ekonomiji, Zbornik – Rast i strukturne promene privrede Srbije u uslovima tranzicije, Ekonomski fakultet Kragujevac i Niš pp. 3-10.
- [10] Svetski ekonomski forum – izveštaji konkurentnosti u svetu za (2007, 2008, 2009, 2010, 2011, 2012, 2013).
- [11] Republički zavod za statistiku – Društveno-ekonomska kretanja, 2013; 2014.
- [12] [www.makroekonomija.org/najvažniji-proizvodi-u-izvozu-i-u-uvozu-Srbije-u-2012-godini](http://www.makroekonomija.org/najvažniji-proizvodi-u-izvozu-i-u-uvozu-Srbije-u-2012-godini)

# ***INNOVATIVE PROPENSITY OF THE WESTERN BALKANS***

*Dragan Ivkovic, PhD<sup>7</sup>*

*Vladimir Knezevic, PhD<sup>8</sup>*

## ***ABSTRACT***

*In the modern world, innovations are a key factor in the development of the economy. Innovations are important for any nation's economy because of the impact that innovations generate on competitiveness, economic growth and development. Innovative tendencies are particularly important for countries lagging behind in the development, or countries that have not yet built their position in the globalized world. This group of countries, along with other Western Balkan countries, includes Serbia.*

*Therefore, the focus of this paper are questions: What is the innovative propensity of Serbia, and other countries in the Western Balkans?; Which key factors influence the innovations in Serbia?; What is the position of Serbia and other Western Balkan countries in terms of innovations in relation to the most innovative countries in the world, and what in relation to the countries of the European Union?*

*This paper seeks answers to these questions through analysis of reports and studies on global innovativeness from the following sources: INSEAD&WIPO, World Economic Forum (WEF), World bank and the European Union.*

***Key words:*** *Innovation, Competitiveness, Economy, Globalization*

***JEL Classification:*** *O31, F02*

***UDK:*** *330.341.1(497)2006/2013(047.1)*

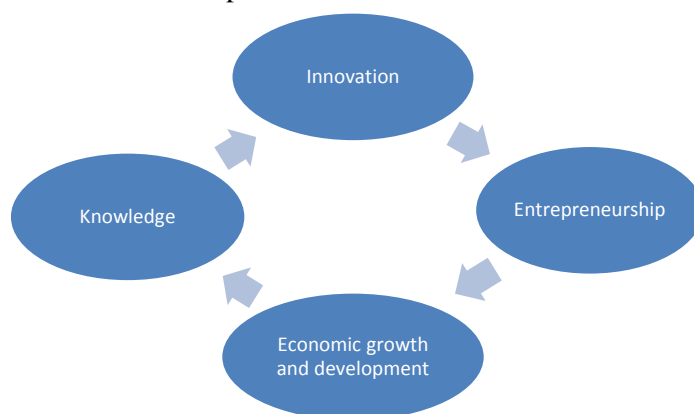
---

<sup>7</sup>Dragan Ivkovic, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, dragan.ict@gmail.com

<sup>8</sup>Vladimir Knezevic, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, vknezevic40@yahoo.com

## ***INTRODUCTION***

Scientific and technical progress and the intensification of the globalization process have considerably changed the world from the fifth decade of XX century and are still changing the world to the present day. Changes affect all aspects of human life. Consumer becomes the focus of economic events, and the battle for his affection leads to a knowledge based economy, the economy in which knowledge becomes the key factor of production. Economies that base its growth and development on knowledge are called entrepreneurial economies. Entrepreneurial economies are based on innovation - the practical application of new information and knowledge, or the application of existing knowledge in a new, different way, thus creating competitive advantage. So innovations and innovativeness became a key factor for economic development.



*Figure 1. Characteristics of Modern Economy*

*Source: Authors*

We can get information about innovativeness of economies of individual countries by researching and analyzing reports of global organizations which study this issue. Important sources in this regard are:

- The Global Competitiveness Report, World Economic Forum;
- Report of the World Bank;
- Report on global innovation, INSEAD&WIPO;
- The report of the European Commission.



## ***THE GLOBAL COMPETITIVENESS REPORT OF THE WORLD ECONOMIC FORUM***

The primary objective of the Global Competitiveness Report of the World Economic Forum is the analysis of the competitiveness of individual economies, and innovations and innovativeness are unavoidable indicators of competitiveness in modern conditions. The importance of innovations for the competitiveness of an economy is shown in the fact that innovation driven economies, economies that base its growth and development on innovation, are considered the best, most advanced economies, in this report.

All economies are classified into three groups depending on the achieved GDP per capita, on: factor-driven economies (<2000 USD per capita), efficiency-driven economies (3000-8999 USD pc) and innovation-driven economies (>17000 USD pc). In addition to these three basic groups there are two additional groups of economies: economies transiting from factor-driven economy to efficiency-driven economy (2000-2999 USD pc) and economies transiting from efficiency-driven economy towards innovation-driven economy (9000-17000 USD pc).

According to this classification, the Western Balkan countries, namely: Serbia, Bosnia and Herzegovina, Montenegro, Macedonia and Albania are in the group of efficiency-driven economies, while Croatia is in a group of countries transiting from efficiency-driven economy to an innovation-driven economy.

The Global Competitiveness Index is calculated based on 125 indicators which are grouped into 12 pillars. To calculate this index, data is collected from the following sources: national statistics institutions, World Bank, International Monetary Fund, UNESCO, World Health Organization, World Trade Organization, OECD, and so on.

One of the twelve pillars from which the GCI is calculated is the "Innovation" pillar. Indicator of innovativeness derived from seven separate indicators. These indicators are: Capacity for innovation; Quality of scientific research institutions; Investment of companies in research and development; Cooperation between universities and industry in research and development; Government procurement of products of modern technology; Availability of scientists and engineers and the number of patents.

The achieved level of innovation indicators and trends for the Western Balkans are shown in the following table.

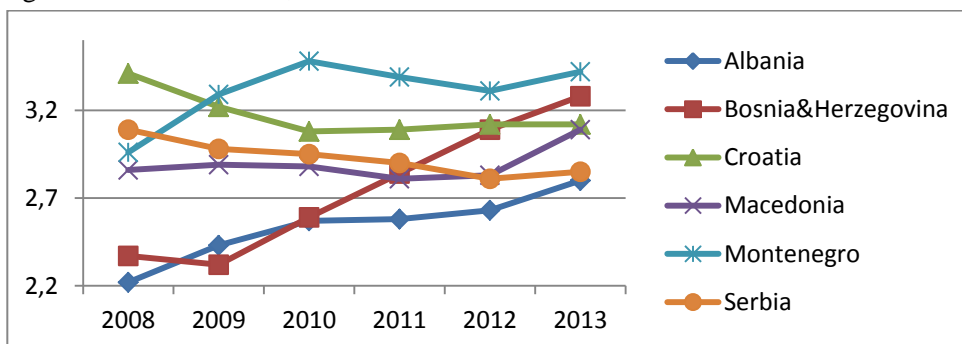
*Table 1. Innovation in the Western Balkans, according to the Global Competitiveness Report in the 2008-2013 period*

	2008 (134) <sup>1</sup>		2009 (133)		2010 (139)		2011 (142)		2012 (144)		2013 (148)	
	Rank <sup>2</sup>	Value <sup>3</sup>	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value
Albania	132	2,22	126	2,43	121	2,57	123	2,58	123	2,63	119	2,80
Bosnia& Herzegovina	128	2,37	131	2,32	120	2,59	104	2,84	80	3,09	63	3,28
Croatia	50	3,41	61	3,22	70	3,08	76	3,09	74	3,12	79	3,12
Macedonia	99	2,86	92	2,89	97	2,88	105	2,81	110	2,83	86	3,09
Montenegro	88	2,96	56	3,29	45	3,48	50	3,39	60	3,31	54	3,42
Serbia	70	3,09	80	2,98	88	2,95	97	2,90	111	2,81	112	2,85

*Source: Authors, based on data from the global competitiveness report 2008-2013*

*Note: <sup>1</sup>Number of the countries observed; <sup>2</sup> Rank in relation to the number of observed countries; <sup>3</sup> Reached value of the innovation indicator*

Among the countries of the Western Balkans, Montenegro achieved the highest innovation score, Albania scored the lowest.



*Figure 2. The values of the indicator of innovation*

*Source: Authors, based on data from the global competitiveness report 2008-2013*

In the six-year period Albania, Bosnia and Herzegovina, Macedonia and Montenegro, achieved the growth of innovation indicators, while the indicators for Serbia and Croatia declined. Bosnia and Herzegovina had the highest growth. Albania raised its level of innovation in each consecutive year. The largest decline of innovation indicators was recorded in Serbia in each consecutive year from 2008 to 2012.

However, when it comes to innovation in this report, it should be noted that a large number of parameters that influence innovativeness are part of the other eleven pillars of competitiveness.

## ***REPORT OF THE WORLD BANK***

Because of importance and impact that knowledge has on long-term economic growth, the World Bank Institute, as part of the program "Knowledge for Development", developed the KAM methodology, with the aim of helping countries which are transiting towards the knowledge based economy to better perceive their advantages and weaknesses compared with other countries. The idea is to provide the basis to the creators of national economic policies for making decisions on which to direct the institutions and resources in accordance with their set goals, to create an environment for the achievement of these set goals, and to be able to monitor the process of achieving these set goals.

Knowledge based economy is an economy in which knowledge is acquired, created, distributed and effectively used to improve economic development (Chen. D, Dahlman.C, 2005:4).

Building a knowledge based economy depends primarily on long-term investments in education, development of innovation capabilities, information infrastructure and economic environment that suits a market economy. On this foundation the KAM methodology frame was built, and it consists of four pillars: Economic and institutional regime; Education and training; Information and communication structures; Innovation system.

KAM methodology uses two aggregate indexes: Knowledge Economy Index (KEI); Knowledge Index (KI).

KI index indicates potential for development of the knowledge based economy of the country. This index takes into account the three KAM pillars: education and training of human resources, the innovation system and information and communication structures.

KEI index is broader, it takes into account all four pillars of KAM methodology, and indicates the extent to which the environment is able to use knowledge in context of economic development.

Both of these indexes are aggregate and are the average normalized value, KI is an index of nine, and KEI is an index of 12 knowledge indicators. An integral part of both of these indexes is the Innovation Index, which is the average normalized value of three indicators: Royalty payment & receipts; patent count and Journal articles.

The latest data for Western Balkans countries is displayed in the following table.

Table 2. Indicators of knowledge and the knowledge economy

Country	KEI <sup>1</sup>		KI <sup>2</sup>		E&R <sup>3</sup>		IS <sup>4</sup>		E&S <sup>5</sup>		ICT <sup>6</sup>	
	R <sup>7</sup>	V <sup>8</sup>	R	V	R	V	R	V	R	V	R	V
Albania	82	4,53	88	4,48	71	4,69	101	3,37	83	4,81	72	5,26
Bosnia& Herzegovina	70	5,12	73	4,97	63	5,55	79	4,38	57	5,77	82	4,77
Croatia	39	7,29	38	7,27	42	7,35	34	7,66	49	6,15	30	8,00
Macedonia	57	5,65	59	5,63	59	5,73	69	4,99	78	5,15	48	6,74
Serbia	49	6,02	46	6,61	80	4,23	48	6,47	51	5,98	39	7,39
Average WB <sup>9</sup>		5,72		5,79		5,51		5,37		5,57		6,43
World		5,12		5,01		5,45		7,72		3,72		3,58
Europe and Central Asia		7,47		7,64		6,95		8,28		7,13		7,50

Source: Authors, based on data from  
[http://info.worldbank.org/etools/kam2/KAM\\_page5.asp](http://info.worldbank.org/etools/kam2/KAM_page5.asp)

Note: 1KEI-knowledge economy index; 2KI-knowledge index; 3E&R-economic and institutional regime; 4IS-Innovation system; 5E&S-education and skills; 6ICT-Information and communication infrastructure; 7R-rank among 145 countries; 8V-Reached value; 9Average WB-average of the Western Balkans, calculated by authors.

The latest available report of the World Bank Institute covers 145 countries. Top-ranked country in the Western Balkans by KEI and KI index is Croatia, which is ranked in the top third of the surveyed countries.

Croatia is the only Western Balkans country, classified in the group of countries with high income (over \$ 12,276 per capita), while the other Western Balkans countries are placed in the group of countries with upper middle income (\$ 3,976 per capita-\$ 12,275 per capita).

Serbia has the second highest value of KEI and KI indexes, behind Croatia, it is placed near the bottom of the top third in the rankings. Albania has the lowest KEI (82) and KI (88) rankings, Croatia also have the highest ranking in all four individual pillars.

The lowest ranked country in the Western Balkans in the pillar of the Economic and institutional regime is Serbia (80). According to the World Bank, Serbia improved its ranking in this pillar for 56 positions compared to the year 2000. However, the position of Serbia in this column significantly lowers the overall rank of Serbia in the KEI and KI index, because it is placed in top third in innovation system and ICT pillars of the overall rankings, the 48<sup>th</sup> and 39<sup>th</sup> position respectively, while it is ranked 51<sup>st</sup> in the Education and training pillar.

Albania has the worst ranking for Innovation system pillar, it occupies the 101<sup>st</sup> position, and also the Education and training pillar, 83<sup>rd</sup> position. The lowest ranked country in the Western Balkans for ICT pillar is Bosnia and Herzegovina, on 82<sup>nd</sup> place.

Compared to the world average, the Western Balkan countries have better average performance indicators, except for innovation system pillar, where the region and each individual country are below the world average.

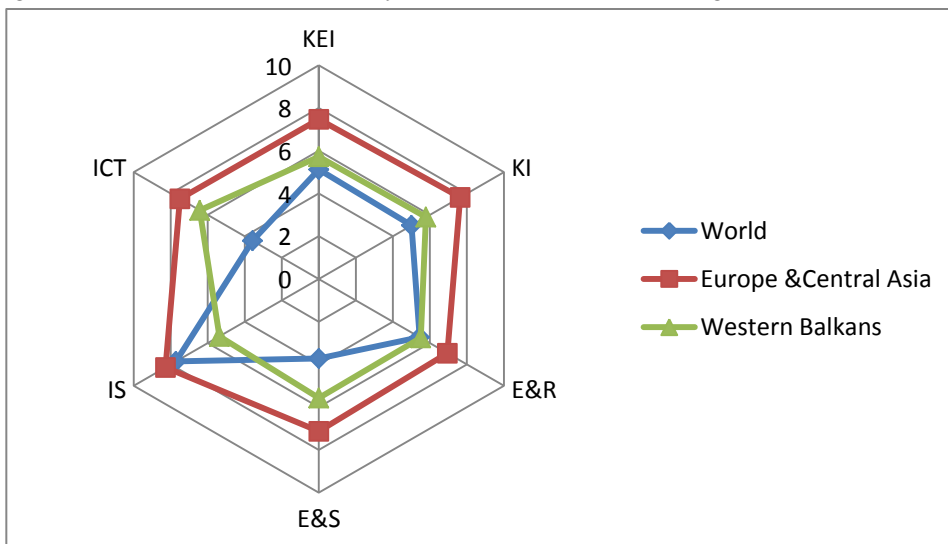


Figure 3. Western Balkans in relation to the World and Europe&Central Asia

Source: Authors, based on data from [http://info.worldbank.org/etools/kam2/KAM\\_page5.asp](http://info.worldbank.org/etools/kam2/KAM_page5.asp)

Viewed individually the Western Balkan countries are below the average of Europe and Central Asia, only Croatia has pillar ICT above the average value for the Europe and Central Asia.

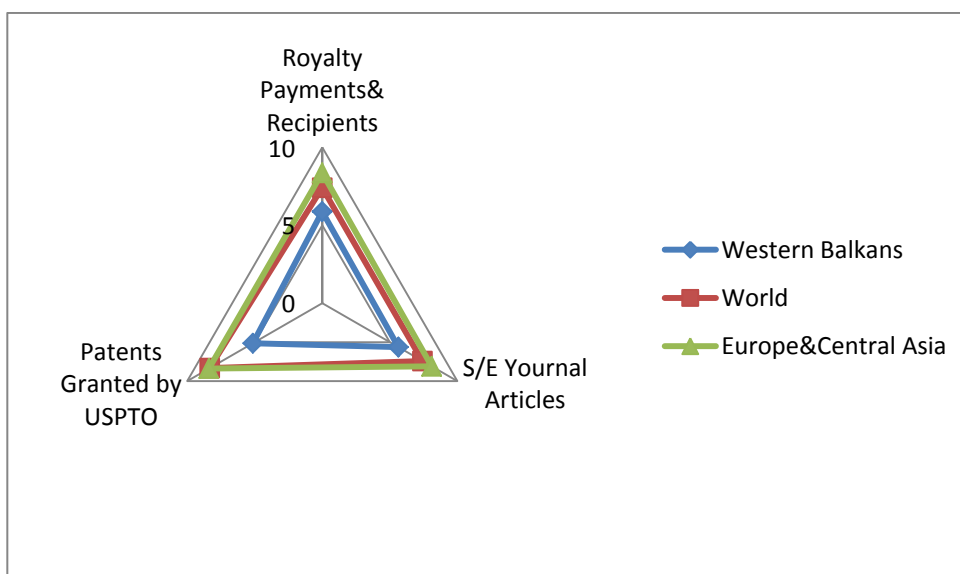
Croatia has the highest value of the three indicators used to calculate innovation system pillar in the Western Balkans.

*Table 3. Indicators of the innovation system of the Western Balkans*

Country	Royalty Payments and Recipients	S/E Yournal Articles	Patents Granted by USPTO
Albania	4,96	2,76	2,40
Bosnia& Herzegovina	4,40	4,48	4,25
Croatia	7,44	8,00	7,53
Macedonia	5,76	5,24	3,97
Serbia	6,48	7,59	7,53
Average WB	5,88	5,64	5,14
World	7,40	7,41	8,33
Europe and Central Asia	8,36	8,10	8,39

*Source: Authors, based on data from  
[http://info.worldbank.org/etools/kam2/KAM\\_page5.asp](http://info.worldbank.org/etools/kam2/KAM_page5.asp)*

The average value of these three indicators of the Western Balkan countries is below average, both at the global level and also compared to the region of Europe and Central Asia.



*Figure 4. Innovation system of the Western Balkans in relation to the World and Europe&Central Asia*

*Source: Authors, based on data from  
[http://info.worldbank.org/etools/kam2/KAM\\_page5.asp](http://info.worldbank.org/etools/kam2/KAM_page5.asp)*

None of Western Balkan countries scored in any of these three indicators above the value for Europe and Central Asia. Croatia, for indicators Royalty Payment & receipts and S / E Journal articles, and Serbia for the indicator S / E Journal articles, are above the world average.

When we talk about innovation system, it is interesting to note that of all the countries of Europe and Central Asia that entered into the process of transition from socialism to capitalism in the late 80's and early 90's of the XX century, only Slovenia has innovation system subindex value (8,50) above the world average and the average for the region of Europe and Central Asia. Hungary is also above the world average (8,15).

To conclude this part of the paper it can be stated that based on the report of the Institute of the World Bank and the Global Competitiveness Report of the World Economic Forum we can get a certain picture of the innovative tendencies of individual countries and the region, but that the true focus of these reports are different phenomena, competitiveness and the knowledge economy.

However, innovation is an essential factor to the competitiveness and knowledge economy. Many factors that are important for understanding the phenomenon of competitiveness and knowledge economy also affect innovation and innovative propensity and vice versa.

Strength of entrepreneurial economy lies in the mutual effects and synergy of these three factors: competitiveness, knowledge and innovation.

## ***REPORT ON GLOBAL INNOVATION OF THE INSEAD&WIPO***

For the purpose of measuring innovativeness business school INSEAD has developed a methodology for calculating the global innovation index (GII). The Global Innovation Index is published annually. WIPO-World Organization for Intellectual Property Protection participates in the research. The last published report, for year 2013, covers 142 countries that make up 94,9% of the world population, and in which 98,7% of the world GDP is created. (Dutta.S, Lanvin.B,2013, pp 7). The Global Innovation Index is obtained as the average of two sub-indexes: innovation inputs and innovation outputs. A total of 84 indicators are used to calculate the Global Innovation Index.

Sub-index innovation inputs encompasses innovative activities that enable the creation of outputs, while the sub-index of innovation outputs shows the results of innovative activities. Sub-index innovation inputs is obtained on the basis of indicators grouped into five pillars: Institutions; Human capital and research; Infrastructure; Market sophistication; and Business sophistication.

Sub-index innovation outputs is calculated from indicators grouped into two columns: Outputs that result from the application of knowledge and technology; the creative results.

In addition to the Global Innovation Index, sub-indexes innovation input and innovation outputs, in 2012 Innovation efficiency ratio was added to the report, it represents the ratio of innovation outputs and innovation inputs sub-indexes, and it shows the efficiency of innovation resources usage in order to obtain innovative outputs.

European countries are ranked at the top of the list of countries according to the Global innovation index. Among the ten highest-ranked countries seven are European and they occupy the top four places. Also among the top thirty countries there are twenty-one European countries.

*Table 4. Most innovative countries in the world*

Rank	Global Innovation Index		Innovation Input Sub-index		Innovation Output Sub-index		Innovation Efficiency Ratio	
	Country	Value	Country	Value	Country	Value	Country	Value
1	Switzerland	66,56	Singapore	72,77	Switzerland	66,85	Mali	1,13
2	Sweden	61,36	Hong Kong	70,65	Netherlands	58,09	Moldova	1,08
3	UK	61,25	USA	69,19	Sweden	54,86	Guinea	1,07
4	Netherlands	61,14	UK	68,20	UK	54,30	Malta	1,06
5	USA	60,31	Sweden	67,86	Malta	53,42	Swaziland	1,06
6	Finland	59,51	Finland	66,67	Luxembourg	53,20	Indonesia	1,04
7	Hong Kong	59,43	Switzerland	66,52	Iceland	53,14	Nigeria	1,03
8	Singapore	59,41	Danmark	66,34	Finland	52,35	Kuwait	1,03
9	Danmark	58,34	Canada	64,76	Israel	52,14	Costa Rica	1,02
10	Ireland	57,91	Netherlands	64,18	Germany	51,88	Venezuela	1,02

*Source: Authors, based on data from Dutta, S., Lanvin B., (Eds.), Global innovation index 2013, Fontainblau: INSEAD. Downloaded from:*

<http://www.globalinnovationindex.org/content.aspx?page=gii-full-report-2013>

The Western Balkans region, according to the Global innovation index indicators, innovation inputs and innovation outputs, is ranked above the world average for 2013 and below the average of Europe.

According to the Innovation efficiency ratio, the average value of this indicator for the Western Balkans is below world and Europe average.

In 2013 Croatia was the highest-placed country in the Western Balkans, ranked 37<sup>th</sup> while Albania was ranked the lowest, 93<sup>rd</sup>.



Table 5. The global innovation indicators in the Western Balkan countries

Country		Global Innovation Index			Innovation Input Sub-index			Innovation Output Sub-index			Innovation Efficiency Ratio		
		2011	2012	2013	2011	2012	2013	2011	2012	2013	2011	2012	2013
Albania	Rank	80	90	93	95	82	77	78	98	118	96	112	129
	Value	30,5	30,4	30,9	22,6	37,4	39,1	38,3	23,3	22,7	0,6	0,6	0,58
Bosnia& Herzegovina	Rank	76	72	65	54	66	58	111	72	78	121	102	103
	Value	30,8	34,2	36,2	42,1	41,4	42,5	19,6	26,9	29,9	0,5	0,6	0,7
Croatia	Rank	44	42	<b>37</b>	45	44	43	48	45	<b>41</b>	65	63	50
	Value	38,0	40,7	<b>41,9</b>	45,0	46,4	46,1	31,0	34,9	<b>37,8</b>	0,7	0,8	0,82
Macedonia	Rank	67	62	51	68	52	48	61	71	66	78	93	96
	Value	33,5	36,2	38,2	26,6	43,2	44,5	40,4	29,2	31,9	0,7	0,7	0,72
Montenegro	Rank		45	44		48	40		<b>44</b>	50		50	94
	Value		40,1	41,0		45,0	47,7		<b>35,3</b>	34,3		0,8	0,72
Serbia	Rank	55	46	54	71	65	60	38	36	51	17	7	<b>49</b>
	Value	36,5	40,0	37,9	39,1	41,5	41,5	33,5	38,5	34,2	0,9	0,9	<b>0,82</b>
Average WB	Value	33,9	36,9	37,7	35,1	42,5	43,6	32,6	31,4	31,8	0,68	0,73	0,73
World	Value		36,8	37,4		42,3	42,2		31,4	32,7		0,73	0,78
Europe	Value	43,0	47,9	47,6	49,5	52,9	52,8	36,3	42,9	50,9	0,73	0,81	0,80

Source: Authors, based on data from Global innovation index 2011-2013

In the past three years Croatia, Macedonia and Bosnia and Herzegovina constantly improved its performance according to the Global Innovation Index. Albania and Macedonia had a constant growth of innovative inputs sub-index, Bosnia and Herzegovina and Croatia recorded growth of innovation outputs sub-index. Serbia has stagnated in the value of the Global Innovation Index and innovation output sub-index. In terms of Innovation efficiency ratio Serbia has the highest value in the region (0,82), despite the fact that this index decreased compared to the year 2012 (0,90), when the value of this ratio for Serbia ranked seventh in the world.

Table 6. Pillars of the global innovation index in the Western Balkan countries

Country		INS <sup>1</sup>	HC&R <sup>2</sup>	INF <sup>3</sup>	MS <sup>4</sup>	BS <sup>5</sup>	K&TO <sup>6</sup>	CO <sup>7</sup>
Albania	Rank	73	84	75	32	128	108	121
	Value	58,9	27,1	31,1	56,8	21,4	19,2	26,1
Bosnia& Herzegovina	Rank	82	42	84	58	<b>37</b>	50	108
	Value	57,2	38,2	28,2	48,1	<b>41,0</b>	30,3	29,6
Croatia	Rank	<b>48</b>	58	<b>32</b>	64	48	<b>39</b>	52
	Value	<b>69,1</b>	34,9	<b>43,3</b>	46,5	36,7	<b>33,9</b>	41,6
Macedonia	Rank	58	52	67	41	51	59	75
	Value	65,4	36,1	33,2	51,4	36,4	27,7	36,0
Montenegro	Rank	52	<b>29</b>	65	<b>29</b>	64	64	<b>50</b>
	Value	67,9	<b>46,7</b>	34,0	<b>57,3</b>	32,4	26,8	<b>41,7</b>
Serbia	Rank	71	50	50	97	73	41	84
	Value	61,2	36,7	37,2	41,4	31,2	33,6	34,8

Average WB	Value	63,28	36,32	34,50	50,25	33,18	28,58	34,96
World	Value	62,56	32,59	33,54	48,26	33,70	27,62	37,73
Europe	Value	75,66	46,41	44,91	56,12	44,91	37,77	47,13

Source: Authors, based on data from Dutta, S., Lanvin B., (Eds.), *Global innovation index 2013*, Downloaded from:

<http://www.globalinnovationindex.org/content.aspx?page=gii-full-report-2013>

Note: <sup>1</sup>INS-institutions; <sup>2</sup>HC&R-human capital and research; <sup>3</sup>INF-infrastructure; <sup>4</sup>MS-market sophistication; <sup>5</sup>BS-business sophistication; <sup>6</sup>K&TO-knowledge and technology outputs; <sup>7</sup>CO-creative outputs.

Compared to the European average Western Balkans lags behind in all pillars of innovation. Compared to the world average, the Western Balkans region has a higher value in five of the seven pillars of innovation. For the other two pillars, business sophistication and creative output, Albania's extremely poor value of these indicators lowered the score for the region below the world average.

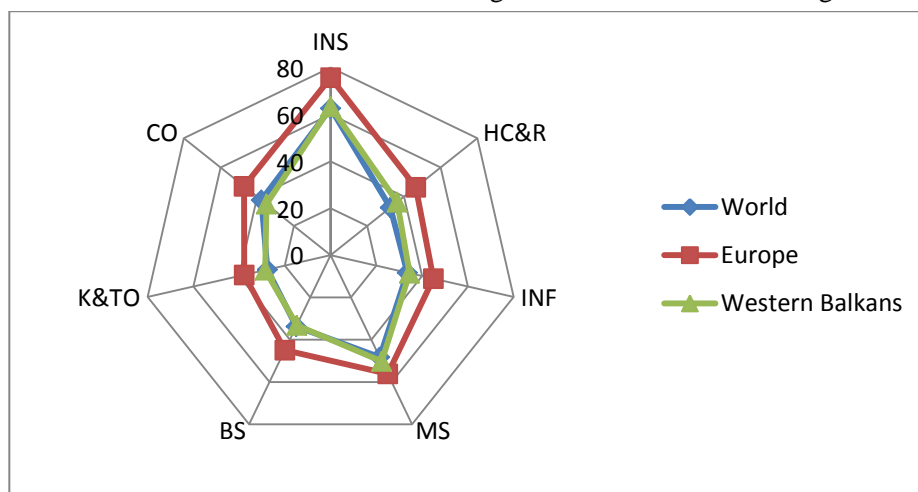


Figure 5. Pillars of global innovation in the Western Balkans in relation to the World and Europe

Source: Authors, based on data from Dutta, S., Lanvin B., (Eds.), *Global innovation index 2013*, Downloaded from:

<http://www.globalinnovationindex.org/content.aspx?page=gii-full-report-2013>

Observed by pillars of innovation Croatia takes the first place in the three pillars of innovation among the countries of the Western Balkans, including: institutions, infrastructure, knowledge and technological output. Montenegro is placed first in the following pillars: human capital, market sophistication and creative output. Bosnia and Herzegovina is ranked number one in business sophistication.

Albania occupies the worst position in the region in four pillars. These pillars are: human capital, business sophistication, knowledge and technology outputs and creative output.

Bosnia and Herzegovina is the lowest ranked in the pillar of institution and infrastructure, and Serbia in the market sophistication pillar. Bad position of Serbia in this pillar is the result of poor values Investments indicators, in which Serbia is placed 122<sup>nd</sup> out of 142 countries observed, and the intensity of local competition, in which Serbia takes 131<sup>st</sup> place.

Value of these indicators suggests that investments are not on the sufficient level and that more investments are needed, primarily in research and development, while the intensity of local competition indicates insufficiently developed markets. Serbia is also placed badly in the pillar of business sophistication, located just ahead of Albania. This is a consequence of state of cluster development indicator, 125<sup>th</sup> place, and innovative connectivity, 114<sup>th</sup> place.

Clusters, as a form of cooperation between enterprises, are very important for the access to the global market, and for the development of the region at the national level. State of cluster development indicator indicates that Serbia has not paid enough attention to the development of clusters. Also, a significant relation between the economic and scientific-research institutions is lacking, and this contributes to bad results in the field of innovation.

Serbia is in placed in the top fifty countries of the world according to the value of pillars: infrastructure (50), human capital (50), and knowledge and technology outputs (41).

## ***REPORT OF THE EUROPEAN COMMISSION***

European Commission studies innovation, and publishes SII index- Summary Innovation Index in "Innovation Union Scoreboard" publication for EU Member States, as well as some of the countries that are candidates for accession to the European Union (Serbia, Macedonia, Turkey), or are close to the European Union, although not actual EU members or candidates for membership (Iceland, Norway, Switzerland).

In addition to examining the data on innovation in the European Union, this report looks at the position of innovation in the European Union in relation to the global innovation leaders who, according to this report, are South Korea, USA and Japan, as well as other global partners, including BRICS countries.

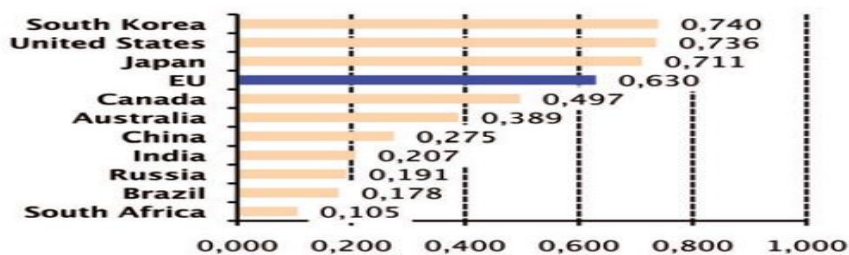


Figure 6. Global innovation performance

Source: European Commission, *Innovation Union Scoreboard 2014*, Downloaded from: [http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index\\_en.htm](http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index_en.htm), pp. 29

According to the Innovation Union Scoreboard for 2014, the gap between European Union and USA and Japan is closing, while the gap between the European Union and South Korea is increasing (European Commission, 2014:29). Also, the European Union in terms of innovative performance has an advantage over BRICS countries.

SII index measures innovative performance of European countries covered by this report. It is derived from 25 indicators, grouped into three pillars: Enablers, Firm activities, and Outputs.

To calculate the Summary Innovation Index and individual indicators, the data from different sources is used: Eurostat, World Bank, Thomson Reuters, OECD, United Nations, etc.

Depending on the value of SII index and average value of SII index in the European Union, all European countries covered in this report are divided into four categories (European Commission, 2014:11):

- Innovation leaders - which includes countries with innovation performance in SII more than 20% above the average SII for the European Union;
- Followers of innovators - which includes countries with innovation performance of 90%-120% of the average value of SII index for the European Union;
- Moderate innovators – which includes countries with innovative performance of 50% -90% of the average value of SII index for the European Union, and
- Modest innovators - countries with innovation performance below 50% of the average value of SII index for the European Union.

Within the European Union Innovation leaders are: Sweden, Denmark, Germany and Finland, respectively. However, when a non- European Union countries are taken into consideration, then the list of innovation leaders is expanded, because Switzerland has the highest innovation performance by far.

As for the Western Balkan countries, this report includes: Croatia, Serbia and Macedonia. Croatia and Serbia are classified in the group of moderate innovators, while Macedonia is in a group of modest innovators.

*Table 7. Movements and the growth rate of SII index in the period 2006-2013*

	2006	2007	2008	2009	2010	2011	2012	2013	Growth rate
<b>EU</b>	0,493	0,506	0,504	0,516	0,531	0,532	0,545	0,554	1,66%
<b>Croatia</b>	0,290	0,274	0,283	0,295	0,315	0,319	0,309	0,306	0,77%
<b>Macedonia</b>	0,191	0,190	0,193	0,218	0,221	0,221	0,239	0,246	3,66%
<b>Serbia</b>	0,246	0,243	0,247	0,239	0,276	0,267	0,344	0,358	5,54%

*Source: European Commission, Innovation Union Scoreboard 2014, Downloaded from: [http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index\\_en.htm](http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index_en.htm), pp. 93*

According to the SII index, Serbia is ahead of other considered West Balkan countries, it is ranked 23<sup>rd</sup> of 34 countries. Croatia occupies 27<sup>th</sup> place, while Macedonia is ranked 30<sup>th</sup>. Macedonia is ranked ahead of three European Union member states, Bulgaria, Lithuania and Romania, Serbia is ranked higher than nine member states.

Although it scored well below the EU average for innovative performance, Serbia went from 48% of the average SII index of the European Union in 2007, to 65% of the average SII index of the European Union in 2013.

Of all the European countries covered in this report Serbia has the highest rate of growth of innovative performance in the period from 2006 to 2013, 5.54% per year, well above the growth rate in the EU (1,66%). Macedonia also recorded significant growth of innovative performance in the period, 3,66%, and took the fourth place of all 37 surveyed countries, behind Serbia, Portugal (3,86%), and Estonia (3,74%).

*Table 8. Indicators of the SII index*

	ENABLERS			FIRM ACTIVITIES			OUTPUTS	
	HR <sup>1</sup>	RS <sup>2</sup>	F&S <sup>3</sup>	FI <sup>4</sup>	L&E <sup>5</sup>	IA <sup>6</sup>	IN <sup>7</sup>	EE <sup>8</sup>
<b>EU</b>	0,583	0,539	0,558	0,417	0,550	0,564	0,549	0,595
<b>Croatia</b>	0,579	0,157	0,289	0,220	0,401	0,137	0,357	0,316
<b>Macedonia</b>	0,408	0,163	0,072	0,239	0,149	0,019	0,478	0,337
<b>Serbia</b>	0,405	0,116	0,608	0,334	0,357	0,026	0,530	0,451

*Source: Authors, based on data from European Commission, Innovation Union Scoreboard 2014, Downloaded from:*

*[http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index\\_en.htm](http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index_en.htm)*

The Western Balkan countries are lagging behind in all the elements which comprise the SII index, except for indicators of Finance and support, where Serbia is above the EU average.

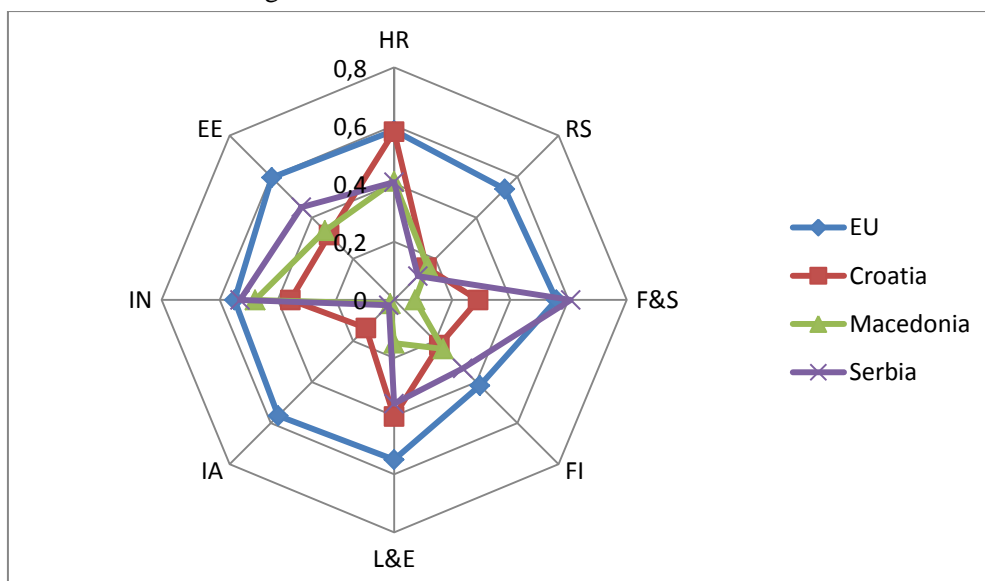


Figure 7. SII indicators of the countries of the Western Balkans

Source: Authors, based on data from European Commission, Innovation Union Scoreboard 2014, Downloaded from:

[http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index\\_en.htm](http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index_en.htm)

Macedonia reached 44% of the European Union SII index level in 2013. The relative strengths of Macedonia are in the area of expenditure incurred for innovations that are not related to research and development and in the field of youth education above secondary level of education. Relative weaknesses are in the areas of expenditure incurred for research and development in the private sector and in the area of scientific publications.

The main advantages of Serbia are youth education and knowledge of the employees, as well as expenditures made for the innovations that are the result of research and development. The main weakness of Serbia are in the area of investment in research and development in the private sector.

## ***DISCUSSION AND ANALYSIS***

In today's business environment innovations have long ceased to be a consequence of chance or serendipity. Today, innovations are a process that is managed. Managing innovation process means, among other things, creating a climate and environment conducive to the creation of innovations, both at the micro and macro levels. Therefore, the Government should ensure the protection of intellectual property rights, an independent and effective judiciary system, legal framework that does not suffocate private initiative, and efficient public administration.

The education system should be based on providing the necessary knowledge and should encourage innovative behavior from the primary education level all the way through to the higher education level.

Tempo of changes that is dictated by the modern environment is so fast that knowledge quickly becomes obsolete. This requires a constant training of employees that will raise their knowledge and skills to the level necessary to survive, adapt and prosper in the ever changing environment.

Financial policies aimed at promoting innovation, availability of financial resources, policy which support development of small and medium enterprises, that seek their competitive advantage through innovation in order to survive and increase their competitiveness, are the backbone of policy that creates innovative environment. Investment in research and development and connection of economy and science through the creation of clusters and technology parks are an innovative base with a number of positive effects on the micro and macro levels. When Western Balkans region countries are observed with these assumptions in mind, then performance indicators point to similarities, differences and problems that are evident.

*Table 9. The most problematic indicators of the Western Balkan countries*

<b>Indicator</b>	<b>AL<sup>1</sup></b>	<b>B&amp; H<sup>2</sup></b>	<b>CR<sup>3</sup></b>	<b>MA<sup>4</sup></b>	<b>MO<sup>5</sup></b>	<b>SE<sup>6</sup></b>
<b>Institutions</b>	Rank <sup>7</sup>	Rank	Rank	Rank	Rank	Rank
Property rights	137					130
Intellectual property protection		135				
Judicial independence	134					
Westfulness of government spending		146				130
Burden of government regulation						142
Efficiency of legal framework in setting disputes						137
Efficiency of legal framework in challenging regs			132			136
Ethical behavior of firms		135				
Efficacy of corporate boards						138
Protection of minority stakeholders		130				144

<b>Macroeconomic environment</b>					
Government budget balance					132
Gross national savings		139		144	136
<b>Higher education and training</b>					
Quality of the educational system		132			
Extant of staff training					140
<b>Goods market efficiency</b>					
Intensity of local competitions	144	143		135	138
Extant of market dominance	131				142
Effectiveness of anti-monopoly policy					141
Effect of taxation on incentives to invest			143		130
Agricultural policy costs			146		130
Business impact of rules on FDI			140		
Buyer sophistication		139		136	143
<b>Labor market efficiency</b>					
Cooperation in labor-employer relations			133		144
Hiring and firing practices			131		
Effect of taxation on incentives to work			143		
Reliance on professional management					135
Country capacity to retain talent		143	134		146
Country capacity to attract talent		140	143	134	147
<b>Financial market development</b>					
Financing through local equity market	146				136
Ease of access to loans	135				
Venture capital availability	136	131			
Regulation of securities exchanges	146				
<b>Technological readiness</b>					
Firm-level technology absorption					137
<b>Business sophistication</b>					
Local supplier quantity	135				
State of cluster development	145	148			
Nature of competitive advantage		146		143	145
Value chain breadth	147	136			
Production process sophistication					130
Extent of marketing					135
Willingness to delegate authority					141

Source: Authors, based on data from Schwab, K. (Eds.), *The global competitiveness report 2013-2014*, Downloaded from: <http://www.weforum.org/reports>

Note: <sup>1</sup>AL-Albania, <sup>2</sup>B&H - Bosnia and Herzegovina, <sup>3</sup>CR-Croatia, <sup>4</sup>MA-Macedonia, <sup>5</sup>MO-Montenegro, <sup>6</sup>SE-Serbia, <sup>7</sup>Rank-rank among 148 surveyed countries.

Serbia and Bosnia and Herzegovina face biggest problems in building and strengthening of institutions. After the breakup of Yugoslavia they were faced with unresolved political problems which continue to exist to the present day. In the case of Serbia the main issue is Kosovo, and in the case of Bosnia and Herzegovina most problems are caused by the dysfunctional state, which results in lack of attention given to the many economic and reform issues. A few years after the collapse of Yugoslavia Macedonia and Croatia entered the calmer historical waters, while Montenegro, after parting ways with Serbia and dissolution of State Union of



Serbia and Montenegro, as a small country, was very quick to adapt to European standards. Albania, which did not take part in the tumultuous events surrounding the SFRY breakup, as the least developed among the surveyed countries, is slowly and steadily progressing.

Household savings are the main source of investment of national economies. Serbia, Montenegro and Bosnia and Herzegovina have poor indicators related to household savings. The causes for this are, among other things, the lack of confidence in the banks, which was destroyed by the pyramid scheme banks of the nineties, and the operations of banks in recent times, which operate in these markets with higher interest rates than in developed countries (Kovačević.M, 2010:49).

Bosnia and Herzegovina has the biggest problems with the educational system, while Serbia has a problem with insufficiently trained workforce.

There are problems in the region in the commodities market. Markets are underdeveloped, and they lack intense market competition, which is otherwise an important motivator of innovation.

Clusters, which are suitable for the realization of economic cooperation between companies and scientific research and educational institutions, and which usually contribute to good results in the field of innovation, are almost non-existent in Bosnia and Herzegovina, and in Albania they are still in their infancy.

In the labor market, there are many problems in the region. Reflected in the lack of cooperation between employees and employers, lack of qualified managers, etc. The leading countries of the region have a major problem with attracting and retaining talent. Problem called "Brain drain" is most pronounced in Serbia, it is present in the past several decades, and Serbia is still not able to cope with this problem (Ivković at all, 2012:1844).

A key factor of innovation are the people, and every man is a potential innovator.

Thus, the issues of employment and unemployment are important for understanding the situation, prospects and problems of the national economies, but also for innovation and innovative tendencies.

*Table 10. Employment rate*

	2009	2010	2011	2012
EU-27	64,5	64,1	64,3	64,6
Croatia	56,6	54,0	52,4	52,5
Macedonia	43,3	43,5	43,9	44,1
Serbia	50,4	47,2	45,4	45,3

*Source: Ministarstvo regionalnog razvoja i lokalne samouprave Republike Srbije, 2013:124*

The employment rate in all the countries of the Western Balkans region is lower than the employment rate in the European Union. Macedonia has the lowest employment rate, Serbia is slightly ahead of Macedonia.

Unemployment rate in the region is also above the EU average.

*Table 11. Unemployment rate*

	2009	2010	2011	2012
EU-27	9,0	9,7	9,7	10,3
Albania	13,8	14,2	14,3	14,7
Bosnia&Herzegovina	24,1	27,2	27,6	28,2
Croatia	9,1	11,8	13,4	15,8
Macedonia	32,2	32,0	31,4	31,0
Serbia	16,9	20,0	23,6	24,6

*Source: Ministarstvo regionalnog razvoja i lokalne samouprave Republike Srbije, 2013:130*

A specific case in this respect is related to Serbia. Serbia at the beginning of the transition process in the late 80s and early 90s of the last century, had an unemployment rate of about 12% (in 1991, 12.1%, source: data.worldbank/indicator / SL.UEM.TOTAL. ZS page = 4).

Everything that's happened in the last decade of the twentieth century has left bad consequences for Serbia and its economy. The sanctions of the international community, two unsuccessful privatization attempts, hyperinflation, gray economy and end NATO aggression have left the economy of Serbia completely devastated. Since 2000, Serbia has entered in intensive transition process. The first and crucial step is the process of privatization, primarily of public property which, after preparation, began in 2002. This process has significantly impacted the economy and economic performance of Serbia. The first negative aspect of the privatization is the state of assets which are to be privatized. The historical experience of capitalist countries after the Second World War, which had devastated economies, suggests that those states, aided with substantial international financial assistance (the Marshall Plan) first recovered its economies, conducted nationalization if necessary, and only when these economies recovered and stabilized, conducted re-privatization process, in order to increase the efficiency of the system (more on that: Jergin, Stanislav, 2004).

In the case of Serbia, whose economy has been devastated, both physically through the aggression of NATO, as well as technologically, due to the sanctions of the international community, and with necessary international financial assistance not being provided, historic moment did not allow further delay of the privatization process.

However, the manner in which privatization was implemented left long-term ill effects on the economic system of Serbia. Privatization is carried out in order to change the form of ownership, and the main reason is that private property

ownership is more efficient than public or state ownership. A consequence of the privatization process in transition countries in the early years is the increase in unemployment, but over time, as private sector strengthens and with the structural changes occurring in the economy, a decline in the unemployment rate and employment growth are to be expected (Đukić, 2010:89). In Serbia this turnaround, to this day, has not occurred.

The established principles of privatization did not take into consideration the origin of buyers capital, and did not consider their motives for buying companies. Therefore, the emergence of money laundering, increase of corruption, and buying the company for its property, and not with the goal of improving its operations and efficiency, often led the company which was bought into liquidation, and left employees on the street (Kosanović et al., 2010:131). This led to a growth of unemployment that economy can not absorb, and increased pressure on the budget which is forced to deal with social issues to a greater extent than it is prudent.

Economic policy views the attraction of foreign direct investment as a way out of the bad economic situation, so this is the basis of its strategy of growth and development. However, a significant inflow of foreign direct investments is absent, because of the bad image of Serbia, which has been created in the world, due to the poor economic situation and inadequate institutional and legislative solutions. Along with all these issues, influence of global economic crisis on Serbia and the region also has to be taken into consideration.

Neoliberal concept of economic policy which was implemented proved to be a bad choice in the given circumstances. To be the undisputed regulator of economic activities, market needs to be able to perform this function, and if this regulator is underdeveloped, then the outcome of such policy is easily predictable. Serbia to this day failed to reach the GDP from the pre-transition period, today it is about 70% of GDP in 1990, and it is the only country in the region with lower GDP compared to 1990. In terms of labor all of the above caused the problem of unemployment in Serbia, which has become a chronic problem.

*Table 12. Employed and unemployed in Serbia in 000*

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Employed	2102	2067	2040	2050	2069	2021	1991	1990	1857	1775	1739	1723	1703
Unemployed	769	843	947	945	992	1005	850	793	730	730	745	761	770

*Source: [www.nbs/statistic/nbs\\_site/gen/latinica/90/statisticki/sb\\_01\\_14.pdf](http://www.nbs/statistic/nbs_site/gen/latinica/90/statisticki/sb_01_14.pdf)*

Another problem is the unemployment of youth in Serbia, as well as in other countries in the region, that is well above the EU average.

*Table 13. Youth unemployment rates*

	2009	2010	2011	2012
EU-27	15,6	9,9	20,9	21,3
Croatia	21,9	25,1	32,6	36,1
Macedonia	56,4	55,1	53,7	55,3
Serbia	37,4	41,6	46,2	50,9

*Source: Ministarstvo regionalnog razvoja i lokalne samouprave Republike Srbije, 2013:131*

Young people, their ideas and creativity, the ability to perceive problems and to find solutions differently, a tendency to more often than other age groups, think "outside the box", are an important innovation resource. The above indicates that Serbia has huge untapped potential in human capital for innovation. This statement also holds true for the other countries of the Western Balkans.

## **CONCLUSION**

The most innovative countries in the world and Europe are the countries with the highest standard of living and the highest GDP per capita. These countries have managed to create a stable environment conducive to innovation development and expression of innovative tendencies. The material basis which the most innovative countries have, represents a significant advantage that allows them to manifest a higher level of innovative tendencies in relation to other countries. A man with 10 EUR in his pocket has completely different way of thinking, behavior, goals and priorities, and is preoccupied with existential problems and an uncertain tomorrow, compared to one who has 10,000.

Innovative performance of Western Balkan countries is in the top half of surveyed countries on the global level, while it is in the bottom half on European level. All countries of the Western Balkans, observed over a longer period of time, have been steadily improving their innovative performance. When making judgments about innovation in these countries the developments in the last 25 years in the region of the Western Balkans that have drastically affected the economic and innovative performance of these countries should be taken into consideration. The Western Balkan countries that have gone through this period with less turbulence achieved better results in economic and innovative performance. If we compare Slovenia, as the most developed country of former Yugoslavia, which went through dissolution of Yugoslavia relatively unscathed, with the Western Balkan countries, we will see that it is better placed than the Western Balkan countries on the global and European level.

Opportunities for further improvement and progress in terms of economic and innovative performance are numerous and extensive, and include: institutions, innovative environment, further development of the market, the educational system, and so on.

Many various possibilities are related to large innovation potential of unused human capital.

How and at what speed will changes and improvements in these areas occur depends on many factors, but primarily on the economic policy makers and their willingness, ability and commitment to improve the innovation environment and to take advantage of available innovation resources.

## ***REFERENCES***

- [1] Chen, D., Dahlman, C. (2005), *The Knowledge Economy, the KAM Methodology and World Bank Operations*, World Bank
- [2] Dutta, S. (Eds.). (2011), *Global innovation index 2011*, Fontainblau: INSEAD. Downloaded from: <http://www.globalinnovationindex.org/content.aspx?page=past-reports> (16.04.2014)
- [3] Dutta, S. (Eds.). (2012), *Global innovation index 2012*, Fontainblau: INSEAD. Downloaded from: <http://www.globalinnovationindex.org/content.aspx?page=past-reports> (16.04.2014)
- [4] Dutta, S., Lanvin B., (Eds.). (2013), *Global innovation index 2013*, Fontainblau: INSEAD. Downloaded from: <http://www.globalinnovationindex.org/content.aspx?page=gii-full-report-2013> (16.04.2014)
- [5] . Đukić, P. (2010), *Završetak privatizacije u Srbiji-efekti na razvoj i zaposlenost, Kraj privatizacije-posledice po ekonomski razvoj nezaposlenost u Srbiji*, Institut ekonomskih nauka, Beograd, pp. 80-97
- [6] European Commission. (2008). *Innovation Union Scoreboard 2008*, Downloaded from: [http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index\\_en.htm](http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index_en.htm) (12.02.2014)
- [7] European Commission. (2009). *Innovation Union Scoreboard 2009*, Downloaded from: [http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index\\_en.htm](http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index_en.htm) (12.02.2014)
- [8] European Commission. (2010). *Innovation Union Scoreboard 2010*, Downloaded from: [http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index\\_en.htm](http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index_en.htm) (12.02.2014)
- [9] European Commission. (2011). *Innovation Union Scoreboard 2011*, Downloaded from: [http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index\\_en.htm](http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index_en.htm) (12.02.2014)

- [10] European Commission. (2012). Innovation Union Scoreboard 2012, Downloaded from: [http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index\\_en.htm](http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index_en.htm) (12.02.2014)
- [11] European Commission. (2013). Innovation Union Scoreboard 2013, Downloaded from: [http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index\\_en.htm](http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index_en.htm) (12.02.2014)
- [12] European Commission. (2013). Innovation Union Scoreboard 2014, Downloaded from: [http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index\\_en.htm](http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index_en.htm) (12.02.2014)
- [13] INSEAD. (2009), Global innovation index 2008-2009, Fontainblau: INSEAD. Downloaded from: <http://www.globalinnovationindex.org/content.aspx?page=past-reports> (16.04.2014)
- [14] INSEAD. (2010), Global innovation index 2009-2010, Fontainblau: INSEAD. Downloaded from: <http://www.globalinnovationindex.org/content.aspx?page=past-reports> (16.04.2014)
- [15] Ivković, D., Cogoljević, D., Kvrgić, G., Vujadin, R., Čukanović Karavidić, M.&Vujičić, S.(2012)., Development of corporate governance in transition countries, *Technics Technologies Education Management*, Vol.7, No. 4, 2012, pp.1837-1847
- [16] Jergin, D, Stanislav. Dž. (2004), Komandni visovi, Beograd:Narodna knjiga Alfa
- [17] Kosanović, M., Paunović, S&Žigmund. Lj. (2010), 'Privatizacija u Republici Srbiji i stavovi sindikata', *Kraj privatizacije-posledice po ekonomski razvoj nezaposlenost u Srbiji*,Institut ekonomskih nauka, Beograd, pp. 128-141
- [18] Kovačević, M. (2010), 'Privatizacija u začaranim krugovima', *Kraj privatizacije-posledice po ekonomski razvoj nezaposlenost u Srbiji*,Institut ekonomskih nauka, Beograd, pp. 41-59
- [19] Ministarstvo regionalnog razvoja i lokalne samouprave Republike Srbije.(2013). Izveštaj o razvoju Srbije u 2012. Downloaded from: [http://www.mrrls.gov.rs/sites/default/files/attachment/Izvestaj\\_o\\_razvoju\\_Srbije\\_2012.pdf](http://www.mrrls.gov.rs/sites/default/files/attachment/Izvestaj_o_razvoju_Srbije_2012.pdf) (30.05.2014)
- [20] Schwab, K., Porter M., (Eds.). (2008), The global competitiveness report 2008-2009, Geneva: World economic forum. Downloaded from: <http://www.weforum.org/reports> (20.09.2011.)
- [21] Schwab, K. (Eds.). (2009), The global competitiveness report 2009-2010, Geneva: World economic forum. Downloaded from: <http://www.weforum.org/reports> (20.09.2011.)
- [22] Schwab, K. (Eds.). (2010), The global competitiveness report 2010-2011., Geneva: World economic forum. Downloaded from: <http://www.weforum.org/reports> (20.09.2011.)
- [23] Schwab, K. (Eds.). (2011), The global competitiveness report 2011-2012 Geneva: World economic forum. Downloaded from: <http://www.weforum.org/reports> (20.08.2011.)

- 
- [24] Schwab, K. (Eds.). (2012), The global competitiveness report 2012-2013, Geneva: World economic forum. Downloaded from: <http://www.weforum.org/reports> (15.10.2012.)
- [25] Schwab, K. (Eds.). (2013), The global competitiveness report 2013-2014, Geneva: World economic forum. Downloaded from: <http://www.weforum.org/reports> (20.12.2013.)
- [26] World Bank (2012) [http://info.worldbank.org/etools/kam2/KAM\\_page5.asp](http://info.worldbank.org/etools/kam2/KAM_page5.asp) (14.03.2014)
- [27] World Bank, <http://data.worldbank/indicator/SL.UEM.TOTAL.ZS?page=4> (27.05.2014)
- [28] [www.nbs.statistic/nbs\\_site/gen/latinica/90/statisticki/sb\\_01\\_14.pdf](http://www.nbs.statistic/nbs_site/gen/latinica/90/statisticki/sb_01_14.pdf) (24.05.2014)

# **STRATEGIC IMPORTANCE OF OPEN INNOVATION FOR SMEs**

*Boris Jevtic, MSc<sup>9</sup>*

*Radmila Grozdanic, PhD<sup>10</sup>*

## **ABSTRACT**

*The concept of Open Innovation requires extensive empirical investigation, testing and development. This paper analyzes the aspects of SMEs innovation activities, working on new ideas in a system of open innovation within the major organizational and technological changes associated with the open innovation. The paper is based on research of 44 innovative enterprises in Serbia, realized in 2014, as well as on the results of the innovative activities of the SMEs in previous period. The main findings are showing that: phenomena is well known among SMEs which base their information about OI on inner and other sources, among which the highest score received consultation with customers, followed by cooperation with universities and institutes in the country and collaboration with experts in the country. The biggest share of innovation in business entities in total was 31.27%. The biggest share among innovators belongs to business entities in the manufacturing industry 36.46%. Most of innovative companies export more than 50% of their production/services mainly as a result of their innovative activities. Innovative companies concern membership of business infrastructure important for their innovative activities. In the paper is presented theoretical framework for open innovation process using relevant references. The contribution of this research is in support the positive practice of innovative enterprises and their activities on the basis of open innovation, as well as in emphasizing the further development of inner and outside conditions for better understanding these activities.*

**Key words:** *Open Innovation, SMEs, Research, Business Infrastructure*

**JEL Classification:** *030, 031,032, 033, 034*

**UDK:** *005.591.6:334.713(497.11)*

---

<sup>9</sup>Boris Jevtic, Intesa bank, Belgrade, Serbia, boris.jevtic10@gmail.com

<sup>10</sup>Radmila Grozdanic, Faculty for Business, Economics and Entrepreneurship, Belgrade, Serbia, sme\_rada@hotmail.com



## INTRODUCTION

Open Innovation is an emerging paradigm. This new paradigm inspires enterprises to find the most appropriate business model to commercialize new products or services, regardless whether that model exists within the enterprise or must be sought externally.

One challenge is that Open Innovation so far has been mainly discussed at the enterprise level, i.e. how enterprises can organize their innovation processes to benefit from opening up. For policy makers the role of governments in a world of Open Innovation is still uncharted (de Jong et al., 2008).

Theory provides tools of contemplation or analysis for understanding, explaining and making predictions on a particular phenomenon (Lundström et al., 2013). While theorizing open innovation, it is needed to develop and regime the methods that are used for data collection and analysis. The large scale platforms mean seeing the light of large collections of data. Improving the ways of making such big data readily available for analysis, thus becomes a key issue for open innovation.

For open innovation development in supporting the new products, organization and markets of enterprises is very important to use new technologies in the process to advance capabilities and commercialization results of the activity.

According to Carlsson (Carlsson et al., 2008) Open Innovation is a model of ways of exploiting new technologies, new products and services by companies. For the emerging innovation market Web-Based Intermediaries (WBIs) as newcomers, expect that number of innovation exchanges increase.

The issue of technological innovation based on open innovation principles can be seen, according to the Impact study (Teleport Sachsen Anhalt & Wise Guys Ltd. 2004) as the main supporter for building the competitiveness through knowledge .

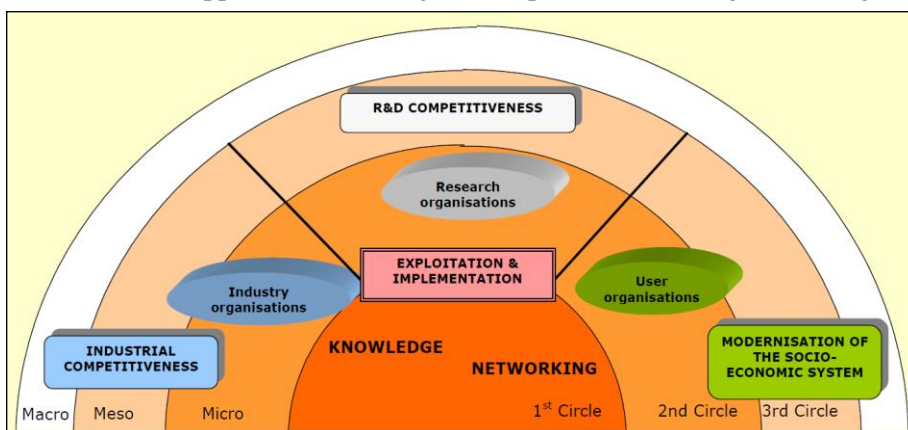
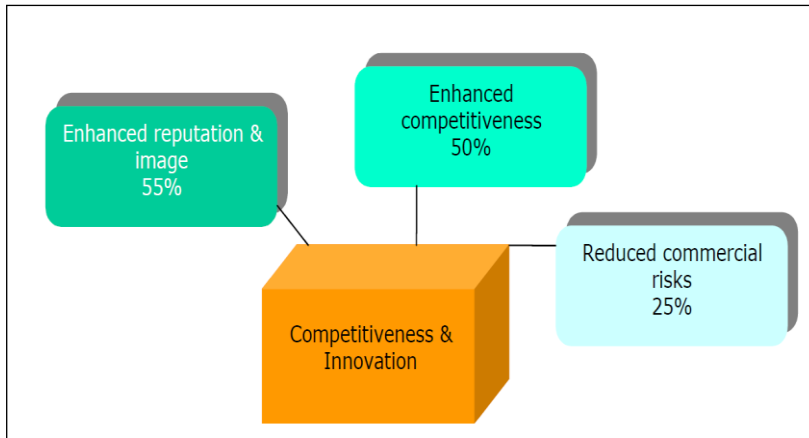


Figure 1. The IST Programme's Role IST Impact Study in the Innovation System

Source: Teleport Sachsen Anhalt and Wise Guys Ltd, 2004

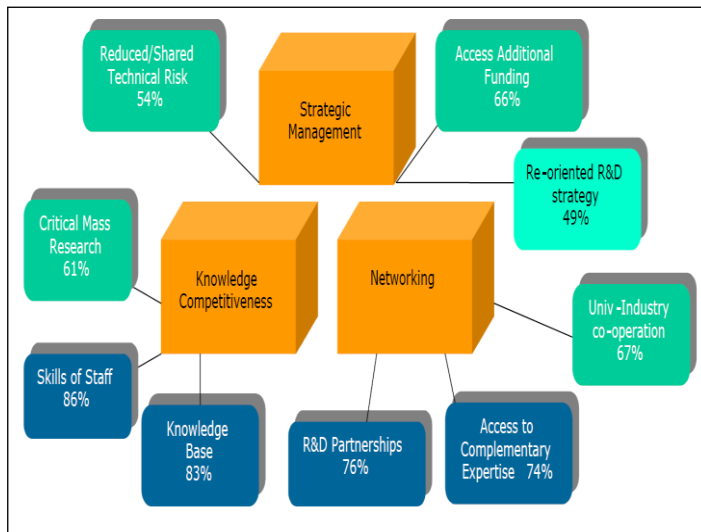
As competitiveness impacts concern reputation, image, innovation, reducing commercial risks, illustrated in Figure 2., to enhance the results for development based on that preconditions are more and more important.



*Figure 2. Competitiveness Impacts*

*Source: Teleport Sachsen Anhalt and Wise Guys Ltd, 2004*

Building the competitiveness through Knowledge very much illustrates further connections among processes and actors:



*Figure 3. Building Competitiveness through Knowledge*

*Source: Teleport Sachsen Anhalt and Wise Guys Ltd, 2004*

In this paper are presented final findings of research on the innovation support of SMEs realized in Serbia. The research is based on the Innovation, theories.

Later are given main characteristics of the research, sampling, companies involved, as well as key results of the research. At the end are given discussion and conclusion, as well as the list of the literature sources used in the elaboration of the paper.

## ***LITERATURE OVERVIEW***

### ***DEFINITIONS***

The closed model innovations based on the view that enterprises must generate and develop their own ideas in order to innovate and remain competitive.

Enterprises today could not easily protect their new knowledge from the competition. As well as the innovations of others, external knowledge or to external information workers, should not be out of the enterprises interest. So, the closed model of innovation which has been dominated, is challenged by growing mobility of highly experienced and skilled people, presence of private venture capital, increasingly fast time to market for many products and services, growing competition from foreign businesses , and a wider stock of knowledge accessible from various sources.

Using internal and external sources of ideas and knowledge to advance innovation processes implies the usage of the Open Innovation model by enterprises. Further, it would understand that the enterprise can its internal ideas take to the market through external channels to generate additional value by, spin-offs, external licensing of intellectual property.

As a consequence enterprises must open their doors; it is widely believed that the era of Open Innovation has arrived (Chesbrough, 2003). Open Innovation is ‘the use of purposive inflows and outflows of knowledge to accelerate internal innovation and to expand the markets for external use of innovation, respectively’ (Chesbrough, Vanhaverbeke& West, 2006:1).

Open Innovation is closely related with the systems of innovation literature, illustrated in Table 1.

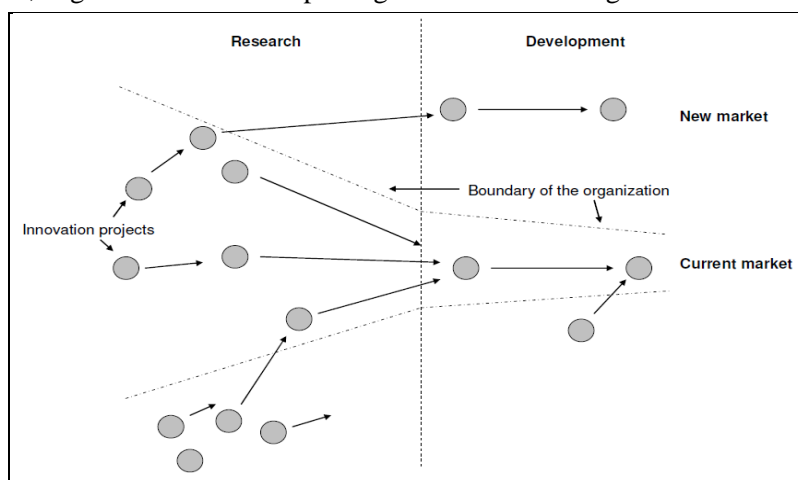
*Table 1. Similarities between the Open Innovation and systems of innovation literatures*

<b>OPEN INNOVATION LITERATURE</b>	<b>SYSTEMS OF INNOVATION LITERATURE</b>
Enterprises obtain better results if they open up their innovation processes, i.e. involve the world outside.	Innovation is the result of complex and intensive interactions between various actors.
Innovation is no longer the domain of the internal R&D department; traditional stage-gate models provide an incomplete picture of how innovation should be organized.	The linear model in which knowledge-related activities are divided in supply and demand does not hold any longer.
Enterprises can benefit from purposive inflows and outflows of knowledge. Knowledge spillovers offer opportunities and are not just a threat	Knowledge spillovers are essential for the functioning of the innovation system, and are very much desirable.
Enterprises need both internal innovation competences (other than R&D) and competences to connect with external parties in order to be successful.	The functioning of innovation systems can be hampered by capability and network failures.
As enterprises increasingly depend on external sources, infrastructural arrangements (e.g. IPR) and other framework conditions become more important.	The functioning of innovation systems can be hampered by institutional and framework failures.
Increased mobility of labor and presence of a trained labor force are important trends that eroded the closed innovation model.	Human and social capital provides the oil necessary for lubricating the innovation system.
If the innovating enterprise cannot internally benefit from its innovations, maybe others can.	The social benefits of innovation exceed those of the individual innovating actors.

*Source: According to De Jong, J.P.J., W. Vanhaverbeke, T. Kalvet & H. Chesbrough (2008), Policies for Open Innovation: Theory, Framework and Cases, Research project funded by VISION Era-Net, Helsinki: Finland ( in Jeroen de Jong, Policies for Open Innovation Report (2008), EIM Business and Policy Research*

## ***OPEN INNOVATION CHARACTERISTICS***

If an enterprise discovers and would like to realize innovative opportunities, Open innovation model would help enterprise in using both external and internal ideas and paths to the market, or in using external channels, outside the current businesses of the enterprise, to generate value. This paradigm is illustrated in figure 1.



*Figure 4. The open paradigm to manage innovation*

*Source: Chesbrough, 2003*

In the open model of innovation the enterprise can still originate its ideas inside the enterprise, and at the same time, some of them may seep out, during the all stages of the innovation process. In the illustration of OI model shown in the figure 1, Chesbrough (2003) understand a lot of potential ideas that can exist outside the enterprise.

The openness and specifically sourcing external knowledge have been already identified (innovation literature) as important model to speed up the innovation engine of enterprises.

The innovation literature recognizes further the specific of the open model that it helps brilliant ideas to be exploited outside the organization ('inside out').

All stress an integral use of purposive inflows and outflows of knowledge and resources results in better innovation performance.

The trend in many industries towards opening up innovation processes cannot be denied; it has become more important in recent years in both multinational, large enterprises (OECD, 2008) and small and medium-sized organizations (De Jong, 2006).

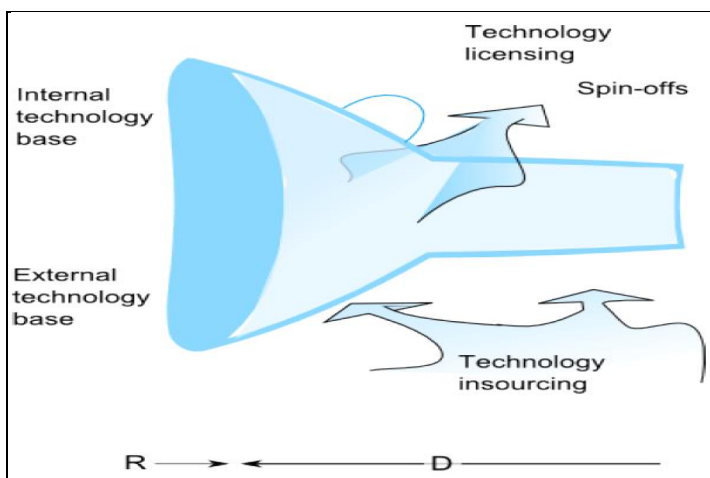


Figure 5. The Open Innovation Funnel

Source: According to Chesbrough, 2003 (from Tuomi, 2009)

By coining the Open Innovation model, Chesbrough (2003; 2006) has witnessed a paradigm shift in how enterprises develop and commercialize innovations.

The view behind the ‘old’ closed innovation model is that successful innovation requires control. It supposes that enterprises must generate their own ideas and then develop them, build them, market them, distribute them, service them, finance them, and support them on their own.

This closed paradigm counsels enterprises to be strongly self-reliant, because one cannot be sure of the quality, availability, and capability of others’ ideas.

The dominant logic was internally focused: enterprises invested in innovation, which led to many breakthrough discoveries. Such a practice make bringing new products and services to the market, realization of more sales with higher margins, reinvesting in more internal innovation harder.

The repercussions were also to the intellectual property (IP) that arises from this internal innovation which was closely guarded, and so the competitors could barely exploit these ideas for their own profit (Chesbrough, 2003).

*Table 2. Points of differentiation, relative to prior theories of innovation*

1	Equal importance given to external knowledge, in comparison to internal knowledge
2	The centrality of the business model in converting R&D into commercial value
3	Type I and Type II measurement errors (in relation to the business model) in evaluating R&D projects
4	The purposive outbound flows of knowledge and technology
5	The abundant underlying knowledge landscape
6	The proactive and nuanced role of IP management
7	The rise of innovation intermediaries
8	New metrics for assessing innovation capability and performance

*Source: Chesbrough, H. (2006) In: Chesbrough, Vanhaverbeke & West: Open Innovation: Researching a New Paradigm, Oxford University Press, p.11.*

## ***SOME RESEARCH FINDINGS ON OPEN INNOVATION OF SMEs IN SERBIA***

### ***METHODOLOGY***

Indicators of innovation activities in the Republic of Serbia, 2010–2012 are based on the survey on innovation activities in enterprises, realized over 2010–2012. The survey on innovative enterprises was carried out on a representative sample. The sample was allocated to the territory of the Republic of Serbia up to the level of regions, proportionally to the number of enterprises. The sample size was 3500 small and medium enterprises. Large enterprises were fully covered. The sample frame covered active enterprises from the Statistical Business Register, containing 11841 enterprises with 10 employees and more. The obtained results were weighted and calculated on the level of the population of enterprises.

The survey on enterprises was carried out on a stratified sample according to the size class of enterprises (small: from 10 to 49 employees, medium: from 50 to 249 employees and large: more than 250 employees) and according to activities (CA classes of activities). Sample realization was over 77%, approximately 3% of selected enterprises were frozen or in bankruptcy, approximately 20% of enterprises did not respond to the survey.

Information is collected via web questionnaire (37%), e-mail (12%) and printed questionnaire which was disseminated and collected by post (37%).

Innovative enterprises were defined for that purpose as enterprises that introduced in the reference period a product-process innovation, organizational

innovation or marketing innovation. The aim has been to grasp a true relation between the business policy of SMEs and innovative activities, in order to determine the type, scope and quality of these activities in SMEs.

Most findings are related to new or significantly improved products or services, use of new or significantly improved processes, logistics or distribution methods, some of them can illustrate the situation in innovative activities of SMEs sector at all, and will be useful for the further research presented in the paper.

## ***THE SIZE OF INNOVATIVE ENTERPRISES***

In this part of the paper are provided the data about business entities' activities on innovation of products/services, process innovation, innovation in the business' entity organization and innovation in marketing just for national level, with the results weighted and calculated on the level of the business entities population.

So, the results indicate that the share of enterprises with at least one of the mentioned types of innovations was approximately 45%. The size of enterprises was key factor for their innovation activity. Among innovative enterprises there were more than 66% of large enterprises, somewhat more than a half of medium and more than 40% of small enterprises. Innovation activities were more frequent in manufacturing enterprises, of which almost half of them introduced innovations, however they were introduced by more than 40% of service enterprises.

More detailed analysis on interesting aspects of technical innovation are presented through further tables and figures.

The size of enterprises was key factor for their innovation activity. Among innovative enterprises there were more than 66% of large enterprises, somewhat more than a half of medium and more than 40% of small enterprises.

*Table 3. Share of innovations by size of SMEs, 2010-2012*

	<b>TOTAL</b>	<b>INNOVATORS</b>	<b>NON-INNOVATIVE ENTERPRISES</b>	<b>NON-INNOVATORS (%)</b>
Total	11841	5280	6561	44,6
Small enterprises	9057	3691	5366	40,8
Medium enterprises	2264	1245	1019	55,0

*Source: Serbian Statistical Office, Statistical Release, No. 285/2013*

Types of innovations are defined according to the Oslo Manual (OECD, Oslo Manual, 3rd ed., 2005), as the implementation of new or significantly improved product, service or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations.



## INNOVATION ACTIVITIES

Innovation activities were more frequent in manufacturing enterprises, of which almost half of them introduced innovations, however they were introduced by more than 40% of service enterprises

Table 4. Enterprises by innovations, by activities, 2010–2012.

	TOTAL	INNOVATORS	NON-INNOVATIVE ENTERPRISES	NON-INNOVATORS (%)
Manufacturing enterprises	4122	2007	2195	48,7
Service enterprises	7719	3273	4366	42,4

Source: Serbian Statistical Office, Statistical Release, No. 285/2013

Table 5. Innovators by industry sector

INDUSTRY SECTOR	Total No. of business entities		Innovators		Product/service		Organization/marketing		Process		Non-innovators (%)
		%		%		%		%		%	
A: AGRICULTURE, FORESTRY AND FISHING	154	30,3	88	17,3	145	28,5	79	15,5	69,7		
B: MINING	20	37,0	12	22,2	15	27,8	8	14,8	63,0		
D: ELECTRICITY, GAS AND STEAM SUPPLY	36	46,2	28	35,9	29	37,2	21	26,9	53,8		
E: WATER SUPPLY AND WASTE WATERS MANAGEMENT	100	32,5	63	20,5	78	25,3	42	13,6	67,5		
F: CONSTRUCTION	449	40,6	240	21,7	409	36,9	201	18,2	59,4		
G: WHOLESALE AND RETAIL TRADE	1344	42,0	649	20,3	1219	38,1	523	16,3	58,0		
H: TRAFFIC AND STORAGE	236	34,4	172	25,1	180	26,2	115	16,8	65,5		
I: ACCOMODATION AND FOOD SERVICES	169	42,6	86	21,7	149	37,5	66	16,6	57,7		
J: INFORMATION AND COMMUNICATION	267	53,7	177	35,6	231	46,5	140	28,2	46,3		

K: FINANCE INDUSTRY AND INSURANCE	88	72,1	63	51,6	78	63,9	53	43,4	27,9
L: REAL ESTATE ACTIVITIES	11	24,4	5	11,1	11	24,4	5	11,1	73,3
M: PROFESSIONAL, SCIENTIFIC, INNOVATIVE AND ENGINEERING ACTIVITIES	480	50,6	312	32,9	450	47,5	282	29,7	49,4
N: ADMINISTRATION AND SUPPORTING RETAIL SERVICES	122	37,7	71	21,9	115	35,5	65	20,1	62,3

*Source: Serbian Statistical Office, Statistical Release, No. 285/2013*

As illustrated in the table above, the biggest share among innovators belongs to the business entities in the manufacturing industry.

Business entities that implemented a product/service innovation or business process innovation (including unrealized innovations as well as those still in progress) are considered to be technological innovators, and these SMEs are of the further interest of the research in this paper.

Other innovators are those business entities that implemented organizational or marketing innovations.

Non-innovators are those business entities that did not implement any type of innovation.

## **MARKETS**

When looking at markets where business entities-innovators sold their products/services, the most numerous were those selling on the local-regional market, followed by those selling on the national market. The share of innovators, versus that of non-innovators on the market of EU and EFTA countries, was twice higher, and on the market of other countries even up to three times higher.

40,7 of business entities - technological innovators responded that they were selling on the local markets in Serbia, (local, regional market) 49,13% of other innovations and 54,2% , and 66,9of business entities were without innovations.

Table 6. Markets where innovators sold their products, 2010-2012.

Market	Business entities that introduced technological innovations	Business entities that introduced other innovations	Business entities without innovations
Local, regional market	49,1	54,2	66,9
National market	40,7	37,8	28,4
EU, EFTA countries	7,1	5,8	3,6
Other countries	3,1	2,3	1,1

Source: Serbian Statistical Office, Statistical Release, No. 285/2013

As product / service innovation which launching a new product or service in the market with new or significantly improved characteristics or possibilities of use and includes significant improvement of technical characteristics, components and materials, built-in software, user orientation or other functional characteristics, is of interest of the research in this paper. In further two tales are presented technological innovators by type of innovative activities, and by the type of the implemented innovation.

Table 7. Technological innovators by type of innovative activities (%)

Size of business Entities	Product / service innovation	Business process innovation	Abandoned or suspended innovations	Organizational innovations	Marketing innovations
Total	21,0	19,1	7,9	17,9	31,4
Small	17,6	15,8	5,8	5,3	28,0
Medium-sized	29,6	27,5	14,6	41,0	36,3
Large	43,3	38,8	23,1	50,2	33,8

Source: Serbian Statistical Office, Statistical Release, No. 285/2013

Table 8. Structure of technological innovators by type of the implemented innovation

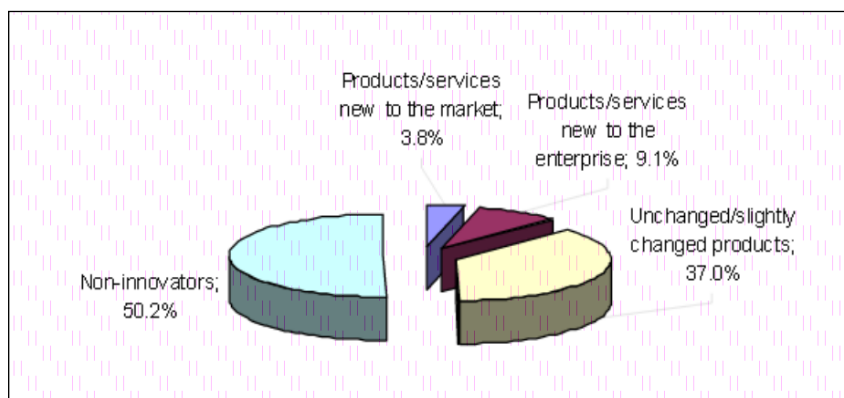
Size of business Entities	Product / service innovation		Business process innovation		
	Product innovation	Service Innovation	Production method innovation	New purchasing/ delivery method	New support activities for business processes
Total	100.00	100.00	100.00	100.00	100.00
Small	71.86	76.98	70.79	72.21	73.73
Medium-sized	28.14	23.02	29.21	27.79	26.27

Source: Serbian Statistical Office, Statistical Release, No. 285/2013

The developers of the newly introduced products/services, according to the responses, where mainly SMEs themselves or the group they belonged to, and as for business process development, about 43% were developed by business entities. The product/service innovation was new in the market 36.46%, and new to the business entity in 63.54% cases.

## ***INCOME FROM INNOVATIONS***

Share in the total income from product/service innovations In the structure of innovative enterprises' income, the share of income from sale of unchanged or slightly changed products was predominant and amounted to 37%, while that of sale of products/services new to the enterprises, and that of sale of products/services new to market were approximately 13%.



*Figure 6. Structure of innovators' income*

*Source: Source: Statistical Release, No. 285/2013*

## ***EXPENDITURES FOR INNOVATION ACTIVITIES***

Expenditures for innovation activities covers costs for the development of new products, costs for the introduction of a new product to the market, costs for significant improvement of existing products, services or processes, as well as costs for unfinished innovation projects.

Expenditures for innovation activities covers current costs (wages and salaries, equipment, services , etc.), as well as investment costs. In the total expenditures for innovation activities of enterprises, the largest percentage amount of expenditure was recorded for the purchase of machinery, equipment and software, being approximately 80%.

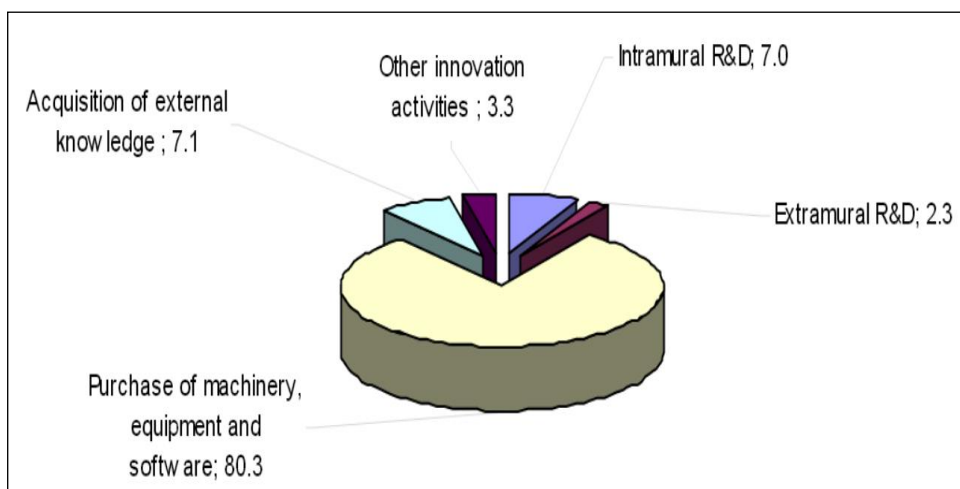


Figure 7. Structure of expenditures for innovation activities

Source: Statistical Release, No. 285/2013

## **OBJECTIVES OF ENTERPRISES**

All estimated objectives of enterprises over 2010–2012 had significant effect for most of enterprises, and the most significant was the increase of income and decrease of costs.

Table 8. Objectives of enterprises over 2010–2012

OBJECTIVES	High	Medium	Low	Not relevant
Increase income	55,8	22,8	9,1	12,3
Increase market share	38,0	31,8	13,0	17,1
Reduce costs	48,5	24,9	12,7	13,9
Increase profit rates	38,3	31,7	13,7	16,3

Source: Statistical Release, No. 285/2013

## ***THE STRATEGY OF ENTERPRISES***

Significance of the strategy to meeting the objectives of enterprises over 2010–2012. In nearly all enterprises the most significant strategies were focused on decreasing purchase costs and internal costs, then on entering new markets and increasing market share, as well as on improving flexibility to market requirements.

The degree of significance of development of new markets in non-EU and EU countries, as well as the association with other enterprises and institutions was not relevant.

*Table 9. The strategy to meeting the objectives of enterprises over 2010-2012.*

Significance of strategy	Significance of objectives (%)			
	High	Medium	Low	Not relevant
Development of new markets in EU-countries	14,2	17,4	17,9	50,6
Development of new markets out of EU	8,3 5	13,7	18,1	59,9
Reduce internal labour costs	33,5	33,8	16,7	16,0
Reduce purchase costs for equipment, parts or services	37,8	31,6	14,5	16,1
Introducing new or significantly improved products or services	21,0	34,0	19,9	25,1
Increase or improvement of products/services marketing	19,6	35,7	20,8	23,9
Increase of flexibility/adaptation to market requirements	31,1	36,0	14,7	18,2
Entering new markets and increase of market share	31,5	28,5	16,3	23,7
Association with other enterprises or institutions	9,8	25,6	22,2	42,4

*Source: Statistical Release, No. 285/2013*

## ***PROBLEMS***

Enterprises reported for the hampering factors in achieving the objectives of enterprises over 2010–2012 further obstacles:

1. Costs as being the greatest obstacle to achieving the objectives.
2. High administrative and regulatory costs were also the greatest hampering factor.
3. The pricing competition and uncertain demand affected significantly the achievement of objectives as for market factors,
4. Innovations of competitors were the least hampering factor.
5. The lack of skilled staff was not relevant.

*Table 10. Obstacles to objectives achieving*

FACTORS	OBSTACLES	Significance of objectives (%)			
		High	Medium	Low	Not relevant
Market	Strong pricing competition	37,9	34,1	14,5	13,6
	Strong competition in product quality, popularity and brand	21,5	35,4	24,1	18,9
	Uncertain demand	37,4	33,4	15,8	13,4
	Competitors' innovations	9,6	31,2	30,4	28,8
	Competitors' dominant market share	19,9	38,6	23,1	18,4
Knowledge	Lack of skilled staff	2,4	31,2	26,5	29,9
Costs	Lack of adequate funds	36,3	31,4	15,3	17,1
	Costs of direct entering new markets too high	35,5	30,7	15,0	18,7
	Administrative and regulatory costs too high	39,1	34,8	13,5	12,7

*Source: Statistical Release, No. 285/2013*

## ***DISCUSSION AND CONCLUSIONS***

The objective of the paper was to discuss the Open Innovation phenomena from theory framework, and based on it to present the key findings of an empirical research realized in Serbia among innovative enterprises on the Open Innovation.

It can be concluded that Open innovation implies that valuable ideas can come from inside or outside the organization, but also that these ideas can be marketed via internal or external pathways. The new paradigm considers external ideas and external paths to market as important as internal ideas and internal paths to market in the earlier era.

This enabled enterprises to practice their (internal) technologies without being blocked or held up by external Intellectual Properties, and to prevent their rivals from benefiting from their innovative efforts. In the open model enterprises manage their IP proactively.

The open paradigm has introduced alternative pathways for enterprises to benefit from innovation. In presented results of the field research, where the majority of SMEs made small enterprises to 50 employees, are evident the benefits for the export, the networking, business strategy, awareness of existing support institutions, sources of innovation, funding and co-innovating in the given environment.

Innovative enterprises demonstrate the opinion on Business Networks and cooperation as infrastructure which give impetus to the process of Open innovation. Enterprises and their associations in Serbia as country where the research was provided would have more in the future to use to an even greater extent, the network capacity of number of institutions, as well as other forms of cooperation with the NIO, customers, and suppliers.

## ***REFERENCES***

- [1] Carlsson S., Corvello V., Migliarese P. (2008), Enabling open innovation: Proposal of a framework supporting ICT and KMS implementation in web-based intermediaries, ECIS 2008 Proceedings
- [2] Chesbrough, H. (2003), Open innovation: The new imperative for creating and profiting from technology, Harvard Business School Press: Harvard, MA.
- [3] Chesbrough, H. (2006), Open Business Models: How to Thrive in the New Innovation Landscape, Boston: Harvard Business School Press.
- [4] Chesbrough, H., W. Vanhaverbeke & J. West (2006), Open Innovation: Researching a New Paradigm, Oxford: Oxford University Press.
- [5] De Jong, J.P.J. (2006), Meer Open Innovatie: Praktijk, Ontwikkelingen, Motieven en Knelpunten in het MKB (More Open Innovation: Practices, Trends, Motives and Challenges in Small- and Medium-Sized Enterprises),



- Background study for the Dutch advisory council on science and technology policy, no. 33, AWT: Den Haag, The Netherlands.
- [6] De Jong, J.P.J., W. Vanhaverbeke, T. Kalvet & H. Chesbrough (2008), Policies for Open Innovation: Theory, Framework and Cases, Research project funded by VISION Era-Net, Helsinki: Finland ( in Jeroen de Jong, Policies for Open Innovation Report (2008), EIM Business and Policy Research
- [7] European Commission (2006c), Creating an Innovative Europe: Report of the Independent Expert Group on R&D and Innovation appointed following the Hampton Court Summit and chaired by Mr. Esko Aho. Luxembourg, 2006, p. 15.
- [8] European Commission (2007), INNO-Policy TrendChart - Policy Trends and Appraisal Report: Belgium, Luxembourg, European Communities, 116 p.
- [9] European Commission (2008), European Innovation Scoreboard 2007: Comparative analysis of innovation performance; Luxembourg, European Communities, 52 p.
- [10] European Innovation Scoreboard (2007), database, European Commission, available at: <http://www.proinnoeurope.eu/index.cfm?fuseaction=page.display&topicID=275&parentID=51>
- [11] Eurostat (2008), On-line database, <http://ec.europa.eu/eurostat>, accessed May 2, 2008.
- [12] Global Innovation Index 2013, INSEAD
- [13] ICT PSP: Contacts Europa-information Society, available at: [http://ec.europa.eu/information\\_society/activities/ict\\_psp/about/index\\_en.htm](http://ec.europa.eu/information_society/activities/ict_psp/about/index_en.htm)
- [14] Innovation activities of SMEs (2010) Serbian Statistical Office, 2010
- [15] Jeroen P.J. de Jong J., Vanhaverbeke W., Kalvet T., Chesbrough H. (2003) Policies for Open Innovation: Theory, Framework and Cases
- [16] Lundström E., Wiberg M., Hrastinski S., Edenius M., Pär., Ågerfalk J. (2013). Managing Open Innovation Technologies
- [17] Nonaka, I. Toyama, R. and Hirata T. (2008), Managing flow: a process theory of the knowledge-based firm, Palgrave Macmillan
- [18] OECD (2008), Globalization and Open Innovation, OECD: Paris.
- [19] Teleport Sachsen Anhalt & Wise Guys Ltd. (2004) Strengthening Competitiveness through Knowledge, Study, Databank Consulting
- [20] Tuomi, I. (2009) Theories of Open Innovation, available at: <http://www.meaningprocessing.com/personalPages/tuomi/>
- [21] Oslo Manual, (2005), OECD
- [22] Tuomi, I. (2000), Tuomi, I. (2000), Journal of Management Information Systems 6 (3):103-117, M.E. Sharpe, Inc
- [23] Tuomi, I. (1999), Corporate Knowledge: Theory and Practice of Intelligent Organization. Helsinki, Metaxis, p. 453 p.
- [24] Tuomi, I. (2002), Networks of Innovation, OUP, 978-0-19-926905-1.

# **DELEVERAGING OF THE PUBLIC SECTOR AND THE OUTLOOK FOR ECONOMIC GROWTH IN SERBIA**

*Slavoljub Sljivic, PhD<sup>11</sup>*

*Dragana Vojteski-Kljenak, PhD<sup>12</sup>*

## **ABSTRACT**

*Every significant financial crisis in the post-Second World War period was followed by a lengthy and painful period of reducing debt. Reducing debt is comprehensive; it relates to public sector, banks, firms and households. From an economic growth perspective, it is very important for policy makers to correctly determine phases in which these particular subjects will start to reduce debt.*

*This paper deals with the theoretical and empirical aspects of reducing public debt, with special turn to Serbia. Serbia is in an economic-financial crisis and need to reduce budget deficits and public debt in the following period. Serbian budget deficit is among the largest deficits in Europe, and public debt has an exponential growth tendency.*

*A hypothesis is represented in the paper that Serbia enters unprepared in the process of reducing public debt. Because of that, its economic growth will be very modest in the following period. The paper's goal is to offer solutions for "navigating" through the process of reducing public debt, which are less expensive and less damaging for Serbian economic growth. The conclusion is that phased model of reduction of debt that was successfully implemented in Sweden and Finland (for resolving their own fiscal problems during 1990.), could be implemented in Serbia too-with necessary adjustments.*

**Key words:** *Deleveraging, Public Debt, Economic Growth*

**JEL Classification:** *H63, O23*

**UDK:** *336.143(497.11) 336.143.232(497.11)*

---

<sup>11</sup>Slavoljub Sljivic, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, [sensa037@gmail.com](mailto:sensa037@gmail.com)

<sup>12</sup>Dragana Vojteski-Klijenak, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, [vojteski@live.co.uk](mailto:vojteski@live.co.uk)

## ***INTRODUCTION***

One of the major issues in the world economy today is how to provide economic growth in an environment of high indebtedness of the private and public sectors. When the border of indebtedness is reached, then performs the reverse process-reduction of debt-which is known as *deleveraging* in a literature. The basic mechanisms of deleveraging are consumption repudiation and (compulsive) savings. Besides being politically unpopular, these mechanisms can cause great economic damage not only to the individual economic entities, but also on the aggregate level.

High public sector debt is especially important issue for Serbia. Serbia is a small transition economy, which achieves low rates of economic growth combined with high rates of growth of public debt. Consequently, the level of public debt is unsustainable and Serbia must enter into the process of deleveraging. Fiscal consolidation and structural reforms are the most important instruments that Serbia intends to use in this process. The key question is: Whether the public sector deleveraging will be successful? Whether it can reduce the ratio debt / GDP and increase economic growth in the future?

This paper deals with the theoretical and empirical aspects of public sector deleveraging, with special emphasis on Serbia. The hypothesis is that Serbia enters unprepared in the process of public sector deleveraging, which will have a negative effect on its economic growth. The aim is to offer solutions to "navigate" through the process of public sector deleveraging, which are less expensive and less harmful to economic growth in Serbia. Such solutions would be based on the positive experience of the world of practice, including necessary adjustments arising from the specifics of the fiscal position of Serbia.

The paper consists of five parts. The first part is a review of the literature. Second part describes the experiences of practice of public sector deleveraging in the world. The third part deals with the empirical analysis of markers of progress in Serbia for evaluation the progress of the economy in the process of public debt deleveraging. The fourth section discusses some of the most important facts that emerge from the empirical analysis. The fifth part is the conclusion.

## REVIEW OF THE LITERATURE

Ancient Greek philosopher Archimedes is known for a famous phrase: "Give me a lever long enough, and I will move the world." His phrase has become very actually in the current global economy. Until 2008., when financial crisis came forth, growth of the global economy was based on consumption and borrowing for the purpose of consumption. In such conditions, everybody saw only positive traits of leverage and debt. In the period after the 2008., many reasons for the use of leverage are gone. Economic growth has become unstable, the appetite for risk-taking are reduced, loans are "exhausted" and prices of assets have fallen. What is needed in the new environment is an urgent process of deleveraging.

Mechanism of deleveraging is not the same for all economic entities (RBC Global Asset Management, 2012). More important than that is the fact that deleveraging effects of different economic agents have different consequences on economic growth. The greatest effects on growth have deleveraging of financial institutions and of the state.

Deleveraging of financial institutions can significantly affect the growth of the economy as a whole. Financial institutions (banks, for example) have three types of mechanisms at their disposal, namely: (I) attracting new investors, for example through share issuance, (II) an increase in retained earnings and cutting dividends, as a way to internally strengthen capital base and (III) reducing the size of the balance sheets, through downsizing lending and/or sales of financial assets in order to repay obligations. The first two mechanisms have small aggregate effects on the economy. The third mechanism-reduction in the volume of lending-can cause serious macroeconomic consequences. Figure 1 describes this case:

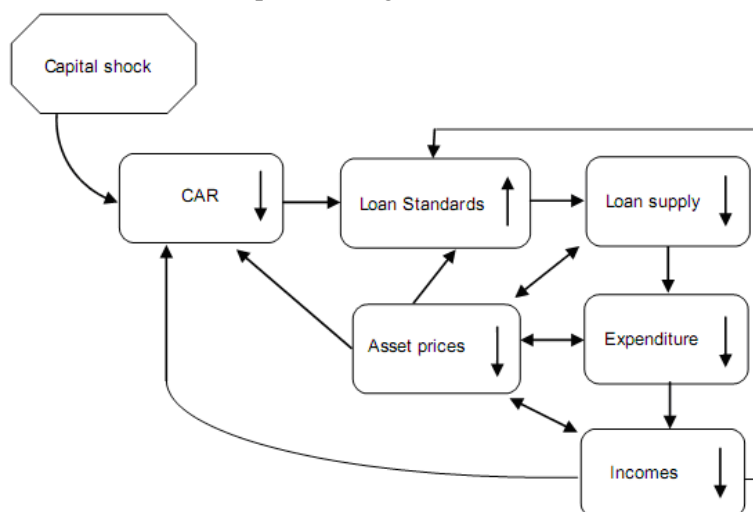


Figure 1. Financial deleveraging and macroeconomics

Source: Devlin and McKay, 2008

In Figure 1, the so-called channel bank capital is represented, through which deleveraging of the financial system can affect the real economy. The process begins with the external shock on the side of bank funds, for example, with the advent of losses from holding mortgage bonds. Such a shock causes a decrease in capital-to-asset ratio (CAR), i.e. increasing leverage. To regain the CAR target level, the banks make to deleverage by reducing the supply of loans. Loans offering decreases by tightening credit standards. Smaller loans offering affects directly the decline in consumption, investment and the asset prices. Reduced consumption and investments cause the decline of incomes of households and enterprises. These negative effects cause a new wave of deleveraging and the circle is complete. Final effect of a negative shock could be much larger and longer-lasting on the overall economy than the initial direct effect on the financial system. The governments of many countries have rapidly concluded that the recapitalization of the banking system is the part of any solution to get out of the financial crisis (Devlin, McKay, 2008).

No one expects for public debt to be completely eliminated, even in the short term. Unlike an individual, the states are theoretically immortal; it would mean that they can carry certain amounts of debt endless. The essence is not to abuse that possibility in practice.

What is the optimal borrowing limit for the state? Many investors and rating agencies consider that the limit should be 60% of GDP. The same limit applies to EU member states, on the basis of the Maastricht treaty. Reasonable alternative limit for government debt would be to get it back to the level before the outbreak of the global crisis 2007.

Several ways exist to reduce levels of public debt. Nowadays most states rely on fiscal consolidation and primary surplus in the budget (Sljivic et al, 2013). From a political standpoint, fiscal consolidation is hardly feasible due to the pressures of various interest groups. From the economic point of view, fiscal consolidation reduces economic growth in the short term. Fiscal consolidation creates immediate painful effects, while positive effects can be expected only after a number of years. So much time is needed to reverse the budget deficits into surpluses and the debt starts to decline. Ideally, the goal of fiscal consolidation could be making primary surplus of 2% of GDP annually. Even in the best case scenario, it will be necessary many years to significantly reduce public debt (RBC Global Asset Management, 2013).

Public debt is the result of accumulation of budget deficits. For conservative economists, eliminating the budget deficit is an example of "fiscal responsibility." Some authors, however, criticize the policy of fiscal consolidation that stand behind eliminating the deficit. They point to the so-called. fiscal trap, a situation in which fiscal tightening reduces economic growth, making a reduction in tax revenues and encouraging even more restrictiveness. In a situation of economic crisis, fiscal tightening becomes an example of "fiscal irresponsibility."

Arguments in favor of the budget deficit imposed on the key question: What is a sustainable level of public debt and how much budget deficit can persist in an economy? Sustainable level of public debt is one in which the debt ratio (Debt to

GDP) is constant. The higher rate of economic growth supports higher public debt and increasing sustainable deficit. Vice versa is also true; lower growth rate supports a lower level of public debt and lower sustainable deficit. What must not be forgotten is the fact that higher public debt imposes higher interest costs for the budget. Interest costs are increasing with the increase in interest rates and debt ratio (Palley, 2011).

The rapid economic growth is one of the best ways to combat high debt. Mathematically speaking, the larger economy means lower debt ratio (Debt / GDP ratio). To achieve faster growth on a sustainable basis, it is easier said than done.

Prospects for economic growth in the future are not optimistic. World economy can no longer count on high growth rates that were typical of the 1980. and 1990. Factors that have dragged such growth: low inflation, low interest rates and low taxes, will not be present in the coming years. Moreover, there are new factors limiting long-term growth. For example, negative trends in demography and education, climate changes, etc. will be important factors for the slowdown growth in the long run (RBC Global Asset Management, 2012).

The key question for policy makers is how to ensure growth in conditions of deleveraging. Positive experience of some countries such as Sweden and Finland, can be inspiring. After completing the deleveraging process, these countries have managed to regain the high rates of economic growth. On the basis of their experience it is possible to identify so-called markers of progress that are used for assessing the progress of the economy in the process of deleveraging. These markers are described below in the presentation.

Stable banking system. Growth of the economy in terms of deleveraging is not possible without a stable banking system. Troubled banks need to recapitalize, nationalize, or annex healthy banks. Alternative solution would be to establish special financial institutions that would take over bad capital of troubled banks. Without any of these solutions, the risk for the whole economy would be very high.

Credible plan for fiscal consolidation. Trying to establish fiscal balance too quickly and aggressively, can only slow down the economic recovery. Nevertheless, it is important for governments to demonstrate that they are dedicated to solving the problem of public debt. Credible plan of fiscal consolidation is a positive signal for the preservation of creditors trust.

Structural reforms. The essence of structural reforms is to ensure accelerated growth on a sustainable basis. For countries in the process of deleveraging there is no universal pattern for the implementation of reforms. Each country needs to prioritize reforms in accordance with the circumstances and objectives.

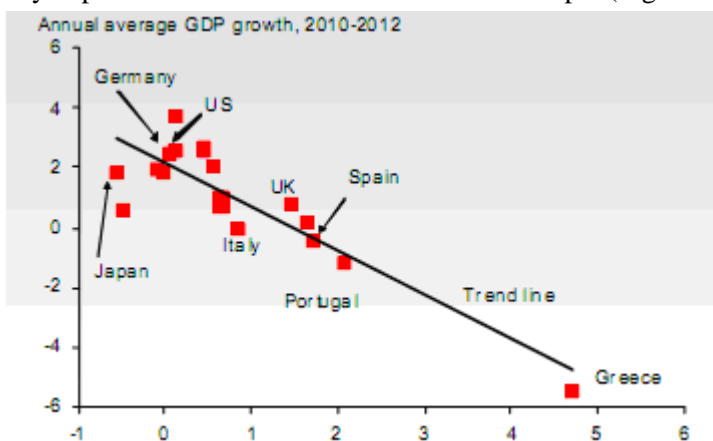
Growth in exports and private investment. As long as the private sector saves more than it invests, there is no prospects for faster growth of GDP, which is a key factor in reducing the budget deficit. Exports and private investment need to grow because they compensate for the decline in domestic demand. When interest rates are very low, there are good conditions for the formation of private-public partnerships to invest in infrastructure projects.

The stabilization of the real estate market. Due to the global crisis, real estate and construction have experienced a major decline in many countries. The revitalization of this sector may mean a lot for the long-term recovery of the national economy. For example, in Spain there is a legacy of about 1.5 million unsold flats. Solving this problem may take more than a decade (Mc Kinsey Global Institute, 2012).

Most economies in the world faces the twin problems of low growth and high levels of debt. Political Council of IMF has defined several broad principles for solving this problem. Each country needs to develop a clear medium-term plan to reduce debt and to concentrate on the implementation of this plan. Speed of fiscal adjustment is determined country by country, i.e. there is no universally acceptable form. Fiscal consolidation should be based on a mix of reforms of public revenue and expenditure, which should minimize the burden of the most vulnerable social groups and allow fiscal policy to support economic growth over the long term. Finally, fiscal policy should be part of a comprehensive package, which includes monetary policy and structural policy (IMF, 2013).

## ***PRACTICE OF DELEVERAGING IN THE WORLD***

Many advanced economies in the world have started fiscal consolidation, but they soon discovered that the restrictive measures of economic growth hit harder than originally expected. Greece is the most extreme example (Figure 2).



*Figure 2. Fiscal tightening versus economic growth*

*Source: Economic Outlook, 2013*

Analyses show that one of the key reasons for this may be the size of fiscal multipliers. At the beginning of 2010, IMF calculated with the multipliers of 0.5. This means that the effects of restrictive fiscal policy amounting 1% of GDP reduces GDP of the country by only 0.5%. In its recent analysis, IMF corrected the size of fiscal multipliers to the range from 0.9% to 1.7%. This means that the effects of restrictive fiscal policy amounting 1% of GDP can reduce GDP of the country by 1.7%.

After all the analyses, a legitimate question is raised: If the fiscal tightening in the euro area countries was particularly costly in terms of output losses? In the period 2010-2013., fiscal consolidation has enabled cutting budgets by 17.5% of GDP in Greek, about 10% of GDP in Spain and Portugal and by about 5.5% of GDP in Ireland. Despite higher restrictiveness, fiscal consolidation proved to be inefficient in these countries. Therefore it is considered that the moderate fiscal tightening would be better for economic growth and employment. Simulations show that with half of fiscal restrictions, budget deficits would be only slightly higher, by about 1-2% of GDP (Economic Outlook, 2013).

Sweden and Finland are often cited as a successful example of the implementation of deleveraging process. Both countries have undergone sharp financially crisis in the early 1990. Most important causes of the crisis was blowing up real estate bubble, under the influence of deregulation of financial markets, uncontrolled growth of household indebtedness and rising real estate prices. Having balloon combusted, a crisis broke leading to a sharp decline in economic activity. The process of deleveraging began and was carried out in three steps (Figure 3).

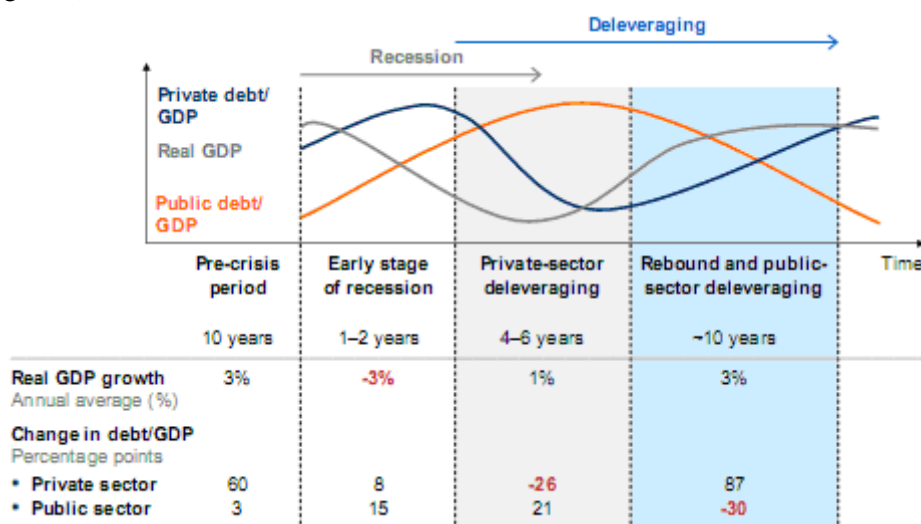


Figure 3. Example of deleveraging process in Sweden and Finland

Source: Mc Kinsey Global Institute, 2012



In the first step, in terms of the recession (1-2 years), there has been a fall in GDP and increasing indebtedness of the private and public sectors. In the second stage (4-6 years), the private sector deleveraging began. The ratio of private sector debt has been reduced by 26%, while the debt ratio of public sector simultaneously increased by 21%. Only after economic growth has returned to normal, the public sector has begun the process of deleveraging (about 10 years). Meanwhile, as the third step, structural reforms were undertaken, especially in the banking sector and to improve competitiveness.

In comparison to Sweden and Finland, the rest of Europe seems to apply the opposite sequence of steps. Public sector has activated programs of fiscal consolidation, while the private sector has not yet begun deleveraging (Keyzer, Delcuve, 2012).

Whether and how monetary and fiscal policy can react to an increase in debt? The most important instruments of monetary policy are micro prudential regulation of the financial sector and the level of interest rates. The corresponding micro-prudential regulation increases the elasticity of financial sector, making it more resilient to shocks. Changes in the level of interest rates affect the desired level of debt.

Fiscal policy can have a very significant role in periods of economic crisis. Its role is basically anti-cyclical. Government borrowing rises in times of crisis because of the effect of the automatic stabilizers, but also because of the measures of discretionary fiscal policy. Thus macroeconomic stability is ensured. When public debt becomes very high, fiscal policy has a pro-cyclical impact. The solution to this problem is to use active institutional frameworks such as fiscal councils and fiscal rules (OECD, 2013).

Around half of the EU countries are faced with the pressures of deleveraging of private sector, such as households, companies and banks. The most vulnerable countries in this respect are Cyprus, Portugal, Spain and Ireland. A maneuver space to mitigate the negative consequences of deleveraging of the private sector is very limited in these countries. The reason for this is indebtedness of the public sector, which is largely caused by the transformation of private sector debt into government debt. The necessity of public sector deleveraging could amplify recession pressures that come from the private sector.

Structural reforms are very important in such circumstances. They can help to establish economic equilibrium that is sustainable over the long term. Structural reforms can ensure greater markets flexibility, particularly labor and product markets. Only structural reforms, however, are not sufficient. Legal framework for the regulation of insolvency of the private sector is an important prerequisite for the timely and efficient deleveraging. In this sense, it is necessary to improve bankruptcy procedure for households and non-financial corporations. (Cuerpo et al, 2013).

Some EU member states are so indebted that there is likelihood of their bankruptcy. This is especially true in countries such as Greece, Portugal and Ireland. Crucial question is: What needs to be done to make these countries out of bankruptcy? The answer is contained in the three conditions that must be fulfilled. These are: market psychology, political will and fiscal math.

Market psychology is inexorable; the market does not forgive anyone failures. Therefore debtors countries must regain the confidence of financial markets. Restoring confidence means credible reforms and public debt reduction. European countries have already taken steps in this direction. The political will is there, even at the cost of sacrificing popularity at home, in order to implement their unpopular reforms.

Fiscal mathematics is not in favor of over-indebted EU countries also. Without bankruptcy, forecasts are that there are small and uncertain chances for the most of the countries to return to a position that allows managing the public debt in a safely manner. Bankrupt of states rarely include a complete write-off of debts. It is usually written off only part of the debt, without touching the principal. Argentina has achieved a historical record, writing-off 74% of its debts in 2001. International rating agencies predict that the write-off will be between 50% and 70% in the case of Greece (R BC Global Asset Management, 2011).

For several years, government debt is gradually increasing in all the countries of South Eastern Europe. By particularly high levels of public debt are Albania, Serbia and Montenegro. Governments in the region of Southeast Europe failed to resolve some key structural rigidities in relation to public expenditure, such as expenditure on wages and social transfers. On the other hand, collecting public revenues is reduced. In 2012., collection of public revenues stood at around 35% of GDP in average, which is two percentage points lower than at the beginning of the global crisis 2008. The reasons for the decrease in public revenue are partly of a structural nature (weak tax administration, customs revenues), and partly of a cyclical nature (reduction of income tax, due to a decline in domestic consumption). Very present informal economy is an additional factor for the reduction of public revenues (World Bank, 2013).

## ***ANALYSIS OF MARKERS OF ECONOMIC PROGRESS IN THE PROCESS OF DELEVERAGING OF THE PUBLIC SECTOR IN SERBIA***

Stable banking system. The financial sector in Serbia is bank-centred. Banks are adequately capitalized. Capital adequacy ratio (the ratio of regulatory capital/risk weighted assets) amounted to 21.2% in the first trimester of 2014. This is well above the regulatory minimum and Basle standards. Serbia is ranked second among the countries of Central and Eastern Europe by size of capital adequacy. The most important factors influencing that ranking are conservative prudential regulation and recapitalization of banks.

Credit activity of banks stagnates in Serbia. Figure 4 shows the real growth of total domestic credit, as well as composite growth which includes cross-border loans to the economy in the period 2006-2012.

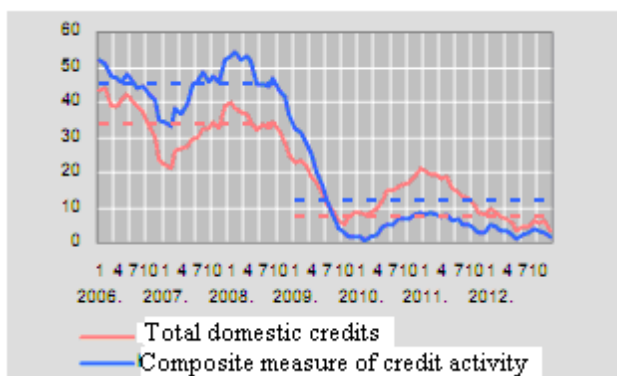


Figure 4. Real credit growth (yearly growth rates, in%)

Source: NBS, 2012

In the period from 2006 to 2008., the average annual growth rate of loans accounted for 45.1%. The volume of lending drastically decreased to 7.3% in the period 2009-2012. year. The tendency of decline in credit activities in Serbia continued to 2013. and 2014. Beside Serbia, lending activity is reduced in the environment, in almost all the countries of Central, Eastern and South eastern Europe. The reasons for this tendency are found both on the demand side for loans, as well as on the supply side. On the demand side, the key factor is the slowdown in the rate of economic growth. The loan supply is reduced due to several factors such as the tightening of credit conditions, the cumulative losses of banks, etc. (EBRD, 2013).

The quality of bank assets has deteriorated. It can be concluded on the basis of share of non-performing loans in total loans. Since the end of 2008. till today, the participation of non-performing loans to total loans is continuously increasing. At the end of the first quarter of 2014., the share of non-performing loans accounted for 22.2% of total gross loans approved. This is twice as much compared to the initial level of non-performing loans in 2008. Although high, non-performing loans do not threaten the financial stability of Serbia, thanks to reserves for potential losses.

Profitability of the banking sector in Serbia is relatively low. Return on equity is less than 5%, while return on assets accounts for 1% in the first quarter of 2014. Both indicators have decreased in comparison to 2008. Profitability of banks in Serbia does not deviate much from the average in the region of Southeast Europe (World Bank, 2013). The main reasons for the reduced profitability of banks are writing off uncollectible receivables charged to business results, as well as the slow growth of credit.

Troubled state banks in Serbia receive financial support from the budget. Total amount of such assistance amounted by around 800 million euros in the period 2012-2014. Such an amount is being spent to recapitalize troubled banks, financial transactions on the occasion of merger of unsuccessful banks to successful ones, including the payment of insured and uninsured deposits (for what Deposit Insurance

Agency assets were used). Problems in banking sector are not resolved, and the amounts being spent for this purpose are extremely large. (Fiscal Council, 2014)

In recent times there has been a change in the business model of European banks, which are reflected in the banking sector in Serbia (Zipovski and all, 2013). Parent banks in foreign ownership withdraw part of the capital which is placed in the other countries and direct their subsidiaries to use stable local financial resources. Consequently, loans / deposits ratio has been reduced.

Credible plan for fiscal consolidation. The estimated public debt of the Republic of Serbia accounts for 20.7 billion euros, or 64.2% of GDP at the end of 2013. Public debt of the Republic of Serbia crossed the boundary that is defined by the Law on budget system (45% of GDP), as well as the border which applies to EU member states (60% of GDP).

In the last four years, the most important causes of accelerated growth of public debt in Serbia have been a high fiscal deficit and increase in issued guarantees. According to IMF methodology, the fiscal deficit is higher than 7% of GDP already in two consecutively years. In other comparable countries, except Albania, the fiscal deficit does not exceed 5% of GDP. On the other hand, indirect government obligations on the basis of guarantees for the public companies loans have increased more than three times, i.e., from around 900 million euros as they stood at the end of the 2009. to about 3 billions euros at the end of the 2013 (Fiscal Council, 2014).

The Government of the Republic of Serbia adopted a plan of fiscal consolidation that is contained in the document entitled "The fiscal strategy for the 2014. and projections for the 2015. and 2016." The most important effects of fiscal consolidation are shown in Table 1:

*Table 1. The main fiscal aggregates for the period 2014-2016. , in% of GDP, the scenario of applying the measures of fiscal consolidation*

Elements	Projections		
	2014	2015	2016
Public revenues	39,5	38,9	38,3
Public expenditures	45,0	43,1	40,6
Consolidated fiscal result	-5,5	-4,2	-2,3
Primary consolidated result	-2,5	-1,6	0,6
Financial transactions out of budget	-1,7	-0,9	-0,9
Total deficit (incl. fin. trans. out of budget)	-7,1	-5,2	-3,2
Public sector debt	67,2	69,8	69,7
Real growth rate of GDP	1,0%	1,8%	2,0%

*Source: Ministry of Finance of the Government of the Republic of Serbia, 2014*

Fiscal Council of the Republic of Serbia believes that the fiscal consolidation plan can help to avoid the crisis of public debt only if three conditions are met,

namely: (1) to amend the budget for the 2014., in order to create additional savings by around 0.8%-1% of GDP; (2) to immediately introduce order into the operations of public and state-owned enterprises and banks and prevent their uncontrolled funding from the budget, and (3) to initiate structural reforms as soon as possible and make a plan for medium-term savings on that basis. Even if these conditions are realized, the public debt will be only relatively smaller (relative to GDP), but will continue to grow in nominal terms after the 2016.

One of the objectives of fiscal consolidation is to increase fiscal discipline in order to combat the underground economy and improve tax collection. Measures taken by the Government of the Republic of Serbia over the last several years have not yielded results. The examples of such unsuccessful measures are tax amnesties and "zero tolerance" for non-payment tax (after the introduction of "zero tolerance", the additional tax revenues fell short) (Fiscal Council, 2014).

Structural reforms. The Serbian government has opted for reforms aimed at improving the business environment and structural changes in the public sector. Reforms for improving business environment include a set of laws, such as: labor law, the law on planning and construction, privatization law, bankruptcy law, etc. Reform package includes measures to improve financial discipline, the guillotine of regulations and changes in the system of issuing building permits. These reforms aim to reduce risk and costs, as well as to increase the competitiveness of the Serbian economy. Structural reforms of the public sector include public administration, education, health care, pension system, the restructuring of enterprises, public enterprises, the tax system, subsidies and other important areas. The aim of these reforms is to establish the long-term sustainability of public finances in Serbia.

Although all reforms are important and necessary, attention is focused to some of them in the exposure below.

The portfolio of the Privatization Agency contains 179 enterprises in the status of restructuring, with approximately 54,000 employees at the end of the third quarter of 2013. These companies accumulate losses for years, but survive thanks to government subsidies. Such subsidies increase the expenditures of the budget and fiscal deficit. According to the World Bank, the budget of Serbia has allocated about 750 million euros in subsidizing these companies in 2012. Companies in the restructuring are protected not only by the forcible collection-blocking current accounts, but also from bankruptcy.

Public companies should be reforming without delay. Financial stability of these enterprises can be achieved through the restructuring of debts and gradual abolition of the practice of issuing government guarantees. Reform of public enterprises, among other things, should include corporatization and standards of responsible governance, privatization of some public enterprises, as well as effective control and supervision.

On the labor market, there are also huge structural problems. Unemployment rate in Serbia (about 25%) is one of the largest in Europe, and the rate of participation in the workforce is one of the lowest. Employment in the public sector

accounts for about 40% of total formal employment. Informal employment is high and is estimated by about 20% of total employment. Process of negotiating salaries is rigid. Unions and employers disagree about issues of workforce redundancy, layoffs and opportunities for part time labor.

The current pension system does not track demographic trends. A process of demographic aging is expressed in Serbia. Half a century ago, it was 10 young work-able persons to one old person, now is the ratio 4:1, and the half-century ahead that ratio will be less than 2:1. Under such conditions, parametric reforms of the state pension system are required. Such reforms should increase the effective retirement age and / or reduce the ratio of average wages and pensions. (Fiscal Council, 2014)

Growth in exports and private investment. The recovery of Serbian economy based on growth in agricultural and industrial production and growth in net exports is a key result of the economic policies in the 2013. The estimated GDP growth rate is 2%, and 14% for exports of goods and services in the 2013. The relatively high growth rate is partially due to the low base of comparison. Export growth trend continues in the first quarter of 2014. Around two-thirds of exports and imports is directed to EU countries. The coverage of imports by exports is around 70%. Faster growth in exports than in imports contributed to a significant reduction of the current account deficit. In the period 2015-2016. projected growth rate of export accounts 7% (Government of the Republic of Serbia, 2014).

Foreign direct investment is an important source of economic growth (Knezevic, Kvrđić and Ivkovic 2013). Unfortunately, there is a downward trend in the inflow of foreign direct investment in the period 2007-2012. In the 2013., the influx of these investments has increased, but not enough to faster economic growth. The largest FDI inflow was recorded in wholesale and retail trade, manufacturing, financial services and construction. In 2014. foreign direct investments are estimated to be less than 1.0 billion euros, or about 2% of GDP (NBS, 2014).

The stabilization of the real estate market. Real estate market in Serbia did not experience such dramatic changes as in some EU countries, but the crisis is present in this sector of the economy. Demand for real estate has declined due to fall in real incomes and tightening credit conditions. The fall in demand is reflected upon the reduction of real estate prices, which negatively impact on their supply. In the first quarter of 2014. the value of jobs performed on the buildings was nominally lower by 17% compared to the same quarter last year. The good news is that the construction sector as a whole increased the value of the contracted jobs by almost three times in the same aforementioned period (Republic Institute for Statistics, 2014).

## ***DISCUSSION***

Analysis of markers of progress in Serbia is significant because it allows to evaluate the chances for economic growth in terms of deleveraging. The analysis points to some important facts that are commented below.

The banking sector is stable, despite the reduced volume of lending, rising non-performing loans and reduced profitability. Troubled state-owned banks are the weakest link in the banking sector and represent a heavy burden for the state budget.

Fiscal consolidation is not sufficiently credible. It can become that only under the condition that the Government of the Republic of Serbia implement the recommendations of the fiscal council. In addition, the "medium-term framework," which covers the period 2015-2016, is too short for the implementation of fiscal consolidation. Worldwide experiences demonstrate that credible deleveraging of the public sector is carried out in the period of 10 years in average.

Exports and foreign direct investment is growing, but not enough to make support for the economic growth of Serbia. The preferred scenario would be to direct a part of FDI to the real estate market in Serbia, which is currently stagnating.

All this indicates that Serbia has not prepared for the process of public debt deleveraging. At this point, beside the stable banking system and partly exports, other markers of progress does not provide the preconditions for future economic growth.

## ***CONCLUSION***

When most economic agents in one country recognize that they have reached the limit of indebtedness, the process of deleveraging becomes essentially important issue. Deleveraging has an extremely negative impact on individual economic entities, but also to aggregate economic growth. Good "navigation" through the process of deleveraging can mitigate its negative effects.

Serbia is not threatened with bankruptcy, but the amount and dynamics of the public debt challenges a serious concern. Serbia need to use the positive experiences of other countries when it comes to public sector deleveraging. In this sense it is possible to implement the Swedish and Finnish model of deleveraging to the case of Serbia. Certain adjustments of a model is understood, according to the specific fiscal problems of our country.

Serbia has already gone through the first phase of deleveraging (recession, followed by an increase of indebtedness of the private and public sectors). All symptoms indicate that Serbia entered the second phase which is characterized by slow economic growth, the increase in public debt and deleveraging of the private sector. In this phase it is crucial to end up the private sector deleveraging, because the success of the third phase (dynamic economic growth and reducing the public sector debt), depends on it. Individuals, banks and one part of enterprises in Serbia have implemented deleveraging satisfactorily. Specific an issue of Serbia at this stage are

debts that are created both in enterprises in restructuring and in public enterprises. The Serbian government should activate the instruments for solving this problem without delay. The instruments should be based on the fiscal council's recommendations and to include a package of reforms to improve the business environment.

Given that at this stage an increasing in public sector debt necessarily comes, it is economically justified to replace a part of costly debt with less expensive one. This can be achieved by financial resources on the basis of favorable bilateral financial arrangements that the government announced. This would "buy" the additional time necessary for the completion of the second phase of deleveraging. This phase should also be used for the design and implementation of measures to increase exports and attract foreign direct investments.

In the third stage, economic growth is accelerating and public sector debt begin to reduce. At this stage it is crucial for the fiscal consolidation plan to be credible. Among other things, this means that the time horizon for implementation of fiscal consolidation will have to be extended. A longer time horizon would enable public sector reform to be worked out qualitatively and its financial effects to be included in the multi-year budget projections.

Phased approach to deleveraging can bring some significant benefits to Serbia. Better "navigation" through the whole process allows to reduce the negative effect of reducing the public sector debt on economic growth. Specifically, high budget deficits in the second phase of deleveraging need to amortize the impact of the reduction in private consumption and investment on economic growth. Thus the trap of fiscal restrictiveness is avoided. Higher growth rates in the third stage of deleveraging allow moderate fiscal consolidation. Thus, the price paid for fiscal adjustment is lesser than it would be otherwise.

## ***REFERENCES***

- [1] Cuerpo, C. Drumond, I., Lendvai, J., Pontuch, P. and Raciborska, R. (2013), "Indebtedness, deleveraging Dynamics and Macroeconomic Adjustment", *Economic Papers*, 477/april
- [2] Devlin, W. and Huw McKay, H. (2008), "The macroeconomic implications of financial 'deleveraging', *Economic round-up*, however. 4
- [3] EBRD (2013), *Transition Report*
- [4] Economic Outlook (2013), *Lessons to be learned from three years of fiscal austerity in Europe*
- [5] Fiscal Council (2014), *Evaluation of Fiscal Strategy 2014-2016 and the budget proposal for 2014*, Belgrade, Republic of Serbia
- [6] IMF (2013), *Annual report*
- [7] Keyzer, P. and Delcuve, S. (2012), "Europe's deleveraging and its political aftermath, *financieel forum / Bank-en financiewezen*, 4
- [8] Knezevic, V., Kvirgić, and Mr. Ivkovic, D. (2013), "Serbian modern economy-regional comparative analysis," in Radovic-Markovic, M. (ed), *International Review*, no. 1-2, Belgrade, ISSN 2217-9739, COBISS.SR ID 192516620



- [9] Mc Kinsey Global Institute (2012), *Debt and deleveraging: Uneven progress on the path of growth*, January
- [10] Ministry of Finance of the Government of the Republic of Serbia (2014), *Fiscal Strategy for the 2014. with projections for the 2015. and 2016.*, Belgrade
- [11] NBS (2014), *Quarterly review of indicators of financial stability of the Republic of Serbia: the first three months of 2014.*, Belgrade
- [12] NBS (2012), *Annual report on the stability of the financial system*, Belgrade
- [13] OECD (2013), "Debt and macroeconomic stability", *OECD Economic Department Policy Notes*, no 16, January
- [14] Palley, T. (2011), "The fiscal austerity trap: budget deficit alarmism is sabotaging growth," *Challenge*, January-February
- [15] RBC Global Asset Management (2013), *What to do with public debt?*, Issue 21, February
- [16] RBC Global Asset Management (2012), *The End of deleveraging?*, issue 19, November
- [17] RBC Global Asset Management (2012), *Sizing up a downshifting economy*, issue 13, February
- [18] RBC Global Asset Management (2011), *The slippery slope from sovereign debt to default*, may
- [19] Republic Institute for Statistics Belgrade (2014), *The release GR 11*, No. 124, May, Belgrade
- [20] Sljivic, S. Jevtic, B. and Sljivic, S. (2013), "Fiscal consolidation, economic growth and social inequality in the Republic of Serbia", in Leković, V (red), *Institutional changes as a determinant of economic Development of Serbia*, Faculty of Economics, Kragujevac
- [21] The World Bank (2013), "Slow road to recovery," *South East Europe: regular economic report*, no. 5, december
- [22] World Bank (2013), "From double recession to weak recovery," *Southeast Europe: regular economic report*, no.4, June
- [23] Zipovski, L.J., Kvrđić, G. and Vujadin, N. (2013), "Credit activities of commercial banks in Serbia: causes and consequences", in Radović-Marković, M. (ed), *International Review*, no. 3-4, Belgrade, ISSN 2217-9739, COBISS.SR ID 192516620

# ***TOURISM AS A RESOURCE FOR SUSTAINABLE ECONOMIC DEVELOPMENT IN THE REPUBLIC OF SERBIA***

*Filip Radotic, MSc<sup>13</sup>*

*Zoran Masic, PhD<sup>14</sup>*

## ***ABSTRACT***

*The aim of the work is the determination of the importance of tourism as an economic sector, through a comprehensive review and analysis of tourism in Serbia. The paper demonstrates the importance and value of tourism in the world and in Serbia, with a special focus on Serbia. By using descriptive analysis, there was a significant correlation between tourism and sustainable economic development through the adoption and implementation of sustainable tourism in the Republic of Serbia. Research work was conducted using standard methodological procedure. Methodological procedure contains the basic component i.e. desk research. Also searched and selected were foreign and domestic professional literature in the field of contemporary trends in tourism, sustainable development, tourism economics and other fields. This work was performed determining specific problems using the methods of case studies. We used specific case studies from the practice of tourism entities. These cases were determined on the basis of the citations in the relevant scientific literature.*

***Key words:*** *Tourism, Tourism in Serbia, Sustainable Development, Regional Economic Activity, Ecological economics*

***JEL Classification:*** *R11, Q01, Q57*

***UDK:*** *338.484:502.131.1(497.11)*

---

<sup>13</sup>Filip Radotic, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, filipbk@gmail.com

<sup>14</sup>Zoran Masic, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, zoranmasic@yahoo.com

## ***INTRODUCTION***

Tourism is the travel for recreational, leisure, family or business purposes, usually of a limited duration. Tourism is commonly associated with trans-national travel, but may also refer to travel to another location within the same country. The World Tourism Organization defines tourists as people traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes (WTO, 1995).

Tourism is a social, cultural and economic phenomenon, which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes. These people are called visitors (which may be either tourists or excursionists; residents or non-residents) and tourism has to do with their activities, some of which imply tourism expenditure (UNWOTO, 2014).

As such, tourism has implications on the economy, on the natural and built environment, on the local population at the destination and on the tourists themselves. Due to these multiple impacts, the wide range and variety of production factors required to produce those goods and services acquired by visitors, and the wide spectrum of stakeholders involved or affected by tourism, there is a need for a holistic approach to tourism development, management and monitoring. This approach is strongly recommended in order to formulate and implement national and local tourism policies as well as the necessary international agreements or other processes in respect of tourism (UNWOTO, 2014).

Tourism is a highly complex phenomenon and can be fully understood only by adopting a multidisciplinary approach. Tourism activity has been studied by many disciplines, being economics, geography, sociology, management and history the most productive. (Candela & Figini, 2012, p. 17)

The tourism phenomenon starts in the tourist's place of residence, at the moment when the planning of the trip and of the spending happens. Then, it becomes real with the trip toward the destination, where the tourist expects accommodation, entertainment and amenities (Candela & Figini, 2012, p. 19).

Traveler is someone who moves between different geographic locations, for any purpose and any duration. Visitor is a traveler taking a trip to a main destination outside his/her usual environment, for less than a year, for any main purpose (business, leisure or other personal purpose) other than to be employed by a resident entity in the country or place visited. These trips taken by visitors qualify as tourism trips. Tourism refers to the activity of visitors. Tourism is therefore a subset of travel and visitors are a subset of travelers. These distinctions are crucial for the compilation of data on flows of travelers and visitors and for the credibility of tourism statistics (UNWOTO/OMT/IOHBT, 2008).

Sustainable tourism development guidelines and management practices are applicable to all forms of tourism in all types of destinations, including mass tourism and the various niche tourism segments. Sustainability principles refer to the environmental, economic, and socio-cultural aspects of tourism development, and a suitable balance must be established between these three dimensions to guarantee its long-term sustainability (UNEP, 2005, pp. 10, 11).

Thus, sustainable tourism should (UNEP, 2005, pp. 10, 11):

Make optimal use of environmental resources that constitute a key element in tourism development, maintaining essential ecological processes and helping to conserve natural heritage and biodiversity.

Respect the socio-cultural authenticity of host communities, conserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance.

Ensure viable, long-term economic operations, providing socio-economic benefits to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation.

Tourism has a direct impact on the national revenue for all touristic countries, it creates work opportunities, industries, and several investments to serve and raise nations performance and cultures, also distributes their history, civilization, and traditions.

The best example of the impact of tourism on the individual destination worldwide showed the analysis of MasterCard Company.



Figure 1. Global Top 20 Destination Cities by International Overnight Visitors in 2013.

Source: (Hedrick-Wong & Choog, 2013, p. 1)

## ***THE TAXONOMY OF TOURISM***

We can identify the basic types of tourism (Candela & Figini, 2012, p. 29):

- Domestic tourism: activities of a resident visitor within the region of reference
- Inbound tourism: activities of a nonresident visitor within the region of reference
- Outbound tourism: activities of a resident visitor travelling to other regions of the world.
- In transit tourism: activities of a visitor while passing by or crossing a region, which is neither the region of origin nor the region of destination.
- National tourism is the sum of both domestic and outbound tourism
- Internal tourism is the sum of both domestic and inbound tourism
- International tourism is the sum of both inbound and outbound tourism

## ***SPECIAL FORMS OF TOURISM***

Special forms of tourism can be defined in the following way (Smith et al., 2010):

Adventure tourism: tourism involving travel in rugged regions, or adventurous sports such as mountaineering and hiking (tramping).

Agritourism: farm based tourism, helping to support the local agricultural economy.

Ancestry tourism: (also known as genealogy tourism) is the travel with the aim of tracing one's ancestry, visiting the birth places of these ancestors and sometimes getting to know distant family.

Armchair tourism and virtual tourism: not travelling physically, but exploring the world through Internet, books, TV, etc.

Bookstore Tourism is a grassroots effort to support independent bookstores by promoting them as a travel destination.

Cultural tourism: includes urban tourism, visiting historical or interesting cities, such as Berlin, London, Paris, Delhi, Rome, Prague, Beijing, Kyoto, Warsaw, and experiencing their cultural heritages. This type of tourism may also include specialized cultural experiences, such as art museum tourism where the tourist visits many art museums during the tour, or opera tourism where the tourist sees many operas or concerts during the tour.

Dark tourism: is the travel to sites associated with death and suffering.

Disaster tourism: travelling to a disaster scene not primarily for helping, but because it is interesting to see. It can be a problem if it hinders rescue, relief and repair work.

Drug tourism: for use in that country, or, legally often extremely risky, for taking home.

Ecotourism: sustainable tourism which has minimal impact on the environment, such as safaris (Kenya), Rainforests (Belize) and hiking (Lapland), or national parks.

Educational tourism: may involve travelling to an education institution, a wooded retreat or some other destination in order to take personal-interest classes, such as cooking classes with a famous chef or crafts classes.

Gambling tourism, e.g. to Atlantic City, Las Vegas, Macau or Monte Carlo for the purpose of gambling at the casinos there.

Heritage tourism: visiting historical (Athens, Cracow) or industrial sites, such as old canals, railways, battlegrounds, etc.

Health tourism: usually to escape from cities or relieve stress, perhaps for some 'fun in the sun', etc. Often to "health spas".

Hobby tourism: tourism alone or with groups to participate in hobby interests, to meet others with similar interests, or to experience something pertinent to the hobby. Examples might be garden tours, ham radio DXpeditions, or square dance cruises.

Inclusive tourism: tourism marketed to those with functional limits or disabilities. Referred to as "Tourism for All" in some regions. Destinations often employ Universal Design and Universal Destination Development principles.

Medical tourism, e.g.: for what is illegal in one's own country, e.g. abortion, euthanasia; for instance, euthanasia for non-citizens is provided by Dignitas in Switzerland. For advanced care that is not available in one's own country, in the case that there are long waiting lists in one's own country. For use of free or cheap health care organizations

Perpetual tourism: wealthy individuals always on vacation; some of them, for tax purposes, to avoid being resident in any country.

Sex tourism: travelling solely for the purpose of sexual activity, usually with prostitutes

Sport tourism: skiing, golf and scuba diving are popular ways to spend a vacation. Also in this category is vacationing at the winter home of the tourist's favorite baseball team, and seeing them play everyday.

Space tourism

Vacilando is a special kind of wanderer for whom the process of travelling is more important than the destination.

## ***THE ECONOMIC IMPACT OF TOURISM IN THE WORLD***

The economic relevance of tourism is remarkable. United Nations World Tourism Organization (UNWTO) estimates that tourism is roughly 9 % of the global Gross Domestic Product (GDP) and 8 % of world employment.

Travel & Tourism is one of the world's largest industries accounting for 9% of global GDP. This is more than the automotive industry which accounts for 8.5%, and only slightly less than the banking sector which accounts for 11% (World Travel & Tourism Council, 2011, p. 3).

The rapid rise in global demand for Travel & Tourism over the past few decades has been spurred by the rise in living standards, in turn fuelled by growing wealth, coupled with the increased affordability of air travel. According to the World Tourism Organization (UNWTO), international arrivals worldwide have more than doubled since 1990, rising from 435 million to 675 million in 2000, and to 940 million in 2010. And these figures do not take account of domestic tourism, which, by all accounts, generates up to ten times more arrivals than international tourism (World Travel & Tourism Council, 2011, p. 2).

## ***THE INTERNATIONAL TOURISM AND TOURIST***

International tourist arrivals up by 52 million in 2013. Based on preliminary full year data from UNWTO tourism barometer, international tourist arrivals (overnight visitors) grew by 5% in 2013. For 2014, UNWTO forecasts 4% to 4.5% growth, above the long term projections (John G.C., 2014, p. 1).

Demand for international tourism was strongest for destinations in Asia and the Pacific (+6%), Africa (+6%) and Europe (+5%). The leading sub-regions were South-East Asia (+10%), Central and Eastern Europe (+7%), Southern and Mediterranean Europe (+6%) and North Africa (+6%). The tourism sector has shown a remarkable capacity to adjust to the changing market conditions, fuelling growth and job creation around the world, despite the lingering economic and geopolitical challenges. Indeed, tourism has been among the few sectors generating positive news for many economies (John G.C., 2014, p. 1).

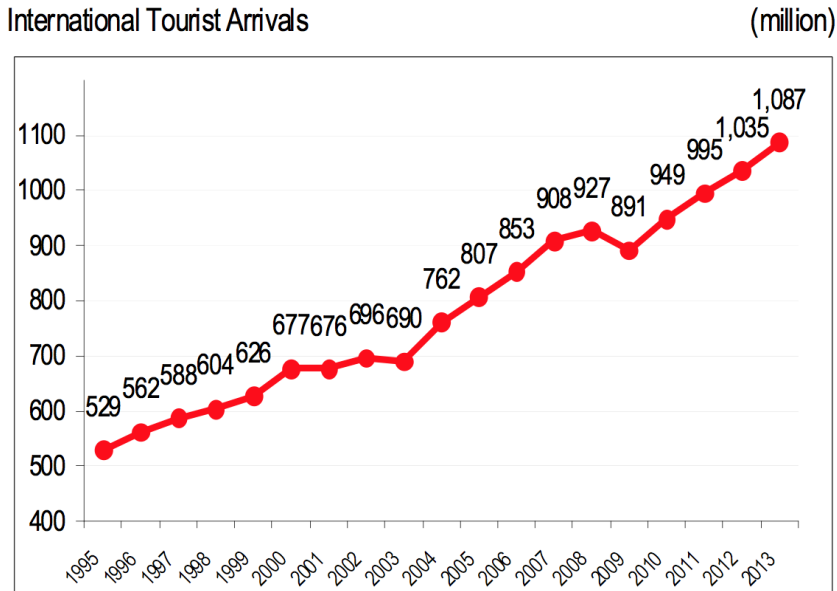


Figure 2. World: Inbound Tourism

Source: World Tourism Organization (UNWTO)

UNWTO forecasts international arrivals to increase by 4% to 4.5% in 2014, again above its long-term forecast of +3.8% per year between 2010 and 2020. The UNWTO Confidence Index, based on the feedback from over 300 experts worldwide, confirms this outlook with prospects for 2014 higher than in previous years (John G.C., 2014, p. 2).

2014 regional prospects are strongest for Asia and the Pacific (+5% to +6%) and Africa (+4% to +6%), followed by Europe and the Americas (both +3% to +4%). In the Middle East (0% to +5%) prospects are positive yet volatile (John G.C., 2014, p. 3).

## **DOMESTIC TOURISM**

Domestic tourism, historically speaking, is in fact the first form of tourism that was practiced and today it continues to account for the most part of this activity by far: it is estimated that out of the 4.8 billion tourist arrivals per year, or 83%, correspond to domestic tourism. Likewise, the UNWTO's economists estimate that at the global level domestic tourism represents: 73% of total overnights, 74% of arrivals and 69% of overnights at hotels, 89% of arrivals and 75% of overnights in other (non-hotel) accommodations (Pierret, 2011, p. 1).



## ***TOURISM DEVELOPMENT***

In the early years of the twentieth century, tourism continued to expand as a consequence of increasing wealth, interest and outgoing attitudes, and improvements in people's transport. Advances in transport allowed people to travel in masses. In fact, mass production and mass consumption was the rationale of that period. Although its roots go back to the eighteenth century, travel was still a novelty for the masses, and the homogeneous character of the demand led to the production of standardized products that could suit everyone. From the 1930s onwards, the growing availability of the motor car stimulated tourism further, and during the interwar years the aircraft began to play a small role in the tourism market as an option for the wealthier classes, particularly in Europe (Swarbrooke & Horner, 2007).

Further, the arrival of holiday camps aimed at a growing low-income market for holidays was a major development of 1930s, and received widespread acceptance by the public. The instant success of the concept resulted in the construction of similar structures all over the coastal areas and even in inland resorts. Moreover, the allure to the sun in 1960s, from the cool and variable climates of Northern Europe and North America, encouraged the emergence of package tours. As such, the mass characteristic of tourism is strengthened further. This chapter aims to outline the development of mass tourism. In other words, it is aimed to reveal the golden age of mass tourism, which has dominated the whole industry between 1950s and 1980s. Initially, the constitutional factors effecting the development of mass tourism will be discussed. Further, developmental factors, namely technology, air transportation, accommodation companies and tour operators will be deliberated in detail. Finally, conclusions on the development of mass tourism will be drawn (Sezgin & Yolal, 2012, p. 76).

The continent of Europe and notably England play important roles in the constitution process of industrial tourism. Accordingly, mass tourism initially commenced in England at the second half of the nineteenth century. Mass tourism owes its existence to mainly two specific reasons: the first reason is the development in the transportation technologies and the second is the individual efforts of an English entrepreneur Thomas Cook (Sezgin & Yolal, 2012, p. 74; Poon, 1993). Using the steam train and ship for transportation, Thomas Cook organized international package tours to three destinations including the Far East, India and America in 1862. By the year 1897, Thomas Cook reached the figure of 20,000 tourists annually (Poon, 1993).

The nature of tourist product has dramatically changed after the Second World War, especially between 1960's and 1980's. While the marketing practice is "customer oriented" nowadays, post-war conditions were completely different and marketing was "sales oriented" (Sezgin & Yolal, 2012, p. 75).

*Table 1. Stages of tourism development by Freyer*

Stage of development	Time	Transportation	Motivation	Participants
Pre-phase	till 1850.	walking, horse, carriage, ship	nomads, pilgrims, wars, discoveries, education	elite, educated and business people
The initial phase	1850.-1914.	train, steamship	vacation	new middle class
Development phase	1914.-1945.	train, car, bus, plane	medical treatment, rest, trade	prosperous workers
High stage	from 1945.	car, plane	rest, leisure time	all social classes

*Source: (Dulčić, 1999, p. 33)*

## **MODERN TOURISM**

Tourism is a dynamic discipline and is affected by these processes previously discussed. The analysis of trends in the modern tourist market show there are many changes suggesting that tourism in the future will differ from present day affairs.

The more difficult challenge of the twenty-first century will be the protection of the environment. Fortunately the tourism industry has begun using modern technology in the fields of computer science, communications, and the building of transportation to preserve the environment. The development of tourism is also known to be an asset to social economics, however, there tends to be strong speculations to the overall benefits in this aspect (Alejziak, 2002).

The end of the twentieth century was a time of great transformation in all fields of life. There were many fast paced changes throughout social conditions, the economy, and technology, which brought about many transitions within tourism. The constant tendencies to observe and gain knowledge about the markets basic condition are needed to succeed with each activity and the trends within tourism can change quickly. Six factors are presented in table. In each of these groups there are positive factors, which will either stimulate or deter the development of tourism, each with variability in strength and effect. These constituents will decide about the dynamics and expansion of tourism with the difficulty being verification. These megatrends, especially demographics, social, cultural, ecology, and technology hold such a strong influence on the maturation of tourism that such events as a political crisis or economic recession (in some regions) would be unable to hinder such progress (Alejziak, 2002).

Table 2. The megatrends and the tourism development

<p><b>Demographic factors</b></p> <p>age of societies;  tendencies to set up home late;  a smaller number of households;  a dominant model of family 2+1;  increasing number of lonely people;  increasing number of childless couples;  increasing number of working women</p>	<p><b>Political factors</b></p> <p>changes in Central-West Europe;  integration of the European Union;  liberalization of international migrations;  convenience passports, foreign currency;  unstable political situation in many regions of the world;  international terrorism;  increased importance of safe travel</p>
<p><b>Social &amp; cultural factors</b></p> <p>shortened time of working, more free time and longer vacations;  increase of time for additional work;  earlier retirements;  increasing number of "two-income" households; which were thought of as a healthy life;  a family crisis;  conflicts between identity and modernization,  a radical demands and increases of importance of ethnic movement etc.</p>	<p><b>Economical factors</b></p> <p>continuation of moderate economical increase in the world scale;  a bigger disproportion between rich and poor countries;  a bigger financial crisis in a number of countries;  a stable price of petroleum;  liberalization and development of an international trade;  capital concentration in world's economy;  globalization of economical activity</p>
<p><b>Technological factors</b></p> <p>automation and computerization;  developing of telecommunication  developing of computing systems;  developing of transport and infrastructure (airports, motorways);  use of modern technologies in everyday life (household articles, sport, tourist equipment);  developing of soft technologies;</p>	<p><b>Ecological factors</b></p> <p>smaller environmental resources;  a greater ecological awareness in society;  government's concern with environment;  conflicts causes by developing of a big agglomerations ( in developing and developed countries );  development of the ecological movement;  international collaboration in field of natural and cultural environment protection</p>

Source: (Alejziak, 2002)

## ***REPRESENTED FORMS OF TOURISM IN SERBIA***

Serbia stretches across two geographic and cultural regions of Europe: Central Europe and Southeast Europe. This boundary splits Serbia roughly in a ratio of 1:2 alongside the Danube and Sava rivers. The northern parts of the country are Central-European lowlands while the southern and central parts are mostly mountainous. There are more than 15 mountain peaks rising to over 2,000 meters above sea level. The navigable rivers are the Danube, Sava and Tisa. A moderate continental climate predominates, with a more Mediterranean climate in the south.

The variety of scenery and cultural and historical monuments, curative spas, hunting grounds and fishing areas give the basis for Serbia's tourism. International roads and railway lines link Western/Central Europe with Greece, Turkey, the Near East, Asia and Africa. The main air transport routes between West and East and North and South cross the country, too.

The Serbian lands were the crossroads of various civilizations in the past, with different spiritual, architectural, artistic and cultural influences. Serbian culture and its historical heritage is diverse because of mixture of various influences. Numerous prehistoric and classical monuments represent some unique examples of the changing times (Vinca culture, Starcevo culture, Lepenski Vir, etc.) Serbia is a land of natural, historic, cultural and ethnic contrasts. The northern lowlands (the province of Vojvodina) form the Central European part of the country. The Fruska Gora hills are the only mountains in that part of Central Europe. Central Serbia is characterized by fields, hedges, orchards and meadows. Southern Serbia has bigger mountain ranges with wide river valleys and hollows.

Eastern Serbia is covered with mountains, which belong to the Carpathian mountains but also to the Balkan mountain system. Here, the Danube river cuts the Kazan, the longest and narrowest part of the Djerdap Gorge. Western Serbia is another mountainous region, with many picturesque canyons, forests and great natural and climatic advantages. Waters in Serbia rivers, lakes, artificial lakes and mineral springs, represent an important natural resource for tourism. The Danube, the largest and the most important waterway in Europe flows through Serbia, covering some 591 km inside its borders. The river Sava was formerly the largest national river in Yugoslavia, connecting Slovenia, Croatia, Bosnia and Herzegovina and Serbia in length of about 900 km; the river's mouth is located north of Ljubljana and the river's end is in Belgrade, where it flows into the Danube by an ancient fortress of Kalemegdan.

Flora and fauna are especially attractive. Throughout Serbia there are numerous animal species and game stock, which is a very favourable precondition for the hunting tourism. Many tourist resorts have sprung up with accommodation facilities, ideal for rest and recreation, situated in this diverse combination of natural and human mightiness. As a tourist area, Serbia has a very long tradition. For more than 150 years, guests have been coming to Serbian spas Palic and Vrnjacka Banja being the best known among tourists. The current receptive basis

of tourism and catering industry consists of 125,000 beds in basic and supplementary accommodation facilities. There are nearly 40,000 hotel beds in various classes.

Represented forms of tourism in the Republic of Serbia are (NTO of Serbia, 2014; YUTA, 2014):

Mountain Tourism - natural resources of tourism in Serbia are designated as national parks, mountain Tara, Kopaonik, Fruska gora, Sarplanina. Benefits for tourists are skiing, hunting, fishing, summer recreation, villages, healthy food and ecologically healthy environment.

Tourism in rivers and lakes - River Danube, Tisa and Sava allow for good hunting, fishing and sailing holidays. Waterway resources provide the opportunity to visit nature reserves and archaeological sites from the ancient era to the Middle Ages. National Park Djerdap and Lepenski Vir, are exceptional attraction.

Hunting, Eco-tourism and Rural tourism - allows you to stay in a preserved natural environment with healthy food and hospitable rural population. At the same time, rural tourism contributes to the preservation and promotion of authentic rural areas.

Rural tourism is an activity that can have a significant impact on the economic, social, functional and structural improvement of the rural area and stop the negative processes of degradation and depopulation of rural areas (Radotic & Masic, 2013, p. 262).

According to the Strategy Plan for Rural Development, 2009-2013, rural areas of Serbia, depending on the methodology used, including even 70-85% of the territory of Serbia and they are home to 43-55% of the total population (Radotic & Masic, 2013, p. 268).

Cultural heritage - monasteries Studenica, Sopoćani and Stari Ras are under protection of UNESCO, and they are invaluable cultural and historical treasures of Serbia.

City tourism - includes business, convention, event, youth and other forms of tourism.

Transit tourism - takes place on the main roads: highway, Ibar highway, transit through Belgrade.

## ***THE TRAVEL & TOURISM COMPETITIVENESS INDEX FOR REPUBLIC OF SERBIA***

Travel & Tourism remains a critical sector for development and economic growth for advanced and developing economies alike. Developing a strong travel and tourism sector supports job creation, raises national income, and also benefits the general competitiveness of economies through improvements in hard and soft infrastructure (Blanke et al., 2013, p. 3).

The travel & tourism competitiveness index has been developed within the context of the World Economic Forum's Industry Partnership Programme for the Aviation, Travel & Tourism sector. The travel & tourism competitiveness index aims to measure the factors and policies that make it attractive to develop the travel & tourism competitiveness index sector in different countries (Blanke et al., 2013, p. 4).

The travel & tourism competitiveness index is based on three broad categories of variables that facilitate or drive T&T (travel & tourism) competitiveness. These categories are summarized into the three subindexes of the Index: (1) the T&T regulatory framework subindex; (2) the T&T business environment and infrastructure subindex; and (3) the T&T human, cultural, and natural resources subindex (Blanke et al., 2013, p. 4).

A country that ranks highly on the Travel and Tourism Competitiveness Index (TTCI) indicates that it has the necessary infrastructure, stability, natural resources, and other amenities to make it attractive to visitors and make positive contributions to local and national economies. The Travel and Tourism Competitiveness Index (TTCI) assesses various factors regarding environmental sustainability when determining a country's overall score. These include: sustainable development of the Travel and Tourism industry, environmental regulation and enforcement, enhanced biodiversity in abundant and well-protected natural areas, and tourist accessibility to these natural areas.

As in past years, at the bottom of the European rankings are a number of Balkan countries (Serbia, Bosnia and Herzegovina, and Moldova.). In line with their less advanced development, these countries will require significant investments in upgrading the infrastructure needed to support healthy and growing T&T sectors (Blanke et al., 2013, p. 17).

In the following table we consider all aspects of the Travel & Tourism Competitiveness Index for Republic of Serbia.

Table 3. Travel &amp; Tourism Competitiveness Index for Republic of Serbia 2013.

(Extracted and summarized data for Serbia)

<b>T&amp;T Competitiveness Index for Republic of Serbia 2013.</b>	<b>Rank</b>	<b>Score</b>
1. Overall index	89	3.78
2. T&T regulatory framework	74	4.50
<ul style="list-style-type: none"> <li>• Policy rules and regulations</li> <li>• Environmental sustainability</li> <li>• Safety and security</li> <li>• Health and hygiene</li> <li>• Prioritization of Travel &amp; Tourism</li> </ul>	103 115 55 46 108	4.10 4.06 4.99 5.70 3.46
3. Business environment and infrastructure	81	3.40
<ul style="list-style-type: none"> <li>• Air transport infrastructure</li> <li>• Ground transport infrastructure</li> <li>• Tourism infrastructure</li> <li>• ICT infrastructure</li> <li>• Price competitiveness in the T&amp;T industry</li> </ul>	110 117 56 49 119	2.33 2.79 4.47 3.64 3.77
4. T&T human, cultural, and natural resources	109	3.45
<ul style="list-style-type: none"> <li>• Human resource</li> <li>• Affinity for Travel &amp; Tourism</li> <li>• Natural resources</li> <li>• Cultural resources</li> </ul>	94 104 131 65	4.63 4.30 2.39 2.48

Source: (Blanke et al., 2013, pp. 10, 15, 32, 34, 37, 40)

Table 4. Travel &amp; Tourism indicators for Republic of Serbia 2013.

<b>Travel &amp; Tourism indicators</b>	<b>Absolute value</b>	<b>Percent of total</b>	<b>T&amp;T industry GDP growth forecast (2013-2022)</b>
T&T industry, 2012 estimates			
T&T industry GDP (US\$ millions)	819.4	1.7	5.3
T&T industry employment (1,000 jobs)	26.6	1.6	0.8
T&T economy, 2012 estimates			
T&T economy GDP (US\$ millions)	2,974	6.2	5.2
T&T economy employment (1,000 jobs)	97	5.7	0.5

Source: (Blanke &amp; Chiesa, 2013, p. 306)

## ***TOURISM TRENDS IN SERBIA***

Domestic arrivals fell to 1.3 million in 2012, down more than 20% in the five years from 2008. The international market has fared better, although inbound arrivals did little more than stagnate from 2005 to 2009, only showing signs of growth once low-cost carriers (LCC) entered the market in 2010. The last couple of years have seen much healthier increases, driven by low-cost demand. Trends for the first seven months of 2013 point to a modest rise in domestic arrivals (details are only available for the first quarter) and a 10% increase in the international count. Preliminary estimates also suggest the growth has picked up further through August and September (World Travel & Tourism Council, 2013, p. 22).

In 2011, Travel & Tourism directly contributed 1.8% of Serbia's GDP and accounted for 32,100 jobs directly in Travel & Tourism, representing 2.4 per cent of total employment. Taking the wider impacts of the industry into account, Travel & Tourism contributed 5.4% of GDP and 80,100 jobs in 2011 (6% of total employment). Furthermore, over the next ten years and with the right policies in place, Travel & Tourism in Serbia is forecast to achieve growth of 4.8% per annum, in terms of its contribution to GDP compared to 4.5% per annum growth in Travel & Tourism in Eastern Europe and 4.3% in the world as a whole. This would take the total contribution of Travel & Tourism in Serbia to GDP to 6.8% of the economy in 2023 (World Travel & Tourism Council, 2013).

*Table 5. Tourist arrivals in Serbia, 2008-2012*

	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>Nights</b>					
Domestic	1,620	1,376	1,318	1,304	1,270
International	646	645	682	764	810
Total	2,266	2,021	2,001	2,069	2,080
<b>Annual increase (%)</b>					
Domestic	0.6	-15.1	-4.2	-1.0	-2.7
International	-7.1	-0.2	5.7	12.0	6.0
Total	-1.8	-10.8	-1.0	3.4	0.5

*Source: Statistical Office of the Republic of Serbia (SORS)*



Table 6. Tourist overnight in Serbia, 2008-2012

	2008	2009	2010	2011	2012
<b>Nights</b>					
Domestic	5,935	5,307	4,961	5,002	4,688
International	1,399	1,470	1,452	1,643	1,796
Total	7,334	6,777	6,414	6,645	6,485
<b>Annual increase (%)</b>					
Domestic	1.4	-10.6	-6.5	0.8	-6.3
International	-5.2	5.1	-1.2	13.1	9.3
Total	0.1	-7.6	-5.4	3.6	-2.4

Source: Statistical Office of the Republic of Serbia (SORS)

Table 7. The average duration of stay of tourists in Serbia (in days), 2008-2012

	2008	2009	2010	2011	2012
Domestic	3,66	3,86	3,76	3,83	3,69
International	2,16	2,28	2,13	2,15	2,22
Total	3,24	3,35	3,20	3,21	3,12

Source: Statistical Office of the Republic of Serbia (SORS)

Table 8. Foreign currency income from tourism

Year	EUR (000)	Index	USD (000)	Index
2008.	639.900	101	944.251	109
2009.	617.177	97	865.373	92
2010.	604.856	98	798.382	92
2011.	710.132	117	991.660	124
2012.	707.761	100	906.127	91
Jan –May 2013.	258.208	109	338.440	109

Source: National Bank of Serbia (NBS)

From mountain destinations, stands out Zlatibor, the number of tourist arrivals and overnight stays in the first six months of 2013 was 57.139 arrivals and 239.943 overnight stays (at the same level compared to the same period in 2012.). They are followed Kopaonik with 52.166 arrivals (increase of 14%) and 238.803 overnight stays (increase of 14%). Number of nights in the two mountainous centers Znatibor and Kopaonik, amounts to 51% of the total number of overnights in the all mountains in Serbia.

*Table 9. Tourism in mountain resorts in Serbia per year*

<b>Year</b>	<b>Arrivals</b>	<b>Index</b>	<b>Nights</b>	<b>Index</b>
<b>2007.</b>	445.857	114	1.933.898	111
<b>2008.</b>	577.208	102	1.912.008	99
<b>2009.</b>	391.316	87	1.687.734	88
<b>2010.</b>	376.648	97	1.466.907	88
<b>2011.</b>	402.221	107	1.590.016	109
<b>2012.</b>	397.388	99	1.600.489	101
<b>Jan – June 2013.</b>	226.428	101	937.191	101

*Source: Statistical Office of the Republic of Serbia (SORS)*

From spa destination, the number of tourist arrivals and overnight stays in the first six months of 2013, stands out Vrnjacka Banja with 67.973 arrivals (an increase of 14% compared to the same period in 2012) and 236.089 overnight stays (an increase of 16% compared to the same period 2012). The second is Sokobanja with 23.125 arrivals (an increase of 7%) and 130.639 overnight stays (an increase of 3%). The largest increase in the number of tourist arrivals (121%) recorded the Vrdnik and the largest increase in the number of overnight stays (75%) registered in Kanjiza.

*Table 10. Serbian spa tourism per year*

<b>Година</b>	<b>Arrivals</b>	<b>Index</b>	<b>Nights</b>	<b>Index</b>
<b>2007.</b>	383.642	120	2.335.543	107
<b>2008.</b>	366.098	95	2.367.730	101
<b>2009.</b>	358.481	98	2.286.661	97
<b>2010.</b>	344.967	96	2.210.710	96
<b>2011.</b>	375.473	109	2.308.435	104
<b>2012</b>	347.192	93	2.035.938	88
<b>Jan – June 2013.</b>	176.797	112	875.444	100

*Source: Statistical Office of the Republic of Serbia (SORS)*

## ***SUSTAINABLE TOURISM IN SERBIA AND BIODIVERSITY***

The main tourism activities in Serbia include tourism in big cities, spa tourism, cultural and natural heritage, hunting, fishing, rural tourism and river tourism. The negative impacts of tourism on the environment include the pressure on natural resources, biodiversity and habitat, and create waste and pollution.

Unsustainable tourism can lead to the same forms of pollution as any other industry: air emissions, noise, waste, wastewater discharges, oil and chemicals, even architectural and visual pollution. Tourism development planning can prevent damage and costly mistakes and avoid the destruction of the value of the environment, which is the foundation for tourism.

The current negative impacts of tourism activities in Serbia, are caused by poor implementation of planning and construction, lack of wastewater infrastructure and uncontrolled waste disposal, and ineffective management of protected natural areas (National Government RS, 2005, p. 111).

The objectives of sustainable tourism development in Serbia include (National Government RS, 2005, p. 112):

- Improve accommodation facilities; development of tourism quality systems and systems of consumer protection;
- Development of tourism information systems;
- Development of additional tourist offer, economic profitability and local development (trade, gastronomy, activities, travel agencies, etc.); which will create new jobs and the preservation of cultural heritage and natural diversity;
- Elimination of actual and potential conflicts between tourism and other economic activities.

Problems that occur in Serbia in terms of sustainable tourism can be classified as follows (Ćuk, 2011):

- Budget restrictions, the economic crisis, high internal deficit, high unemployment rate;
- Slow reforms, inefficient struggle against organized crime and corruption;
- Unfavorable demographic structure and poor demographic trends;
- Poor infrastructure, collisions between citizens and local authorities;
- Unfavorable parameters of air quality and drinking water.

Biodiversity has an intrinsic value, it is worth protecting regardless of its value to humans, but it also underpins economies, societies and individual well-being. Every year, millions of tourists fulfill their urge to see and experience the natural world; snorkeling among coral reefs; wildlife spotting on safari; trekking through rainforests. All these activities depend on healthy and intact ecosystems. Even a beach holiday requires clean waters and a functioning coastal ecosystem. Tourism is thus a

biodiversity dependent sector and has a long- term interest in its protection and conservation. At the same time, when developed and managed in a sustain- able way, tourism can be instrumental in safeguarding biodiversity(UNWTO, 2010, p. 4) .

Sustainable tourism is a major source of revenue and employment for local communities, pro- viding a strong incentive to protect biodiversity. This revenue often translates into direct income for conservation and both direct and indirect income for local stakeholders, boosting local, national and international support for the protection of nature. At the same time, revenue provides impetus for private biodiversity conservation efforts and is of ten channeled into capacity building programmers for local communities to manage protected areas. In much the same way, sustainable tourism preserves land for nature, offering alternative livelihood options to those who may otherwise rely economically on less sustainable land use. With habitat destruction as the leading cause of species extinction, protected areas form the cornerstones of efforts to conserve biodiversity. For many national parks, tourism provides the financial means and incentives for conservation and justifies the creation of further protected areas (UNWTO, 2010, p. 5).

While the loss of biodiversity and its ecosystem services is of global concern, it is at the local level that it has the greatest impact. The world's poor, especially in rural areas, are especially vulnerable, depending heavily on biological resources for much of their needs. With the largest proportion of global biodiversity concentrated in developing countries, which are at the same time receiving an increasing share of the international tourism market, biodiversity may well be one of their most competitive tourism advantages (UNWTO, 2010, p. 5,6).

The Republic of Serbia is characterized by high genetic, species, and ecosystem diversity. The highland and mountainous regions of the Republic of Serbia, as a part

of Balkan Peninsula, are one of six European biodiversity centres. Moreover, in terms of the wealth of its flora, the Republic of Serbia is potentially one of the global centres of plant diversity. Although the Republic of Serbia's 88,361km<sup>2</sup> represent only 2.1% of European territory, biodiversity of different groups of organisms remains high (Ministry of Environment & and Spatial Planning RS, 2011, p. 18).

The Republic of Serbia hosts:

- 39 % of European vascular flora,
- 51 % of European fish fauna,
- 49 % of European reptile and amphibian fauna,
- 74 % of European bird fauna,
- 67 % of European mammal fauna.

The following biomes are found in the Republic of Serbia: steppe zonobiome, deciduous forests zonobiome, coniferous forests zonobiome and zonobiome of high mountain tundra. The Republic of Serbia has heterogeneous flora and fauna, which includes both widespread and endemic species (Balkan, local and stenoendemic).

Pressure from tourism and outdoor recreation on natural and semi-natural ecosystems contributes to biodiversity loss and habitat degradation directly and indirectly. Direct impacts include the construction of tourism and recreation-related infrastructure: ski areas, roads, trails, hotels, lodges, campsites, artificial lakes created for the production of artificial snow etc., which replace natural ecosystems with human dominated environments.

Furthermore, the trampling of vegetation, compact of soils, alteration of runoff and erosion patterns, increased likelihood of non- native species invasions and changes to animal behavior are all impacts that have been associated with recreational uses. The impact of tourism on biodiversity is the subject of an Environmental Impact Assessment (Ministry of Environment & and Spatial Planning RS, 2011, p. 57,58).

*Table 11. SWOT analysis of biodiversity and tourism*

<b>Strengths</b>	<b>Opportunities</b>
<p>The Nature Conservation Act mentions and provides for the development of tourism. Adopted strategy of biological diversity of Serbia (2011-2018) which recognises tourism in several instances. Adopted Tourism Strategy of Serbia which puts an emphasis on the development and importance of ecotourism. Providing incentives for tourism development through studies and conservation acts, strategies and plans. Richness in biodiversity is a guarantee for the quality of tourism offer (the value of landscape and activities).</p>	<p>Tourism activity helps in attracting attention to endangered species and protected area landscapes. Tourist presentation supports the objectives of the Convention of Biological Diversity. Tourism promotion of biodiversity provides benefits for the local community. Tourism products on the subject of biodiversity contribute to a better conservation of protected area (economic benefits, education, conservation promotion) Opportunities for applying to numerous projects (e.g. cross-border cooperation) with the aim of ecotourism development.</p>
<b>Weaknesses</b>	<b>Threats</b>
<p>Economics of biodiversity and adequate economic evaluation of biodiversity through tourism development have not been carefully carried out yet. Biodiversity has not been sufficiently considered as tourism potential and attraction. Research into the relationship of biodiversity and tourism has not been always carried out, and plans have not been often implemented. Protected areas in view of economic development are often observed through other economic activities (fishing, hunting...), and not tourism. Poorly developed tourism infrastructure for the development of ecotourism and the presentation of biodiversity.</p>	<p>Biodiversity is increasingly endangered due to economic activities impact. It is often the case that there are not enough funds for adequate conservation which is always expensive. Tourism activity and bad habits of holiday makers are actually harming or may be harmful to biodiversity (moving outside designated trails, putting up fire, poaching ...). Irresponsible behaviour of local communities is harmful to biodiversity. Environmental pollution in surrounding communities has had a harmful effect on protected areas and their flora and fauna.</p>

## ***THE ENVIRONMENTAL IMPACTS***

Tourism is largely dependent on natural resources. For example, the provision of fresh water for drinking, taking showers, swimming pools etc. Beaches and coastlines, mountains, forests, lakes, oceans and the scenery provided by landscapes containing these elements are central to the attraction potential of most destinations (Gössling & Hall, 2006).

Human impacts on the environment can have a global character in two ways. First, climate and oceans have the characteristic of a global system and both influence and are influenced by tourism production and consumption. A second, is change on a worldwide scale, or represents a significant fraction of the total environmental phenomenon or global resource (Gössling & Hall, 2006).

In 2003, climate change slowly became an issue for the tourism sector when it was picked up by the World Tourism Organisation for its 1st International Conference on Climate Change and Tourism at Djerba, Tunisia (WTO, 2003). A first attempt to estimate carbon dioxide (CO<sub>2</sub>) emissions from worldwide international and domestic tourism was made for the 2008 World Tourism Organization report on climate change (UNWTO/UNEP/WMO, 2008).

Next figure shows how the modal split differs in terms of trip numbers and corresponding emissions for international and domestic tourism. 45% of international trips use air travel, whereas this figure is only 12% for domestic trips and 1% for all same-day visitors. Air travel is responsible for 87% of international tourist trip emissions (321 Mt CO<sub>2</sub>). Domestic trip emissions are dominated by car transport (54%, 259 Mt CO<sub>2</sub>). A large share of domestic trips is made by other transport modes than airplanes or cars (37%), but these only produce 7% (34 Mt CO<sub>2</sub>) of domestic tourism transport emissions. For all tourism trips, the impact of air travel on emissions is plainly visible (Ejgelaar et al., 2008, p. 18,19).

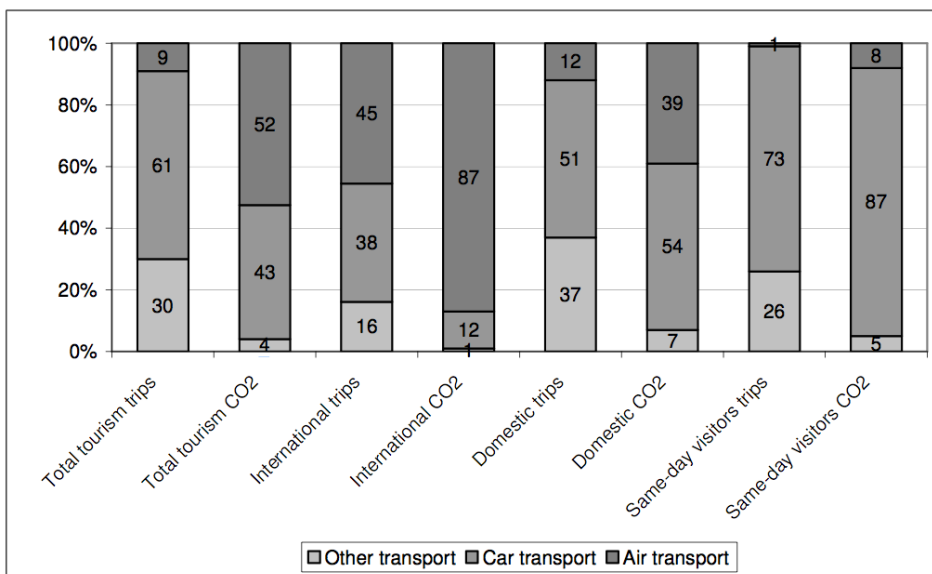


Figure 3. Modal split of trip numbers and CO2 emissions

Source: (UNWTO/UNEP/WMO, 2008)

Statistics on international tourism as reported by among others the UNWTO are more or less consistent, comprehensive and up-to-date. But international tourism is only one part and certainly in number of arrivals, domestic tourism is several times larger than international. However, consistent data on worldwide domestic tourism are not so readily available. Whereas international tourism movements are hard to measure, domestic tourist movements are even harder to track. International interregional tourism flows, be it West-South or West-West tourism flows (e.g. North America – Europe) highly depends on high-emission long-haul flights, i.e. those trips causing a large part of tourism emissions. Thus, a reduction in demand for these trips will significantly reduce overall tourism emissions. Environmentally sustainable tourism should therefore rather be domestic or intraregional (South-South, intra-Europe, intra – North America) (Ejgelaar et al., 2008, pp. 22, 23).

Education for the environmental protection, as it is written in the Chapter 36 of Agenda 21 (Program of measures and activities for the 21st century), is in the function of actualizing the sustainable development, and is therefore necessary for all the Earth's inhabitants and must represent a long-term planned development of an interdisciplinary knowledge about the environment during the entire life span of a man (Masic et al., 2012, p. 306).

## ***NEGATIVE ECONOMIC IMPACTS OF TOURISM***

There are many hidden costs to tourism, which can have unfavorable economic effects on the host community. If a country or region becomes dependent for its economic survival upon one industry, it can put major stress upon this industry as well as the people involved to perform well.

Many countries, especially developing countries with little ability to explore other resources, have embraced tourism as a way to boost the economy.

In The Gambia, for instance, 30% of the workforce depends directly or indirectly on tourism. In small island developing states, percentages can range from 83% in the Maldives to 21% in the Seychelles and 34% in Jamaica.

Over-reliance on tourism carries risks to tourism-dependent economies. Economic recession, the impacts of natural disasters such as tropical storms and changing tourism patterns can all have a devastating effect.

Increasing demand for basic services and goods from tourists will often cause price hikes that negatively affect local residents whose income does not increase proportionately. Tourism development and the related rise in real estate demand may dramatically increase building costs and land values. This makes it more difficult for local people to meet their basic daily needs.

Much of the income from tourism expenditures leaves the country again to pay for these imports. The average import-related leakage for most developing countries today is between 40% and 50% of gross tourism earnings for small economies and between 10% and 20% for most advanced and diversified economies. A study of tourism "leakage" in Thailand estimated that 70% of all money spent by tourists ended up leaving Thailand.



## ***CONCLUSION***

Based on the UNWTO research, tourism is one of the top five export categories for as many as 83% of countries and is a main source of foreign exchange earnings for at least 38% of countries.

A robust tourism industry can have direct economic impacts in the region where the attraction is located. Tourism accounts for 9% of global GDP and more than 260 million jobs (100 million direct) based on the analysis of the UNWTO.

Especially in developing countries, one of the primary motivations for a region to promote itself as a tourism destination is the expected economic improvement. As with other impacts, this massive economic development brings along both positive and negative consequences.

Tourism development can cost the local government and local taxpayers a great deal of money. Developers may want the government to improve the airport, roads and other infrastructure, and possibly to provide tax breaks and other financial advantages, which are costly activities for the government.

Tourism in Serbia is still untapped potential. Natural Resources and undoubtedly wide natural biodiversity can basically represent an excellent potential for the development of a comprehensive tourism industry generated in the territory of Serbia. In addition to tourism in big cities (Belgrade, Novi Sad) and famous tourist destinations (Kopaonik, Zlatibor), Serbia has developed forms of specific types of tourism such as rural tourism, spa tourism, eco-tourism, etc.

Considering the good geographical position and natural capacities, Serbia can create a good climate for potential investors and the fundamental foundations of sustainable tourism potential.

However, poor infrastructure, delays in the implementation of national and local strategies, redirecting money capital, investment in other industries, represents a fundamental barrier to the further development of the tourism potential of Serbia.

The basis of sustainable tourism is a fundamental protection of the environment and biodiversity in Serbia. Without these two main factors, we cannot think about the further development and improvement of all aspects of tourism.

Entrepreneurship is a multi-discipline phenomenon that positively contributes into destination development. Tourism entrepreneurship is a phenomenon that would be flourished by current economic, social, economic and political conditions in a particular destination. In fact, expressing any entrepreneurial behavior highly depends on both closed and far environment.

## REFERENCE

- [1] Alejziak, W. B. (2002). Tourism in the Face of 21st Century's Challenges. *Tourism Academy of Physical Education Cracow, Poland*.
- [2] Blanke, J. & Chiesa, T. (2013). The Travel & Tourism Competitiveness Report 2013, Reducing Barriers to Economic Growth and Job Creation, in: *The World Economic Forum*.
- [3] Blanke, J., Chiesa, T. & Crotti, R. (2013). The Travel & Tourism Competitiveness Index 2013: Contributing to National Growth and Employment. *World Economic Forum, The Travel & Tourism Competitiveness Report 2013*.
- [4] Candela, G. & Figini, P. (2012). *The Economics of Tourism Destinations*. New York: Springer.
- [5] Ćuk, T. (2011). Issues of Sustainable Development in Serbia. *International Quality Conference, Kragujevac*.
- [6] Dulčić, A. (1999). *Turizam, Načela i Praksa*. Institut za turizam, Zagreb.
- [7] Ejgelaar, E., Peeters, P. & Piket, P. (2008). Domestic and International Tourism in a Globalized World. *documento presentado en Research Committee RC501 International Sociological Association Jaipur, Rajasthan, India, 24–26*.
- [8] Gössling, S. & Hall, M. C. (2006). *Tourism and Global Environmental Change: Ecological, Economic, Social and Political Interrelationships*. Routledge.
- [9] Hedrick-Wong, Y. & Choog, D. (2013). MasterCard Global Destination Cities Index.
- [10] John G.C., K. (2014). 2013 International Tourism Results and Prospects for 2014.
- [11] Masic, Z., Radotic, F. & Grbovic, M. (2012). Environmental Education through EPA Training Analysis. *The First international conference Employment, Education and Entrepreneurship*, 1, 293–309.
- [12] Ministry of Environment & and Spatial Planning RS. (2011). Biodiversity Strategy of the Republic of Serbia for the Period 2011 – 2018.
- [13] National Government RS. (2005). National Strategy for Sustainable Development in Republic of Serbia.
- [14] NTO of Serbia. (2014). Travel Serbia, Destinations. *National Tourism Organisation of Serbia*. Retrieved from <http://www.serbia.travel/destinations/>
- [15] Pierret, F. (2011). Some Points on Domestic Tourism. *Rencontre internationale sur le développement du tourisme domestique*.
- [16] Poon, A. (1993). Tourism, Technology and Competitive Strategies. , 370pp.
- [17] Radotic, F. & Masic, Z. (2013). Rural Tourism as a Stimulus of Sustainable Rural Development in the Vicinity of Kragujevac. *The Second International Scientific Conference, Employment, Education and Entrepreneurship (EEE 2013)*, 4, 262–279.

- [18] Sezgin, E. & Yolal, M. (2012). Golden Age of Mass Tourism: Its History and Development. *InTech*.
- [19] Smith, M., Macleod, N. & Robertson, M. H. (2010). *Key Concepts in Tourist Studies*. London, United Kingdom: SAGE Publications Ltd.
- [20] Swarbrooke, J. & Horner, S. (2007). *Consumer Behaviour in Tourism*. Routledge.
- [21] UN/UNWTO/OMT/IOHBTO. (2008). International Recommendations for Tourism Statistics 2008. Department of Economic and Social Affairs
- [22] UNEP. (2005). Making Tourism More Sustainable, A Guide for Policy Makers. United Nations Environment Programme
- [23] UNWTO. (2010). Tourism and Biodiversity, World Tourism Day 2010. *World Tourism organization*.
- [24] UNWTO. (2014). Understanding Tourism: Basic Glossary. *World Tourism Organization, UNWTO*.
- [25] UNWTO/UNEP/WMO. (2008). Climate Change and Tourism – Responding to Global Challenges. World Tourism Organization and United Nations Environment Programme
- [26] World Travel & Tourism Council. (2011). The Authority on World Travel & Tourism; Travel & Tourism 2011. WTTC
- [27] World Travel & Tourism Council. (2013). Serbia Travel & Tourism Development Potential 2011-2023.
- [28] WTO. (1995). Technical Manual: Collection of Tourism Expenditure Statistic. OMT/WTO/BTO
- [30] WTO. (2003). Climate Change and Tourism. 1st International Conference on Climate Change and Tourism. Djerba, Tunisia: World Tourism Organisation
- [31] YUTA. (2014). Serbia Travel Guide. *Serbia National Association for Travel Agencies*. Retrieved from <http://www.yuta.rs/en/>

## **THE LEGAL NATURE OF EUROPEAN UNION**

*Aleksandar Minkov*<sup>15</sup>

*Ana Opacic, PhD*<sup>16</sup>

### **ABSTRACT**

*For determining the legal nature of a community, its legal and business capacity, i.e. property of the legal entity is not what decides. Much more important are the authorisation of the community, especially the foundation from which these powers derive. After the signing of the Lisbon Treaty, the EU has acquired a personality based on which arises a dilemma if the EU is some kind of an international organization or some sort of complex state. It is certain that the EU is not a classic unitary or composite state. What it still lacks is the source authority. All powers the EU has, have been assigned to her by the member states. A vague legal nature of the EU can be confirmed on the basis of the so-called "Four freedoms". Even during the establishment of the first community, the member states as targets of association determined a high level of employment, population, steady economic growth and raising the living standards of the population. These objectives are achieved through the establishment of a single market, which includes the possibility that persons, goods, services and capital circulate freely inside such a market. In this paper, we try to emphasize the complex legal nature of the European Union and the dilemma as to which direction will the process of its legal nature move. Particular attention is paid to the basic characteristics of the common market of the European Union, because it is key to the overall success of the European Union, and is the very foundation of the project of European economic integration. In this sense, we pointed out to the positive characteristics of the formation of a single market, but also to specific challenges that the enlargement of the EU brings in the implementation of the principle of free movement and work.*

**Key words:** *Federation, Confederation, International Organizations, The Single Market, Free Movement of Workers*

**JEL Classification:** K33

**UDK:** 341.17(4-672EU) 331.556.42/.43(4-672EU)

---

<sup>15</sup>Aleksandar Minkov, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, aleksandar.minkov@yahoo.com

<sup>16</sup>Ana Opacic, Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, ana.galjak@gmail.com

## ***INTRODUCTION***

Although the European Union is still referred to as an international organization with specific traits, such legal nature during the seventies were challenged by numerous scholars of constitutional law who recognized that the European Union takes on the characteristics of a federal state. In the period of the establishment of the "constitutional framework for a federal-type structure in Europe," the system of decision-making in the European institutions was miles away from the classic federal states. A significant process of federalization was initiated by the Single European Act, and a full momentum was given by the Maastricht Treaty. All subsequent contractual reforms aimed for enlargement of the legislative and control powers of the European Parliament, strengthening the role of the European Commission and all more important decisions in the Council of Ministers. It all made possible for the European Union to take on some characteristics of traditional federal states like the United States, Switzerland and Germany.

It is clear that nowadays, the final form of the European Union cannot be identified with certainty, in which there is still a confronting of supporters of confederal and federal concept. However, historical examples of some countries that have gone through conflict of confederalists and federalists (eg. United States, Switzerland) may indicate the final legal nature of the European Union. In these states the federal process had been going on for years or decades, which indicates that for the European Union time is needed in order to take the form of a classic federal state. The idea of a federal Europe is not new. She is older than the European Union. The only "cure", as the British Prime Minister Winston Churchill spoke at the University of Zurich in 1946, for Europe is that it must look like Switzerland, it must make some kind of United States of Europe.

Determining the legal nature of the EU has multiple significance. Apart from the theoretical importance, far more important is its practical importance, both for Member States and for countries wishing to join the European Union. We think that a complex system of managing the community of European states is of vital importance for Serbia as well. The unconcealed desire of Serbia to join the European family carries hidden challenges. Serbia is on its way to meet the political, legal and economic conditions. Also, it is required that any country wishing to join the European Union must maintain neighborly relations with other countries. This condition draws particular attention, because in addition to the maintenance of good neighborly relations, primarily with countries in the region, such a relationship with Kosovo and Metohija is necessary. Should a country

maintain good neighborly relations with a territory which is an integral part of the country? Is it a task before current politicians to join Serbia to the European Union as a complete country, or without a part of it? Can a hidden federal form of the European Union produce certain effects to its part of the territory, not only with the request for accession to the European Union, but also its possible membership? Does EU accession of Serbia lead to indirect recognition of Kosovo as an independent, sovereign state? To possibly answer these questions (to the extent possible at this point) it is primarily important to point out the level of the sovereignty of a country that it retains as a member of international organizations and the Member States of a (con) federal state.

## ***INTERNATIONAL ORGANIZATION***

Since the international organizations came to the center of scientific research, they were offered numerous definitions of the term "international organization". Here, we will mention one, which has the most consensus and the least misunderstanding. "The international organization is a permanent form of international cooperation between member states, which are, by law, states; it is formed and is acting with the consent of their willingness manifested in their international treaty or in a similar manner, having at least one permanent body and is formally independent from the members" (Dimitrijević, Račić, 2011:27). Thus, the constituent elements of the international organization are state, international contract and at least one permanent body.

The classic form of organization of international organizations as we know it is a means of cooperation between sovereign states. Movement for international organization has always been accompanied by a desire to improve anarchical relations between Member States by a "world government" which the states would obide, similar to subordination of the individual to their national authorities. In the basis of this belief is that it is considered that the state does not comply with its international obligations because they are sovereign. Efforts to establish greater control over sovereign states has led to the creation of a "supra-state" powers of international organizations, so-called supranational organizations. These international organizations have the following characteristics. Firstly, the executive authorities are independent in decision-making from member states because they are composed of individuals who act as independent individuals, and do not depend on government instructions. Secondly, the institution of these organizations are empowered to make decisions that bind

member states without their consent. And thirdly, the decisions of an organization create rights and obligations for individual and legal entities (Dimitrijević, Račić, 2011:81-83).

The European Union has incorporated elements of the suprapstate in the first pillar, ie. to all matters pertaining economic integration. The other two pillars have a different situation. The second pillar (Common Foreign and Security Policy) and third pillar (cooperation in the field of justice and home affairs) retained a determining role of intergovernmental bodies, the European Council and the Council. It has not come to a significant sacrifice of sovereignty as it was done in the first pillar - defined as the four freedoms: free movement of moving goods, persons, services and capital. Therefore, Member States, at this point, are not prepared to delegate decision-making of foreign policy, security, as well as internal affairs to persons who are directly elected by the citizens of the European Union (European Parliament) as well as independent persons (the Commission).

## ***FEDERALISM***

The term federalism is derived from the Latin word foedus, foederis (Alliance), that is, by Littre (Littre, Dictionnaire de la langue francaise), from the verb fidere, confide in, rely on (Popović, 1933:5), federalism as the form of state system becomes universal and widespread. Le Fir states that the federation has a dual character: it is both a state (Staat) and community (Bund), whose components take part in the formation of the state will (Popović, 1933:19).

Federalism as an idea has a long history. Although the history of forms of federalism dates back to Greek and Roman alliance alliances (foedus) and across multiple forms that can be described as a confederation (German Empire, the United States from 1781 to 1789, Switzerland until 1848, and others.) until the first modern federal state of the United States, federalism is considered as a relatively recent political invention. Expansion of federalism is attributable to a property that describes it. It is a form that allows the association, uniting diversity, so as to preserve a degree of local autonomy, while providing better common defense, wider economic space, the advantages of the division of labor, better organization and infrastructure, better allocation of available resources, regional development, etc.. As a political form, federalism necessarily implies pluralism. It would be even more accurate to say - a variety of pluralism (social, political, ethnic, economic, cultural). Federalism is also enables the unity of diversity.

It is obvious that the role of federalism as a political and social form is increased due to its suitability to alleviate the so-called national issue, i.e. the coexistence of multiple ethnic groups within the same political framework. If in the past, for a variety of reasons, primarily because of aggressive imperialism (conquering and submission) and striving for dominance prevailed pursuit of unitarism and centralism, then we can say that nowadays federalism is more widespread, and that this expansion is in conjunction with the modified understanding of the conditions of life in modern society. Perceptions are changing in the direction of taking diversity as certain values that should be respected and to strive to preserve them.

From a political-legal and economic reasons, there is a tendency of modern states to decentralize power i.e. to transfer the powers to different levels of government. Regardless of what kind of state regulation it is, practice shows that today there is almost no state with only one level of government, except for small unitary states (Milosavljević, 2011:152). Although there are a large number of states that at first glance have the same state regulation, it is difficult to find two that have exactly the same characteristics. One of our authors distinguishes between two senses and the meaning of the federal government: the first, which is reflected in normative texts, ie. constitution, and the other arising from the reality. The influence of the constitution of the country to another is just a fluke, because it is obvious that, for example. provisions of the Constitution of the United States have found its own copy in the constitutions of the South American federations, and that although there is a formal similarity between federal institutions, in practice, they don't lead to their similar operation, because "the plant can be transplanted, but with it you cannot transfer the land in which it plants their root, and the air it breathes, the sun that heats, so that it will in any case-if the transplant works- be something other than what it was before the transplant (Jovičić, 2006:21). "Author has in the picturesque way described any attempt to imitate someone else's federal system, because every federation is a "case for itself." Likewise, we must agree that it is not possible to determine a unique model, because every state is *sui generis*, hence the need to allocate common essential elements. Miodrag Jovičić believes that each federal state has six common characteristics.

First, a federation consisting of two political-territorial units- federation and the federal unit. Without the existence of the federal units there is no federation i.e. joint federal units are a federal state. There is no mention of how many associated federal units is necessary to form a federation. By logical interpretation, it can be concluded that the minimal number is two federal units constituting a federation (ie. Binomial Federation, for example, Czechoslovakia, the Federal Republic of Yugoslavia), while the maximum



number cannot be determined (multi-member federation may have three federal entities, such as Belgium, or more, for example, Canada, Brazil, Germany). The most complex federation is the United States with 50 member states and Mexico with 29 federal units.

Secondly, the character of a federal state must be determined by the federal constitution, and in particular the status of the federal units. In the normative part of the Constitution there are legal norms of the organization of power and human rights.

Thirdly, the Constitution defines the authority and the distribution of functions between the federation and the federal units. Thus, for example. The German Constitution (Basic Law) of 1949 has the following parts: 1. Fundamental Rights, 2. the federal government and the country, 3. Bundestag, 4. Bundesrat, 4a. The Joint Committee, 5. Federal President, 6. Federal Government, 7. Legislature of the State, 8. Enforcement of federal law and federal governments, 8a. Joint ventures, 9. Judiciary, 10. Finance, 10a. Defensive Balance (parts under 4a, 8a., and 10a. were inserted along with the subsequent amendments of the Constitution), and 11. Transitional and final provisions (Milosavljević, Popović, 2009:45).

The scope of authority and power can be distributed so that it outweighs the power of the federal government (strong federation) or that it outweighs the power of the federal units (weak federation). The allocation of jurisdiction must be made in such a way that it creates fewer problems in functioning. The division can be made so that there are: 1) areas within the exclusive jurisdiction of the federal state; 2) areas within the exclusive jurisdiction of the federal units; and 3) areas in which the jurisdiction is divided between the federal government and the federal units. In federal countries where there is a clear division of responsibilities, it is easier to operate, however it turned out that in certain areas there must be cooperation between the federal government and its federal units to achieve common goals. Nowadays, competitive authority is considered inevitable.

Federal entities play an important role in the formation of the federal authorities. In some federations it is anticipated that federal entities are involved in the selection of the head of state. When it comes to the judicial system, the rule is that there are judicial organs of federal units and judicial authorities of the federal state, but there are other examples as well. In some federations there is only one federal judicial body, as the first and also the highest court of the country, or more of them in such a role (for example, in Germany there are five federal courts with specialized jurisdiction). On the other hand, there may be a tiered federal judiciary (for example, in the United States, there are three types of federal courts: district, appellate and Supreme Court). There is also a federal state in which the federal units do

not have their own courts (for example, Austria). When it comes to executive power in the states, there are different solutions. Enforcement of federal laws may be conducted in one of three possible ways: on a "dual track" approach, according to the "one track" system and the mixed system. In the first case, the federal government forms their own bodies which carry out federal laws. The "one-track" system is based on the execution of federal laws by the federal units. In the first case, the criticism is addressed because the system is expensive, and the second because it is unreliable. Mixed system has proven to be most effective, by which certain areas are delegated to the federal administrative bodies (foreign affairs, defense, customs, taxes), and some other areas have been delegated to administrative authorities of the federal units. When it comes to legislative jurisdiction, the rule is that the federal constitution adopts and amends by the common will of the federal units. Also, in areas of federal legislative jurisdiction, common will of the federal units is assumed (Milosavljević, Popović, 2009:308-309).

Fourthly, the federation has its own bodies, and the highest among them the Parliament. Parliament holds legislative and constituent power. It is a representative of citizens who exercises the legislative power. Montesquieu had said that the parliament is the one that needs to make laws and that it is a condition of freedom. Since the Parliament is the carrier of the most legislation, it can be concluded that it is the strongest factor in the political arena. However, such a position of Parliament is now challenged because the executive power has been gaining increasing importance and taking over the anchoring power from the Parliament in the representative government. Despite these estimates, Parliament is formally and actually the highest authority, because without Parliament there is no law. Parliament is the holder of sovereign power. It elects government, controls its operation and can withhold trust. More specifically, with the legislative function, Parliament has these responsibilities: adopt and amend the constitution, elect government and oversee its work, decide on war and peace, elect the holders of certain functions, performs quasi-judicial jurisdiction and regulate their own organization (Milosavljević, Popović, 2009:259-260).

Fifth, the federal units have their own bodies, which operate independently. Such a view is confirmed by the United States federal system. Although federalism is the basis of the American constitutional system, which has undergone evolution for over two centuries, to the limit it respects the autonomy of states within the federal assembly. States are single units that could operate independently and without federation. With its vastness, population, economic importance, the states give greater responsibility to their managers than some other European democratic

countries do. States have bicameral parliament except for Nebraska, which has accepted a unicameral one. Executive power is in the hands of the governor. The content of authorization depends on the state. The judicial system of each country was crowned as in the federation, with the Supreme Court. In the majority of the countries, judges are elective, and in some countries the elections kept the party insignia. Some states have the right to recall, that is, national recall of judges. Therefore judges do not guarantee safety, whether they are elected for a certain period with the possibility of re-election or revocation (Lovo, 1999:148-149).

In the German federal system, Basic law differs only the legislation and competitive. In all areas of exclusive legislative, regions can be mixed only under the authority of federal law (article 71 OZ). These are the areas listed in Article 73 OZ and include (as is the custom in the federal system), foreign affairs and defense, citizenship, free movement of people and goods, money, federal public authorities, regional and federal cooperation in the areas of criminal police, security, defense of liberal and democratic regime, and the creation of the Federal criminal Police Bureau. Regarding the matter in competitive areas, regions can legislate to the extent that the federation does not use its own legislative power. In the administrative area of the presumption of jurisdiction goes in favor of the region. Administrative jurisdiction has the following four types: a direct federal administration in the area of sovereignty, its own administration of local affairs, the administration of federal affairs delegated to the regions and the federal administration of tasks carried out by the regions as their own jurisdiction.

According to Article 50 OZ regions participate in legislative and administrative activities via the Bundesrat. Representation of federal units at the federal level is provided, as well as other federal democracies, the upper house of parliament. Bundesrat consists of members of the government of the region, which they appoint and recall. The members of the Bundesrat represent the interests of their governments, who provide guidance and imperative mandate (Lovo, 1999:374-375).

Sixth, the Federal Constitution is the supreme law of the federal government (Jovičić, 2006:22-23). Authentic federalism involves shared sovereignty, ie. division of responsibilities between the joint and the according bodies of the federal units. The right way to make this distinction is the constitution and that's why the rule of law, ie. the rule of the constitution, and not the rule of personality or of a body, a necessary condition for true federalism. The main feature of modern federalism is replacing the former federation of states to the new institution of the state. It is characterized by deviations from the classical theory of sovereignty, as was represented by Jean Bodin, Jean Jacques Rousseau and Thomas

Hobbes. The concept of the State involved a joint government and the governments of the individual states. The system has implicated a division of responsibilities, i.e. the division of sovereignty. This division can be done in a continuous manner only on the basis of the rule of law, i.e. the constitution, which thus becomes a pivot of rights and duties of individual governments. In the case of domination of political will, i.e. arbitrariness, then through it, the various interests pressure to ensure success or dominance over other interests. Determining jurisdiction that is specified by the constitution is a matter of an agreement or compromise, like most other solutions in the federal system. If you want to avoid conflicts that cannot be resolved within the legal and constitutional order, then the solution must have a permanent character.

### ***HIDDEN FEDERALISM***

By adopting of the constitution (or far less attention would be devoted to this topic) a theoretical dispute about the legal nature of the European Union would be completed. The adoption of this legal-political act would end the federal process of the European Union. However, in order to finally determine the nature of the federation it is necessary to define the notion of a constitutional provision. One of the key figures in the political and legal theory of the twentieth century, Carl Schmitt in his constitutional theory held that it is necessary to clear up the confusion between the terms of the social contract, the Constitution, the Federal Constitutional Treaty as a Covenant status and federal contract as a free agent pact. Schmidt points out that the adoption of a constitution in a positive sense assumes that people already exist as a political entity. However, it is observed that the constitutional pact does not have to rely on the existence of the political unity of the people. Thus, Schmitt distinguishes between the concept of a federal constitutional pact and modern constitution. Federal Constitutional Treaty creates a new political unity while preserving the political existence of member federations. The Federal Constitutional Treaty is not based on the constitutional power of a people, but the political will of the member states. Schmitt's determination of the constitutional pact is somewhere between classical constitution and international treaties to which the member states remain the masters (Kovačević, 2013:157).

The analysis of the federal states has shown that political unity is based on the Federal Constitution, not the federal contracts. What differentiates a federation from unitary states is that a contract that establishes a federal state loses its nature in the same time when it was made. From that moment

on, all policy decisions relating to the federal state are made by the bodies that belong to the community, and not the states that participated in the establishment of a new community.

The difference between federal contracts and federal pact can be clearly seen in Schmitt's theory of the constitution. Federal contract represents a relationship whose purpose and duration can be accurately determined. Once established, modern constitutions stems from the people's will. International agreements, on the other hand, do not rely on people's will, but the will of the member states. This means that member states retain the option to terminate the contract. By signing the contract the states are not giving up on their sovereignty, but only a part of its political existence.

Already at the first insight into the empirical reality of the process of European integration, it becomes clear that there cannot be talk about the classic federal constitution, which is seen as a political decision of the people. The political unity of the European Union comes from contracts. Europe's founding treaties represent a process of continuous harmonization of member states. In the current process of European integration there was no decision in terms of the revolutionary act of the European constituent power, the decision that would terminate the past practice of the process of changing the European contracts.

The existence of a constitution is related to the existence of the state. The debate on whether the EU is a classic country or an international organization with (con) federal organization has been present for a long time (for more see: Beširević, 2011:53-78).

Given that the European Union (still) has no constitution, or rather that there is no codified constitution (for details see Beširević, 2013:27-61), which would have clearly defined responsibilities and authorities, the question is who is the guardian of federal contracts? How to overcome the conflicted situation in which each party interprets differently their contractual obligations? Who can make a decision in cases where each party of a dispute considers that their perception is the correct one? The dispute may then be solved only by the court which is higher than the courts of the Member States, a kind of Supreme Court. Decisions of the European Court, in the period between the sixties and seventies, established the principles of governing relations between the EU laws and the rights of member states such as those in the classical case of the federal states. Three principles have played a key role: the principle of direct effect, the principle of supremacy and the principle of implied authority.

The principle of immediacy dictates that the norms of the European Union must be treated as domestic law. Every citizen can be invoked before national courts on the provisions of the contract, as well as the secondary

right of the EU. The principle of immediacy has become a fundamental principle of the Community. This principle has enabled citizens to take action against their countries in the event of non-compliance with the provisions of the contract. In this way, it is made clear that the European Community is not an international organization, who are sovereign guardians of the member states.

The difference between traditional international treaties and federal constitutions is in the fact that treaties established by international organizations do not have the status of higher law compared to national ones. In the famous case of the "Costa v ENEL" (Costa vs. Enel), the Court of Justice of the European Communities stated that the right of the Community of a higher rank in relation to the national law. There is actually a principle of superiority there. In this case, the owner and beneficiary of shares of the nationalized electricity company ENEL, has questioned the legal validity of the Italian law on nationalization, in which he argued that Italian law is contrary to the obligations imposed by the Treaty on establishing the EEZ. The Court of Justice has explained its decision as follows: "By creating a Community of unlimited duration, which has its own institutions, its own personality ... and, more particularly, real powers stemming from the limitation of sovereignty and the transfer of powers from the States to the Community, the member states have limited their sovereign rights ... and thus created a legal structure that binds them, and their citizens. "The Court of Justice of the EZ, on the basis of these decisions found that the norms deriving from the Treaty on establishing have a supremacy over national laws. This interpretation of the law is characteristic of federal states, not international organizations. The judges of the European Court of Justice on the basis of the principle of immediacy and principles of supremacy, in fact, turned contractual norms in constitutional ones that have an advantage in relation to legal and constitutional norms of the member states.

Based on a teleological interpretation of the Court of Justice EZ has established a third key federal constitutional principle, the principle of implied powers. Court on the basis of implied powers established that the Community in addition to internal authority, must necessarily have powers related to foreign jurisdiction which are necessary for the realization of the objectives of the Community. The Court has established two principles-the principle of exclusivity and the principle of pre-emption rights, as a complement to the principle of implied authority. According to the principle of exclusivity, in certain areas of the country, the states shall not be entitled to make any unilateral measures. The principle of pre-emption rights means that the provisions adopted by the Community in a particular area excludes

the autonomous activity of the member states in that area (Kovačević, 2013:183-197).

What we consider key is in the way of creating new states. While with international organizations there is the possibility of forming new states from existing ones that make up the international organization, with the federal arranged government it is different. In fact, international law distinguishes between two modes of country formation: the originary (when the state occurs in an area that was not under anyone's authority - terra nullius) and derivative (when caused by a change in the territories of the existing states). Since the areas that could be called terra nullius practically do not exist anymore, it seems that in the future the possible emergence of new states was possible only in a derivative way (Dimitrijević et al, 2007:74).

Changing the boundaries of the federal state is possible in three ways. The first way is to join federal units to a federal state. Second, that within the existing federation comes to a separation of previous federal units in new, or vice versa, by merging. The third way, which may reduce the number of federal units withdrawing from the composition of the federal state.

The first group includes those countries whose constitutions provide the possibility of expanding the federal state. These include: USA, Canada, Australia, Mexico, Venezuela, Argentina, West Germany, and the former Soviet Union whose Constitution of 1936 recognized this possibility. Of all the above countries only the United States, Canada and the USSR received a federal unit in its composition. The number of received federal units was the largest in the United States, from the original 13 from 1787 to the present 50 states of the federal states. In Canada and the USSR, the number is much lower. Canada has, from the original four provinces in 1867, expanded to the current ten federal units. In the USSR in 1940 was joined five new federal Republics that joined the Federation, which has previously been eleven federal units.

In the second case, there is no expansion of the federal state, but within its borders changes are made. The conditions of certain constitutions of some federations allow for any change in the structure of the federation, by the education of new federal units or abolishing the existing ones under the condition that they vote for such a decision, both as a federal parliament, and interested members of the federal state. Thus, the United States Constitution (Article IV, section 3) "no new state can be established, nor declared on the legal area of any other state, nor can any state be formed by connecting two or more states or parts of states, without the consent of the legislature of interested states and Congress. "But this rule has exceptions. For example, the Constitution of Mexico (Article 73, III) predict that if a two-thirds majority of the state concerned does not reach a decision, it will still take effect if voted for

by two-thirds of other federal units. The highest powers, on this issue, are given by the constitution to the federal parliament in India, in which it only has jurisdiction to decide on amending the boundaries of the member states.

The third way of changing the structure of the federal state in the resignation of the member states, or the right to secession. The right of secession is one of the issues in legal and political theory. Namely, the supporters of the notion that sovereignty belongs to the federal units is considered that member states have the right to secede, because if they willingly entered into a federation, also have the right to withdraw from it. On the other hand, the authors who believe that sovereignty belongs to the federal state, there is no right to secede. They base their understanding on the view that the member states by joining the federal state transferred their sovereignty to the federation. The only two states whose constitutions recognized the right to secede were Czechoslovakia and the Soviet Union, where member states used that right (Jovičić, 2006:78-84).

## ***CONFEDERATION***

Confederation is a union of states which form the member states connected in an alliance by the international agreement. In constitutional theory Confederation represents a "transitional" form of the state union, which over time decomposed into a number of independent, sovereign states, or form a federal state (eg USA, Switzerland, Germany) (Pajvančić, 2003, p. 316). The difference between federation and confederation is obvious when it comes to complex state sovereignty because the "federation is a sovereign state, consisting of states, therefore a particular state. Confederation, on the contrary is not a state, but rather a community of states. In other words, confederation is not sovereign. Sovereign are its members" (Milosavljević, Popović, 2009:312).

Unlike the Federation, which is the main constituent act of the constitution, in the Confederation's constitutive act is the confederal pact-contract. Member states of confederation have the right of nullify, i.e. the right not to accept the decision of the confederation with which they disagree on, and the right to secession, ie. right to withdraw from the confederation (Jovičić, 2006:25).

Confederacy is characterized by joint decision-making bodies on matters entrusted to the confederation. When deciding you need cumulatively meet two conditions. The first condition relates to the decision-making bodies of the confederation, and the other on the



recognition of decisions by member states of the confederation. In fact, to make a decision, the consent of representatives of all member states of the confederacy is required. In addition, such a decision does not automatically oblige the member states, but only after they their bodies accept through ratification or recognition (Pajvančić, 2003:317). Such a decision would only then be binding for the citizens of the member states of the confederacy. On the other hand, the federal states are "characterized by the fact that the decisions of federal bodies, adopted in the framework of their powers, general requirements for citizens of the federation, without the need for the bodies of the federal units to determine them as obligatory" (Jovičić, 2006:26).

In a confederation, there are usually only one body, known in theory as *dieta* consisting of delegates of the member states of the confederacy. The Confederation does not have a judicial authority, as well as the executive in the form of government, but perhaps certain sectors, mainly for foreign affairs and defense. There is one obvious difference between confederation and federation, and that is that the confederate state there has no citizenship of confederation, only the citizenship of the members of the confederation. On the contrary, in addition to the citizenship of the Federation Federation there is a citizenship of federal units (Jovičić, 2006:26-27).

The claim that the European Union has the outline of a confederal state is not entirely inaccurate. This understanding of the legal nature of the European Union in particular has arguments to the period before the adoption of the Single European Act and the Maastricht Treaty. Nowadays, in addition to some of formal similarity to the confederate form, we cannot indicate a significant similarity. It seems that the European Union is in the process of federalization modeled on the older brother - USA. United States of America, which are considered as the first country in which he established a federal system of a new type, the first country in which he introduced the modern form of the State has introduced, were at the beginning of their creation and according to the character and content, and the form and name of that community- confederation. They have therefore at the beginning of their independent history of post-independence went through establishing a classical state independent units, the former colonies. The reasons which led to their political leaders to transform this form are important for understanding the conditions under which modern federalism was born. Their experience with confederalism itself was a criticism of that form. The Constitution of the confederation represented a compromise between different interests, concepts and desires. In it has come to the fore a known fear of a strong central state authorities and shying away from executive authorities, thus ensuring that all the attributes of sovereignty, and

their operation is reserved for member states. Many have, before entering into force of the provisions of confederation, pointed out the shortcomings of this system, but only practical experience and demonstrating these shortcomings of the confederation created a more favorable environment for the execution of changes, on its way to the federal system.

Unequivocally, the European Union rejected the international organization status as an outdated form. Before we could say, if we tried to determine the exact legal nature, that the European Union is on the scale of which outweighs the side of the federation, and damages the confederation.

### ***CHARACTERISTICS OF A SINGLE (COMMON) EU MARKET***

By the Treaty establishing the European Economic Community, before the Commonwealth are set numerous, primarily economic objectives. Introductory provisions of Article 2 of the Treaty, the economic objectives of the Community are in general defined as the establishment of a common market and gradual harmonization of economic policies of the member states.

Establishment and operation of common and internal market depends on the degree of realization of the four freedoms and competition rules, i.e. the success in removing bans and barriers in mutual trade between member states. Fundamental freedoms are the way that the whole EU is allowed liberalization i.e. free competition. Fundamental freedoms of the EU are:

1. Free movement of goods (merchandise)

Freedom of movement of goods includes the elimination of customs duties and charges with equivalent effect, the adoption of a common customs tariff to third countries, prohibition of quantitative restrictions and measures with equivalent effect, and the reform of state-owned monopolies. The aim of these measures is to integrate markets of member states and ensuring the free movement of goods, similar to that within the territory of a state. Control of the goods exceeding the internal borders of the member states ceased on January 1st 1993.

2. Free movement of people

All citizens of EU member states on the basis of a valid passport or identity card can enter another country. Under no circumstances can they seek entry or exit visa. Article 17 of the Agreement of the

Community, every person holding the nationality of a member state has the citizenship of the EU.

### 3. Free movement of capital

In accordance with the Agreement, all restrictions on the movement of capital (investment) are prohibited, as well as payment of goods and services among member countries.

### 4. Free movement of services

This freedom allows foreign companies engaged in providing services, and comes from a EU member state, to be treated the same as domestic companies.

Positive characteristics of the formation of a common single market are reflected, among other things, in the following :

1. Access to the common market, which enables them to sell their own products in a wider area and thus, increase their own profit, as seen from the perspective of individual companies;
2. Greater competitiveness expressed by strengthening market mechanisms that lead to the achievement of higher quality products, expanding product range and lowering the price. Benefits of these changes in production structure are enjoyed by customers as end consumers;
3. The concept of "trade creation", which means that when you create a customs union, which occurs by integration, domestic products with high production costs are replaced with imports of these products from partner countries where costs are lower.
4. Incentives for innovation and technological advancement that provides a broader market, as a requirement for the integration to be more competitive with the rest of the world, and so on.

## ***FREE MOVEMENT OF LABOUR***

As for the four freedoms (we will now only be interested in freedom of movement of labor) The European Union has assumed the right of member states to decide on these issues. Freedom of trade (movement) of the workforce means employment cases, performing activities, the establishment of companies and subsidiaries.

Freedom of employment is applicable to workers, ie. to persons employed by someone else. The worker is in the opinion of the Court of Justice of the European Union a person who performs any work dependently, i.e. person who acts for another, on their orders, perform some work, and in return receives a fee. There are certain norms relating to foreigners that the state must respect. It

may happen that the position of foreign citizens is better than the domestic citizens, because the regulations at EU level relating to foreign citizens do not explicitly oblige the member states to have the same regulations and the application to its own citizens. However, the free movement of workers does not apply to cases of employment in public administration. This freedom is not guaranteed if such a possibility is excluded by certain state regulations. However, member states have the right to prescribe what constitutes work in public administration, but this term is interpreted in accordance with the European Union. Professions such as nurse, doctor, specialist, teacher, lecturer of foreign languages, etc., are not considered matters of public administration. In current practice, the Court of Justice pleaded that jobs, such as police officer, a professional soldier, judge, prosecutor, and the like, are jobs of the public administration.

From the above it can be concluded that freedom of employment consists of three elements: first, the prohibition of prescribing various norms on domestic and foreign citizens, and second, the right to freedom of applying for a job, and third, the right to stay on the territory of the state upon completion of the work. However, there is a possibility of restricting freedom of employment for important reasons such as public safety, public order or the protection of health (Stefanović, 2011:203-206). Measures affecting the freedom of movement and residence must be based on the personal conduct of the individual concerned, and such behavior must constitute a sufficiently serious and real threat to the fundamental interests of the state.

First, it should be noted that the Treaty of Rome itself excludes persons employed in public administration from the principle of free movement, hence the principle of equal / national treatment (Article 48/4 of the EC Treaty, now 39/4), and a similar possibility of restraint i.e. discrimination of citizens of other member state citizens in relation to its own citizens, is intended for persons who establish their own business and perform services, if the activities they perform are at least occasionally associated with the exercise of public authority.

The economic effects of free movement of workers within the European Union are undisputed. In this way, economic growth is stimulated by enabling people to travel, shop and work across borders and allowing companies to seek workers from a large selection of qualified staff. Labor mobility between member states contributes to solving the problem of mismatch between skills and jobs in the context of significant imbalances in labor markets in the EU and an aging population.

However, on the other hand, the question is determining the effects of migration on the labor market. Although the public believes that immigrants reduce employment opportunities for local workers and increase

unemployment, empirical research does not confirm this. For example, research carried out in Germany, Austria and France do not confirm the presence of a significant impact of immigration on unemployment and employment opportunities for local workers. On the contrary, some estimates suggest that the influx of immigrants from the new member states in the period from 2004 to 2007 caused a rise in the employment rate of the EU-15 for 0.01%. Also, a negligible impact of immigrants on the rise in the unemployment rate was established of the EU-15 for only 0.04%, whereas in the long term it the presence of even a small impact of immigrants on the unemployment rate of 0.01% is expected (Peković, 2011). The positive effects of migration are reflected in the fact that immigrants often have that combination of skills by which differ greatly from those of domestic workers. In France and Germany, for example, immigrants often increase the productivity of domestic workers working in areas such as business management, finance, sales and marketing, and filling positions that domestic workers would not want to accept it.

However, the fear among European Union member countries of immigrants, despite all of the above exist. It was Germany and Austria the first to declare for the application of transitional measures that immigrants from Central and Eastern Europe restrict access to the labor market of the old member states and to the full transition period of seven years. For unrestricted access of immigrants from Central and Eastern European labor market, only United Kingdom, Ireland and Sweden has declared, while the UK and Ireland restrict the use of welfare benefits to immigrants.

Finally, we should not forget that the global economic crisis has not spared the member states of the European Union. It did result in the reduction of employment and increase in unemployment in nearly all countries of the European Union. Therefore, the priorities of the EU are focused on growth and employment, and it was confirmed that knowledge, innovation and the optimization of human capital are key to development. Accordingly, three priority directions are defined:

1. strong support for the development of knowledge and innovation;
2. the creation of better conditions for investment and working in Europe and
3. more work, that is, strong social cohesion.

Accordingly, one of the main objectives of the Europe 2020 strategy is that the employment rate of the population between 20 and 64 years of age is increased from the current 69% to at least 75% by 2020.

## ***CONCLUSION***

The European Union as an incomplete political union with the supporters of two different concepts, whose views on the final structures of community are so different, having the dilemma in which direction the process of a legal nature will go. However, the example of the United States, Germany, Switzerland can almost with certainty predict the final shape of the European Union. It seems that, as in these countries, the confederal system was only a transitional form that has experienced defeat, the victory of European Federalists is not far away. The final victory, "United States of Europe" should bring the long-awaited European Union Constitution, although many authors have noted that the EU already has its own, for now, hidden constitution. On the other hand, in parallel with the question of its legal nature, the question remains what will happen with the common market because it is known that it presents the key to the overall success of the European Union. Nowadays, it is noticeable that the European market is not in the foreground, and the great attention is paid to the issues of foreign and security policy. Also in the European Union for many years, there are two trends present "integration fatigue", or enlargement fatigue, which reduces appetite for the single market, and more recently, "market fatigue" or "tiredness of the market", which represents the lack of trust in the effective role of the market (Milović, 2010). Also, the last major expansion of the EU has led to fear among the old member states from a possible mass influx of cheap labor from Central and Eastern Europe, which will "take jobs" from domestic workers. This is because the largest expansion in the history of the EU brought a number of challenges in the application of the principle of free movement and work arising from the significant differences in the level of economic development and labor market conditions between the old and new members. Therefore, the free movement of labor has become one of the most sensitive political issues at a national level, because of the possibility of rising unemployment and increasing competing wage in countries that joined (Milović, 2010).

However, despite all the challenges facing the EU, even when it comes to common market, for now, positive economic effects for the member states are dominating. What gives rise to these economic effects is the free flow of goods, labor and capital within the EU, as well as immeasurably greater degree of political and legal security that the membership has. Most authors agree that economic integration is a positive step, which is reflected in increased levels of well-being, freedom of choice of citizens, greater access to the single market, increased product quality and services, labor mobility, increased amount of foreign investment, higher employment and so on.

## ***REFERENCES***

- [1] Beširević V., (2011), Who's afraid of a federal Europe? Critical review of the "Lisbon decision," the Federal Constitutional Court of Germany g, legal bills, II / 1, Faculty of Law, Union University, 53-78.
- [2] Beširević, V., (2013), The Constitution without demos: Why the European Union (still) has a constitution, legal bills IV / 1, Law School of Union University, 27-61.
- [3] V. Dimitrijević, Račić O., Djerić V. Papić, T., Petrović V., Obradović S., (2007), Foundations of public international law, the Belgrade Centre for Human Rights, Belgrade.
- [4] V. Dimitrijević, Račić O., (2011), International Organization, Faculty of Law, University Union: Official Gazette, Belgrade.
- [5] Jovičić M., (2006), Contemporary Federalism, Official Gazette: Faculty of Law, Belgrade.
- [6] Kovacević, B., (2013), Hidden federalism, federalist experience in the process of European integration, Albatros plus, Belgrade.
- [7] Lovo F., (1999), Large modern democracy, Publishing house Zoran Stojanović, Novi Sad.
- [8] Milosavljević, B., Popović D.M., (2009), Constitutional Law, Faculty of Law, Union University, Belgrade.
- [9] Milosavljević, B. (2011), Introduction to the Theory of Constitutional Rights, Faculty of Law, Union University, Belgrade.
- [10] Milović, N., (2012), Enlarged Europe and Montenegro - Economic changes and risks, Montenegrin Journal of Economics N0 12, Vol. VI
- [10] Popović Dj., (1933), about federalism, the National Printing House, Belgrade.
- [11] Pajvančić M., (2003), Constitutional Law: Constitutional Institutions, Faculty of Law, Novi Sad. (12) Peković, D. (2011) The effects of migration on the labor market immigration countries: Example after EU enlargement in 2004, Population, no. 2, p.52-71.
- [12] Stefanović, Z., (2011), European Union Law, Faculty of Law, Union University, Belgrade.

## ***A COMPARATIVE ANALYSIS OF MACROECONOMIC FORECASTS ACCURACY IN SPAIN AND ROMANIA***

*Mihaela Simionescu, PhD<sup>17</sup>*

*Elena Jovicic<sup>18</sup>*

### ***ABSTRACT***

*In this study a comparative analysis of the forecasts accuracy for Spain (developed country) and Romania (developing country) was developed for the crisis period (2009-2013). The providers are national forecasters: Bank of Spain and FUNCAS (Spanish Savings Banks Foundation) for Spain and Center of Macroeconomic Forecasting that uses Dobrescu model and National Commission for Prognosis (NCP) for Romania. Only for the unemployment rate the Spanish institutes provided more accurate forecasts, for the rest of the variables (inflation rate, private consumption and GDP growth) the Romanian institutes giving more accurate predictions. However, the results are contradictory for the accuracy assessment in each country, the UI Theil's statistic and the accuracy tests (Diebold-Mariano test and Wilcoxon's signed rank test) indicating different hierarchies. All in all, for inflation rate, unemployment rate and GDP growth in Romania, NCP provided more accurate forecasts. In Spain, FUNCAS offered better forecasts for GDP growth and private consumption during 2009-2013.*

***Key words:*** *Directional Accuracy, Forecasts, Predictions, Diebold-Mariano Test*

***JEL Classification:*** *C52, C53, E27, E37*

***UDK:*** *338.12.017:330.43(460) 338.12.017:330.43(498)*

---

<sup>17</sup>Mihaela Simionescu, Institute For Economic Forecasting Of The Romanian Academy, Bucharest, Romania, mihaela\_mb1@yahoo.com

<sup>18</sup>Elena Jovicic, Institute of Economic Sciences, Belgrade, Serbia, Czech Republic, elena.baranenko@ien.bg.ac.rs



## ***INTRODUCTION***

The main objective of this research is to make a comparative analysis of the accuracy of forecasts in two countries: Spain and Romania. The predictions are provided by the national institutes from the two countries: Centre for Macroeconomic Forecasting that uses Dobrescu model and National Commission for Prognosis. The providers from Spain are the Central Bank and the FUNCAS (Spanish Savings Banks Foundation). The macroeconomic variables that were selected: GDP growth, inflation rate, private consumption, and unemployment rate. Romania and Spain were chosen because we want to assess the degree in a developing country and in a well developed country and to analyze better the effects of economic crisis on the forecasting process of these two types of countries.

In Romania and Spain there are very few studies that treated the problem of forecasts accuracy. The government, the National Bank and other institutions are directly interested by the use of the most accurate forecast.

There are many international organizations that provide their economic predictions for various countries. The comparisons between forecasts consider these institutions anticipations (OECD, IMF, World Bank, European Commission, SPF etc.) and those of other international organizations, the accuracy assessment being made. The forecast errors for these institutions are in general large and non-systematic. Three international institutions (European Commission- EC, IMF and OECD) made predictions using macroeconomic models, but these forecasts failed to anticipate the downturn from 2007. Other providers of forecasts are statistical institutes, ministries of finance, and private companies like banks or insurance companies.

Literature usually makes comparisons between OECD and IMF forecasts and Consensus Economics ones or private predictions. The accuracy is evaluated according to different criteria: forecasts errors and associated accuracy measures, comparisons with naïve predictions that is based on random walk, directional accuracy evaluation.

Glück and Schleicher (2005) compared the forecasts performance of IMF with that of OECD, evaluating the errors between G7 countries. Krkoska and Teksoz (2005) compared the changes in the EBRD (European Bank for Reconstruction and Development) predictions for transition countries with those made by other institutions (commercial and academic forecasters). They showed that the EBRD made on average higher changes in its earlier forecasts. Later, Krkoska and Teksoz (2007) showed for 25 transition countries that the EBRD predictions during 1994-2004 improve in accuracy with the progress in transition. These predictions accuracy for late GDP is better than of other institutions with around 0.4 percentage points. The Russian crisis seems to be the only structural break.

The European Commission's forecasts analyzed on the horizon from 1998 to 2005 are comparable in terms of accuracy with those of Consensus, IMF and OECD for variables like inflation rate, unemployment rate, GDP, total investment,

general government balance and current account balance as Melander, Sismanidis, and Grenouilleau (2007) stated.

Abreu (2011) assessed the forecasts accuracy for predictions made by international organizations like IMF, European Commission and OECD and by private institutions (Consensus Economics and The Economist). The author made also the assessment of directional accuracy. Forecasters from Netherlands used the macroeconomic model of the Netherlands Bureau for Economic Policy Analysis (CPB) to make predictions that were compared to experts' anticipations. The results over the period 1997-2008 indicated that CPB model provided superior forecasts in terms of accuracy, the results being presented by Franses, Kranendonk and Lanser (2011).

The forecasts accuracy of the predictions provided by European Commission before and during the recent economic crisis was assessed by González Cabanillas and Terzi (2012). They compared these forecasts with those provided by Consensus Economics, IMF and OECD. The Commission's forecasts errors have increased because of the low accuracy from 2009 for variables as GDP, inflation rate, government budget balance, and investment.

The forecasts' accuracy for inflation and real GDP growth rate in case of the Germany predictions made by OECD and 3 professional forecasters from Germany was analyzed by Heilemann and Stekler (2013). In the last 10 years, the accuracy forecasts for Germany's inflation and GDP did not improved too much.

The strategic behavior of the private forecasters that placed their expectations away from OECD's and IMF's ones, was assessed by Frenkel, Rülke and Zimmermann (2013), this duration of this event being 3 months.

Greenbook inflation forecasts are more accurate than those of the private forecasts, Liu and Smith (2014) making comparisons between the predictions provided by Survey of Professional Forecasters, Greenbook and other private forecasters.

In Romania, excepting the studies of Simionescu (2013), there were not any preoccupations for assessing or comparing the macroeconomic forecasts accuracy. In Romania, the most accurate predictions for the unemployment rate on the forecasting horizon 2001-2012 were provided by the Institute for Economic Forecasting (IEF) that is followed by European Commission and National Commission for Prognosis (NCP).

## FORECASTS ACCURACY ASSESSMENT

Let us consider the actual values of a variable  $\{y_t\}, t = 1, 2, \dots, T$  and two predictions for it  $\{\hat{y}_{t1}\}, t = 1, 2, \dots, T$  and  $\{\hat{y}_{t2}\}, t = 1, 2, \dots, T$ . The prediction errors are computed as:  $e_{it} = \hat{y}_{it} - y_t, i=1,2$ . The loss function in this case is calculated as:

$$g(y_t, \hat{y}_{it}) = g(\hat{y}_{it} - y_t) = g(e_{it}) \quad (1)$$

In most cases this function is a square-error loss or an absolute error loss function.

Two predictions being given, the loss differential is:

$$d_t = g(e_{1t}) - g(e_{2t}) \quad (2)$$

The two predictions have the same degree of accuracy if the expected value of loss differential is 0.

For DM the null assumption of equal accuracy checks if the expected value of differential loss is zero:  $E(d_t) = 0$ . The covariance stationary been given, the distribution of differential average follows a normal distribution. The DM statistic, according to Diebold and Mariano (2012), under null hypothesis is:

$$S_1 = \frac{\bar{d}}{\sqrt{\hat{V}(\bar{d})}} \rightarrow N(0,1) \quad (3)$$

$$\bar{d} = \frac{\sum_{t=1}^n d_t}{n}$$

$$\hat{V}(\bar{d}) = \frac{\hat{y}_0 + 2 \sum_{k=1}^{n-1} \hat{y}_k}{n}$$

$$\hat{y}_k = \frac{\sum_{t=k+1}^n (d_t - \bar{d})(d_{t-k} - \bar{d})}{n}$$

Instead of estimating the variance we can study the prediction error auto-covariances. This test does not suppose restrictions like forecast errors with normal distribution, independent and contemporaneously uncorrelated predictions errors.

Wilcoxon's signed rank test is based on the sum of the ranks for the absolute values of positive prediction differentials:

$$WSR = \sum I(d_t > 0) \text{rank}(|d_t|)$$

$$I(d_t > 0) = 1 \text{ if } (d_t > 0)$$

For T going to infinity, under the null assumption, the Wilcoxon's signed rank test has the following statistic:

$$\frac{SR - T(T+1)/4}{\sqrt{\frac{T(T+1)2T+1}{24}}} \rightarrow N(0,1) \quad (4)$$

The U1 Theil's statistic is used for making comparisons between predictions based on different methods or made for different countries. It considers the positive and the negative changes in a variable:

$$U_1 = \frac{\sqrt{\sum_{t=1}^n (a_t - p_t)^2}}{\sqrt{\sum_{t=1}^n a_t^2 + \sum_{t=1}^n p_t^2}} \quad (5)$$

a- actual values of a variable

p- predicted values of a variable

t- time index

e- forecast error (e=a-p)

n- length of forecasts horizon

There are other accuracy measures like mean absolute scaled errors, but this reduces to our U1 coefficient. The U2 statistic of Theil is used to make the comparison with the naïve forecasts.

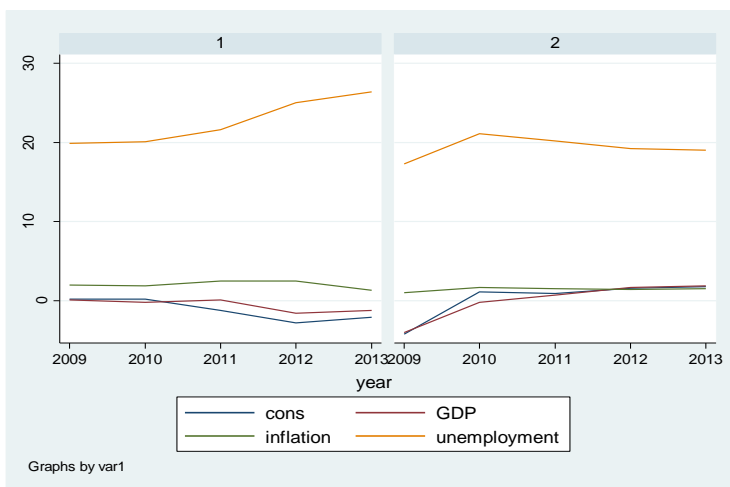
## ***THE EVALUATION OF FORECASTS ACCURACY IN ROMANIA AND SPAIN***

A comparison between the forecasts made for two countries (Spain and Romania) and between the forecasters of each country is made. For Romania we used the predictions based on Dobrescu model and the forecasts of National Commission of Prognosis. For Spain the forecasts are made by the Central Bank and by FUNCAS (Spanish Savings Banks Foundation). The latter is a private organization with no profit that has as main purpose the benefit of the entire Spanish society. The FUNCAS forecasts contain average annual predictions for the current and the following year for 35 variables and aggregates.

The first version of the Dobrescu model used for the Romanian economy appeared in 1996, the predictions being made from 1997. The Center for Macroeconomic Forecasting uses Dobrescu model, the last version of it being released in 2012.

The National Commission for Prognosis makes short-run, medium-term and long-run forecasts regarding the social and economic development of Romania. The predictions are in correlation with the provisions of the Government Program, with national, sectoral and regional strategies, with the national and world tendencies.

The horizon covers the actual economic crisis (2009-2013), when from empirical studies we know that the degree of accuracy decreases. The accuracy of macroeconomic forecasts for Spain and Romania is evaluated for several variables: inflation rate, unemployment rate, GDP growth and private consumption.

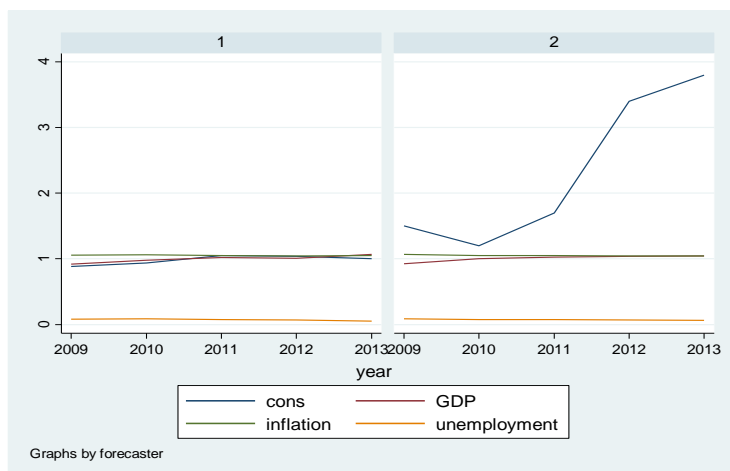


- 1- Bank of Spain
- 2- FUNCAS

Figure 1: The predictions of macroeconomic variables in Spain

Source: author's graph

As we can observe from this graph the Bank of Spain predicts a tendency of increase for unemployment rate in the last years, while FUNCAS considers that the unemployment might decrease even if it is a crisis period.



- 1. Dobrescu model
- 2. NCP

Figure 2: The predictions of macroeconomic variables in Romania

Source: author's graph

For private consumption starting with 2011 the NCP anticipated an increase, while Dobrescu model predicted low changes in population's consumption. Very low modifications are also observed for unemployment rate predicted by both forecasters, the differences between predictions being insignificant.

For making comparisons the U Theil's coefficient is computed in order to see which country predicted better its indicators and which institution in each country provided more accurate forecasts.

*Table 1: The values of U1 Theil's statistic for predictions provided for Spain and Romania*

Variable	Romania		Spain	
	Dobrescu model	NCP	Bank of Spain	FUNCAS
Inflation rate	0,009	0,007	0,268	0,271
GDP growth	0,084	0,081	0,818	0,188
Private consumption	0,026	0,489	0,751	0,698
Unemployment rate	0,099	0,095	0,086	0,024

*Source: author's computations*

Only for the unemployment rate the forecasts for Spain are more accurate than those for Romania, as U1 Theil's statistic shows. For the rest of the indicators, the projections for Romania are better. According to U1 coefficient, NCP predicted better in Romania compared to Dobrescu model the following variables, even if the differences are not large: inflation rate, GDP growth and unemployment rate. In Spain FUNCAS predicted with a higher accuracy all the variables excepting the inflation rate.

Moreover, the Diebold-Mariano and Wilcoxon's signed rank tests are applied for checking the differences in accuracy between the forecasts in each country. The results of Diebold-Mariano tests in STATA are presented in Appendix 1 and Appendix 2 for both countries.

*Table 2: The results of forecasts accuracy tests during the economic crisis in Romania (horizon: 2009-2013)*

Test	Statistic value	Decision-more accurate predictions provided by:
<b>Inflation rate</b>		
DM test	$S(1) = .0118$ p-value = 0.9906	NCP
Wilcon's signed rank test	$z = 1.929$ Prob>  z  = 0.0537	No differences
<b>Private consumption</b>		
DM test	$S(1) = -1.641$ p-value = 0.1009	Dobrescu model
Wilcon's signed rank test	$z = -2.495$ Prob>  z  = 0.0126	Dobrescu model
<b>GDP growth</b>		
DM test	$S(1) = .3721$ p-value = 0.7098	NCP
Wilcon's signed rank test	$z = -0.378$ Prob>  z  = 0.7055	No differences
<b>Unemployment rate</b>		
DM test	$S(1) = 1.051$ p-value = 0.2933	NCP
Wilcon's signed rank test	$z = 0.605$ Prob>  z  = 0.5449	No differences

*Source: author's computations*

For private consumption predictions both accuracy tests indicated that Dobrescu model provided more accurate forecasts than NCP. Wilcoxon's signed rank test shows that there are not differences between unemployment rate, inflation rate and GDP growth predictions in Romania. For these variables, according to DM test, NCP provided more accurate forecasts.

*Table 3: The results of forecasts accuracy tests during the economic crisis in Spain (horizon: 2009-2013)*

Test	Statistic value	Decision-more accurate predictions provided by:
<b>Inflation rate</b>		
DM test	$S(1) = 1.40e+08$ p-value = 0.0000	Bank of Spain
Wilcon's signed rank test	$z = 1.786$ Prob > $ z  = 0.0740$	No differences
<b>Private consumption</b>		
DM test	$S(1) = 1021298$ p-value = 0.0000	FUNCAS
Wilcon's signed rank test	$z = -1.051$ Prob > $ z  = 0.2933$	No differences
<b>GDP growth</b>		
DM test	$S(1) = 2.036$ p-value = 0.0417	FUNCAS
Wilcon's signed rank test	$z = -1.571$ Prob > $ z  = 0.1161$	No differences
<b>Unemployment rate</b>		
DM test	$S(1) = 1.369$ p-value = 0.1711	No differences
Wilcon's signed rank test	$z = 1.776$ Prob > $ z  = 0.0758$	No differences

*Source: author's computations*

According to Wilcoxon's test there are not significant differences between the forecasts of the two Spanish institutions. GDP growth and private consumption DM test indicated that FUNCAS's predictions are more accurate. For the unemployment rate predictions DM test did not detected differences in forecasts.

The results given by U coefficient and accuracy tests are contradictory. Therefore, there is necessary to make a judgment in order to determine the best provider. It is clearly that in Romania the forecasters predicted better all the indicators excepting the unemployment rate. In Spain FUNCAS forecasted better than the Bank of Spain all the variables excepting the inflation rate on the horizon 2009-2013. Excepting private consumption, NCP predicted better than Dobrescu model the other macroeconomic variables.



## ***CONCLUSIONS***

In this study we assessed the macroeconomic forecasts accuracy in two types of countries: a well developed one (Spain) and a developing country in economic transition (Romania). Surprisingly, the Romanian forecasters provided better predictions for private consumption, GDP growth and inflation rate. Only for unemployment rate the Spanish experts from FUNCAS and Bank of Spain provided more accurate forecasts during the economic crisis (2009-2013).

A future research on this topic could include the assessment of directional accuracy based on Pesaran- Timmermann test. Moreover, other dimensions of forecasts performance like bias and efficiency could be analyzed. Some strategies of improving the forecasts accuracy could be used. It is interesting to check if the combined predictions of the national forecasters could improve the degree of accuracy.

## ***APPENDICES***

### ***APPENDIX 1***

#### **Diebold-Mariano tests for forecasts in Romania**

##### **Private consumption**

Diebold-Mariano forecast comparison test for actual : cons  
 Competing forecasts: cons1 versus cons2  
 Criterion: MSE over 5 observations  
 Maxlag = 1 Kernel : uniform

Series	MSE
cons1	.002585
cons2	2.957
Difference	-2.954

By this criterion, cons1 is the better forecast

H0: Forecast accuracy is equal.

S(1) = -1.481 p-value = 0.1387

## GDP growth

Diebold-Mariano forecast comparison test for actual : GDP

Competing forecasts: GDP1 versus GDP2

Criterion: MSE over 5 observations

Maxlag = 1 Kernel : uniform

Series	MSE
GDP1	.0317
GDP2	.02954
Difference	.002158

By this criterion, GDP2 is the better forecast

H0: Forecast accuracy is equal.

S(1) = 1.881 p-value = 0.0600

## Inflation rate

Diebold-Mariano forecast comparison test for actual : inflation

Competing forecasts: inflation1 versus inflation2

Criterion: MSE over 5 observations

Maxlag = 1 Kernel : uniform

Series	MSE
inflation1	.0003761
inflation2	.0002215
Difference	.0001546

By this criterion, inflation2 is the better forecast

H0: Forecast accuracy is equal.

S(1) = 1.679 p-value = 0.0931

## Unemployment rate

Diebold-Mariano forecast comparison test for actual : unemployment

Competing forecasts: unemployment1 versus unemployment2

Criterion: MSE over 5 observations

Maxlag = 2 Kernel : uniform

Series	MSE
unemployment1	.0001831
unemployment2	.0001699
Difference	.0000133

By this criterion, unemployment2 is the better forecast

H0: Forecast accuracy is equal.

S(1) = 1.855 p-value = 0.0636

## APPENDIX 2

### Diebold-Mariano tests for forecasts in Spain

#### Inflation rate

Diebold-Mariano forecast comparison test for actual : inflation

Competing forecasts: inflation1 versus inflation2

Criterion: MSE over 5 observations

Maxlag = 5 chosen by Schwert criterion Kernel : uniform

Series	MSE
inflation1	1.212
inflation2	.882
Difference	.33

By this criterion, inflation2 is the better forecast

H0: Forecast accuracy is equal.

S(1) = 1.40e+08 p-value = 0.0000

### Private consumption

Diebold-Mariano forecast comparison test for actual : cons

Competing forecasts: cons1 versus cons2

Criterion: MSE over 5 observations

Maxlag = 5 chosen by Schwert criterion Kernel : uniform

Series	MSE
cons1	37.6
cons2	37.44
Difference	.154

By this criterion, cons2 is the better forecast

H0: Forecast accuracy is equal.

S(1) = 1021298 p-value = 0.0000

### GDP growth

Diebold-Mariano forecast comparison test for actual : GDP

Competing forecasts: GDP1 versus GDP2

Criterion: MSE over 5 observations

Maxlag = 1 Kernel : uniform

Series	MSE
GDP1	4.742
GDP2	.54
Difference	4.202

By this criterion, GDP2 is the better forecast

H0: Forecast accuracy is equal.

S(1) = 2.036 p-value = 0.0417

### Unemployment rate

Diebold-Mariano forecast comparison test for actual : unemployment

Competing forecasts: unemployment1 versus unemployment2

Criterion: MSE over 5 observations

Maxlag = 1 Kernel : uniform

Series	MSE
unemployment1	13.35
unemployment2	.87
Difference	12.48

By this criterion, unemployment2 is the better forecast

H0: Forecast accuracy is equal.

S(1) = 1.369 p-value = 0.1711

## ***REFERENCES***

- [1] Abreu I. (2011) “International organizations’ vs. private analysts’ forecasts: an Evaluation”, Banco de Portugal Working Paper, article available at: <http://www.bportugal.pt/en-US/BdP%20Publications%20Research/wp201120.pdf>
- [2] Diebold F. X., Mariano R., (2002) Comparing Predictive Accuracy. *Journal of Business and Economic Statistics*, 20, 1, pp.134-144.
- [3] Franses, P.H., H. Kranendonk, and D. Lanser (2011) “One Model and Various Experts: Evaluating Dutch Macroeconomic Forecasts”, *International Journal of Forecasting*, 27, pp. 482-495.
- [4] Frenkel, M, Rülke, J.C., Zimmermann, L. (2013) “Do private sector forecasters chase after IMF or OECD forecasts?”, *Journal of Macroeconomics*, 37:217-229
- [5] Glück, H., & Schleicher, S. P. (2005) “Common biases in OECD and IMF forecasts: Who dares to be different.” In A Real Time Database for the Euro-Area” workshop in Brussels.
- [6] González Cabanillas, L., Terzi, A. (2012) “The accuracy of the European Commission's forecasts re-examined”, *Economic Papers* 476, [http://ec.europa.eu/economy\\_finance/publications/economic\\_paper/2012/pdf/ecp476\\_en.pdf](http://ec.europa.eu/economy_finance/publications/economic_paper/2012/pdf/ecp476_en.pdf)
- [7] Heilemann, U., Stekler, H. O. (2013) “Has The Accuracy of Macroeconomic Forecasts for Germany Improved?”. *German Economic Review*, 14, pp. 235–253.
- [8] Krkoska, L., Teksoz, U. (2005) Accuracy of growth forecasts for transition countries: assessing ten years of EBRD forecasting.
- [9] Krkoska, L., Teksoz, U., (2007) “Accuracy of GDP growth forecasts for transition countries: Ten years of forecasting assessed”. *International Journal of Forecasting*, 23(1), pp. 29-45.
- [10] Melander, A., Sismanidis, G., Grenouilleau, D. (2007) The track record of the Commission's forecasts-an update (No. 291). Directorate General Economic and Monetary Affairs (DG ECFIN), European Commission.
- [11] Simionescu, M. (2013) “The Performance of Unemployment Rate Predictions in Romania.Strategies to Improve the Forecasts Accuracy”, *Review of Economic Perspectives*, 13(4), pp. 161-175.
- [12] Vogel, L. (2007) How do the OECD Growth Projections for the G7 Economies Perform?: A Post-Mortem (No. 573). OECD Publishing.

# **THE IMPACT OF GLOBALIZATION ON THE SOVEREIGNTY OF THE REPUBLIC OF SERBIA AND NEIGHBORING COUNTRIES**

*Borislav Galic*<sup>19</sup>, MA

## **ABSTRACT**

*The author, in his work, suggests that globalization bothers insistence of some countries at the national, ie. state sovereignty. In fact, globalization is not reconciled with nationalism, precisely because nationalism is the main obstacle to globalization and time of postsovereignty in which the state would be deprived of the right to be the guardian of their religion and nation. With regard that nationalism and the nation-state are governed primarily by national interests (not by universal) seeking closeness of their nation in its borders, globalism sees them as its main opponent, primarily due to the fact that nation- states have their own regulations, customs, borders and more. All this, according to the globalists , hampers movement of goods , services, people and capital and, thus reducing the profit of big multinational companies for which profit is more important than anything else. The globalists argue that the „care“ of preserving national elements of individual states should get into the hands of the international community by time. Therefore, fear of small and weak countries from losing their identity and their uniqueness is reasonable.*

**Key words:** *globalization, sovereignty, desovereignty, the Republic of Serbia, new world order, internationalisation, national identity, education, employment, transition, Balkan*

**JEL classification:** *F63, F52, I25, J21*

**UDK:** *341.211(497) 316.32(497) 339.9*

---

<sup>19</sup> Borislav Galic PhD student of Law Faculty in Kragujevac, Public utility company city sanitation, Belgrade, Serbia, galic.bora@gmail.com

## ***INTRODUCTION***

**Globalization (internationalization, mondialization)** is a process that, today, often has a negative connotation. This is why in many anti-globalist appears justified fear of the so-called internationalization, even though the verb „globalized“, „internationalized“ and the like, is not always a bad note and did not inspire fear in people. In fact, contrary to this understanding, throughout history we have a series of examples of globalization in some areas and none was not afraid of that. The most famous example of such globalization can be silk trade from China to Europe, specifically from Xian, to Italy. In addition to silk, for exchange and encounter between East and West in this way,

In addition to silk, for exchange and encounter between East and West in this way, then people exchanged products of material and spiritual culture, gain new experiences, expanded their knowledge and learn from each other. As such, the process of globalization is the opposite of individualization and, therefore, requires a certain (lower or higher) degree of integration. The term “globalization” (in English globalization, globalisierung in German, in French mondialization) is synonymous with the terms that were used previously in use, such as – “colonization”, “imperialism”, “Westernization” (“Westernization”). As the narrower meaning of the term may be used synonymous “Americanization”. Last years of the twentieth century, these terms have experienced their most extensive use, so that the word “globalization” has become the most prominent in the last decade.

## ***GLOBALIZATION AND EUROPEAN INTEGRATION - FROM IDEA TO REALIZATION***

The desire and efforts of the great powers to dominate some regions, continents or the whole world has been always present. There were many empires from ancient times until today: Persian, Roman, Macedonian, Hun, Byzantine, Egyptian, Mongol, Ottoman, Chinese, British, Russian, Spanish, Portuguese, Japanese, French, German and many others. The pursuit of the imperialist division of the world existed and still exists, only methods and ways to achieve it were different. Typically, it was a war option with use of armed force and enormous material and human casualties. What could not be achieved on the battlefield, it has been resolved at „green table“. In recent decades the United States, along with its Western allies, most often combine the two methods, while the most developed European countries led by Germany, France and Italy (as a founder), has achieved the dominance over Europe by forming the largest regional organization - the European Union, made up of 28 states with a tendency of further expansion. In this sense, it is very interesting to note a professional and unbiased opinion, a famous Austrian sociologist, Hannes Hofbauer, who in his book, „Enlargement of

the European Union to the East“, said that Carlo the Great looked at his kingdom as „Easter of *Imperium Romanum* and his subjects called him *Pater Europae*“.

The idea of globalization and the creation of the future „world without borders“ which would be based on the abolition of territorial, cultural, economic and other borders, thanks to the integration and unification of people in the world, is extremely well designed, under condition that behind this concept and its creators there is no intention that are not known to usual man and small countries. Specifically, as in comparative constitutional law and legislation, very often, there is a discrepancy between the law and reality (what is written in legal norms and real life), so there is a discrepancy between the global and the local. Hence, if you give the process of dying nation-state in the general trend of global integration, there would be a loss of the sovereignty of the nation-state, because the powers are transferred to the supranational institutions, while the decisions made binding on the nation-state. Also, the transfer of government functions from higher to lower (local) instance, would lead to a state decentralization and “expropriation” of the state, or to the full decentralization (shifting from the central government to the teeming center management at lower levels).

In fact, when it comes to the current process of globalization in the world, it should be noted that, on the contrary, there are numerous articles on the survival of the nation-state and on several levels. For example, if we analyze the relationship between politics and economics at the global and national level, we will see that, regardless of the fact that politics is increasingly becoming a *global* (international, international, global) economy remains *local*. Regardless of the fact that it is necessary to repeal certain barriers (borders) for the free movement of capital (as well as goods, people, etc.), however, the origin of that capital and place where it is being returned are of the utmost importance. This is precisely the nation-state, which has become the other (and it will be many years) is one of the major (and perhaps major) players in the global economy, it is difficult to accept the much-vaunted idea of the withering away of the state, in order to give new world order, that is. creation of a “borderless world”, as well as some new “super-state”.

In addition, the relationship between economics and identity (integrity) is very important because the states are those who determinr and maintain both of these properties. There is no doubt that the sense of security (especially of small countries) enhance the knowledge of the fact of belonging to a community, that is. existence of common bonds and their own identity. Precisely, the nation provides the possibility of expressing identity and political will, whereas the state as an institution with a monopoly of force, provides a guarantee of protection and realization of rights and freedoms of man and citizen. It is therefore not surprising that at the world market, in global economic relations, that successful small countries have a high degree of national integration in terms of tradition, culture, script, language, customs and the like.



## ***STATE SOVEREIGNTY AND THE SOVEREIGNTY OF THE NATION***

In the modern world there are more and more talks about two very important but the opposite ideas - sovereignization and seizing sovereignty. Specifically, for each country and its survival its sovereignty is an essential property which indicates that only the state has the sovereign authority over other political institutions, has supremacy over all other authorities over a particular people in a particular territory. This further indicates the vulnerability of other state authorities, ie. their subordination to the state because it is the highest authority in the relative, comparative, superlative and absolute term. However, in order that sovereignty has the importance that it really belongs to, the term must include three basic elements, namely: 1) internal; 2) an external and 3) synthetic. The first element means the supremacy of state authority over all other authorities and institutions on its territory, the other is the independence of state governments in relation to other countries and the third is the legal limitlessness of state government (that means that it can prescribe legal norms at its discretion).

Since we live in a time when the process of European integration is very actual and when the Republic of Serbia is on the path to join the great European family, it is necessary to point out at this point the relation between national and European identity. The citizens of a European constitutional state do not have to surrender their national identity to become citizens of the European Union, because they are, first and foremost, citizens of member states (they acquire additional European identity). It is, therefore, that European citizenship, ie. the right of citizens of the Union is complementary to national citizenship and therefore gives EU citizens additional rights, such as: 1) the right to vote in local elections and in elections for the European Parliament; 2) the right to free movement and life in the territory of the Union; 3) the right to appeal to the European Parliament; 4) The right to apply to the European Ombudsman; 5) Diplomatic and consular protection in third countries by the European Union. Therefore, we have two opposing processes: on the one hand, the Euro-skeptics have justified fear of losing their sovereignty prerogatives, while on the other hand, the Europeans (supporters of European integration), have desire for greater unification in which they see the opportunity for continuous improvement, development of Europe and European identity. They believe that the European Union should, by way of reforms, extensions and other changes to get closer to the vision of a „United States of Europe“. In turn, globalization needs to ensure peace and stability in the world increasing national security, human rights, enhancing police cooperation at the global level in the suppression of negative tendencies and organized crime, especially effective fight against international terrorism. Is it all really so?

As we mentioned above, the *concept of sovereignty* is very complex and has two dimensions - *internal and external*. The components of the internal dimensions are durability, indivisibility and the like, while the components of the external

dimensions include the right to wage war, conclusion of peace, the signing of the basic documents of international law and more. However, the new world order and its advocates believe that national sovereignty through the past centuries, steadily decreased (crowded) due to bullying, so that no nation-state can be basic form of political organization of members of certain communities. In fact, today, justification for interference in the internal affairs of a sovereign state is usually „humanitarian intervention“, „prevent a humanitarian catastrophe“, „intervention for the good of the citizens“, and the like and often they have very strange names such as „Merciful Angel“ built by NATO (19 states) without the consent of the Security Council and contrary to all rules of international law. For the purpose of so-called „fragmentation of sovereignty“ and to justify such illegal actions the aggressors have no qualms to accuse a state whose sovereignty is hurt that it is a terrorist, criminalized, police, oppressive, absolutist, undemocratic state without respect for fundamental human rights and freedoms and the like, and they appear as saviors, protectors, defenders of democracy and almost as the „White Angel“. Along with these „justifications“ and emphasizing the limitation of national sovereignty, they provide legitimacy (and legality) for punishment of local authorities for „acts of terrorism against its citizens rebel“.

However, it should be noted that the so-called "paradox of sovereignty", even if we accept the fact of limitation of sovereignty at the state level, it does not lose validity because it reaffirms at the global level. As already stated, the statute of limitations is only a consequence of the disappearance of the bipolar world and the change in the political power and changes of the character of the international order. On the other hand, the restoration of the classical concept of sovereignty at the global level is an attempt to justify the imposition of the will by the superpowers to other countries and their wish to create a new world order. Therefore, this narrowing of the sovereignty of nation-states has resulted in the expansion of sovereignty at the global level so that the sovereignty of global power today looks like the sovereignty of the absolutist state which existed in the seventeenth and eighteenth centuries. On the other hand, forcing and accelerating the independence of certain regions and local communities at the micro level by global force leads to the destruction of the nation state. It is usually done (and most often achieved) by a number of means in order to achieve some higher goals, such as, for example, the entry into the European Union. The above-mentioned elimination of bloc confrontation led to the so-called „Local re-feudalisation“.

## ***THE RELATIONSHIP OF GLOBALIZATION AND SEIZING SOVEREIGNTY***

For the existence of the sovereignty of a country stable functioning of political and legal order is needed, so as the absence of antagonism and conflict in social relations, the existence of a certain standard of living and the elimination of the gap between political office holders (the governing elite) and citizens (those over which it manages). It's hard to imagine the existence of sovereignty and its preservation if a majority of people has no interest to preserve own freedom and independence of the country because it is fraught by own survival. This is just what globalization is based at and which in its base has replacement of value system based on threats, fear and violence. Therefore, very often, there is question how to respond to the global challenges of the modern world and the growing globalization. We consider that an important role has preservation of traditional values, ie. cultural heritage, traditions, customs, its own language and everything that contributes to the preservation of identity and to the integrity and continuity of spiritual and national development.

From the very beginning of the process of globalization, it is emphasized that it takes to the process of seizing sovereignty of nation-states and practically in all spheres of social life. The fact is that there is erosion of sovereignty due to the increased insistence on international norms regarding constitutionalization, protection and realization of human rights and freedoms. These norms challenge the sovereignty of nation-states and their right to determine their own rules in the field of human rights and freedoms so that the nation-state is under pressure to accept and implement these standards. As to the forms of this pressure, it should be noted that they can be very different and go even to the „humanitarian military intervention“ if the pressure and seizing sovereignty of „small“ by „large“ do not avail. This can be done through the establishment of various tribunals, by signing a contract, adoption of conventions and declarations, as well as demands for decolonization. Of course, this military intervention is always justified by „concern“ for human rights and in fact is an attempt to redefine the very concept of sovereignty. All of this is justified by the excuse that it must intervene in cases of violation of human rights which requires a change, ie. adaptation of existing international law. It is well-known doctrine of 1999., so called „Annan Doctrine“, which resulted from the well-known events in Kosovo and Metohija.

A special form of political pressure to “small states” are school reform, usually so that the teaching content, losing teaching and scientific methodical unit that the students develop a sense of national identity. At the same time, in a subtle way to promote the universal values of globalization, which is produced in the Republic of Serbia in the entire primary and secondary education, students in all three school classes handle heroic epic folk songs, which are authentic Serbian cultural heritage for which it was famous Goethe learned Serbian language. The consequence is that the younger generation do not even know who their characters from the national and literary history, but they successfully mastered the subject matter that relates to the

value of globalization, and, above all, foreign languages, enabling them to communicate smoothly, but indirectly affect the loss of their practices not only in the way of behavior, but also everyday life. The conclusion is that education is very important in the preservation of national identity, and to promote and impact of globalization on the sovereignty of each state.

The fact is, however, that those who speak the most about the need for seizing sovereignty of nation-states consistently and stubbornly defend their own sovereignty. This is especially so in the area of human rights, so that the great powers, especially the United States, as well as others, are regularly putting domestic law before international in order to preserve their own sovereignty. These forces often refuse (without punishment) to sign certain conventions, declarations, protocols and other documents at the global level in order to preserve their own sovereignty, while George W. Bush signed a U.S. law according to which American and allied soldiers and government officials remain outside the jurisdiction of the International Criminal Court. Because of this, it must be recognized that today the international community is trying to implement seizing sovereignty of Serbia and to introduce a protectorate. It seems the easiest way to do this is to make the story of its road to Europe, which goes through crushing its sovereignty and persuasion that it can not do it alone, i.e. autonomously to take responsibility for its own performance.

## ***THE PROCESS OF GLOBALIZATION AND TRANSITION OF SERBIAN SOCIETY***

This work will be at the end analyze the transition of Serbian society and the impact of globalization on the preservation of the sovereignty of the Republic of Serbia. After the Second World War in Yugoslavia, and consequently in Serbia, fundamental changes in the constitutional, socio-economic, political, and economic system were done, but during this process a number of mistakes and failures were made because the experiments were conducted which until then, almost anywhere in comparative constitutional practice, were not proven to be successful. It can be said that they have just created the beginnings of the process of de-globalization which resulted in the necessity of the transition of all those countries that were members of the former socialist bloc.

In the Republic of Serbia, today, there is an actual privatization process but much more re-privatization and cancellation. The Serbian society today, among other things, is characterized by an attempt to enter European integration and full membership in the European Union as the main goal. Citizens of the Republic of Serbia, at the beginning of the XXI century, felt a revolutionary fervor (and irrepressible desire to join the European Union), which, however, over time, rapidly grew weaker. Therefore, today, very often it is quite openly pointed out to the possible consequences of the globalization process and transition of Serbian society.

Here is the place for pointing out the fact that, precisely, the end of the twentieth and beginning of the XXI century were a turning points in the understanding and respect of individual member states of the former Yugoslavia to the issue of sovereignty. Although the idea of communism very quickly collapsed, as in Serbia and almost all over the world, it has had some very significant and positive traits that must be noted. Thus, during the existence of Yugoslavia and Josip Broz Tito's life, and all to 2000., In Serbia there was a nationalist option, while the October changes in the same year accepted the second option – internationalist one (mondialistic, globalist) which, we can safely say, was anti-national and even went to the extent that it could be considered an insult and disrespect of national dignity. After the October changes 2000th year, the second option was consistently pursued which, under the banner to as soon as possible „entry into Europe“ and to become closer to „international community“ has led, in fact, to the marginalization and „losing of signs“ of the Republic of Serbia. Namely, the excessive desire to correct the mistakes of the previous regime and to achieve a state of „universal friendship“ (which is impossible, and unnecessary!), led to risk of losing integrity and national dignity, ie. to stay without our own identity.

Obviously, these processes are destroying the nation and minimizing the Serbian national body. That is why, at this point, a very important issue of preserving the internal and external sovereignty, its own identity and the rescue of the disappearance of small countries and peoples in the current whirlwind of globalization. This, therefore, there is undivided opinion of many scholars, politicians and practitioners from various countries in the world that globalization causes sovereignty decline or destroys the sovereignty of smaller states. All this is due to the unstoppable expansion of capital „at any cost“, striving to expand the boundaries and activities of transnational corporations, blocking the democratic process within the party countries, stronger external control over other natural resources, violation of basic human rights and the like.

Transnational companies have a special role in the impact of globalization, such as the leadership of asking foreigners, establish codes of conduct and rules of global nature in which all employees are fit, accepting all the values that are thereby promoted. Even entrepreneurs and small local companies that wish to cooperate with multinational companies also have to adapt to the ways and values of the “supra-institution” in themselves beyond globalism wherever they are, simultaneously bringing economic prosperity to all stakeholders.

## ***SOCIO-ECONOMIC BASIS OF THE REFORM OF THE REPUBLIC OF SERBIA AND ITS ENTRY INTO THE EUROPEAN UNION***

By performing an analysis of the most important characteristics of modern Serbian society, it can be concluded that it is a society, which are typical processes of globalization and the transition aimed at joining the European integration and the modern global world society. However, all that initial enthusiasm that was characteristic of the citizens of the Republic of Serbia, from year to year, gradually becoming weaker, because today, more to show the main determinate, ie. positive and negative effects of globalization and the transition to which these processes occur. The European integration today are very relevant to them tends largest number of states of modern Europe. This is particularly the case in countries in transition, which are liberated from the constraints of many years of membership in the Warsaw Pact. These countries believe that joining the European Union to solve most of its problems, which are economic, political and security nature and that, in the foreseeable future, to achieve the standard of living of its citizens, as is the case in the developed countries of Europe. However, many of these new members of the European family quickly realized that they do not put in the Union no welfare and that it is not a „promised land“.

For a European constitutional state, citizens in any case does not have to surrender their national identity, because they are, first and foremost, citizens of member states, and then the citizens of the Union (they acquire additional European identity). In fact, every citizen of the Member States, becoming a citizen of the EU, because European citizenship (or the right to citizenship of the Union) is, in fact, complement national citizenship, and, as such, involves additional rights, which include: 1) the right to freedom of movement and life territory of the Union; 2) the right to vote in elections for the European Parliament and local elections; 3) Diplomatic and consular protection in third countries; 4) the right to appeal to the European Parliament; 5) the right to report to the European Ombudsman. Hence, while the Euro-skeptics fear the loss of their prerogative of sovereignty, by contrast, proponents of greater unification as an opportunity for continued progress, the development of Europe and European identity. Those of European integration, as well as the globalization, I do not see the danger of loss of sovereignty, because in their view, European citizenship does not replace national citizenship. They allege that federalism, due to its flexibility, able to accept and manage numerous social and technological changes and globalization to ensure peace and stability in the world, increasing national security, human rights and more.

Comprehensive strategic approach to the European Union, the Western Balkan countries, among which included Serbia, started in May 1999. This process is referred to as „The process of stabilization and association“ and involves a whole series of relationships and activities between the European Union and the interested countries of the Western Balkans and the European Union and Serbia. The main instrument of this process is the „Agreement on Stabilization and Association Agreement“. Since in this region over the past 10 years and more, there is political instability, as the main feature, put the emphasis on stabilization. It is in fact the main difference and novelty in relation to contractual relationships that the European Union had with the countries of Central and Eastern Europe. Special emphasis is placed within the „Stabilisation and Association Process“, the mutual, regional cooperation between the countries wishing to become full members of the European Union. Through the CARDS (Community Assistance for Reconstruction, Development and Stabilization), or through Community Assistance for Reconstruction, Development and Stabilisation of the European Union, provided significant financial assistance to the country as part of this process.

When it comes to Serbia, which has since 2006, the dissolution of the State Union of Serbia and Montenegro (voting citizens of the Republic of Montenegro's referendum on the independence of Montenegro and the separation of the State Union), became independent and found in the group of countries that waiting for their chance to join the European Union, it should be noted that it is often a real one, maybe uncomfortable parallels between the European Union and the former Yugoslavia. In fact, also became very symptomatic and strange how in some countries, as a member of the Yugoslav federation, fought with all his strength, by whatever means (war, killing civilians and their expulsion from ancestral homes, bullying, blackmail, threats, denial of basic human rights and the like) to get out of a small Federation (which had a much smaller commitment, and a lot more freedom, autonomy and rights), and that immediately after entering into one big „federation“ (which will have many more obligations and fewer rights and autonomy). Examples include Slovenia, Croatia and Bosnia and Herzegovina and Macedonia (luckily it in Macedonia there was no war in the separation).

When it comes to Europe and in Serbia it, a lot can be said, because the Serbian people of Europe much heard and experienced, starting from the Battle of Kosovo, until the present day, when it was supposed to defend the penetration of the Ottomans in the Balkans and in Europe (Turkey in the Middle Ages was for the world, what are now the United States), none of the European countries and dignitaries, who were at their head, they did not find it necessary to help the Serbian army. As evidence of the great „love and support“ then Europe towards the heroic Serbian people, who fell into five centuries of slavery, the bells were ringing in the Louvre. It was then the French and the support of other major European nations, and nothing better relationship was not over the past six centuries, until the present day. So much of modern Europe and our „friends“ in it!

## ***TALKS ON SERBIA'S ACCESSION TO THE EUROPEAN UNION AND ITS PATH TO FULL MEMBERSHIP***

Considered as a whole, the process of European integration is the adoption of values and standards, except that this process one state or society voluntarily approach. Accession negotiations are inseparable phases of integration of each interested country to join in this great European family, and her much expected. Specifically, this phase is caused by the unmistakable beginning of radical, systemic changes in society and the state, and its end is the signing of the membership contract and obtain a full member. The Council of Ministers in June 2013 approved a European Council confirmed the start of accession negotiations and that is obviously the most important phase of European integration on the road to full membership.

So far, Serbia passed a bumpy road and a lot of difficulty moving through the process of European integration, primarily because of his political past, burdened by the wars of the nineties of the twentieth century, the problems of cooperation with the ICTY, numerous political disputes with other member states of Yugoslavia - Montenegro, complicated and unresolved relationship between Belgrade and Pristina, as a result of unilateral declaration of independence of Kosovo and other issues. Serbia on September 1, 2013, as an independent country, became an associate member of the European Union with the entry into force of the Stabilisation and Association Agreement. Since then our country has gone through several stages of development of relations with the European Union.

In fact, immediately after receiving the feasibility study, the competent Serbian representatives began negotiations in 2005, while Serbia a year later (2006), ie. after the independence of Montenegro, continued this process independently. Additional problems that are complicated by the (already very complex) political situation emerged after less than two years, ie. February 2008, when there was an unconstitutional declaration of independence, and, practically, the secession of the Serbian territory. All this is burdened and complicated by the political situation and relations of the Republic of Serbia with the European Union and its Member States, and that relationship lasted until the present day. The process of Serbia's European Union accelerated after enhanced cooperation with the war crimes tribunal in The Hague, and the renewal of negotiations between Belgrade and Pristina regarding the resolution of the Kosovo issue, on which occasion and signed the Brussels Treaty. This has affected the changing attitude of the European Commission, which is October 2011 recommended Brussels that Serbia candidate status on the basis of a request made in December 2010. After almost two years, in June 2013, a decision was made to open negotiations, a major reason for this positive relationship was significant progress in normalizing relations with Pristina.



All this certainly contributed to “open”, ie. to start the so-called “Screening” in three parts, as follows: 1) the judiciary and fundamental rights (Chapter 23), 2) Justice, Freedom and Security (Chapter 24), and 3) financial control (Chapter 32). This process of negotiations regarding the enlargement of the European Union is quite complex and it is, so far, has repeatedly changed, establishing the conditions that must be met in order for a country to become a member (Copenhagen Criteria - 1992 and Madrid criteria - 1995 years). This screening process has two forms (phases): the first form is an indication of the European Commission on the *acquis* representatives of the candidate countries for EU membership (explanatory screening), while the second form means a representation of the candidate countries in terms of its legislation, the level of reforms and harmonization with the European Union within a specific chapter (bilateral screening). European Commission and the information is necessary, because on the basis that it constitutes a report by which a recommendation to open negotiations for a specific chapter (if all conditions are met), or determining the criteria to be met in order to open the chapter.

What is important to highlight here is the fact that after a major expansion of the EU from 10 countries (2004), accession of Romania and Bulgaria (2005) and the last, the sixth expansion, admission of Croatia (2013), the European Commission pointed to the fact that in the future period will be a lot more strict and thorough in terms of meeting the criteria for membership. It is obvious that the conditions for candidates, who are expected to join the European Union (including the Republic of Serbia), today, a lot more rigorous and that the number of the *acquis* (*acquis communautaire*) to be negotiated with 29 rose to 31, the and today reached a number of 35th.

It is undisputed that all negotiations between the candidate countries and the European Union must have three key components, in order to be successful - political, diplomatic and technical. What is particularly important to note is the fact that the necessary political will within the country that the process is successful, and the willingness of diplomacy to the European institutions, Member State governments and the entire European public sends a clear and unambiguous message. Also, it is very important to how the administration is capable of in the negotiating process to ensure the functioning of the country within a common economic market.

When the negotiations are successfully completed, the candidate signs the Accession Treaty, which must be ratified by all member states of the European Union, while the citizens of the future members must be a referendum vote on the membership of their country in this great European family. Thus, the referendum results and views of the citizens are the final act (the end) of a very long, complex and open process, which should lead to modernization and Europeanization of each candidate country. Therefore, the full membership of the European Union is considered a confirmation of success of reform, so it is very important to do when Serbia to achieve the long-desired goal (the highest political office holders want it to be 2020).

## ***CONCLUSION***

The largest number of states of modern Europe aspiring to European integration, which is especially true for countries that are in the processes of transition and have for decades been in the Warsaw Pact. The Pact had a great influence on decision-making within the European Union. These countries believe that joining the European Union to solve most of its problems, which are economic, political and security nature and that, in the foreseeable future, to achieve the standard of living of its citizens, as is the case in the developed countries of Europe.

At the same time the reform of education, media, establishing new customs and habits of citizens, new ways of communication through modern means, the employment of citizens in large international companies, as well as cooperation between small businesses and entrepreneurs with them, the more they lose common and old customs, way of life, which reflects the national identity.

Everyday topic of numerous television and almost all of the media in Serbia, is the possibility of its membership in the European Union. This issue with us has become inevitable since the nineties of the twentieth century until today. The most common comments are in the style that we, the European Union only hope that "Europe has no alternative", and we just acquiring a full member of the great European family, to ensure their survival, raising living standards and overcome the crisis. Will it really be so remains to be seen.

## ***REFERENCES***

- [1] Simeunovic, D. (2009), Nation and Globalization. Belgrade: ZOGRAF.
- [2] <http://www.vidovdan.org/arhiva/print1158.html>, ( 03.03.2014 )

***II PART.  
CREATING AND GROWING A SUSTAINABLE  
AGRIBUSINESS***





## ***ENVIRONMENTAL ASPECTS OF SUSTAINABLE DEVELOPMENT OF COMPANIES***

*Katarina Kanjevac Milovanovic, PhD<sup>20</sup>*

*Aleksandra Kokić Arsić, PhD<sup>21</sup>*

### ***APSTRACT***

*Sustainable development is based on the model in a qualitative way meet the socio-economic needs and interests of citizens at the same time eliminate or significantly reduce the impacts that threaten or damage the environment and natural resources. According to this model, the paper analyzes the current state of development strategies and regions in Central Serbia, especially in terms of environment and natural resources and ensure the survival and quality of life of future generations.*

***Key words:*** *sustainable development, enterprise, environment*

***JEL classification:*** *Q56*

***UDK:*** *005.35 502.131.1*

---

<sup>20</sup>Katarina Kanjevac Milovanović, Center for quality, Faculty of engineering, Kragujevac, Serbia, e-mail: k.kanjevac@gmail.com

<sup>21</sup>Aleksandra Kokić Arsić, VTŠSS Zvečan, Serbia, e-mail akocicster@gmail.com

## ***INTRODUCTION***

The concept of sustainable development is considered a milestone in the global approach to environmental protection and development. It is defined as "development that is going to meet the needs of the present so as not to jeopardize the ability of future generations to meet their own needs" (World Commission on Environmental and Sustainability, 1987.). The concept of sustainable development implies the need to reflect the desired quality and the real pace of social development, as well as the need for balancing different social values.

Sustainability in this sense means the adjustment of economic growth and development with the interests of environmental protection and social development. In this sense, economic sustainability is a necessary but not sufficient condition to achieve sustainable development principles.

Sustainable development of our country should provide permanent longterm economic growth that will not be based on the excessive use of natural resources, or unacceptable environmental consequences that would lead to the question of its sustainability, and economic prospects of future generations. This means that the development of Serbian economy in the direction of sustainability can be seen only on the basis of achieving economic growth, based on criteria such as knowledge, information, people, education and quality of connection between people and institutions.

The social dimension of sustainability is based on the fact that equality and understanding of the interdependence of people within the community are the basic prerequisite for an acceptable quality of life, which is the first goal of development. To make a long-term sustainable development, wealth, resources and opportunities must be distributed in such a way that all citizens can enjoy basic standards of security, human rights and social privileges such as food, health and education, housing and opportunities for the development of his personality. In order to achieve sustainable development of social competence necessary to take into account:

- protection and development of new social values and increase social capital
- equal rights, equality before the law and security for all, with special attention to
- the equal rights of men and women, children and young people
- providing and promoting comprehensive health and safety of people
- quality education which are provided conditions for individual development and
- identity preservation
- solidarity within and between generations, as well as solidarity with marginalized groups, poor and invisibles.

Today, in Serbia, initiated specific activities related to sustainable development, both at national and local level. Local governments are the major challenge both in the field of economic development, and in the field of infrastructure, municipal services, spatial planning, environmental protection, social development and poverty reduction.

In addition, there is facing the almost complete lack of research access and connectivity problems in the sector of environmental protection, health and education, as well as problems of poverty. Such lack of multidisciplinary follows research and scientific process in this area, so in the practice of referring institutions at all levels fails interesorna or intercooperation. On the other hand, there is a problem related to the availability of data, and if they exist they are usually out of date, once collected, and available only for the general population in the republic. For this reason, monitoring and analysis of trends is very difficult at the regional level.

## ***PRINCIPLES OF SUSTAINABLE DEVELOPMENT OF THE REGION***

In defining sustainable development there is the problem of conflict between environment and development goals. It can be seen from the definition of sustainable development as follows: "Sustainable development is development that meets the current needs of society without compromising the ability of future generations to meet their own needs".

Thus the concept of demands placed on equal involvement of three aspects of development:

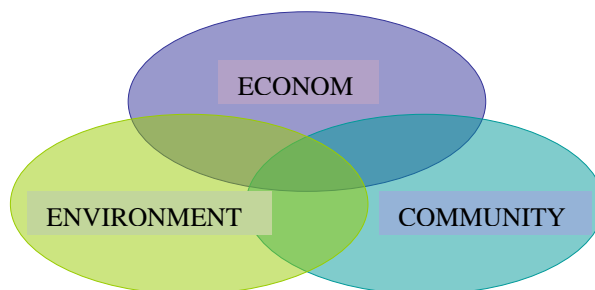
**1) Economic:** sustainable economic system must be able to continuously produce goods and services through the maintenance of state-level management and external debt while avoiding the extreme sectoral imbalances that can lead to major problems in the agricultural and industrial production.

**2)Environment:** Environmentally sustainable system must maintain a stable core resources while avoiding overexploitation of renewable resources or endangering their life functions with depleting non-renewable resources to the extent to which investments can be found through an adequate replacement. This includes maintenance of biodiversity, atmospheric stability, as well as other ecosystem functions that are not marked as an economic resource.

**3) Community:** Sustainable system of society has to ensure the distribution of capital, which nables adequate provision of social services including health and education, gender equality and participation in politics and responsibility.

It is absolutely clear that these three dimensions of sustainable produce many potential complications in addition to the original simple definition.

How to resolve the conflict of objectives and to ensure unimpeded sustainable development? How to reconcile the goals of a market economy and sustainable development, when the inputs are limited (energy, materials) and you have to invest large resources into sources of clean, renewable energy and recycling waste materials? Also, scientific and technological achievements are not up to provide unimpeded sustainable development. Of course, that there is no other choice and we had to find the most effective and shortest road to sustainable development of society.



*Picture 1 Model of sustainability (Dow J. 2008)*

## ***INDICATORS OF SUSTAINABLE DEVELOPMENT***

Indicators of sustainable development are qualitative indexes of the evaluation of conditions and changes in subsystems. Performance indicators of sustainable development are developed and defined in accordance with the established vision, policy and goals of sustainable development (Commission on Sustainable Development UN, 1995.). These indicators should refer to the performances indicating the degree of fulfillment of the established goals. Development and definition of indicators are performed through the following steps:

- Defining criteria for selection of indicators,
- Establishing potential indicators,
- Valuing potential indicators,
- Final selection of indicators.

A large number of models which show the value of indicators and sustainability index, and allow the monitoring of achieved level of sustainable development have been developed to date (Peter H., Laszlo P., 1995).

In order to ensure the representative data, one should take care of the following principles:

- Always start from the same definition i.e. unit measure,
- Use same methods while determining the value of indicators,
- Follow the movement of indicators within the same periods of time,
- Use same procedures for calculation, as well as quality control methods.



A focus should be on possible movement trends of observed indicators (How they move? Do and how the changes on one field impact the other?) in case when the data exist in longer period of time in the past. This helps to understand what is happening and what can be expected in the future period. The connection may be discovered between, at the first sight, un-connected groups of factors such as economy and environment.

A basic report is focused on possible improvement directions of the sustainable development condition and shows the current condition through relevant indicators with the projection on the future period and recommendations for its improvement. Such reports are a sort of warning of what could happen if relevant measures are not taken. Developed indicators of sustainable development are comparable to indicators of other local communities i.e. regions within a country, but they also allow the comparability outside the national borders. The sustainable development indicators on the country level have to be comparable on the international level. Certain countries such as Switzerland, Great Britain, Germany, Sweden and Belgium have developed the methodology and set their own indicators for measuring the level of sustainable development over the last two decades, regularly publishing the results and further developing within this area through National Strategies of Sustainable Development (Ministry of Environment, Sweden, 2007).

A number of national indicators of sustainable development in the countries where the comparative analysis was possible to perform is within the scope of 12 to 187 indicators (table 1). The analysis has been performed in 22 European countries (including 2 countries outside Europe – Canada and Australia) for the purpose of identifying similarities between the countries in terms of common indicators, as well as wider issues related to setting specific indicators of the sustainable development (EUROPEAN COMMISSION, 2010).

Determining the most frequent indexes from country to country has been a great challenge due to different ways in which the indicators can be expressed (table 1).

*Table 1. Number of national indicators of sustainable development in some European countries*

<b>Countries</b>	<b>Number of indicators</b>	<b>Source</b>
France	12	National Strategy for SD
Germany	28	2006 Indicator Report
Belgium	45	2008 Federal Report
Greece	70	2006 Report of Sustainability Indicators
Slovenia	71	2006 Development Reports
Austria	95	Decision of the Ministerial Council
United Kingdom	147	2006 Indicator Report

*Table 2. Most frequently used sets of indicators*

Number	Aspect of sustainable development	Number of sets of found indicators
1.	Natural resources management	24
2.	Climate changes and energy	21
3.	Sustainable production and consumption	20
4.	Public health	19
5.	Social issues	19
6.	Education	19
7.	Socio-economic development	18
8.	Transport	16
9.	Proper management	16
10.	Global dimension of sustainable development	16
11.	Research, development and innovation	15

## ***STRATEGY OF SUSTAINABLE DEVELOPMENT IN SERBIA***

There are numerous problems on the road towards sustainable development in Serbia. The financial component cannot be avoided, as well as intellectual. Serbia lacks funds, but it also lacks experts who will work on the projects that will be set up on the road of sustainable development. One of major issues is, for example, to solve the industrial pollution problem because, according to the data of the SWOT analysis in our country, the industrial production is based on outdated technologies which “create heaven for polluters” (Živković N., Jančićević I., Đurić M., 2008.) In Serbia, a country with extremely inexpensive electric energy, the level of energetic efficiency is very low comparing to the European countries, while the energy savings and the utilization of renewable sources of energy are still in the initial phase. For example, the analysis of experts and volunteers on the technical team for energetic efficiency, who participated in the creation of the Local Action Plan of the City of Kragujevac, has shown that the major issues impacting the environment are low energetic efficiency of the buildings, the work of coal-consuming boilers, low energetic efficiency of the traffic and industry, as well as the lack of economic preconditions for energy savings.

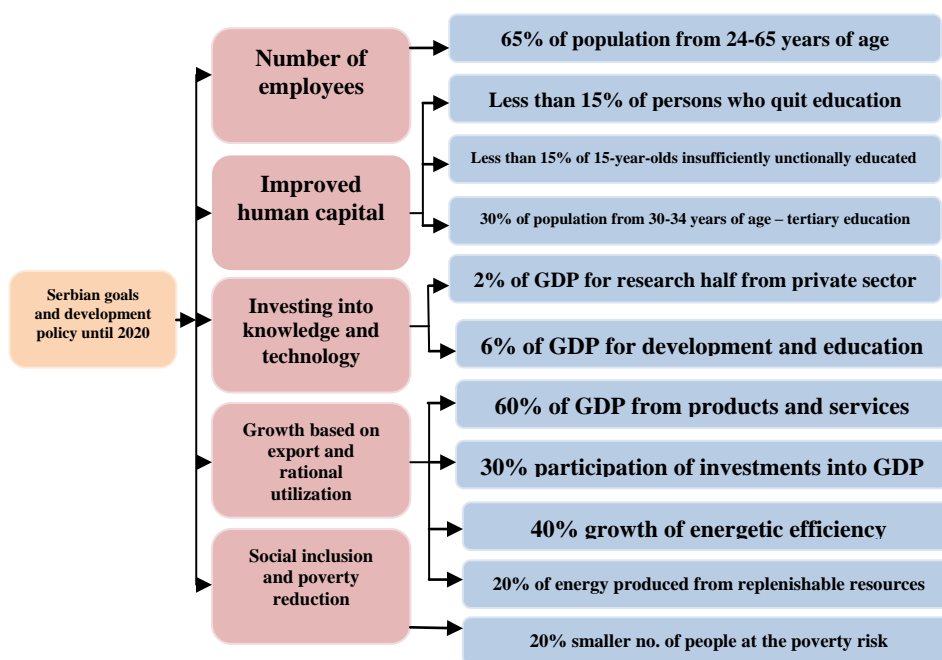
Problems faced by Serbia can be classified as follows:

- Budget limits aggravated by economic crises, high internal deficit, high unemployment rate;
- Slow pace of reforms, slowed struggle against the organized crime and corruption;
- Unfavorable demographic structure and poor demographic trends;
- Poor infrastructure within the living environment;

- Citizens have no trust in any of the country institutions;
- Unfavorable parameters of air and drinking water quality.

Current allocations for crucial points of sustainable development are very low (education, environment protection, research and development and similar) comparing to GDP. Therefore the achievement of desired standards implies very high investments (Government of the Republic of Serbia, 2010). While projecting the period of time for the achievement of goals defined by the Strategy of Sustainable Development, the focus was on the sustainability of macroeconomic stability, possibility to absorb financial means, as well as the need to avoid that the increase of allocation for sustainable development reflects on realistic decrease of allocation for other budget beneficiaries. The investments in the preservation of living environment are the first among the priorities. On one side, there are a large number of internationally taken obligations related to the preservation of living environment and those still to be taken by the country, while on the other side inactive approach, along with the existing high commercial growth, considerably increases future costs of the living environment protection. Current level of investments into the living environment in Serbia is low and the financing by the industry and private sector is insufficient. New EU member states from the Central Europe were investing from 1.5 to 2.5% of GDP into the area of living environment in the EU pre-accession period. The system of economic instruments is still underdeveloped and fails to ensure sufficient stimulation for the decrease of pollution. The economic growth has to comply with investments in cleaner production, energetic efficiency, reduction of emissions and the protection of the living environment. In one word, it is necessary to comply with international standards within the area of living environment because otherwise degradation and damage of the living environment will gradually lead to larger economic loss. It is necessary to include the costs of natural resources utilization and their degradation into the production costs. Through the implementation of known and accepted norm "the polluter pays", as well as the norm of "projecting the total life cycle of the product" into the product price, the external costs i.e. the costs of production, usage and disposal of the product are consolidated.

We can conclude that there is still a lot of work to be done on raising the awareness of significance attached to the sustainable development and the living environment protection as preconditions for EU membership in the Republic of Serbia. Serbian goals and development policies until 2020 are given in the picture 2.



Picture 2. Serbian goals and development policies until 2020

The indicators are very important for successful evaluation of undertaken measures and activities related to the implementation of the Strategy. The selection of indicators preserves the connection with the crucial suggested instruments. To be internationally comparable, selected indicators are put in accordance with the new, revised list of the sustainable development indicators of UN, which also includes the indicators for the implementation of the Millennium development goals (UNITED NATIONS, 2008). All indicators are gender-supported and they include:

- Poverty – lack of income, inequality, support to the poor;
- Management - corruption, crime, efficiency of the state government;
- Health - mortality, provision of health care, health status and risks;
- Education – educational level, literacy, educational qualifications of citizens;
- Population- citizens, total fertility rate, dependence of the elderly, indexes of internal migrations of citizens, tourism;
- Economic development – macroeconomic performances, employment, information-communication technologies, research and development;
- Global economic partnership - commerce, external financing;
- Consumption and production – establishing the balance of the current production and consumption, energy utilization, waste production and management, transport;
- Natural catastrophes;
- Atmosphere – climate changes, ozone shield damage, air quality;

- Land – land utilization and status, land degradation, desertification, agriculture, forests, fishing;
- Waters – water quantities, water quality;
- Biodiversity - ecosystems, types.

## ***ECOLOGICAL ANALYSIS OF A COMPANY'S CONDITION***

One of the national priorities for achieving sustainable development in Serbia refers to the protection and improvement of living environment and rational utilization of natural resources. There are two particularly aggravating circumstances in the preparation context of the sustainable development strategy. One refers to the almost complete lack of multidisciplinary research approach i.e. connecting problems from the sectors of the protection of the living environment, health, education and the problems of poverty. Also, the working practice of the relevant institutions shows the lack of cross-department cooperation on all the levels, leading to independent resolution of mutually connected problems. Second aggravating circumstance refers to the availability of data which are mostly outdated, collected once, and not rarely available only on the republic level.

This paper targets 83 organizations (52 small, 21 medium and 10 large) in the region of the Central Serbia where the cities have similar characteristics in terms of economic development, social conditions and living environment in current transitional conditions (Raonić D.,2007). EU criteria for the division of organizations based on the number of employees were used, as follows:

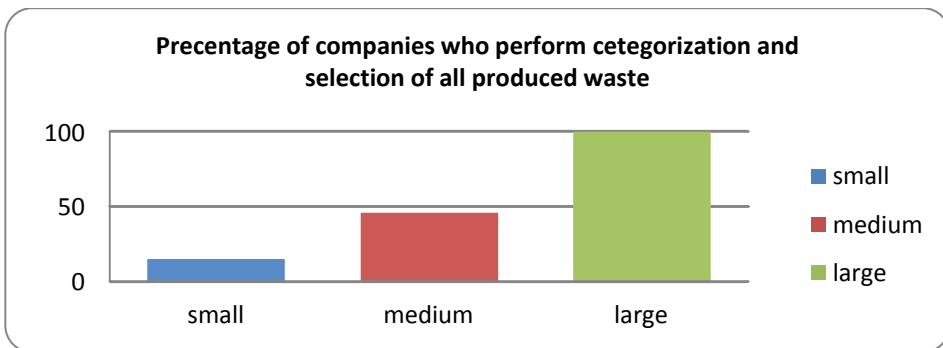
- 1-50 – small companies,
- 51 – 250 – medium companies,
- >250 – large companies.

The majority of examined companies is in the private ownership (82%), while smaller number (10,8%) is in the country ownership or mixed ownership (7,2%), and they belong to different sectors. The research was performed based on the questionnaires containing 50 questions related to the level of competitiveness, quality and sustainable development in the interviewed companies. The questionnaire was compiled based on the analysis of the existing literature, domestic and foreign questionnaires with similar purpose and empirical evaluation of the certain characteristics' significance. During the analysis of ecological condition of small, medium and large companies dealing with similar business activity, the following aspects were considered:

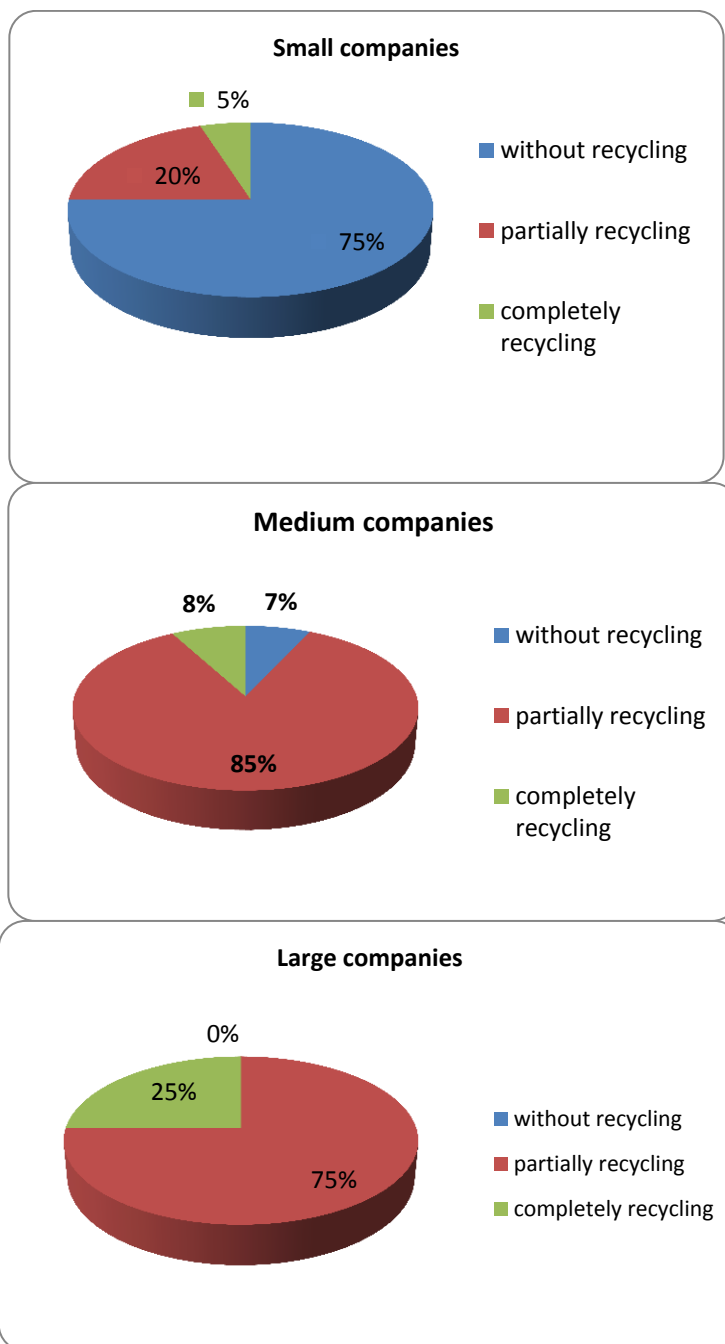
- Waste management,
- Gas emissions,
- Noise,
- Utilization of resources,
- Effluents,

- Legal regulations stipulating the protection of the living environment,
- Requests from stakeholders and ecological penalties,
- Eco-marking,
- Procurement of equipment for the protection of the living environment,
- Accident reaction plan,
- Possession of the certificates of the systems for the protection of the living environment management.

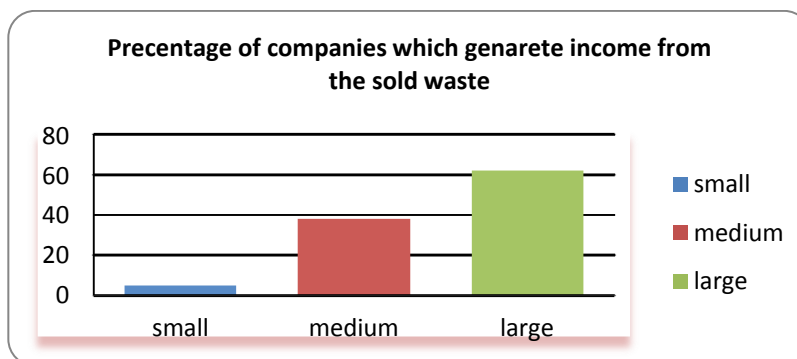
The research results have shown that only 37% of interviewed large companies and 15% of medium companies have implemented the systems for the management of the living environment protection, while none of small companies owns this certificate. This is reflected in the level of awareness of the employees while dealing with certain harmful emissions leading to the pollution of the living environment (The Government of the Republic of Serbia, 2003). All examined large companies, 46% of medium and only 15% of small companies (picture 3) accordingly perform the categorization and selection of all produced waste. All large companies dispose the produced waste to recycling (completely or partially), while this percentage for the medium companies is 85%, and for small companies only 25% (picture 4). The percentage of companies which generate income from the sold waste (picture 5) is relatively small.



*Picture 3. Percentage of companies who perform categorization and selection of all produced waste*



Picture 4. Display of the resulting waste in the studied companies in Central Serbia



*Picture 5. The percentage of companies which generate income from the sold waste*

The recycling issue is insufficiently focused. Within the period from 2008-2014, the recycling participated in the total industrial production with 0.3%. On the other side, the Western countries put the recycling among the strategic commercial branches, so that the participation of the recycling in the commerce of those countries makes up to 35%. Growing consumption of resources, commercial growth and the increased consumption of goods have resulted in the appearance of large quantities of various types of generated waste. Even 78% of examined companies performs the selection and categorization of waste, while 63% of companies generates income from the sales of waste. Only 5% of companies has the procurement plan of recyclable materials. Even 80% of examined companies disposes their waste to recycling, more than a half of them gives to recycling all the waste produced in their production processes. Dangerous waste is identified at 26% of analyzed companies, more than two thirds of examinees treat and keep this waste in the legally prescribed manner. Regarding the management of machines and waste at the end of the life cycle, 33% of companies disposes their outdated equipment to recycling, while other companies dispose them at the dumpsite. A major issue of the waste management is the lack of infrastructure for the treatment and disposal of waste, joint disposal of communal and dangerous waste, lack of information on the content and the flow of waste, lack of the storage space for disposal of dangerous waste, pollution of land, underground and surface waters, etc.

The sector of energetics is significant polluter of the living environment. The unfavorable impact mostly comes from the power plants using lignite as fuel, as well as from the oil industry still lacking access to modern technologies, which would efficiently mitigate the pollution effects. Production and consumption are mainly based on the use of lignite and brown coal. In terms of examined companies, only 20% has the plan of energetic efficiency. The Law on Energetics introduces the obligation of energetically efficient utilization of energy in all sectors. However, the implementation techniques of this decision are not elaborated, so additional documents and subordinate legislation are necessary to complement the Law on Energetic Efficiency. To bring to life the obligation of more rational utilization of energy, an urgent action in that direction is necessary



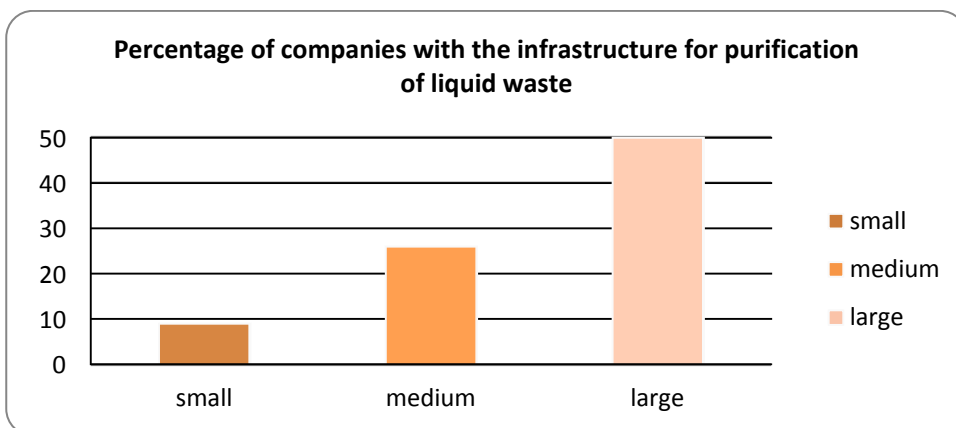
(Oka S.,2010). Otherwise, it is unrealistic to expect significant positive shifts, although this obligation is clearly stated by the Law on Energetics. Among the analyzed companies, only 1,2% uses the replenishable sources of energy, unless we consider the fact that 20% of electric energy in Serbia is produced in hydro power plants so that this percentage of electric energy comes from the replenishable sources. When we consider that EU has set the goal to reach 12% of used energy from replenishable sources until 2010, we can say that the Central Serbia is only in the very beginning of this undertaking. Improvement of the legislative and institutional frame in energetics has special importance for the improvement of the living environment. A little less than a half of interviewed companies uses coal as the basic heating energy generating products, 18% of companies uses natural gas, while the remaining companies use wood or electric energy. Considerably small number of interviewed companies (1.2%) uses some kind of replenishable resources of energy for heating their premises.

Consumptions of electric energy and water differentiate according to the business activity of the company. Producers consume much more than service-oriented businesses, as well as those companies which use the electric energy for heating.

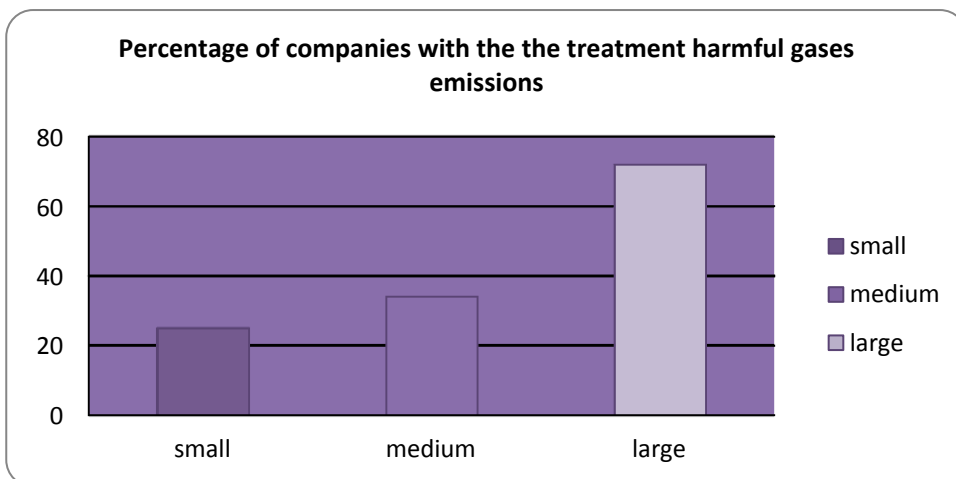
The issue of polluted living environment is largely the consequence of outdated technology and equipment, the lack of funds to change the existing condition, as well as low energetic and raw material efficiency, high intensity of harmful gases in the production processes, high level of the waste production, irrational utilization of raw material and similar. The statistics also shows that less than 5% of companies in the Central Serbia invests in the procurement of equipment for the protection of living environment, which is primarily caused by the economic crises and poor financial situation, and to a lesser extent by the lack of awareness for the preservation of the environment.

Similar condition characterizes the treatment of the liquid waste. Alarming fact is that more than 90% of small companies disposes their liquid waste directly into the sewerage, while only a half of large companies has the infrastructure for purification of liquid waste (picture 6). Somewhat better situation characterizes the treatment of harmful gasses emissions produced in a company's production processes and disposed into the atmosphere (picture 7).

On the other side, the number of paid ecological penalties by these companies over the last three years is considerably small (below 5%), as well as the number of possible complaints of the stakeholders (up to 8%), which implies poor application of the law from the area of the living environment protection and the low level of awareness in the community.



*Picture 6. Percentage of companies with the infrastructure for purification of liquid waste*



*Picture 7. Percentage of companies with the the treatment of harmful gases emissions*

## ***SUSTAINABLE DEVELOPMENT STRATEGIES AND IMPLEMENTATION METHODOLOGY***

Developing a strategy for sustainable development of the region is based on the basic principles and major documents of sustainable development. Thus, in this decade, the EU created the following acts related to sustainable development:

(1) in March 2000. Lisbon is passed a new strategic goal for the EU:

"By the 2010. to become the most jobs, with high social competitive and dynamic knowledge-based economy in the world based on knowledge, capable of sustainable economic growth with more and better cohesion."

(2) in Gothenburg but was June 2001. made:

The first EU Sustainable Development Strategy, adding dimension to the Lisbon process of environmental employment, economic reform and social cohesion. The priorities of this strategy are:

- fight against climate change
- provision of sustainable transport
- guidance on health issues/health
- very responsible management of natural resources.

In addition to these two initial documents which set the foundations for sustainable development, the EU has adopted several important documents in this area:

- EU directive 2001/42/ES - Assessment of plans and programs for the environment • Declaration on the guiding principles of sustainable development (May 2005., Brussels)
- Strategy for Europe 2020 smart, sustainable and comprehensive development (Brussels, 03/03/2010.)

Considering the strategic documents and their basic objectives and the availability of natural and acquired resources of the region are for the strategy of sustainable development of the region. At the same time to establish the basic sets of indicators for a specific region, whose movement should be monitored over time and based on which the implementation of appropriate strategic planning and operational activities. The strategy defines the following key activities:

- Consideration of sustainable development in the future -Climate change and clean energy
- Sustainable transport -Sustainable consumption and production - Conservation and Resource Management
- Public health
- Social inclusion, demography and migration
- Global poverty and sustainable development opportunities.

## ***CONCLUSIONS***

The reconciliation of goals of all three sustainable development dimensions (social, economic, living environment) is a complex problem requiring multidisciplinary researches, and cannot be in the focus of only one scientific area. It has to be understood once for all that the laws of money can never be above the laws of nature, so that the latter have to be highly respected in order to achieve success and prosperity of human community.

Analysis of companies in the Central Serbian region from the ecological aspect highlights the following:

- all large companies, 46% of medium and only 15% of small companies perform categorization and selection of produced waste,
- all large companies, 85% of medium and 25% of small companies dispose the waste from the production to recycling,
- income from the sold waste is generated by 62% of interviewed large companies, 38% of medium and only 5% of small companies.

Regarding the purification of the liquid waste and harmful gasses, the research results are as follows:

- a half on interviewed large companies, 26% of medium and only 9% of small companies perform the purification of the liquid waste,
- 72% of large companies, 34% of medium and 25% of small companies perform the purification of harmful gasses.

The research results highlight the requirement for integration and coordination of goals and measures of all sector policies, harmonization of national regulations with the legislation of the European Union and their full application. Highly important is the implementation of the National program for the living environment protection together with the relevant action plan, and the implementation of the National Strategy of Sustainable Utilization of Resources and Goods. Adoption and application of the National Strategy of Sustainable Utilization of Resources and Goods will contribute to the decrease of pressure on natural resources. Aiming to integrate the living environment policy into other sector policies, it is necessary to strengthen the capacities for the application of the strategic evaluation of impact of policies, plans and programs, in compliance with law, on the living environment. Further engagement of the Ministry for the protection of living environment, the Agency for the protection of living environment and the Fund for the protection of living environment, as well as other institutions relevant for the protection of living environment and the utilization of natural resources, is needed. The development of cleaner technologies, increase of the energetic efficiency and the use of replenishable sources of energy will surely contribute to the decreased consumption of heating energy by improving the insulation in the buildings and reducing the number of households that use electric energy for heating.

## ***REFERENCES***

- [1] World Commission on Environment and Development (1987), Our common future. Report of the World Commission on Environment and Development, Published as an Annex to General Assembly document A/42/427, Development and International Co-operation: Environment
- [2] Vos, R. (2007), Defining sustainability: a conceptual orientation, *Journal of Chemical Technology and Biotechnology*, 8, pp334-339
- [3] Upton, S. (2007), Chair roundtable on sustainable development at the OECD, now Pricewaterhouse Coopers, New Zealand
- [4] Dow J. (2008), Sustainability World Indexes Guide Version 9.1, Available from: [http://www.sustainabilityindexes.com/djsi\\_pdf/publications/Guidebooks/DJSI\\_World\\_Guidebook\\_91.pdf](http://www.sustainabilityindexes.com/djsi_pdf/publications/Guidebooks/DJSI_World_Guidebook_91.pdf), January
- [5] Segnestam L. (2002), Indicators of Environment and Sustainable Development, Theories and Practical Experience, ENVIRONMENTAL ECONOMICS SERIES, paper NO. 89
- [6] Arsovski S., Pavlović M., Arsovski Z., Mirović Z. (2009), An Investigation Of Relation Between Sustainable Development And Quality Of Life *International Journal for Quality Research*, Volume 3 - 2009 - Number 4
- [7] EUROPEAN COMMISSION, COM(2010), EUROPE 2020 A strategy for smart, sustainable and inclusive growth, Brussels
- [8] Hardi P., Pinter L. (1995), Models and methods of measuring sustainable development performance, International Institute for Sustainable Development Winnipeg, Manitoba CANADA
- [9] Živković N., Janićijević I., Đurić M. (2008), Određivanje indikatora održivog razvoja lokalne zajednice, 3. Konferencija o kvalitetu života, Kragujevac
- [10] Ministry of Environment Sweden (2007), Implementation of the EU Sustainable Development Strategy Sweden's report to the European Commission
- [11] Commission on Sustainable Development UN (1995), Indicators of Sustainable Development: Guidelines and Methodologies
- [12] UNITED NATIONS New York and Geneva (2008), Measuring Sustainable Development, Report of the Joint UNECE/OECD/Eurostat Working Group on Statistics for Sustainable Development
- [13] Vlada Republike Srbije (2010), Nacionalna strategija održivog razvoja Republike Srbije, Beograd.
- [14] Vlada Republike Srbije (2006) Nacionalna strategija privrednog razvoja Republike Srbije 2006.-2012., Beograd
- [15] Vlada Republike Srbije (2003), Nacionalna strategija upravljanja otpadom, Beograd
- [16] Oka S. (2010), Energetska efikasnost i obnovljivi izvori energije u strategiji razvoja energetike Srbije do 2020., Radionica: Izgradnja kapaciteta Republike Srbije u oblasti strateškog planiranja u energetskom sektoru, Beograd
- [17] Raonić D. (2007), Istraživanje infrastrukture kvaliteta u Centralnoj Srbiji, 34. Nacionalna konferencija o kvalitetu, Kragujevac

## **RURAL DEVELOPMENT STRATEGY IN THE LIGHT OF SERBIA JOINING EUROPEAN UNION**

*Marko Protic, MSc<sup>22</sup>*

*Goran Dimic, MSc<sup>23</sup>*

### **ABSTRACT**

*Agriculture influences rural community, rural economy and the environment.*

*However, agricultural production is not the only function of rural areas, as that could be a whole range of other activities that favor the growth of rural economy, the decrease of gap between urban and rural areas and improvement of standard of living for rural area populations. That reduces farmers' dependence on agricultural production as a source of income. Activities needed to be done in order to carry out this program are: creation of opportunities for employment outside of the farms through smaller processing units, centers for services in rural area and adequate improvements in infrastructure. Diversification stimulates entrepreneurship. Advantages of diversification of rural economy are: reduction of unemployment, taking advantage of rural areas' competitive advantages, speeding up economic development of rural areas, improving quality of life in rural areas. Diversified activities are constantly growing in developed countries.*

**Key words:** *Rural Economy, Rural Development, Diversification of Activities, Rural Tourism, Virtual Village*

**JEL Classification:** *O13, O18, Q13*

**UDK:** *341.217.02(4-672EU:497.11) 338.43(497.11)*

---

<sup>22</sup>Marko Protic, Electrical distribution, Cacak, Serbia, markoprotic.ca@gmail.com

<sup>23</sup>Goran Dimic, PUC „Komunalac“, Cacak, Serbia, goranddimic@gmail.com

## ***INTRODUCTION***

At the very beginning, it is important to say that this is a unique approach to the rural problem, which will give an overview of the current state of the rural landscape on the one hand, and on the other through scientific research and case study on virtual village go through the mathematical-statistical indicators, ecological, psychological, philosophy and sociology indicators. The paper shall present some unpublished hypotheses, mathematical functions, ideas and proposals needed to boost the economy and entrepreneurship in the rural scenery. On the one hand, readers of this paper may conclude that it represents an overly idealistic definition of the rural landscape problems, and an overly radical approach to stating hypotheses on man and his position on the planet Earth. However, it should be emphasized that the authors allow the freedom to criticize and upgrade everything proposed here, while remaining clear in their belief in the necessity to change people's perceptions of their environment, as well as to reject some previously formulated ideas on this topic, because except for the fact that the ideas are still the same, nothing has changed.

The aim of the European Union's rural development policy is to promote multifunctional development of rural areas. The policy addresses not only farms, but also the entire rural environment. The concept of multifunctional development has been fostered in response to the numerous problems experienced by rural areas. The key challenges to rural growth include low incomes generated by farm owners, high unemployment, in particular in areas that were once dominated by State Agricultural Farms, and social exclusion of rural inhabitants. In an attempt to limit migration from rural to urban areas, multifunctional development promotes non-agricultural activities in the countryside, including business, tourism, agritourism, forestry and residential construction. The most important resource and market area of Serbia that covers 80% of its territory is the village, and it houses around 45% of Serbia's population. Serbia, once a country of peasants, could soon lose the village because of 4,600 villages there are now in the country, one in four is now facing the verge of extinction. In fact, 1961 villages are completely deserted, and in 200 villages there are no residents under the age of 20. Recent studies indicate that in a decade and a half another 1,200 villages will disappear from the map of our country. According to research, in half a century, from 1950 to the year of 2000, over eight million people migrated from rural to urban areas of the country. In the rest of the world, such a process takes 120 to 150 years (Bailey & Clayton, 2002). In villages in Serbia, at this moment, lives 45 percent of the population, and if a country is planning to live off agriculture there should be around 70 percent of the population in these areas. The disappearance of the population in the villages of Serbia will lead to changes in biodiversity in a large area, especially in the east and south-east of Serbia. The once cultivated and well-kept lands are already partially overtaken by the wilderness, and the old abandoned villages will go back to the period of 200 years ago, when these were villages in the making and the people cleared forests to build houses. Unfortunately, many of these villages now have smaller population than they had in the 19 century. This means that the rural environment in the 21st century is going back to its beginnings. According to the 2002 census, there were

nearly 50,000 homes in the villages. If we add 145,000 houses enumerated then but classified as temporarily unoccupied, it sums up to the fact that the Serbian villages now have at least 200,000 housing units which are not inhabited. There are around 40,000 abandoned farms and gardens, and most of them in southern Serbia, in the Kursumlija region, where there are only 10 inhabitants per square kilometer. While in Europe a slight trend of people returning to the country can be noticed, in Serbia, it seems everybody prefer to live in the city. So now almost one third of the population of Serbia lives in Belgrade (Barker, Debi, 2002).

## ***PROBLEMS OF AGRICULTURE DEVELOPMENT***

Agriculture has always played an important role in European Union policy. The agricultural sector received preferential treatment due to a shortage of farming products. In the late 1950s, more than 15 million people were employed in the agricultural sector of six Member States of the European Community (accounting for around 20% of the total work force), and they generated around 10% of the national income<sup>2</sup>. Member States undertook various measures to guarantee uninterrupted food supplies, and they increased farm incomes by introducing intensified production systems.

In industrialized countries, agriculture ceased to be a major sector of production although agricultural productivity and performance indicators continued to increase. Agriculture supplies food, and its marginalization has a negative impact on the industry itself as well as the consumers. According to estimates, the European farming sector would be deprived of competitive edge on the global market since many countries have better climatic and environmental conditions for growing food. The farming industry is also faced with domestic competition, mainly as regards land which is in high demand for non-agricultural projects (business development, road construction). Rural residents are significantly less educated than city dwellers, and the added value generated in agriculture flows to other sectors of the economy.

Results of social exclusion in rural areas of Serbia show that over 38 percent of rural households in the country are now facing poverty, 37.8 percent is not able to meet even the basic human needs, whereas 4.8 percent of the population faces deprivation and poor living conditions. The worst situation is in the villages of south eastern Serbia, where as much as 43.1 percent of the population lives in poverty, while in Vojvodina 22.1 percent is facing this problem. We should not forget that in the majority of Serbian villages electricity, telephone connections, sewer, internet, cable TV, and even asphalt still considered luxuries (Daly, Herman, 1990). Schools are being closed due to the economic unprofitability, and those that remain are half empty. Ironically, the most vivid images of these regions are still used in promotional materials that advertise Serbian natural beauties. However, those interested in living in beautiful but remote landscapes are very few. The state has forgotten the village, and left it to itself, which has led to the fact that



the Serbian villages today have an average of 89 active households, with three family members and five acres of arable land overgrown with weeds. This fact shall be the focal point of the rest of this study.

For the Serbia countryside to develop, new jobs have to be created outside the farming sector. The success of this scheme depends on the presence of non-farming activities in rural areas. The majority of Serbian farms are small or medium-sized estates. Small-scale farms have a low market output, but they play an important role as sources of modest income and places of residence. The smallest farms also contribute to the preservation of the natural environment and cultural heritage. The Serbian agricultural sector is gradually divided between two types of farms. The first are low output community farms that give employment to farmers. The second groups comprises competitive and business-oriented farms with larger acreage. The main disadvantage of low output farms is that they make modest use of resources. According to the above only farms whose area exceeds 40 ESU have real growth potential because the generated income guarantees the return of invested capital, fair remuneration for workers and fixed asset investments. Nonetheless, the majority of labor and land resources remain in the hands of small-scale owners whose farms are characterized by low output, low productivity and low economic effectiveness. The key prerequisites for improvement in agricultural effectiveness are increased acreage and specialization.

Subsidization schemes addressed to low output farms that do not supply goods for the market continues to be the subject of much controversy. Low-performance farms contribute to the preservation of an agrarian structure inherited from the past. The high rate of farmland conversion to non-agricultural uses is a serious problem in Serbia and the EU, and it poses a threat to food security.

Globalization has a negligible effect on the economic situation of farms. Agricultural production is dependent on land, an immobile factor, and food products are slowly distributed across markets. Globalization leads to the industrialization of agriculture, it decreases the share of farming in the economic surplus and income generated by the agricultural sector (Epp, Roger, 2002).

The rate and progression of changes in Serbian rural areas will be determined by the level of incomes in the agricultural sector. A special role will be played by enterprising farmers who will generate revenues from both farming and non-farming activities. For the Serbian agricultural sector to become fully harmonized with EU requirements, massive spending is required to develop modern infrastructure (commodity exchanges, wholesale markets, market information systems, marketing options in agriculture, export promotion). Such measures call for the consolidation of Serbian farms and improved organization of commodity producers. Serbian's agricultural policy should promote rural areas as locations that support not only farming production, but also progress of civilization. EU structural funds are increasingly often utilized in support of the above goal.

Rural inhabitants' passive attitude towards the search for new solutions and alternative sources of income is a factor that impedes development in the countryside. The European Union's policies, including the provisions of the Lisbon

Strategy, aim to accelerate changes in rural areas and increase employment levels among its residents. There are many underlying causes of rural inhabitants' passive behavior, among them the reluctance to take up new employment, fear of change, mismatch between employee qualifications and employer expectations and lack of initiative to become self-employed.

The key obstacles to the development of contemporary agriculture include problems with the sale of agricultural produce, liberalization of agricultural trade, low incomes in agriculture, competition within agricultural branches, collapse of traditional values, etc. European markets are characterized by agricultural overproduction, and their production systems are highly efficient. In Serbia, many farms are fragmented, and their owners have problems with expanding the harvested acreage. The main factors supporting compliance with the requirements of the EU's agricultural policy include the availability of external resources and the ability of businesses, farms, food processing enterprises as well as government institutions to raise funds that promote regional growth. The European Union sets stringent qualitative requirements for food products which are traded on the common market. In order to improve the quality of their produce, Serbia farmers have to raise the level of capital investments and introduce organizational and technical changes in their estates (Lobao, Linda, 2000).

## ***MULTIFUNCTIONAL DEVELOPMENT OF RURAL AREAS – GOALS AND PREMISES***

Multifunctional development of rural areas is a concept that promotes non-agricultural activities and aims to overcome the stereotypical treatment of the countryside as a monofunctional area. Multifunctional development entails the initiation of additional non-agricultural activities in rural areas. This concept was coined in response to the problems reported in the countryside, and it was not a mere attempt to increase employment. The main goal of multifunctional development is to improve living conditions and to modernize the infrastructure in rural areas. The measures initiated as part of this approach increase rural incomes, promote enterprise development and enhance the attractiveness of rural areas as potential places of employment and residence.

Implementation of multifunctional development projects in rural areas will deliver the following benefits:

- economic – development of infrastructure in rural areas, support for investment projects, increased attractiveness of the countryside as a potential residential area, improved agricultural productivity,
- social – improvement of living conditions, educational standards and safety,
- political – higher level of political stability, integration of rural communities.

The multifunctional development of rural areas is aligned with the concept of sustainable development, and it supports the achievement of balance between economic, social and environmental growth. The measures initiated as part of multifunctional development projects promote good management practices in agriculture, they decrease unemployment, increase awareness of environmental issues and improve the living conditions of rural inhabitants. The concept of multifunctional development seeks to diversify the roles and functions played by the countryside. Multifunctionality implies the development of new areas of activity.

Every key function encompasses a number of complementary activities. The main and supplementary functions include:

- agricultural: plant and animal production,
- forestry: development of forestry and the timber industry,
- environmental: development of organic farming,
- recreational: tourism, catering services, culture and education,
- residential: construction of holiday homes, allotment gardens,
- retail and services: sale of farming produce, recreational activities,
- industrial: development of enterprise, food processing companies and other businesses,
- alternative energy sources: geothermal and hydrothermal energy,
- demographics and culture: social and residential functions, protection and management of cultural landscape.

(Nassauer, Joan Iverson, 2002) have proposed to divide agricultural functions into old and new roles. The primary functions include the production of food as well as raw materials for the processing industry. The new functions expand the traditional farming tasks to include the supply of renewable sources for the production of bioplastics, the supply of biomass for the generation of renewable energy, generation of solar and wind energy, environmental protection, nature conservation and landscape cultivation.

From all this we can easily conclude that the size of land of one farm is only a (small) part of the formula for achieving higher productivity of domestic agriculture. Everywhere in the world, under appropriate conditions, the productivity of small farms per hectare is higher than the productivity per hectare of large farms. In addition, small farms use less oil and gas per unit of product, exploit the land less and feed it more, and pollute the environment to a lesser degree (Kimbrell, 2002).

Agricultural Development Strategy of Serbia can only be successful if it is adjusted to national capabilities and resources, and therefore should not be built on a formula applied by the rich countries. Enlargement of possessions requires a substantial increase in subsidies in order to reach the European competition, and we simply do not have enough resources for that. Neglecting small farmers and small-scale farms in Serbia, instead of helping to them, will be nothing but preparation for the sell-out of the nation's arable land to foreigners.

The state ought to help the farmer continuously and solve problems systematically, and not erratically change the regulations and thus "extinguish fire." No regulation has ever brought long-term prosperity, laws need to be made. A long-term national strategy is what we need – a national rural development plan with clearly defined goals and measures for their implementation. A declaration of rural and agricultural development is needed and it can be the basis for the adoption of a national strategy for rural development. This would clear up a way for agrarian and social reforms and enable rational use of natural resources. In order to achieve this, we need three sets of practical measures which include technical cultivation of arable land through land consolidation and reclamation, voluntary consolidation of properties, but also cultivation of waterways and forming of farmers associations. Also, production of finished agricultural products needs to be encouraged, new technologies introduced into production, and rural budgets created at the local level, but also a Diaspora's development bank should be founded so its funds could be directed to rural development.

The multifunctional development of rural areas stimulates the growth of farming, tourist, economic and environmental functions. It reduces unemployment, increases farm incomes and contributes to the preservation of the region's cultural heritage. This theory is validated by the results of the discussed survey, where most respondents were of the opinion that the municipal authorities should increase spending on investments in the area of environmental protection, wastewater treatment and the construction of cultural facilities.

According to the polled subjects, the factors that are most conducive to rural development include scenic beauty, a friendly community and convenient location. The fact that none of the respondents pointed to education as a prerequisite for rural development is, however, a cause for concern.

Farmers recognize the need for the infrastructure development in the countryside. Infrastructure construction projects improve living standards and bridge the urban-rural divide. Farmers would also gladly welcome higher state subsidies which support the introduction of modern solutions and increase the competitive advantage of the agricultural sector. According to farm owners, the creation of systems that stimulate non-agricultural production would provide rural inhabitants with a vital source of alternative income.

## ***RESOURCES AND DETERMINANTS OF MULTIFUNCTIONAL DEVELOPMENT***

Rural areas and agriculture are highly diversified in terms of their organizational structure and level of development. Those variations are a reflection on the region's history, and they are also shaped by natural, demographic, economic, social and cultural factors. The multifunctional development of rural areas comprises various types of non-farm production and service activities that create new jobs. In highly developed countries, off-farm operations are regarded as the key driver behind social and economic activation of rural areas.

The development of non-farm activities entails a departure from the monofunctional character of rural areas which relies mainly on crop and livestock production. For the change process to commence, rural areas have to evolve in various directions to acquire a competitive edge in a modern economy. The process of multifunctional development of rural areas implies more than the creation of new jobs. It is a broader concept that seeks to promote local development, growth of enterprise, strategic planning, diversification of farm activities and development of infrastructure. For this reason, a comprehensive approach to rural and agricultural development is required.

The development potential of Serbian rural areas lies in the following resources and opportunities:

- absorption of surplus farm labor into non-farm activities or agricultural support services without the need for relocating members of the local community,
- creating an attractive environment for members of the rural community through landscape shaping, improved access to consumer goods, recreational opportunities, etc.,
- stimulating economic activities that complement farm work in the areas of agritourism, food processing, production and consumer services, etc.,
- creating a supportive environment for settlers from urban areas who have their own sources of income and search for healthy lifestyle options, including freelancers, pensioners,
- persons who commute to work in the city, professionals who rely on technological advancements, etc.,
- creating a supportive environment for entrepreneurs seeking new business opportunities in areas that are characterized by an abundance of natural resources, scenic environment, cheaper labor, lower taxes, closer family ties, sentimental value, etc.,
- promoting the growth of tourism in rural areas by developing tourist facilities, recreational centers, tourist accommodation, camping sites, tourist services, etc.

The main objective of measures that instill positive changes in rural areas on both the regional and local scale is to improve the living conditions of the local community, enhance the competitiveness of local businesses, create equal access to opportunities for external support and boost the economic potential of a given territorial unit. Development of rural areas is determined by numerous factors, mostly the availability of resources and the presence of a supportive environment for growth. The contributors to rural development can be divided into internal factors (a given area's strengths and weaknesses in view of the available resources) and external factors (opportunities and threats presented by the external environment).

External factors create both opportunities (i.e. a supportive environment that should be utilized by rural inhabitants) and threats (i.e. an unsupportive environment which can inhibit rural growth if adequate preventive measures are not initiated). Those factors are shaped by growth trends as well as key social and economic factors such as:

- demographic factors, i.e. trends and phenomena related to population size, migration, population structure and demographic processes,
- economic factors, i.e. the local community's purchasing power, indebtedness, economic growth, financial phenomena (e.g. inflation), economic condition, business performance and structural changes in the local economy,
- technical factors associated with the introduction of new technologies, materials, production and communication systems,
- legal and institutional factors relating to legal regulations, the presence and location of institutions in the social and economic system which create an operating framework for local enterprises and projects,
- cultural and social factors, such as changes in lifestyle, value systems, sociological processes and phenomena,
- ecological factors, including the rational use, allocation, protection and management of natural resources.

The external environment, namely the strengths and weaknesses of a given area, is shaped by the availability of material and non-material resources and limitations to resource ownership. The predominance of weaknesses over strengths can significantly inhibit local development.

- A rural area is characterized by the following internal factors:
- a municipality's economic, technical and scientific potential, human resource availability, (e.g. number of businesses, employment in various sectors of the economy),
- availability of technical and social infrastructure (e.g. coverage of sewer, gas supply and water supply networks),
- environmental condition and natural resources (e.g. forests, farmland, protected areas),
- a municipality's financial resources,

- the local authorities' involvement in local development, their management skills, willingness to create a supportive environment for enterprise growth, ability to raise funds for public utility projects,
- local community's involvement, creativity, level of education and culture (e.g. level of professional activity).

Agriculture is not the only domain of activity in rural areas where the natural environment, infrastructure and institutional framework also play an important role. For this reason, rural inhabitants can take up a variety of alternative activities that provide them with an additional source of income. Rural areas offer vast resources that enable members of the local community to derive incomes from diversified sources, including agritourism, forestry, preliminary food processing or handicraft.

## ***RESEARCH AND METHODS***

### Function of the natural distribution of land

The changing perception of people towards their environment is one of the most important factors that will affect the future life on Earth. The man's destructive treatment of nature has led to global pollution of our planet, and many other changes need to happen so that the future generations can continue their life on this planet. It takes a lot more than empty repetition of the word ecology over the years, while every year we witness worse destruction of the Earth (Epp, Roger, 2002). One of the things that is noticeable is unequal distribution of land, meaning rapport between the land owned by certain households in comparison to others. So, there are households in Serbian villages which own 20000 hectares, and there are those which own 1 hectare or less. Such uneven distribution of land does not create equal market participants, but unfair competition at the market. Here we come to a mathematical function which we call natural distribution of land. Natural distribution in its essence follows a unique pattern that starts from simple systems and moves towards more complex forms, but has equality in its center. To make this easier to understand we shall use the fact mentioned in the introductory part that in the villages of Serbia there is now an average of 89 active households, with three family members and five acres of arable land. Here we notice the pattern of numbers 3, 5 and 89, which represent the well-known Fibonacci series (Fibonacci series is a mathematical sequence which can be observed in many physical, chemical, biological and natural phenomena. It represents a series of numbers in which each subsequent number is the sum of the previous two. Indexing of the members of this series starts from zero (0,1,1,2,3,5,8,13,21,34,55,89,144 ...)).

From this sequence we can draw the function of natural distribution of land:

$F_{xa}$ -natural distribution of lands

$$F_{xa} = \frac{H \cdot h}{H \cdot p} = \frac{89 \cdot 5}{89 \cdot 3} = \frac{445}{267} = 1,6 \text{ Gcp}$$

Legend:

H – household

h- hectare

p – people

Gcp- Golden cut per man

Like we have said, there are patterns in nature and nothing is chaotically organized, and it is also known that the value of 1.6 in Fibonacci series is the golden cut, calculated by dividing one number to its predecessor, in this case 5 / 3. In order to show how important this cut is and how everything on earth follows irrefutable laws, we will mention that the size of a DNA gene is 1.6 mm, the distance between joints in mammals is 1.6 cm, breathing expands the lungs by 1.6 cm, the distance between the left and the right lung is 1.6 cm, and so on. Therefore, the ideal area of land in the villages of Serbia that should be possessed by one man is 1.6 hectare. If we go further, in observing a man who takes up 1.6 hectare of the total area of the land and multiply these portions of land by the number of people:

$$1,6h^2, 1,6h^3, 1,6h^4 \dots 1,6h^x$$

It is easily seen that there exists a fractal series starting from the simple and progressing to the more complex sequence, but it stays the same regardless of the number of times it is multiplied. A fractal is a geometric figure that can be broken down into smaller parts so that each of them is an approximately downscaled copy of the whole, meaning that such a figure is self-similar. Fractals enable us to see both the whole unit and its equity in one sample.

From all this we can conclude that Serbia currently has the ideal number of active households, with the ideal average number of household members, as well as an ideal area of arable land. The reader may say that this is too perfect, and a coincidence, but this pattern can be applied to any other village in any other country, and even to cities with minor changes, and is the root of further research because the nature works by certain patterns that must be noted, and used in the best way possible. Also, this does not represent a hypothetical mathematical function without a goal, but a validity of the natural distribution of land in the Serbian villages, so it could function in the best way possible, meaning that equal households could have equal properties, and therefore a healthy competition to their products on the market. The following part of the paper shall offer proof for the aforementioned.



## ***THE ROLE OF THE STATE***

Still, equal natural distribution of land and healthy competition in villages are not the main carriers of economic development and entrepreneurship in Serbian villages. The main carrier is the state, which, as we have said, has forgotten about the village. Besides talking about supporting agriculture as the main branch of economic progress of Serbia for past two decades, nothing has been done. The state has even contributed to the abandoning of many villages, there was a migration of rural population to the cities, farmlands are overgrown with weeds, and because of the destroyed industry of the cities there are no jobs for the citizens, let alone for the newly-arrived peasants, and thus a chaotic situation is created and it is not sustainable.

In Serbia, as much as 900,000 acres of land is left fallow every year, and last year the lease of this land brought only 1.5 billion RSD to the budget. On the other hand, the calculation of the Serbian Chamber shows that if wheat had been sowed in this area, 3.5 million tons of wheat could have been harvested in one year and as much as 91 billion earned. The current strategy of Serbian agriculture is based on the principles that the government has been imposing on farmers since World War II, the enlargement of farms and the principles of industrial agriculture. It seems that our, Serbian experts are not familiar with the conditions under which farmers work in the developed countries, nor with the states of agricultural land in these countries, and continue to insist only on the maximizing of property. In doing so, they use incorrect and incomplete data from around the world, which can lead to further damaging of the Serbian agriculture. In Serbia, industrial agriculture is still called *Modern agricultural practices* - even if such measures are no longer *modern*. Industrial agriculture is characterized by monocultures (large areas planted by one and the same crop), a small variety of crops, relying on chemicals and other inputs, and the separation of plant and animal agriculture. This agriculture asks for the enlargements of lands and it depends on high state subsidies to farmers, but is unhealthy for the environment, the climate, our bodies and the rural economy.

Farm size and yield per hectare are not the only criteria for successful agriculture. Farm profitability should be set in the center of discussion of Serbian agriculture rather than its size and yield per hectare. During the transition in Serbia large farms came into possession of silos, processing facilities and shops, and they can now make up for the possible loss in primary production through processing and selling foods. Both large estates and the small ones which depend on crop production and small domestic subsidies cannot compete with highly subsidized European agriculture. For greater profitability of small farms in our country, the key is to connect plant and animal production, and increased profit from crop production by breeding livestock, together with subsidies same as in the countries from which meat and other foods are imported in the existing duty-free regime.

Lot more than the increase of property or raising the yield per hectare is needed to improve the situation in Serbian agriculture. When we talk about

increasing the yield per hectare, instead of increasing earnings through increased production of high-profit vegetable crops and meat, our experts seem to be unaware of the consequences of over-intensification of agriculture. The insistence on increasing the agricultural yields has led to considerable soil degradation in Europe and even more in the U.S.A., which is a fact our experts never mention. They refer to the high yields of European agriculture but apparently have no information about the consequences of these successes. The success of the European agriculture stands on high subsidies allowed to their farmers and the state investments in agriculture which - measured in money per acre, including the total arable land and total investment, at least four times greater than in Serbia. Furthermore, in the old part of EU farmers generally own or co-own silos and mills, cold storages, dairies and slaughterhouses - which significantly increases their income earned from primary production.

From all this we can easily conclude that the size of land of one farm is only a (small) part of the formula for achieving higher productivity of domestic agriculture. Everywhere in the world, under appropriate conditions, the productivity of small farms per hectare is higher than the productivity per hectare of large farms. In addition, small farms use less oil and gas per unit of product, exploit the land less and feed it more, and pollute the environment to a lesser degree.

To achieve the European level of efficiency, national agriculture should introduce other measures accepted by European farmers, and these do not come down to mere increasing the property. The way to increase the productivity of agriculture in Serbia can only go through increasing the profitability of small farms and their protection, and can be achieved by the following:

- Measures to prevent dumping, i.e. to prevent duty-free imports of foreign agricultural products and food at prices lower than production costs;
- Better interlinking of crop and livestock production;
- Better interlinking of primary production, processing and trade, i.e. the ownership participation in the primary production in the entire food chain;
- Increased subsidies to primary agricultural production;
- Postponement of the implementation of the Agreement on Cooperation and Partnership (PCA) signed with the EU, according to which foreigners shall be allowed to buy agricultural land in Serbia as of 2014.

Agricultural Development Strategy of Serbia can only be successful if it is adjusted to national capabilities and resources, and therefore should not be built on a formula applied by the rich countries. Enlargement of possessions requires a substantial increase in subsidies in order to reach the European competition, and we simply do not have enough resources for that. Neglecting small farmers and small-scale farms in Serbia, instead of helping to them, will be nothing but preparation for the sell-out of the nation's arable land to foreigners.

The state ought to help the farmer continuously and solve problems systematically, and not erratically change the regulations and thus "extinguish fire."

No regulation has ever brought long-term prosperity, laws need to be made. A long-term national strategy is what we need – a national rural development plan with clearly defined goals and measures for their implementation. A declaration of rural and agricultural development is needed and it can be the basis for the adoption of a national strategy for rural development. This would clear up a way for agrarian and social reforms and enable rational use of natural resources. In order to achieve this, we need three sets of practical measures which include technical cultivation of arable land through land consolidation and reclamation, voluntary consolidation of properties, but also cultivation of waterways and forming of farmers associations. Also, production of finished agricultural products needs to be encouraged, new technologies introduced into production, and rural budgets created at the local level, but also a Diaspora's development bank should be founded so its funds could be directed to rural development.

## ***RESULTS AND DISCUSSION***

Revitalization and survival of Serbian villages primarily depend on the modernization of agriculture that has never actually happened in Serbia and, consequently, on the modernization of rural areas as a framework for this economic activity. Serbia needs a rationalized settlements' network with a clear definition, urban and spatial, which can be a village, a small town, a small or a large city, or even a metropolitan area, where most of the population would live in urbanized units adapted to meet the modern human needs, and where the demographically vital part of the population could practice modern, up-to-date agriculture. Therefore, the state should first enable the allocation of subsidized loans for the purchase of old buildings (these loans are now an option only for buying newly-built homes), and once the deprived family is settled, these people can start a production that would later enable them to return a small loan for the purchase of rural property. Also, production programs tailored to the natural conditions and traditions of manufacturers need to be designed, necessary funding must be found, primarily in local revenues, and pilot projects in agricultural cooperatives introducing new models of cooperative-assemblies should be made because farmers in Serbia today are very poorly organized. People living in rural areas should have living conditions similar to those in the city and available kindergartens, schools, health care, culture, fashion, entertainment, sports, etc. This can be achieved by the predictability of agricultural policy and the fact that people will be able to plan what they will do and how much they will earn in the next couple of years. Only then will a young man be interested in staying there. The government should help young people who have the machinery enlarge their farms by purchasing land or taking perpetual lease on the land, so they can work. At this point, these young, small farmers are not able to compete with the large producers in getting the arable land. If this were to change, it would lead to an increased production and competition in the country, increased processing of agricultural

products by applying new technologies, and increased birth rate and a guarantee that the young will remain living in the villages and preserve natural resources.

When it comes to production, emphasis should be placed on the production of organic agricultural products under controlled conditions. Organic production of agricultural products in small farms will soon represent one of the four main sectors for creation of millions of new jobs in the 21st century.

Small farms are more labor intensive. With appropriate technical and infrastructural support, yields from small farms that use crop rotation, manure, natural pesticides and other sustainable methods, can become equal to larger farms that are often more harmful to the environment. In addition to that, it is estimated that organic farming employs one third more workers than conventional farming.

Only the land of high fertility and quality has the potential to maintain productive capacity, with minimal adverse impacts on the environment. This land is characterized by high content of available nutrients, good aeration, water infiltration and retention, stable structure and high biological activity. One of the conditions for the establishment of organic production is unpolluted soil in which content of harmful substances is below the maximum allowed.

The fertility of a soil is determined by its composition and properties - morphological, physical, chemical and biological. Seen from the aspect of the land's suitability for use in agriculture, the soil's potential in the Republic of Serbia is classified into eight classes, where the first four classes are the better land, and the classes 5 - 8 include areas mostly unsuitable for cultivation. Seen for the Republic as a whole, the ratio of land suitable and unsuitable for treatment is almost identical. Restrictions on the conduct of intensive agriculture are the least strict in Vojvodina, and the strongest in Kosovo and Metohija. The latter area, similarly to the greater part of central Serbia, is characterized by big differences in the natural fertility of soil in narrow geomorphologic units.

In general terms, with approximately 2.1 million hectares of land, of I and II quality class, representing 57% of total arable, and 44% of arable land, significant areas in Serbia offer soil types on which with appropriate agricultural technology, good choice of varieties and hybrids, etc., high, stable and profitable yields of various crops can be achieved.

Most of the rural population depends on agriculture and despite a slight economic growth in the recent years, the rural communities still earn less than the urban population. The economic policy for the rural areas should support businesses and initiatives which help a particular rural community to take advantage of its resources and potentials in a form of financial stimulation or education, or both.

People living in the rural areas must be provided an access to the basic infrastructure to ensure a high quality of life as well as an easy access to information and to the "outer" world. Good infrastructure is also the key for economic development and in-migration both of which are crucial for preservation of the rural areas.

Despite the increased interest in rural housing in the recent years, the access to a home in the rural areas remains highly inaccessible due to highly restrictive building policy. Limited rural sprawl helps preserve the rural environment and character but at the same time, it often hinders development of the rural communities and forces young people to move to urban and suburban areas. In order to keep the rural areas alive in their traditional form, the building policy should be reviewed because the problem with accommodation in the countryside cannot be solved without a larger number of newly built homes. In addition, the current situation poses a risk of dramatic change of social structure of the rural communities as homes in the rural areas remain mostly accessible only to the wealthy.

The rural communities should be provided an equal access to quality education, health care and services as the urban population is.

The countryside, unfortunately, is not what it used to be and is now facing a number of environmental challenges. To make things worse, the environmental issues in the rural areas are closely related to the rural economy which is why they are especially challenging to solve. Intensive agriculture involving the use of enormous amounts of artificial fertilizers polluting the groundwater and pesticides which are severely toxic to the environment and human health provides a living to the majority of members of the rural communities. Organic farming and sustainable agriculture eliminate the majority of environmental issues related to agriculture; however, they do not bring an instant result which poses the greatest obstacle for most rural communities. Farmers who make the transition from conventional to organic agriculture should therefore be provided financial support during the transition period.

Most rural communities have important historical and natural heritage which is of major importance for the local and sometimes also for national history and biodiversity/geodiversity. In order to protect the historical and natural heritage, the rural communities should be provided assistance in expertise and funds.

Urbanization and suburban sprawl, industrialization, intensive agriculture and globalization have dramatically changed the rural areas in both their appearance and character. Conservation of the rural areas is of national importance for several reasons which are why it is crucial to conserve the areas which managed to retain their distinct character. In addition, the areas that have not yet been transformed completely should be stimulated to reverse the process which eventually leads to disappearance of the rural areas and communities. Rural regeneration, however, is not about reversing the process of modernization and progress in the countryside. It is about preservation and revival of natural and historical heritage and stimulating the rural economy at the same time.

Protection of the rural areas translates into protection of the landscape which went through a dramatic transformation over the last few decades. Rural regeneration does not automatically guarantee preservation of the landscape because the use of the land for crop production and pastures has considerably changed the landscape, while the conventional agricultural methods pose a serious

threat to the environment. Rural regeneration therefore requires a complex approach which must stimulate the rural economy and help protect the environment at the same time. An excellent example are projects which provide education and training on organic farming which helps protect the environment without effecting the rural economy.

Conservation of the rural areas is also of major importance for conservation of diversity when it comes to both the country's social and natural diversity. Rural communities are very different from the urban ones, but they are of vital importance for the country's overall development including the national economy. Adoption of environmentally-friendly agricultural methods and businesses, on the other hand, helps preserve biodiversity and healthy environment which dramatically improves the quality of life of the rural communities both directly and indirectly. Clean and healthy environment which thrives with life provides a major asset for the so-called countryside tourism which can be a major contributor to the rural economy and provide the urban population a getaway from the city buzz and an opportunity to enjoy tranquility and beauty of unspoiled nature.

Many rural areas also have a rich historical heritage of national importance which is at risk of being lost forever. Fortunately, the most significant buildings and areas are protected from undesirable alterations by the Government Agencies and by a series of laws. In addition to being of major national historical and cultural importance, the designated areas and buildings also play an important role in the community's identity and often also in rural economy by developing tourism.

Lastly, conservation of the rural areas is also of vital importance due to food production. The UK imports nearly 50% of all its food requirements which raises serious concerns about the effects of a potential disruption of food imports. So if the country wants to reduce its dependence on food imports, it must not only conserve the rural areas but regenerate the countryside completely. This, however, requires a series of measures which must be adjusted to each rural area individually as each rural community faces specific challenges.

Preservation of nature in the rural areas has not received enough attention in the past. Traditionally, the rural areas and unspoiled nature were believed to go hand in hand but in reality, the nature was and still is seriously threatened by the conventional agricultural methods.

Agriculture is the very most important source of survival in the rural areas. At the moment this paper is written, the UK farmers do not produce enough food to feed the entire population which made the country dependent on food imports. This raises concerns about the country's food security and increases the pressure on the rural communities to produce more food which, however, seriously threatens the efforts to preserve nature. The environment in the rural areas has been under increased pressure for most of the last 100 years and the intensification of food production with the use of conventional agricultural methods poses a risk of irreparable damage to the environment without solving the food security issue.

Food production rates increased dramatically since the mid-20th century thanks to mechanization, artificial fertilizers and chemical pesticides. However,

chemical fertilizers and pesticides are among the most serious environmental polluters and directly threaten the nature and human health due to their toxicity. Agricultural mechanization has increased farm output and reduced the physical labour at the same time, however, it made the farms dangerously dependant on fossil fuels which could cause serious problems in the future considering that the fossil fuels are not available in limitless amounts.

Reducing the country's dependence on food imports and preserving nature in the rural areas at the same time is not an easy task as the same measures that increase food production increase damage to the environment. The best solution for preservation of nature in the rural areas is organic farming which reduces the pressure on the environment by strict avoidance of toxic chemicals and stimulation of biodiversity as an integral part of organic farming methods.

Organic farming also provides a stable income to the rural communities as it eliminates the expenses for chemical fertilizers and pesticides, while organic food reaches higher prices on the market. However, the yields are typically slightly lower than in conventional agriculture which means that it does not solve the food security issue although the yield of some organic farms is comparable to that of the conventional ones. In addition, organic farming typically requires more physical labour which means that it increases employment opportunities in the rural areas.

Other sustainable agricultural methods such as perm culture also offer a potential solution when it comes to both food security and preservation of nature in the rural areas. The transition from conventional to sustainable agriculture, however, is taking place extremely slowly also due to the fact that sustainable agricultural methods radically contradict the conventional ones and it takes a few years to complete the transition. This poses a risk of permanent damage to the environment which is why it is necessary to assist the rural communities in their transition to sustainable agriculture in both financial and technical aspects.

Rural communities have a unique character which makes them very special. They have a very strong sense of community and tend to have much closer relationships than the urban population. Their distinct character increases the country's diversity and enriches the culture. Protection of the rural character is therefore just as important as the protection of rural areas themselves.

The rural character has been taken for granted for too long which has resulted in dramatic changes within the rural communities and their character. One of the greatest challenges for conservation of the rural areas and their character is the housing problem which has become especially obvious in the recent years. In 2010, more than 90 percent of the UK's population lived in the urban areas and the percentage of the urban population is estimated to continue to increase over the years to come. However, this is not so much related to flight from the rural areas as it is to housing difficulties in the countryside.

With the aim to preserve rural areas, highly restrictive building regulations were adopted. They have achieved their main goal – prevention of urban and suburban sprawl into the rural areas but they have also resulted in the rise of prices of homes in the rural areas. As a result, homes in the countryside became

unaffordable for the majority of population which in turn poses a risk of permanent change of the rural character. To protect the traditional rural character, the building authorities will need to reconsider the restrictions concerning new homes in the rural areas because the housing will not become more affordable as long as the offer of new homes does not increase.

Economic development of rural areas is another factor that can both help preserve and change the rural character. Whereas the traditional economic activities enhance the rural character, factories and highly competitive economic environment dramatically change the character of the rural communities. To conserve the rural areas and their distinct character, the governmental and non-governmental programmers should therefore stimulate the traditional rural economy and businesses, and agriculture in the first place.

Although rural areas can hardly exist without the agricultural sector, the latter raises more issues than it resolves. Intensive agriculture that became the predominant agricultural method in the 21st century has seriously altered the rural areas and made farmers dependant on chemicals which are seriously harming the environment as well as human health. Many farmers gave up the conventional agricultural methods for the organic ones, but many more are hesitating as organic food production requires radical changes in the adopted agricultural methods. Since conventional agriculture is unsustainable in the long term, farmers should be provided assistance in education, training and funds to adopt sustainable agriculture which is the only way to conserve both rural areas and rural character.

The countryside and rural areas used to be a synonym for clean air and intact nature. Unfortunately, many rural areas have become unhealthier to live in than large cities despite all the traffic and industry. Conventional agriculture is posing one of the greatest challenges to rural conservation and regeneration efforts because it involves the use of highly toxic chemicals to control the pests and increase food production. These may provide a decent income to the farmers but they have a devastating effect on human health as well as the environment.

Rural areas can be preserved and revived only with stable local economy which can seem to make rural regeneration and preservation of the nature incompatible. However, the task is not as difficult as it may appear. The solution is in organic farming which has proven to be an excellent alternative to conventional agricultural methods. Organic farming is based on strict avoidance of chemicals for animal and crop production which means that it is not harmful to human health or the environment. On the contrary, it helps preserve nature and increase biodiversity because it is based on the use of wildlife species for pest control and increasing the yields. These may be slightly lower than in conventional farming, however, most organic farmers make larger income because they do not need to buy artificial fertilizers and pesticides as well as due to higher prices of organic food. Organic farming does not necessarily involve more physical labor but it requires good education and takes a few years to yield results as it heavily depends on the natural balance which cannot be created within a single year.



Great potentials for rural economy lie in countryside tourism. Sadly but true, most kids living in urban and suburban areas have never in their lives seen farm animals. Trips to the countryside to experience the rural life have therefore become increasingly common. Most popular destinations are animal farms, wineries, family-run cheese factories, and “pick-your-own” fruits and vegetable farms, and many people come to the countryside to find peace and enjoy the nature. Increased tourism also provides a major asset for small businesses such as restaurants, family-run bed & breakfasts, horse riding facilities, etc. as well as for traditional craftspeople that otherwise often face difficulties when trying to sell their products and may not be able to make a living from crafting alone.

In addition to farmers and small business owners, rural areas are also ideal for people who work from home as well as for Internet-based business owners whose success does not depend on an attractive office/shop location. They increase the area’s income without affecting the environment in any way but it is crucial to ensure the entire necessary communications infrastructure even in the most remote areas and of course, affordable housing. They may not be typical members of the rural communities, but they do increase diversity and can stimulate local economy in many ways. People who are not typical inhabitants of rural areas can also help rural communities deal with many issues by providing a different point of view of the challenges they are facing.

In this section we have shown and proved by detailed scientific approach that rural economy in Serbia has great potential, which, unfortunately, remains unexploited due to wrong policies and wrong thinking. However, we should not yet reject the idea that we are late for the development of rural areas. At this point, the essential factor is the state and their readinesses to support this type of economy, which will in long term bring it back great benefit.

Based on the case study, which will be called "virtual village", in the rest of this paper we shall try and show how everything presented earlier should work in practice.

## ***VIRTUAL VILLAGE***

For the model of virtual village we shall use the fact that Serbia has an average of 89 active households with three family members and an average of five acres of arable land, and this is the case in the majority of villages in Serbia, which is why the authors did not choose a specific village for this case study. We shall then add 1/3 of the area covered by roads and infrastructure the area described. If we then change our perception, and we imagine that the land is a man’s skeleton, and the roads, infrastructure and residents circulating the village are a man’s vascular system, blood circulation and veins, we will get a clear insight into how these roads and infrastructure should be built. As we know, the human vascular system must work perfectly, and the blood must flow equally through all parts of the body

because otherwise it may cause a variety of diseases and in this sense infrastructure system is the same, a system of roads and fields across which the population moves must be perfect. Fields must not be crossed by roads, must not be curved, housing and other facilities should not be built chaotically, roads need to be asphalted, etc.

The state has played the key role in the creation of a virtual village. It has invested in the infrastructure, restored the kindergartens, schools, cinemas, and theaters. The people now have the ability to do their field work and follow trends because there are boutiques, they can enjoy diverse cultural program as there are theatres and cinemas. The young can do sports in the newly-opened village sport clubs and enjoy the nightlife in the newly-opened clubs.

For this investment to pay back, the population is engaged in growing organic products, under strictly controlled conditions. In the village, there is a laboratory that constantly monitors the quality of the products. The villagers are obliged to pay the investment back in the next 20 years. 70% of their products will be given away to the state without any financial compensation, as an annuity, but each farmer can use the remaining 30% of his products in the way he thinks best. The logic of this agreement says that no sooner than in two decades the residents of this virtual village will begin to enjoy 100% of their product, however, the current 30% is sufficient for their needs and sales, and the long-term focus is on future generations.

Since virtual village produces organic foods, it therefore protects the environment and healthy living of its residents. For this reason, it is supplied with electricity from renewable energy sources. The average household spends an average of 600kv monthly, and since we said that our virtual village also has other facilities, the average consumption in the virtual village per building would be 1500kv per month, which makes up a total of 133500kv per month. In the virtual village, electricity is generated from three different sources because it is well known that with renewable energy it is not desirable to have a single source of supply. Virtual Village has installed solar panels of 2 kV for individual needs, a mini-hydro power plant producing 200 kV for the village, and a small windmill of 200kV. Since there is a surplus of electricity, the virtual village can distribute its electricity surplus into the power distribution system for a financial compensation. For the purposes of thermal energy virtual village uses methane, which is distributed through the networked system of tubes, and obtained from faces of people and the domestic animals in their possession.

The school system is organized so that the future generations learn the skills and scientific techniques that will prepare them for new achievements in agricultural production. There is a scholarship fund for the best students who are sent to high schools and colleges, on condition they return to the village and stay there for the next ten years. The Fund is financed by all the villagers. Also, the same fund is organized so that it can be used to help a villager in difficulty, to purchase modern machinery, new technologies, or to invest in new ideas and investments.

The residents of virtual village are equal competitors in the market. All the villagers have the same amount of land on which they produce organic crops. Residents compete for the market by increasing the quality of their products and thus earn higher incomes that they continue to invest in new technologies or modern machinery, improving quality, buying property in another village in order to expand their activities, etc.

Recognizing the need of the modern man to escape from the hubbub of the city at least for a weekend, the inhabitants of the virtual village made a clear strategy defining the ways to motivate the people by their way of life, cultural and artistic programs, ecologically healthy nature, sights, history and folklore. The total revenue of rural tourism, is invested in the village development fund, or invested in a quicker paying back the funds the state has invested in the construction of the village.

Clear agrarian laws are implemented by local governments and these governments monitor their implementation on the ground. Every local not cultivating his land shall be punished and his land taken away from him and distributed to other residents. Agricultural areas cannot be sold to foreigners under the pretext of the entering of direct foreign investments. Direct foreign investment bring dirty technology to the village, exhaust the natural resources of the village, exploit the labour force, etc. also, once they lose interest to participate, they leave the ruined village. Recognizing these hazards, the government can take care of this small area of the country, allowing rental to interested foreign investors, who would invest in the country, improve rural life, constantly modernize it, because of their interest in the virtual village, which offers healthy food, fertile land, cheap labour, etc.

Setting the virtual village as an organization, the townspeople take inputs (money, materials, energy, and labour) transform them through organic product and return as outputs in the region. The virtual village as the organization strives to continuously adapt to external factors (global, political, economic, legal, social, technological, etc ...) that influence and shape its existence. To accomplish its goal of placing organic products on the market, new investments, modernization of machinery, building better relationships of villagers and their suppliers and customers are needed. Taking into account the external influences, the virtual village attracts internal and external stakeholders. Residents of the virtual village take care of the profits, objectives, managing farms, wages for hired labour, securing their jobs. On the other hand, residents take care of the quality and the price of the product. Residents perform their duties on time. The state and local residents provide further support for community development and environmental protection of virtual villages.

## ***CONCLUSION***

Serbian's agricultural and rural development stalled under communism. However, Serbia now has access to modern technology, science, and can reorganize its agriculture in response to market forces. This creates the possibility for Serbia to catch up fast. With modern genetics and management, its dairy herd can leap forward in milk per cow. Of course, the membership in the European Union will limit this somewhat, but with the end of quotas, the lower wage rates and cheaper land could see the establishment of dairy herds in Serbia by investors from UN. This would dramatically restructure the dairy industry, with fewer small herds and lower levels of labour per cow. It would also increase milk per cow dramatically. This would mean fewer jobs in dairy on the farm, but more milk production. The dairy processing industry is already restructuring, but more will happen.

Similar changes can occur in other parts of agriculture. Wage rates in agriculture will rise, but workers will be fewer. The rural population, which is already shrinking, may drop more rapidly, especially in areas with few non-agricultural jobs. Even now, the villages we have visited have a lot of old people, but not many young families.

As the national economy does better, more jobs will be created, but usually not in the villages. People can commute from places near population centers, but the more rural areas will probably experience long-term decline. As the old people die, the rural population will shrink further. Of course this affects rural institutions, such as churches and schools. Once the transition stabilizes, income will be higher, but the rural communities will be different. Community leaders and local governments should plan accordingly.

If tourism is a possibility, can it be fostered? Does the area have something that would be interesting to a tourist? Would the diaspora like to visit their home village and see where their families lived? Would local family history center help the descendants of a former villager find the old family home, or some living relatives? Could the community build a couple of traditional houses from 1600, 1800, and 1900, with furnishings that illustrate the lifestyle? Are there sites of historic battles nearby? Was there an important monastery or castle or church in the area? Are there locally produced souvenirs that might be a keepsake for a visitor and create jobs for someone in the community?

Things like this don't just happen. Someone has to have some vision and organizational skills to develop this potential. People must welcome visitors and those involved in tourism must have language skills and outgoing personalities. It is easy to overstate how easy this is, or how easy it is to anticipate what an outsider will find interesting. Every village cannot do the same thing, but if the traditional rural life is going to survive, it must adjust to changing circumstances. Often we don't understand how fluid tradition is. When people sit down to discuss the past, they often romanticize how attractive the simple life in the village was. Usually it

was a lot of very hard work for very little gain and a tough life. Few people that want to go back to farming like their grandfathers would want to live like their grandfathers, with no electricity, farming with horses, having a very limited diet in the winter, and the rest of the “good old days.”

Nevertheless, the sense of community and close relationships, knowing your extended family well and other aspects were and are positive. Keeping rural communities vibrant is a goal worth pursuing.

#### Acknowledgements

The authors would like to thank all those people who live in the country today, with no clear policy and state aid and struggle every day to feed the humanity.

## **REFERENCES**

- [1] Bailey, Clayton, 2002. “Where Have All the People Gone?” *Guardian Weekly*, June 27-July 3, p. 22.
- [2] Barker, Debi, 2002. “Globalization and Industrial Agriculture.” In Andrew Kimbrell (ed.), *The Fatal Harvest Reader: The Tragedy of Industrial Agriculture*. Washington: Island Press.
- [3] Bridger, Jeffrey C., Aaron J. Harp., 1990. “Ideology and Growth Promotion.” *Journal of Rural Studies*, Vol. 6, No. 3, pp. 269-277.
- [4] Daly, Herman, 1990. “Toward Some Operational Principles of Sustainable Development.” *Ecological Economics*, Vol. 2, pp. 1-6.
- [5] Epp, Roger. 2002. “The Rural as Polis: Towards a Tradition of Agrarian Political Thought.”
- [6] Lobao, Linda M., 2000. “Industrialized Farming and Its Relationship to Community Well-Being: Report Prepared for the State of South Dakota, Office of the Attorney General.” Expert testimony for the United States District Court, District of South Dakota, Central Division.
- [7] Nassauer, Joan Iverson. 2002. “Agricultural Landscapes in Harmony with Nature.” In Andrew
- [8] Kimbrell (ed.), 2002, “The Fatal Harvest Reader: The Tragedy of Industrial Agriculture”. Washington: Island Press.

## **PUBLIC WAREHOUSE SYSTEM IN SERBIA**

*Aleksandar Todorovic, MSc<sup>24</sup>*

*Vladimir Varadjanin, MSc<sup>25</sup>*

### **ABSTRACT**

*The Law on Contracts and Torts defines property relations related to the storage of goods. The specified Law defines the warehouse receipt as document by virtue of which the warehouseman confirms the receipt of goods. The warehouse does not need any special permits for the aforesaid operations. Therefore, the issued warehouse receipt has a limited use only. In practice, in terms of trade and pledge, the warehouse receipt has a limited use only if its beneficiaries trust each other.*

*However, the need to provide a higher level of legal security as well as develop the sales and distribution of agricultural products through «the exchange of securities» resulted in the necessity to establish the system of public warehousing and warehouse receipts for which purposes it was vital to pass the separate law by virtue of which the public warehouse shall issue the warehouse receipt to the owner of agricultural products as a certificate of storage of agricultural products. The warehouse receipt consists of two elements: Receipt and Warrant. Given the specific characteristics of agricultural products, experience from other countries (Poland) instructed to distinguish this type of products from other industrial products as the overall system arrangement did not yield positive results.*

**Key words:** *Public Warehouse, Warehouse Receipt, Pledge, Agricultural Products, Agricultural Loan*

**JEL Classification:** *Q19*

**UDK:** *347.767(497.11) 339.173(497.11)*

---

<sup>24</sup>Aleksandar Todorovic, Administration for Joint Services of the Republic Bodies, Belgrade, Serbia, atodoros@gmail.com, atodorovic@uzzpro.gov.rs

<sup>25</sup>Vladimir Varadjanin, Preschool Teachers' Training College, Kikinda, Serbia, varadjaninv@yahoo.com

## ***INTRODUCTION***

The public warehouse system is the new concept of warehousing agricultural products and running business with these products in Serbia. The reason of putting this system in place lies in the necessity to ensure full security of warehousing of agricultural products. The Law on Public Warehouses for Agricultural Products (“Official Gazette RS” No. 41/2009) arose from the need to thoroughly define the relations between public warehouses, farmers and financial institutions, primarily, banks, at this stage. The system of public warehouses has been employed in several countries and it turns to be an important method in generating relations which improve business in sales and distributions and placement of agricultural products. So far, the system has taken its roots in Bulgaria, Hungary, Slovakia, Kazakhstan, Ukraine.

## ***MAIN REASONS FOR PASSING LEGISLATION IN THE AREA OF WAREHOUSING OF AGRICULTURAL PRODUCTS IN SERBIA AND PRACTICE BENCHMARK ANALYSIS***

For business entities, it is more cost effective to deposit their goods to the professional warehouse and pay the adequate fee, than to build their own storage space which would not be constantly used and which would produce warehouse costs significantly higher than the fee paid to the professional warehouseman for this type of service.

The Law on Contracts and Torts (“Official Gazette of SFRY”, No. 29/78, 39/85, 45/89, 57/89, “Official Gazette of SFRY”, No. 31/93, 22/99 a d 44/99) defines the property relations in warehouse operations including the warehousing of agricultural products (Article 730. – 748. of the Law). The afore said Law prescribes the warehouseman’s obligations as follows:

- in line with the warehouse service contract, the warehouseman shall receive and store goods and undertake all required and/or agreed measures for the purpose of keeping goods in particular state. The warehouseman shall also hand over goods at the request of the depositor or any other authorized person. The depositor shall pay certain fee to the warehouseman for the aforesaid services (Article 730, Paragraph 1 of the Law);
- if based on the law the warehouseman is authorized to issue the warehouse receipt for the received goods, the warehouseman shall issue the warehouse receipt to the depositor at the request (Article 740 of the Law).

Besides the fact that the Law on Contracts and Torts prescribes goods warehousing, actions to be undertaken by the business entities in this type of

business, their rights and obligations, this system in general has not been widely applied in practice. The storage of goods is not usually followed by the warehouse receipt as the security with all elements prescribed by this Law. Therefore, the goods warehousing is often reduced to the application of legal regulations which govern the deposit operations and accordingly apply to warehousing operations, pursuant to Article 739 of the aforesaid Law, unless otherwise defined by warehousing rules. So far, there have been no specific regulations by virtue of which the warehouse receipts are to be issued for the received goods by the authorized warehousemen. In the warehouse receipt system, in line with the Law on Contracts and Torts, it is believed that all business entities who receive the goods other than theirs are entitled to issue the warehouse receipts as registered activity. Those business entities have the so-called status of “public warehouses”.

In the practice, so far, the authorized warehouses have issued the warehouse receipt in its full form along with the receipt and warrant in line with the Law on Contracts and Torts. However, the issued warehouse receipts did not have major effects (non-use and/or poor use of the warrant for the purpose of providing collaterals in lending relations between the goods owner and banks, sales and distribution of goods submitted for storage purposes did not take place by issuing the receipt and warrant). The issued warehouse receipts mainly had the function of certificate of depositing the specified amount and type of goods. Often, the warehousemen used to issue the receipt by virtue of which confirmed the receipt of goods for storage purposes. The receipt issued in the aforesaid manner did not have legal nature of securities and cannot be assigned for the purpose of assigning the rights to the goods.

The problem of excluding the overall effects in running business with the warehouse receipts in the practice, in line with the opportunities provided by the Law on Contracts and Torts, is essentially the problem of institutionalization. Namely:

- reliable goods warehousing depends on the business, organizational, staffing and technical characteristics of warehouses which have not been assessed and verified in the systematic and prescribed manner;
- business entities who have certain rights to goods, whether they are owners of goods who submit the goods to the warehouseman for storage purposes or creditors who have the pledge on the stored goods, must determine themselves, in each particular case, whether and to what extent their rights are protected and safe;
- Should the rights be violated due to the warehouseman’s failure (for example, due to the damage to goods, or in case of unauthorized sale of stored goods to the third party, etc.) the collection of claims (payment of damage) depends on the solvency and available property of the warehouseman. The collection is often associated with time-consuming court procedures for settling such claims;
- As a rule, in order to run warehousing operations, no special license is required (certificate issued by the competent authority as proof of compliance with the requirements to run this type of business). This resulted



in the issuance of the warehouse receipt with the limited use (without reaching its purpose in trade and deposit) only if its beneficiaries trusted each other;

- The entire system does not have the mandatory nature as the specialized control of warehousing operations to be performed by the competent authority based on the established procedure has not been prescribed.
- This legal and de facto situation does neither create conditions to fully store the goods in line with the Law on Contracts and Torts, in complete safety for business entities that have certain rights to the stored goods, nor provide for legal actions prescribed and allowed by this Law when it comes to the warehouse receipt as the security. Ensuring the safety and regulatory structure is a must in the storage of any type of goods. However, they are especially important for the storage of agricultural products due to:
  - natural susceptibility and short shelf-life of raw or semi-processed agricultural products;
  - the need to clearly establish the warehouse system of agricultural products in the manner that is reasonable, applicable and beneficial to all farmers irrespective of the production size;
  - -the importance of agriculture to the economy of the Republic of Serbia.

The public warehouse system is the new concept of warehousing agricultural products and running business with these products in Serbia. The reason of putting this system in place lies in the necessity to ensure full security of warehousing of agricultural products. The Law on Public Warehouses for Agricultural Products ("Official Gazette RS" No. 41/2009) arose from the need to thoroughly define the relations between public warehouses, farmers and financial institutions, primarily banks, at this stage. The system of public warehouses has been employed in several countries and it turns to be an important method in generating relations which improve business in sales and distributions and placement of agricultural products. So far, the system has taken its roots in Bulgaria, Hungary, Slovakia, Kazakhstan, Ukraine.

In Bulgaria, the system became operational in 1998. Year 2000 was the first year when the system was successfully utilized. Today, there are 47 authorized warehouses in Bulgaria, with the overall storing capacity of 500,000 mt. In the last five years, the financial institutions in the country approved \$70 million worth of loans within the system.

The relevant legislation in Hungary was passed in 1996 and included a long list of goods like wine, sugar, fertilizers and cigarettes. Quite a few banks (over 10) were included in the warehouse receipt system. The system offers storage space in customs' warehouses which store goods that are designated for import and export.

In the Slovak Republic, the Law on Public Warehouses was adopted in April 1998. There are several banks that financially support the system, with the Agricultural Bank playing the prominent role. In collaboration with the EBRD, the Agricultural Bank provides loans based on warehouse receipts. There are 60 authorized warehouses in Slovakia, and, based on this system, a total of \$55 million worth of goods has been marketed on average

In 2002, the EBRD and USAID launched an initiative for the implementation of the warehouse receipt system in Kazakhstan. Relevant legislation and bylaws were also passed. As of 2002, when the system became operational, several banks have been providing loans based on the warehouse receipt system, and 15 warehouses have become members of the Indemnity Fund. In 2003, the total value of loans granted on the account of the system stood at \$22 million.

Ukraine joined the public warehouse system in 2002 with the assistance of EBRD and USAID. At the moment, all required system components are in place, with the exception of the Indemnity Fund. There are over 60 authorized warehouses in Ukraine which issued the first warehouse receipts following the 2004 harvest. Ukraine has also developed a central E-registry, and the amount of money granted by international and local financial institutions, based on the system, amounts to \$ 500 million

The public warehouse system is currently undergoing the implementation in Russia, Romania, Moldavia and Turkey. For this very complex system it is of vital importance to note at the outset of this analysis the need to successfully implement this system in underdeveloped but ambitious agricultural systems and lay a basis to raise the level of running business in agriculture. (<http://www.kompenzacionifond.gov.rs/index.php?page=20-sistem-javnih-skladista>).

## ***REGULATION OF THE PUBLIC WAREHOUSE SYSTEM ACCORDING TO THE LAW ON PUBLIC WAREHOUSES OF AGRICULTURAL PRODUCTS***

The Law on Public Warehouses of Agricultural Products (“Official Gazette of the RS”, No. 41/09 – hereinafter referred to as the Law on Public Warehouses) as established a comprehensive system of laws and bylaws aimed to reach the following parameters:

- agricultural products shall be warehoused by the licensed public warehouses which perform warehousing operations based on the verifiable and periodically renewable permit issued by the competent authority;
- strict obligations which must be met by the public warehouse in order to obtain the license to perform this type of activity;
- control of the compliance with the requirements to warehouse agricultural products;
- supervision of the warehousing of agricultural products by the competent authorities in line with the regulations governing this area;
- issuance of warehouse receipts– securities which allow reliable and fast sales and distribution and pledge of agricultural products;

- involvement of commercial banks in this system by granting short-term loans secured by the pledge to agricultural products;
- in the case of damage to agricultural products for which the warehouseman shall be held responsible, the financial guarantee for the compensation of damage to the business entities who have certain rights to agricultural products on the basis of warehousing shall be provided;
- availability of market information;
- the warehouse system of agricultural products shall provide security and protection to its beneficiaries both in the regulatory framework and direct application of regulations.

The public warehouse system in the Republic of Serbia is based on the Law on Public Warehouses and regulations passed based on this Law. These regulations allow the establishment of the new warehouse system of agricultural products and, in this context, full application of warehouse receipts for agricultural products (hereinafter referred to as the warehouse receipt) as the security. This is allowed by the full regulation of different areas under the Law on Public Warehouses by virtue of which the storage of agricultural products is defined as well as actions to be undertaken, rights and obligations of the all business entities directly included in this system, and, in particular, by prescribing:

- the requirements on the basis of which the legal entity may run the public warehouse as well as the requirements for the issuance and renewal of work permits of public warehouses;
- requirements to enter into the Registry of Public Warehouses of the Ministry of Agriculture, Forestry and Water Management (hereinafter referred to as the Ministry), as well as the requirements for the removal from the registry;
- procedures for the issuance, sale and pledge of warehouse receipts;
- forced collection of claims based on the warehouse receipt;
- responsibility of the public warehouseman;
- guarantee for the fulfillment of obligations of the public warehouseman based on the damage to agricultural products for which the public warehouse is to be held responsible and in this context the establishment of the Indemnity Fund of the Republic of Serbia;
- supervision over the application of provisions defined under the Law on Public Warehouses and regulations passed based on the aforesaid Law.

Based on the Law on Public Warehouses and in view of its implementation, in the period from April 2009 to May 2010, the following bylaws were passed:

- Rulebook on the Quality of Agricultural Products to be Warehoused in the Public Warehouse
- Rulebook on the Contents and Format of the Registry of Warehouse Receipts and Method of Keeping the Registry of Warehouse Receipts
- Rulebook on the Contents and Method of Keeping the Unique Records on Issued Warehouse Receipts

- Rulebook on the Contents and Method of Keeping the Registry of Public Warehouses
- Rulebook on the Requirements To Be Met by the Public Warehouses
- Rulebook on Determining the Amount of Membership Fee and Dinar Amount per a Ton of Warehoused Goods
- Rulebook on the Types of Products That May Be Warehoused
- Rulebook on the Methodology To Determine the Amount for Agricultural Products which Public Warehouse Sells to the Indemnity Fund Based on the Bank Guarantee
- Rulebook on Technical Requirements in Terms of Quality to be Met by Fruits Warehoused in the Public Warehouse
- Manual for the Operation of Public Warehouse for Grain Crops
- Instructions for Warehouse Receipt Management

The provisions defined under the Law on Contracts and Torts shall apply to all issues not governed by the Law on the Public Warehouses.

The following business entities are actively involved and connected in the implementation of the public warehouse system: farmers, public warehouses for agricultural products, Indemnity Fund of the Republic of Serbia, commercial banks, insurance companies, Ministry of Agriculture, Forestry and Water Management.

Every single year, *the farmers* face the challenge how to preserve the quality of crops, whether to sell agricultural products immediately after the harvest or store them and where to store them, how to ensure funds to finance the further production process. The feasibility and economic confidence in this system, farmers find in: strict legislation, additional security provided by the Indemnity Fund by the mutual respect of interests of all participants in the system.

The core activity of the *public warehouse, i.e. warehousing of agricultural products* (grains, industrial crops, fruits and vegetables either fresh or semi-processed) is the safe warehousing based on the warehouse service contract and issuance of the warehouse receipts to the depositor in line with the Law on Public Warehouses and other regulations. The agricultural products are warehoused by the licensed public warehouses which engage in this activity based on the verifiable and periodically renewable permit issued by the Ministry. The permit shall be issued for all and/or individual agricultural products with the shelf life of one year to be warehoused. The legal entity registered to engage in the warehousing of agricultural products may obtain the license for this activity if it meets the requirements in terms of: 1. storage space for the receipt, storage and delivery of agricultural products in the manner which ensures the preservation of quality and hygienic features of warehoused agricultural products; 2. equipment for measuring the quantity and assessing the quality of agricultural products to be warehoused; 3. value of fixed assets encumbered by a mortgage or other lien; 4. indicators of financial operations in the previous reporting period; 5. documents on the operation of the public warehouse; 6. responsible person.

In order to sell fixed assets, lease them, place a mortgage and liens over the fixed assets as well as provide guarantees to third parties, the public warehouse shall obtain the prior approval by the Ministry. The public warehouse shall be deleted from registry if the decision on termination of this activity has been passed or if it fails to meet the prescribed requirements. The Minister determines the list of public warehouses entered into and/or deleted from the registry which shall be published in the "Official Gazette of the Republic of Serbia". Should the public warehouse be deleted from the registry, the public warehouse is obliged to continue to operate based on the warehouse receipts until the expiration of the warehouse service contract. In this case, the public warehouse is obliged to notify all holders of warehouse receipts of changes within seven days. The holders of warehouse receipts shall be entitled to unilaterally terminate the warehouse service contract.

Strict obligations of the public warehouse provide specific security to all entities included in this system, in particular, depositors of agricultural products and creditors who have a lien to the goods issued based on the warehouse receipts.

The Indemnity Fund is the legal entity established by the Law on Public Warehouses whose role in the system and core activity is to guarantee the payment of damages on the basis of warehouse receipts. In the case of damage to the warehoused agricultural products, the public warehouse is obliged to pay the damage. Should the public warehouse fail to pay the damage, the damage will be paid by the Indemnity Fund (where the Indemnity Fund is entitled to the recourse claim towards the public warehouse up to the full amount of paid damage along with all ancillary claims).

The commercial banks, by accepting the warehouse receipts of public warehouses, as collaterals, when granting short-term loans to farmers or other owners of agricultural products on the basis of warehouse receipts, give true meaning to the public warehouse system and make it more comprehensive. The strict legislation, Indemnity Fund and rigorous control of public warehouses provide economic security to the banks and minimum risks in lending operations in agriculture.

The insurance companies are included in this system based on the obligation of the public warehouse to ensure:

- fixed assets against fire, flood, earthquake, break-ins and theft;
- warehoused goods against fire, flood, earthquake, break-ins and theft within three days from the date of receiving the agricultural product.

The prescribed obligation to ensure fixed assets and warehoused goods minimizes the business risk of all entities involved in the public warehouse system and if the obligation of the indemnity Fund to compensate the damage to the warehoused agricultural products is added, it may be assessed with certainty that the level of protection of these entities is extremely high.

The Ministry of Agriculture, Forestry and Water Management supervises the application of the provisions defined under the Law on Public Warehouses and regulations passed based on this Law through the agricultural inspection

authorities. The inspection authorities control the public warehouses in issuing licenses as well as the application of the Law on Public Warehouses both in the course of regular and ad hoc inspections. The public warehouse and/or the third party subject to inspection is obliged to allow the inspector to make the inspection and submit for review all required documentation and other evidence relevant for the inspection without any delay.

In the course of performing operations falling under its competence, the agricultural inspector is authorized to: prohibit the operation of the public warehouse, order the removal of defects and/or prohibit the use of rooms and equipment if the aforesaid defect impact the quality or hygienic properties of the warehoused agricultural products, impose other measures and undertake other actions in line with the Law.

### ***OPERATION OF PUBLIC WAREHOUSES, METHOD OF APPLICATION OF WAREHOUSE RECEIPTS AND THEIR IMPACT ON THE DEVELOPMENT OF AGRICULTURE AND INDEMNITY FUND ROLE***

The operation of the public warehouses starts when the farmer deposits agricultural products to the licensed warehouse. The licensed warehouse, in which the goods are warehoused and kept based on qualitative classes, issues the warehouse receipt to the farmer.

The warehouse receipt is the security issued by the public warehouse to the farmer in line with the Law on Public Warehouses, Law on Contracts and Torts, Rulebook on the Contents, Format and Method of Keeping the Registry of Warehouse Receipts for Agricultural Products, Rulebook on the Contents and Method of Issuing Warehouse Receipts, Rulebook on the Method of Keeping Records on Issued Warehouse Receipts and Rulebook on Warehouse Receipt Form.

The warehouse receipt evidences the ownership of the holder of the warehouse receipt over the specified quantity and quality of the warehoused agricultural product; transfers the ownership rights on the basis of the warehouse receipt to the third party (warehouse receipt endorsement) establishes a lien on the warehoused agricultural product, which means that:

- the warehouse receipt is the instructed security, as it is assigned by the endorsement and is classified into the category of actual juridical securities
- the assignment of the warehouse receipt shall symbolically mean the transfer of the ownership rights to the goods
- the warehouse receipt is the causal security as it clearly states that it has been created in relation to the warehouse service contract and that it contains

certain rights to which the depositor is entitled based on the warehouse service contract.

The public warehouse issues the warehouse receipt based on the deposit of agricultural products and warehouse service contract entered into between the depositor and public warehouse. The warehouse receipt consists of two elements: receipt and warrant. The term “receipt”, includes the note that the warrant has also been issued along with the receipt and vice versa.

The main characteristics of the warehouse receipt issuance procedure are as follows:

- the warehouse receipt is to be issued to the owner of the agricultural product by the licensed public warehouse (which meets the legal requirements to engage in this activity, has obtained the permit by the Ministry, has been entered into the Registry of Public Warehouses kept by the Ministry) in the written and prescribed form based on the warehouse service contract entered into between the depositor and public warehouse;
- the agricultural products for which the public warehouse shall issue the warehouse receipt are as follows: grains, industrial crops, fruits and vegetables either fresh or semi-processed.

The receipt and warrant are separable parts of the warehouse receipt in view of exercising different models of trade of this security including the stock exchange trade. Both parts of the warehouse receipt have the the title on the front page: “Warehouse Receipt for Agricultural Products” followed by the title: “Receipt” or “Warrant” in which the identical data are to be entered. The warehouse receipt template is to be printed on specially protected paper with a watermark and hologram. The receipt and warrant are to be signed and verified by the public warehouse. The contents of one of these pages allow the holder of the separated receipt or warrant to be familiar with the data entered into them. Therefore, for the same reason, in addition to data on the transfer of the warehouse receipt (endorsement) the data on pledges are also entered into on the back of the receipt.

The warehouse receipt holder is the legal entity or natural person who has submitted the agricultural product to the public warehouse for the storage purposes and to which the warehouse receipt has been issued and/or to which the warehouse receipt has been assigned. The warehouse receipt shall be issued for the period not exceeding one year and/or the period not longer than the shelf life of the agricultural product, after which a new warehouse receipt is to be issued, if the warehouse receipt holder wants to extend the goods storage period in the following period up to one year. The public warehouse is obliged to issue the warehouse receipt with all prescribed data based on the concluded contract following the receipt of the agricultural product for storage purposes.

The warehouse receipt holder may subsequently request from the public warehouse to divide the warehouse receipt into several warehouse receipts in exchange for the already issued warehouse receipt and/or integrate several warehouse receipts or extend the goods storage period by issuing the new

warehouse receipt. In such case, the previous warehouse receipt with validity expiration shall be revoked.

Should, in the course of forced debt collection, only the part of goods subject to the warehouse receipt be sold by the over-the counter sales, the public warehouse shall not issue the new warehouse receipt but enter the data on the sold part of goods, data on remaining goods (in tons) and data on settled claims on the warrant and back of the receipt.

As opposed to other securities, the warehouse receipt consists of two parts which allow the warehouse receipt holder to dispose the entered agricultural products in four manners, as follows:

- to transfer both parts of the warehouse receipt to the same person;
- to transfer the receipt and keep the warrant;
- to transfer the warrant and keep the receipt;
- to transfer the warrant to one party and receipt to other party (in which case both apply the rules on the transfer of the receipt and warrant).

The warehouse receipt or the receipt and warrant may be the subject of trade and/or legal; transactions including the stock exchange trade. The warehouse receipt is to be transferred by the endorsement – assignment statement recorded on the back of the receipt. As opposed to the assignment of bills of exchange whose endorsement is only signed by the endorser, when it comes to the warehouse receipt the assignment statement shall be both signed by the endorser – assignor and endorsee - a new owner of the agricultural products. The new owner must sign the endorsement as in this case the assignment takes place without establishing the contractual relations. Therefore, in this manner, the new owner of agricultural products certifies to the fact that the goods specified under the warehouse receipt has been transferred to it by the endorsement, thus, excluding potential problematic situations related to the endorsement. As opposed to the assignment – endorsement of the warehouse receipt, in the course of its issuance it is not necessary to have the warehouse receipt both signed by the issuer – public warehouse and owner of goods given the fact the goods are warehoused based on the Warehouse Service Contract entered into between the depositor and warehouseman and by virtue of which all details related to this business are defined. When depositing goods based on the warehouse receipt, as a rule, the creditor will demand to submit the contract as a mandatory part of the documentation to be submitted by the debtor. Based on this contract, the creditor may be familiar with all elements of this legal transaction.

The endorsement may be a: “full endorsement” and “blank endorsement. The full endorsement is the fully completed assignment statement enclosed to the warehouse receipt to be signed both by the endorser and endorsee. The assignment statement to which the signature of the endorser is affixed and which does not specify the new warehouse receipt holder – endorsee shall be deemed the blank endorsement. The blank endorsement is often used in the warehouse receipt stock exchange trade. The stock exchange members in their own name and/or on behalf



of the third party (often natural persons – warehouse receipt holders not entitled to directly trade on the stock exchange), provide and quote the warehouse receipt sales orders on the stock exchange by submitting the warehouse receipt only signed by the endorser. In the case of receiving the adequate warehouse receipt purchase order, the sales/purchase orders shall be paired and the buyer and seller shall receive the Certificate of Business. Following the payment, the buyer shall complete, sign and verify the parts of the endorsement related to the endorsee and decides whether the warehouse receipt will remain deposited on the stock exchange or will be taken over.

The receipt and warrant may be endorsed together or separately. By the endorsement of the warehouse receipt its holder shall obtain all rights held by the previous holder.

The warehouse receipt recipient or the recipient of the receipt or warrant shall notify the public warehouse which issued the warehouse receipt without any delay of the assignment of rights by submitting the written application for registration of changes in the Registry of Warehouse Receipts for Agricultural Products kept by the public warehouse. The endorsement of the warehouse receipt does not produce any effects on the issuer as long as the public warehouse does not receive the written notification and/or as long as the endorsement has not been registered in the Registry. The damage suffered due to the failure to enter the changes in the Registry of Warehouse Receipts for Agricultural Products caused by untimely or incomplete reporting of the changes by the recipient shall be borne by the recipient.

The receipt and warrant are separable parts of the warehouse receipt in view of exercising different models of trade of this security including the separate trade with the warehouse receipt parts. For example, this is the case when the lien is laid on goods by separating the warrant and submitting it to the creditor, while the receipt remain in the possession of the owner of the agricultural product and which may be the subject of a separate trade.

Should the receipt be assigned to only one party that party shall become the owner of goods specified under the receipt. However, the goods may remain pledged in favor of the person who holds the warrant. Furthermore, the owner of goods may sell the goods provided that the buyer pays the price in installments. The buyer takes the possession of the receipt, but the seller retains the warrant as a security that the buyer will pay the price within the agreed timeframe. The buyer who receives the receipt without the warrant must be aware that the goods are encumbered by a line or may be encumbered by a lien. Therefore, in order to make information on the creditor's claims available to the third parties, on the back of the receipt, in addition to data on the transfer of the warehouse receipt the data on pledges shall be also entered into.

In the case of separate receipt trade upon entering into pledge and submitting the warrant to the creditor, the rights of the new owner of the agricultural product shall be limited as opposed to the creditor's claims which are protected and/or the right to payment based on this collateral is fully secured.

The warehouse receipt holder may use the warehouse receipt as a pledge for the purpose of securing creditor's claims. The recipient may acquire the right to pledge on goods by the transfer of warehouse receipt and/or by the transfer of the warrant without receipt. The completed pledge statement shall be enclosed to the warehouse receipt on the back of the warrant and receipt. The public warehouse is obliged to enter the data on pledges into the Registry of Warehouse Receipts for Agricultural Products, while the consequences of failure to notify/ enter into the data shall be the same as in the case of receipts. Without reporting and registering the warehouse receipt pledges, the warrant cannot be further endorsed.

The warehouse receipt holder may trade with the warehouse receipt (including the stock exchange trade), use it as collateral to obtain the loan or sell it and get liquid assets to finance the production process.

The warehouse receipt as collateral for a loan is significantly more effective instrument than the mortgage or other forms of manual pledges for the following reasons:

- by pledging them the owner does not encumber the rest of the property.
- the procedure of placing the pledge and implementing the forced settlement of claims is fast and efficient and does not produce high costs in relation to mortgage and other types of pledges.
- the value of products subject to the pledge based on the warehouse receipt is stable and thus protects the interests of the creditor and/or bank. The estimated value of these products is more certain than the estimate of standard and real collaterals.
- this type of the pledge considerably reduces the risk of debt collection by the creditor due to the exceptional liquidity of the collateral based on the warehouse receipt and based on which the bank is entitled to settle all its claims before other creditors.
- the possibility of quick and full collection of due claims by the extrajudicial sale of pledged agricultural products based on the warehouse receipt (on the stock exchange or elsewhere) considerably reduces the risk of claim recoverability for banks, while the extrajudicial settlement of claims secured by laying the pledge on goods cannot be terminated or delayed unless the creditor consents to it on the part of the endorser. In the case of receiving the adequate warehouse receipt purchase order, the sales/purchase orders shall be paired and the buyer and seller shall receive the Certificate of Business. Upon the payment the buyer shall complete, sign and verify the parts of the endorsement related to the endorsee and decides whether the warehouse receipt will be still deposited on the stock exchange or will be taken over.

The Indemnity Fund provides security to business banks as creditors by its role and prescribed activity and by compensating potential damages to the warehoused agricultural products for which the public warehouse is held responsible, except for damages caused by force majeure.

The farmer or other owner of the warehoused goods as the warehouse receipt owner may trade with the warehouse receipt on the stock exchange or elsewhere. The farmer or other owner of the warehoused goods may sell the goods or submit the application for the approval of the short-term loan to commercial banks in view of obtaining funds required to run business.

By accepting the warehouse receipt as collateral, the commercial bank approves the short-term loan (pledge to the warehouse receipt provides to the banks a higher level of security and confidence in the potential debtor, which may result in granting a favorable loan). Should the warehouse receipt owner fail to repay the loan within the determined timeframe, the bank may quickly and efficiently collect its overdue claims through extrajudicial procedures. At all stages of operation of this system, the additional security for all participants is the Indemnity fund which is obliged to pay the damage to deposited goods, if the warehouseman fails to do it.

The farmers have a need for: high-quality and safe warehousing of products, thus generating the demand for high quality and licensed storage space which motivates the warehousemen to meet the demand by the storage capacity and join the system. At the same time, a farmer has a need for loan funds based on the warehouse receipt. This motivates banks to join the system, offer loans with the warehouse receipt as collateral and join the market of new loan users - farmers and create new loan products.

The agricultural products warehoused in the licensed public warehouses increase the demand by their quality. This stimulates the purchasers to rather buy high quality agricultural products from the licensed warehouses than the products of unknown quality from smaller privately-owned warehouses. The food manufacturers process high quality raw materials and produce better local food whose demand and price are higher, thus increasing their competitiveness and success in both domestic and foreign markets. The end customer buys the local, high quality food generating the demand for high quality agricultural raw materials and starting a new cycle of healthy economy. The main aim of the consistent implementation of this system is to bring the agro-complex into the state of regular agricultural production, warehousing of primary agricultural products and their realization.

Cost-benefit analysis of the application of warehouse receipts for corn The average monthly corn prices in the observed period from 2007 to 2008 are given in Table 1.

In the course of the observed period there were different trends in the monthly prices of corn per year. In 2008, in the month of harvest, the corn price in relation to other years reached its maximum of 219.99 euro/t. During this economic year, the price growth or drop level does not exceed 6% until August when prices sharply fall for 30% in relation to the previous month.

Economic 2008/2009 year recorded the lowest prices in the observed period, on the one hand, and on the other hand, a constant slight monthly increase until August. In economic 2009/2010 year, the maximum price reached in August was 178.78 euro/t. Economic 2011/2012 year recorded, in addition to price in

2007/2008, the highest corn price in September in the observed period from 2007 to 2012.

*Table 1: Average monthly corn prices (euro/ton)*

Month	Average monthly prices (euro/ton)				
	2007/08	2008/09	2009/10	2010/11	2011/2012
<b>X</b>	219.99	89.84	89.47	145.31	151.76
<b>XI</b>	183.45	82.62	103.84	151.22	148.79
<b>XII</b>	192.62	84.00	105.33	174.51	144.88
<b>I</b>	194.29	90.12	111.82	202.76	160.00
<b>II</b>	182.65	96.80	110.10	200.92	167.90
<b>III</b>	176.70	88.00	108.06	211.50	168.10
<b>IV</b>	187.38	95.76	116.55	211.58	174.68
<b>V</b>	181.92	114.36	116.32	201.69	171.34
<b>VI</b>	189.87	125.35	129.06	197.44	169.57
<b>VII</b>	185.69	118.08	158.62	219.63	209.42
<b>VIII</b>	133.83	98.97	178.78	195.01	218.49
<b>IX</b>	114.58	83.22	169.81	166.45	232.98

*Source: Novi Sad Commodity Exchange*

As far as the benefit of use of warehouse receipts in the observed period from 2007 to 2012 is concerned, the owners of warehouse receipts would make the largest profit by selling corn in the period from March to August without taking into account the economic 2007/2008 year because the prices of food products fell after the harvest due to the economic crisis. Therefore, the use of warehouse receipts would result in the farmer's loss in price of agricultural products. This loss would be additionally increased by the warehousing costs in public warehouses.

Years 2009/2010, 2010/2011, and 2011/2012 are standard years in which the corn price records the upward trend until the beginning of new harvest. In these years the use of securities would result in additional profits for owners.

The negative effects of corn warehousing in the public warehouses occur at the end of the economic year, in August, before the next harvest. In economic 2011/2012, an exception was recorded when the most cost effective month for the sale of corn was September.

## ***CONCLUSION***

In order to develop agriculture it is necessary to intensively develop the commodity markets. In this respect, the concept of warehouse receipts established based on the public warehouse system in Serbia is a considerable progress in reaching the objective. The establishment of this system provides a chance to the farmer to stop making decisions and start with assessments and planning. With the assistance of credit policy and transparent knowledge about the type of incentives the farmers deserve in the forthcoming period, the opportunity of developing of agribusiness becomes the possibility and reality.

Owing to protection mechanisms that have warehouse receipts through the security granted by the Indemnity Fund, banks granting loans based on the warehouse receipts as pledges and traders who buy warehouse receipts are eager to provide better conditions in terms of interest rates and loan approval, i.e. a higher price for the goods in the public warehouse given the fact that they do not have a risk related to the delivery of warehoused goods. One of the important features of the operation of the Indemnity Fund is the fact that the funds intended for the compensation of damages to the owners of warehoused goods in public warehouses are separated. Therefore, the fund for grains cannot be used to compensate the damage to the owner of good warehoused in refrigerator cars.

The National Bank of Serbia (NBS) has determined the “adequate credit rating” for loans which have the warehouse receipt as a pledge. The aforesaid decision has reached a double effect. Firstly, commercial banks when granting loans which have the warehouse receipt as a pledge have the obligation of only 5% deposit payment towards the NBS. This allows less involvement of bank funds and consequently less interest rate for this type of loan. Furthermore, by the specified decision the NBS has sent the signal to the commercial banks that the warehouse receipt is the first-class security.

The system of public warehouses is arranged so that there is an automatism in keeping in mind the interests of all interrelated business entities, which is especially true for agro-entrepreneurs. All these entities produce a greater manufacturing and financial effect if involved in this system rather than acting independently. From the standpoint of real assessment of warehouse receipts as securities prescribed by the Law on Public Warehouses, pledge to warehouse receipt is more reliable and rational instrument for commercial banks as opposed to the instruments used so far. The end result should be the active involvement of banks in the application of the Law on Public Warehouses by developing new credit products with favorable conditions for users.

Considering the above mentioned, as recommendations for future development of the market of warehouses receipts, the following items shall be taken into account:

- Promotion of the stock exchange trade with warehouse receipts – it is necessary given the fact that, in the practice, the benefits offered to customers by the warehouse receipts in the stock exchange trade are not known.

- Granting subsidies to public warehouses in view of ensuring more warehouse receipts. By granting subsidies to public warehouses in the manner that the best classes get the largest amount of subsidy contributes to the additional interest of manufacturers to manufacture better quality goods. Furthermore, the additional interest would be provided to participants to further joint the system.
- Introduction of e-records of warehouse receipts. The e-record would: increase the security of the warehouse receipt which would certainly have a positive effect on the warehouse receipt stock exchange trade, simplify transactions given the fact that at this moment the seller is obliged to deliver the original of the warehouse receipt to the rooms of Commodity Exchange. The recommendation is to create the e-system of warehouse receipts so that all commodity exchanges have a direct access to the transactions related to the transfer of warehouse receipts and thus increase the security and reduce transaction costs.

## ***REFERENCES***

- [1] Law on Contracts and Torts ("Official Gazette of SFRY, No. 29/78. 39/85. 45/89 and 57/89 and "Official Gazette of FRY, No. 31/93);
- [2] Law on Public Warehouses for Agricultural Products (Official Gazette of RS, No. 41/09)
- [3] Capital Market Law (Official Gazette of RS, No 31/2011)

## ***THE GREAT INSTITUTIONAL STRATEGIST IN MEXICO: AN EVIDENCE OF MONSATO***

*José Vargas-Hernández, PhD<sup>26</sup>*

*Hugo Cesar Enriquez García<sup>27</sup>*

### ***ABSTRACT***

*This research is based on the relationships between organizations and governments in order to establish common agreements for the good of the society, but all the most to reach a corporate welfare. On this paper we wanted to demonstrate the influence of the coercive power of the law for the more profitable companies. The point of view of the institutions and the theory of the property rights are part of the theoretical frame work that has been taken as a reference to describe the relationship they has had with "Monsanto Corporation" and the Mexican government, for entry of transgenic corn in our country. It tries to generate a hypothesis based on data and information gathered to bring in this, that in a general sense, proving the strategy taken by Monsanto Co. to achieve this maize market in Mexico.*

**Key words:** *Transgenic corn, property rights, the point of view of the institutions.*

**JEL Classification:** *K11, O13, O31, O34, Q16*

**UDK:** *351.77:[604.6:633.15(72)]*

---

<sup>26</sup>José Vargas-Hernández, University Center for Economic and managerial Sciences, University of Guadalajara, Guadalajara, México [jvargas2006@gmail.com](mailto:jvargas2006@gmail.com), [jgvh0811@yahoo.com](mailto:jgvh0811@yahoo.com), [josevargas@cucea.udg.mx](mailto:josevargas@cucea.udg.mx)

<sup>27</sup>Hugo Cesar EnriquezGarcía

## ***INTRODUCTION***

In 2005, under the administration of President Vicente Fox Quezada, Mexico approves the law on bio safety and genetically modified organisms (Dellios, 2005). Later to this approval, in 2008 there is a regulation of this law for the purpose to regulate and control these organisms (Diputados, 2005). However, in March 6, 2009, an established decree is published in the Official Journal of the Federation (Diario Oficial de la Federación, 2009) amending regulations of bio safety law (Diputados, 2008) which means that the special protection regime of corn is included within the regulations. With this approach, according to Granados (Granados, 2009) experimental planting of transgenic corn in Mexico was initiated in September of that year.

Despite the pressure generated by various political and public figures, social activists and experimenting and testing of these organisms of corn are now a reality, thanks to the powerful strategic alliances American Chemical Monsanto. However, it must be emphasized that new technologies have reached the human beings and food production has to be multiplied in order to obtain food sovereignty and avoid food lags nationally. The varieties of genetic modified (GM) crops are an efficient technology, growing and controversial. Its effects on biological and cultural diversity are a key issue in apolarized debate often.

Socio-economic changes, such as migration, trade liberalization and reduced support to Mexican farmers are also variables or factors that can affect the diversity of maize. Diversity may increase, decrease, or remain by itself. This project does not attempt to determine whether the entry of these products in Mexico is good or bad. This will depend on the subjective values. So, it is demonstrated that the use of property rights has contributed to Monsanto to exercise bargaining power against farmers. A relatively notorious case in the media and on social networks, which can talk a lot but most of the opinions are lacking empirical evidence to sustain themselves, are value judgments which have prevailed when manifest for or against.



## ***BACKGROUND***

### ***ACQUISITIONS***

Monsanto Co. announced in May 1998 that it had reached an agreement to acquire two seed companies DEKALB Genetics Corporation (NYSE: DBK), based in DeKalb, Illinois, and Delta & Pine Land Company (NYSE: PLD), based in Scott, Mississippi. These companies have an important role in strategy of science at Monsanto, which is designed to enhance the sustainable production of food and create new possibilities for improving nutrition and health by linking Monsanto's experience in agriculture, food and pharmaceuticals.

These acquisitions expand the availability of the agronomic characteristics; the first wave of traits developed through biotechnology, and gives more to farmers around the world access to production and the benefits of improved crop productivity through this technology. They also prepare the way for the rapid introduction of the second wave of biotech traits that enhance fiber composition, the nutritional composition of food processors, and provide new tools to improve the value of cereals and oil seed.

Delta & Pine Land is a leading breeder, seed production and marketing of cotton. Currently sells Monsanto's Bollgard and Ingard insect – protected cotton in the United States, Mexico, Australia and China, and Roundup Ready cotton in the United States. International experience of Delta & Pine Land in the marketing of crops developed through biotechnology has enabled these new seeds quickly lead to global markets. This will help in part of Monsanto's strategy to penetrate the Latin American market in order to implement its transgenic biotechnology.

### ***BACKGROUND OF TRANSGENIC***

More over, engineering genetically modified varieties (TGV) has expanded rapidly over the past 10 years, more and more traditional agricultural systems (TBAS) in the Third World as well as seed and food. Their proponents claim that TGV are key to reducing hunger and negative environmental impacts of agriculture. Opponents say they have the opposite effect. The risk management process is the main way that the TGVs are regulated in the U.S.(and many other industrialized countries), and the authors state that the results of this process have different regulatory consequences in the U.S. and should be extended to traditional parcels.

In a study by Soleri, Cleveland and Cuevas (Soleri et al., 2005) where they interviewed 334 farmers in Cuba, Guatemala and Mexico on agricultural practices, potential damage assessments through scenarios, and the classification of types of corn. The results suggest a high potential for transgenic flow through seed and

pollengrains, differences in the effects of this exposure of the TBAs compared to industrial agriculture, farmers see some possible harmful consequences. Never the less Monsan to entry is predictable, because, as Eggertsson (Eggertsson, 1990) argues, the firms can use strategies using property rights and alliances with institutions.

This can be especially true with the distribution and the spatial scale of the corn fields in many traditional parcels. While the average farm size of kernels of corn in the U.S. in 2003 was 79.2 hectares. United States Department of Agriculture (2004), in Oaxaca, Mexico for over 76% of corn farms are less than 5% according to National Institute of Economics, Geography and Informatics (INEGI, 2010). Based on the average number of fields per house hold in the sample there are approximately 753 corn fields in Santa Ines Yatzeche. It would take a large number of small corn fields to monitor if it is required crops helters, and if they are physically and economically feasible. Therefore, the management of the evolution of resistance to pests has different strategies in.

However, while most discussion about GM flows and industrial systems TBAs assumed that minimization is the objective, there is evidence that gene flow is extensive and critical to the genetic health of local populations of corn (Pressoir, Berthaud, 2004).

## ***INVOLVEMENT PROCESS TO THE DIVERSITY OF MEXICAN MAIZE***

It should stand out some arguments of those opposed to the new transgenic biotechnology and emphasize the fact that Mexican corn could be affected according to studies by scientists. Then explain the characteristics of transgenic corn seed and its effect to the environment however, this does not limit the actors to put aside their claims.

Now according to Soleri, Cleveland and Aragon (Soleri et al., 2006), GM maize could increase or decrease the diversity of maize, or may not have any effect. Gene flow and long-term effects on the diversity of the host population depend on a number of variables, including the size of the donor and recipient populations, the rate of seed and pollen flow and fertilization and fitness relative and absolute of hybrids, which are determined by genetic, ecological and socio cultural processes of specific agricultural systems. The flow of the seeds is the first step in the flow of transgenic genes, followed by cross-pollination, hybridization and introgression or incorporation of a transgenic into the host genome with stable inheritance.

## ***JUSTIFICATION***

Mexico has become a country potentially important for companies like Monsanto itself to unleashing a variety of GM maize. The field in Mexico represents a great deal for the food industry. In countries that have authorized the cultivation of GM maize, as Soleri, Cleveland and Aragon (Soleri et al., 2006) have shown that it is difficult for them to coexist with conventional varieties, native and organic. This coupled with the question that the Mexican government has given and in turn has opened up the possibility of allowing pilot tests to bring transgenic maize and market through the framework of the law. This certainly gives pause to anyone who has known about this in that there is something strange, perhaps corruption, or perhaps good intentions of governments, that cannot be known for sure, but these factors have been determined and motivated to carry out this.

It is important enough to generate information to empirically observe that these chemical company strategies have generated good returns. In the present it highlights the interest of knowing for sure what could be the mechanisms inherent in the market in order to find more benefits and business skills to Monsanto, without doubt, this should be the most important goal as scholars of a business curriculum.

As has been seen in academics and from the perspective of organization theory, is inferred by Scott (Scott, 1995) that it is always important to build weak and strong institutionalities across firms with the aim of increasing their benefits. According to North (North, 1990) laws are the rules of the game, which is always good to know in order to benefit. However, remained always suspected the honesty of public officials and corporations. So, is our need to consider these organizational the oriesto reach a conclusion as objective as possible and without being biased, i.e. without stress if socially is right or wrong this entry strategy of biotechnology in Mexico.

## ***RESEARCH QUESTION***

What are the strategies adopted by Monsanto to enter Mexico?

## ***THEORETICAL FRAMEWORK***

Vision-based institutions and New Institutional Economics (NIE).

Institutions help to reduce uncertainty and provide a structure for the every day (North, 1990). Williamson (Williamson, 2000) has noted that the regulatory pillar is the coercive power of governments with in formal institutions. Include laws, rules, procedures and rules. Regarding in formal institutions, Peng (Peng, 2006) says that the two main areas are the training and cognitive:

1. Training. It refers to the values, beliefs and actions of others that influence the behavior of individuals or businesses.
2. Cognitive. They are related to internal values and beliefs that are the essence of the company. Also they guide the behavior of individuals and firms.

These institutions govern the lives of consumers of good and users of services. Williamson (Williamson, 2000) says that from this point of view there are two important levels to consider:

1. The first level of these institutions are those that are most deeply rooted in our lives and play a key role from birth, these are the customs, norms, morals, traditions, where religious, other nested institutions are who idealize these concepts among societies.
2. In the second group of NIE that influence around a firm are environmental institutions or abroad. It is here where the government of a country plays the most critical because it is where the laws of each country vary. It can be said in other words that one level of institutions are informal rules, and at level two are "the formal rules of the game".

Monsanto is a chemical company that brings biotechnology to maintain a sustainable supply. However, in Mexico there is a great culture, which is rooted in its values and customs. It is a conservative society, traditionalist in most states and is aware of its roots. But it cannot be generalized, because the influence of Yankee culture has affected in some way. To get the final permit to grow and market this maize in Mexico, Monsanto would have a fireproof as there is a lot of pressure from farmers, political, social and activists to stop entry and cannot come. The general public may reject this type of food, and knowing that may affect their traditions affect that could be manifested in corporate hatred.

The legal framework of the laws are the formal institutions of a country, and these are likely to be modified or altered in accordance with the interests of the nation or of certain actors who have the power to maintain order and control over the population. These undoubtedly represent the strategic variable that determined the success of this powerful chemical company. However, informal institutions (values and behaviors), at least in the European Union have shown some animosity on the part of citizens before the arrival of this company.

## ***THEORY OF PROPERTY RIGHTS***

In the beginning, it is desirable to highlight and mention that there is a close relationship between property right sand formal institutions. Property rights are defined as immediate use and enjoyment of movable or immovable goods. Property rights are exercised in accordance with the needs to protect, among other things, intellectual property; it follows from this part of the strategy of Monsanto.

With respect to property rights and the institutions range from formal arrangements, including constitutional provisions, laws and judicial decisions, to informal conventions and customs regarding allocations and uses of the property. Such institutions critically affect decisions regarding the use of resources, and therefore, influence the economic behavior and economic performance of firms.

These provisions are those that have allowed Monsanto to have greater power world wide, since, although they are subject to the local regulations, it is also true that under this scheme have gained strategic competitive advantage over any opponent since the seeds patented are a powerful tool for the implementation of the frame work of the law, despite going in affectation of the farmers. Eggertsson (Eggertsson, 1990) observes that organizations and institutions are not immutable. Organizations and institutions vary with time and place, with the political agreements and property rights structures, with the technologies used, and physical qualities of resources and services exchanged. In fact, the production involves not only the physical transformation of inputs into outputs, but also the transfer of property rights among the owners of the resources and labor services.

This is where can be denote-quoted the oriesat the micro level production factors represent the productivity of the company, capital, labor and land are considered the most important for achieving economic objectives. When they grow at the same rate they are called increasing returns to scale. But there is something that economic theory has not mentioned at all, that is property rights, as they areas productive as labor and capital, an assets representing them selves powerful intangible., that at some point if there are no patents or registered rights can be a handicap against those who ignored this strategy. So as can be shown, according to Eggertsson (Eggertsson, 1990) and based on the information gathered, the strategy adopted by Monsanto is appropriate.

## ***RESEARCH ASSUMPTIONS***

1. Property rights such as patents and trademarks are very powerful assets and productive factors for companies when deciding maximize their profits.
2. A company can enter new markets despite obstacles of various kinds, if used appropriately formal and informal institutions.

## ***ANALYSIS OF ASSUMPTIONS***

Monsanto is often criticized for the efforts devoted to litigation that are aggressive. They are directed to farmers in order to protect the proprietary technologies genetically modified seeds. This is done through judicial demands. Farmers are intimidated and confined to do their job not to fall into "inadvertent infringement" might surprise since Monsanto file a lawsuit against them.

Farmers usually grown organic products and do not intend to use the seeds from this company often misused Monsanto's patented biotechnology, and thus the seed softhe company were transferred to the land by natural factors. This is where property rights come under the argument that only this company has the legal right onits patented technology. Undoubtedly it is a strategy of applying the rules of the game, where in Latin Americaand especially in Mexico opens a large gap to potentiategan expansion in these markets. To mitigate the risk that Monsanto could sue for unintentionalin fringement against farmers who are merely victims of genetic drift, some propose a digital system of notification and removal of copy right law in the context of patent sseed. This is done to protect inadvertentoffenders without eliminating Monsanto's patent rights.

Dellios (Dellios, 2005) notes that activist networks as Green Peace and Avaaz around the world mention that Monsanto threatens to sue farmersif they do not use their seeds, which consequently bring about a corporate monopoly on power over food of humanity on the globe. Avaaz (Avaaz, 2012) argues, among other things, that once there is a patent in one country, other nations begin receiving enormous pressure, although does not specified from where the pressure, to take them through negotiations and commercial agreements.

In this qualitative analysis and according to the bibliography, one can conclude that only logical reason Monsanto has made relations linking the company with the key institutions that regulate social behavior, mentioned that the company of thas ties with the governments of countries around the world, something that could somehow clarify is that there are former public servants from the federal government now working for the firm and vice versa. But on the website of Monsanto (Monsanto, 2013), it mentions that both public and private employers benefit when they have access to people with the best experience and the best grades. It is perfectly understandable that someone in the government who has concluded that biotechnology is a positive and beneficial technology goes to work for a biotech company, like someone who thinks differently and find employment within an organization that opposes the agricultural biotechnology.

Should be noted that the company'sofficial site NOT deny the existence of the relationship between government employees and the corporation. With the new legislation passed in Mexico in 2008 of the law of biosafety and genetically modified organisms and is currently allowed regularization of experiments of this kind of organisms, seem to have changed the rules of the game to take this step of quality.

## ***RESULTS***

Depending on the methods described were detected very important data contributing to this research with evidence supporting the assumptions of property rights as an important asset for organizations, as well as proper management of the institutions in order to obtain greater benefits economical. Thus in 2006, during the administration of former President Vicente Fox began to grant patents after a wait of five years after Monsanto registered wait requests. According to data obtained from SIGA (SIGA, 2013) the Mexican Institute of Intellectual Property (IMPI) confirms the assumptions in question, as specified patents licensed to the firm in the period comprising from 2006 to 2012 (See Annex A).

## ***CONCLUSIONS***

Since applications were sent in 2001 to 2006 when the first patent was approved to given try of GM maize, several events raised coming to predicting the realization of the purpose of Monsanto. Thanks to the fact that was found this empirical evidence of patents, is evident that the above assumptions are too close to the truth, especially the theory of property rights, which has served as an important tool for this multinational company.

Regarding the course of the proper management of institutions to enter new markets is credited part of the course due to a chain of events, same as follows:

1. Monsanto never denied the fact that former federal government employees have worked in this company and vice versa.

The new rules of the law of GMO Biosafety, which came into force in 2008, in reference to Pantoja (Pantoja, 2011) brought with it the start of experiments such transgenic corn in Mexico in Sinaloa and Tamaulipas. According to the table presented, from that year shows that the first patent was registered transgenic corn plant. Thus, this put in doubt the purpose of this new regulation.

2. The malnutrition crisis in Mexico in the lower classes would benefit from increased food production to a lower cost.
3. The fact that they have clinched the patents described and knowing that GM maize can genetically alter other native species of corn is another reason that makes one think that the strategy described is indeed true.

While it is true that these cases could not be fully demonstrated because it is very difficult to enter data for employees of a private company like Monsanto, it is also true that based on the arguments proposed can be said that the assumption is proved partially.

## REFERENCES

- [1] Avaaz (2012). Monsanto vs madre tierra. Avaaz.org obtenido de: [http://www.avaaz.org/es/monsanto\\_vs\\_mother\\_earth\\_rb/](http://www.avaaz.org/es/monsanto_vs_mother_earth_rb/)
- [2] Cámara de Diputados (2005). Ley de bioseguridad, obtenido de: <http://www.diputados.gob.mx/LeyesBiblio/pdf/LBOGM.pdf>
- [3] Cámara de Diputados (2008). Reglamento de la ley, recuperado de: [http://www.cibiogem.gob.mx/Norm\\_leyes/Documents/Reg\\_LBOGM.pdf](http://www.cibiogem.gob.mx/Norm_leyes/Documents/Reg_LBOGM.pdf)
- [4] Dellios H., (2005). The Monsanto law; Mexico and the Corn Law and degrees of caution. info: Chicago Tribune.
- [5] Diario Oficial de la Federación (2009). Diario Oficial de la Federación, 9 de marzo de 2009. Gobierno de los Estados Unidos Mexicanos.
- [6] Eggertsson. T., (1990). Economic Behavior and Institutions. Cambridge: Cambridge University Press.
- [7] Granados M., (2009). Monsanto 2, México cero. info: El Norte [Monterrey, Mexico].
- [8] USDA NASS (2004) United States Department of Agriculture. United States Government.
- [9] INEGI (2010). Censoeconómicos. Instituto Nacional de Economía, Geografía y Estadística. 2010.
- [10] Monsanto (2013). Monsanto corp. Obtenido de: <http://www.monsanto.com.mx/>
- [11] North, D., (1990). Institutions, Institutional Change, and Economic Performance (Chapter 1: An introduction to institutions and institutional change, pp. 3-10; Chapter 4: A transaction cost theory of exchange, pp. 27-35). New York: Cambridge University Press.
- [12] Pantoja. S., (2011). Monsanto probara maíz modificado en México. Tomado de base de datos el 11/Mayo//2013 desde: <http://search.proquest.com.wdg.biblio.udg.mx:2048/pqcentral/docview/886758636/13E96F5F0A123EA4282/1?accountid=28915>
- [13] Peng, M. W., (2006). Global Strategy. Cincinnati: Thomson South-Western.
- [14] Pressoir G., Berthaud J., (2004). Population structure and strong divergent selection shape phenotypic diversification in maize landraces. *Heredity*. 92: 95–101. Tomado de base de datos el 11 de Mayo de 2013 desde: <http://search.proquest.com.wdg.biblio.udg.mx:2048/pqcentral/docview/229987264/13E970746785D08B217/1?accountid=28915>
- [15] Scott, W. R., (1995). Institutions and Organizations. (Introduction: pp. xiii-xvi; Chapter 7: Accomplishments, continuing controversies, new directions, pp. 133-152). Thousand Oaks, CA: Sage.
- [16] SIGA (2013). Instituto Mexicano de la Propiedad Intelectual. Obtenido de: <http://siga.impi.gob.mx/#busqueda>
- [17] Soleri D., Cleveland A., Cuevas F., (2005). Understanding the potential impact of transgenic crops in traditional agriculture: Maize farmers' perspectives in Cuba, Guatemala and Mexico. *Environmental Biosafety Research: Bio one* 141–166.
- [18] Soleri D., Cleveland A., Aragon C., (2006). Transgenic Crops and Crop Varietal Diversity: The Case of Maize in Mexico Source: *Bio one*.
- [19] Williamson, O. E., (2000). The new institutional economics: Taking stock, looking ahead. *Journal of Economic Literature*, 38: 595-613.



## ANNEXA

*Table 1. Table of patents granted in the period 2006-2012 in Mexico, concerning genetically Modified maize.*

NUMER OF PATENT	DATE CONCESION	TITLE	DESCRIPTION
MX 302013 B	03/08/2012	"Plants and improved maize seed for asparagine and protein"	The present invention relates to a plant and seed corn with increased levels of protein and amino acids.
MX 300393 B	19/06/2012	"Event PV-ZMGT32(nk603) on corn and compositions and methods for detecting the same"	The present invention relates to a DNA construct that confers tolerance to a transgenic maize plant.
MX 299985 B	07/06/2012	"Production of high maize tryptophan by chloroplast through targeted expression to the anthranilate synthase"	The present invention relates to vectors and novel expression constructs encoding a chloroplast transit peptide (CTP) operably linked.
MX 287749 B	23/06/2011	"Compositions of corn of high Lysine content, and methods for the detection thereof."	Described herein is a method for the presence of a transgenic event increasing lysine content, based on the DNA sequence.
MX 287419 B	10/06/2011	"Methods for producing hybrid seed"	The present invention relates to methods for producing a hybrid seed unnatural; also describes specific RNA and rRNA recognition sites.
MX 285482 B	08/04/2011	"MON88017 Corn plant, and compositions and methods for detecting the same"	The present invention relates to a corn plant designated MON88017 and DNA compositions contained therein, are also provided evidence for detecting the presence of corn plant MON88017 based on a DNA sequence.
MX 283546 B	01/02/2011	"Plant and seed corn transgenic corresponding to event MON89034, and methods of detection and use thereof"	The present invention relates to a transgenic corn event MON89034 and cells, seeds and plants comprising the DNA diagnostic for corn event. The invention also provides compositions comprising nucleotide sequences that are diagnostic for event of corn in a sample. Cultivated seed of such event of corn plants and fertilized to produce corn plants comprising DNA diagnostics.
MX 269897 B	08/09/2009	"Method to reduce pest damage in corn by treating transgenic corn seeds with pesticide thiamethoxam"	The present invention relates to a method for protecting corn against feeding damage by one or more pests, comprising treating corn seed having a transgenic event.
262107	12/11/2008	"Compositions of corn high content Lysine, and methods for detecting the same"	Described in the present testing for the detection of presence and witness of a transgenic event of increasing lysine content, based on the DNA sequence of the exogenous DNA construct inserted into the corn genome and of genomic sequences flanking the site insertion.
257749	06/06/2008	"Corn plants with improved traits of grain quality"	The present invention relates to methods of producing novel corn plants with improved traits quality grain, comprising using accessions to corn RENO01 and plants derived therefrom. The invention further provides methods for producing corn grain with improved traits of quality grain, comprising pollinating hybrid elite maize varieties with pollen from the accessions to maize RENO01 and plants produced from the same.
238133	27/06/2006	"Event PV-ZMGT32 (nk603) on corn and compositions and methods for detecting the same"	The present invention relates to a DNA construct that confers tolerance to a transgenic maize plant.
237341	30/05/2006	"Processing of transgenic corn seed with clothianidin"	The present invention relates to a method for protecting corn against feeding damage by one or more pests, including the treatment of maize seed. La

*Source: Own elaboration based on data from IMPI*

# ***ECONOMICAL ASPECTS OF ORGANIC FOOD PRODUCTION***

*Mirela Tomas Simin, MSc*<sup>28</sup>

*Radovan Pejanovic, PhD*<sup>29</sup>

## ***ABSTARCT***

*Organic farming is an integrated production system of high-quality food that is based on best environmental practices, which is both socially acceptable and economically viable, and therefore important for the sustainable development of the whole society. For a farmer to switch from conventional to organic production, benefits that this production system bring must be known. In the modern market economy and consumerism profitability of organic farming is the main criterion on which each farmer makes a decision.*

*For this reason, the aim of the paper was to determine whether and under which conditions organic farming can be economically viable and competitive in relation to conventional production. This paper analyzes the importance and procedure of calculation and indicators of economic efficiency (production value and profit) and efficiency (cost-effectiveness, productivity and profitability of production). In conclusion it is stated that organic production in the long term, may be economically attractive alternative to conventional agricultural production for many farmers.*

***Key words:*** *Organic Farming, Efficiency, Profitability*

***JEL Classification:*** *Q01, Q57*

***UDK:*** *631.147:33*

---

<sup>28</sup>MirelaTomas Simin, Faculty of Agriculture, University of Novi Sad, Novi Sad, Serbia, mirelat@polj.uns.ac.rs

<sup>29</sup>Radovan Pejanovic, Faculty of Agriculture, University of Novi Sad, Novi Sad, Serbia, pejanovic@polj.uns.ac.rs

## ***INTRODUCTION***

The traditional concept of development with growth-oriented production and simultaneous increase of the consumption of limited natural resources is unsustainable in the long term. The so-called "external costs" which are generally not included in the cost of production leads to an increase in pollution, resource depletion, and invasion of human health. Because of that they exceed the benefits of the further growth. Changes caused by man's actions are happening so fast that nature alone cannot restore and recover. Therefore, in the last decades of the twentieth and first decade of the twenty-first century, more attention is given to the protection and improvement of the environment, because it is a basic prerequisite for the survival and further development of mankind.

The development of agriculture, which began ten thousand years ago, allowed the development of civilization. The main task of agriculture was, and still is, to provide a sufficient quantity and variety of quality food and raw materials for the ever-increasing human population. However, the modern, intensive agricultural besides unquestionably positive impact on agricultural production itself also has a negative long-term impact on the environment, and human and animal health. Today, the farms are one of the biggest polluters of the environment.

As a result of industrialization, technological development and population growth the need for food is increasing while the areas and production capabilities are drastically reducing. To satisfy the growing need agricultural production must be improved and intensify. For this reason intensive technology in agricultural production have developed, whose main goal is to achieve high productivity and high profits. Those technologies are based primarily on the mass application of artificially synthesized substances (fertilizers, plant protection products, growth stimulants, hormones, antibiotics, etc.), heavy farm machinery and genetically modified organisms (GMO) with specialized production and monoculture crops.

In addition to the undoubtedly positive impact on agricultural production alone (increased productivity), conventional agriculture technology applied during the last decades have led to serious environmental degradation. Knowledge of the potential risks to human health and the need to preserve natural resources, led to the strong development of the green wave in the world and Serbia. This wave requires that, in the production of food, basic ecological principals are applied: precautions and prevention. This means that the goal of production is becoming a production of quality and safe food with environment preserving (Lazić B., Lazić S., 2005).

Thus, the current system of food production has become unsustainable. Climate change, increasing food demand from a number of countries, as well as increasing production of biofuels with water shortages and rising prices of fuel, require urgent changes in the way food production. To ensure the production of sufficient quantities of food, not only for the currently existing population, but also for future generations, it is necessary to change the current agricultural practices, or modify it so that it becomes sustainable in the long term. Because meeting the

needs of the current human population for food is just as important as the conservation of exhaustible natural resources and the environment (Subić et al, 2010). Therefore, it is desirable to be reoriented towards sustainable agricultural production systems, as far as possible, which includes organic agriculture.

## ***METHODOLOGY AND DATA SOURCES***

In order for organic production to be economically viable in terms of the agricultural producers (enterprises or farms), for farm operators necessary relevant informations are about:

- Technical and technological aspects of organic production;
- Economical effects of organic food production;
- Characteristics and trends in the market for organic products;
- Marketing of organic products.

For this reason, this paper analyzes the significance of these parameters, with special emphasis on the analysis of economic efficiency and effectiveness of organic farming.

The aim of this research was to determine whether and under which conditions organic farming can be economically viable and competitive in relation to conventional production. All relevant factors that organic producers have to take into consideration if they want a successful (profitable) production will be analyzed. In addition, we will point out to the importance of calculation that provides a range of indicators of economic effectiveness (production value, the financial result - profit) and efficiency (cost-effectiveness, productivity and profitability of production) for the farmers. Those are the basis for complex and objective economic analysis of organic production.

As data sources published works, both from domestic and foreign literature that deals with the issues in this field were used.

## ***CONCEPT OF ORGANIC AGRICULTURAL PRODUCTION***

The idea of organic production was born in the late eighteenth century. However, it is in the seventies and eighties that this production system gets its contours, and in the last few years exponential trend of growth in the European Union and the United States (Pejanović and Njegovan, 2011).

This method of agricultural production had its followers in the past: Rudolf Steiner (in 1924 published the book "Agricultural Course" and is considered the founder of then new biodynamic production from which all of today's alternative

farming systems derives), Lord North bourn (in 1940 in the book "Looking at earth" was the first one to introduced the term organic farming), Albert Howard (the emergence of today's way of organic production is related to this British botanist who in 1947 published a book entitled "Soil and health: A Study of Organic Agriculture"), Masanobu Fukuoka (in "One straw revolution" from 1975, his theory and practice is based on four basic principles: no treatment, no fertilizer or compost, no weeding and no chemicals). They were devotees of a closed system of production without the use of chemicals. The ideas and goals that these forms of agriculture have in common are - the connection between agriculture and nature, respecting the natural balance, as opposed to conventional agriculture, which is based on the application of the synthesized materials, the use of heavy farm machinery and genetically modified organisms (GMO).

Under term organic farming, which in everyday language is often called "biological" or "ecological" farming, the general public usually refers to the production of so-called "healthy" food, and agricultural production without the use of agro-chemicals (fertilizers, plant protection products, additives, etc.). Although best known, this is just one of the features of this mode of production, because the real essence of organic farming is much more than that.

As defined by the FAO (the Food and Agriculture Organization in the UN) and WHO (World Health Organization), "organic agriculture is a production management system that promotes the recovery of ecosystems including biodiversity, biological cycles and emphasizes the use of methods which largely excludes the use of inputs outside the farm." This means maximum use of renewable energy sources, maintaining genetic diversity and agro-ecosystems, environmental protection, reduction of all forms of pollution that may result from conventional farming. In this way, viewed over a longer period of time, the conditions are created to meet the basic living needs of farmers, satisfaction with their own work and adequate income.

According to EU regulations (Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91) "organic farming is a holistic production management system of agricultural, food and other products, combining good agricultural practices, a high level of biological diversity (biodiversity) conservation of natural resources, the application of high standards of animal welfare and production methods in line with the certain consumers demand relating usage of natural ingredients."

Our law ("Official Gazette of RS", No. 30/10) defines organic farming as follows: "Organic farming is the production of agricultural and other products based on the application of the methods of organic production in all stages of production, which excludes the use of genetically modified organisms and products containing or produced from genetically modified organisms and the use of ionizing radiation in accordance with this Act and the regulations made thereunder."

Organic farming is a highly organized system which is regulated by law and as such is subject to the inspection and control in all phases of production ("from farm to fork") of the authorized control organizations. It is based on the principles and standards that are unique on the international level, and are formulated in the framework of IFOAM (International Federation of Organic Farming, founded in 1972). On these principles EU regulation (EC) 834/2007, 889/2008, 1235/2008 and 1254/2008; Codex alimentarius 2001 (Joint FAO and WHO regulations adopted in 1999 and revised in 2001); and our legislation (Law on Organic Production ("RS Official Gazette", No. 30/10 dated 07.05.2010.) are based.

Organic food is food produced, certified and labelled in accordance with the law governing this area and the regulations promulgated there under. The certificate is the only guarantee to the consumer that the organic product is produced by all the principles and standards of organic agriculture required by law.

General principles of organic production are based on the use of methods that leads to the ecological balance of natural systems. Basic characteristics of organic production are the following: (Mirecki at al, 2011; Kovačević, 2005; Lazić B., Lazić S., 2005; Pejanović, Popović-Vranješ, 2010; Pejanović, Njegovan, 2011):

- The use of chemical and synthetic agents (fertilizers, plant protection products), livestock antibiotics, food additives, genetically modified organisms (GMOs) and ionizing radiation is not allowed;
- Usage of crop rotation which increases and maintain soil fertility;
- Application of rational way of cultivation, mainly conservation, thereby greatly saving energy;
- Usage of plant and animal species that are resistant to disease and adapted to local conditions;
- Mechanical and biological measures in the fight against weeds, diseases and pests;
- Only organic and microbial fertilizers usage;
- Raising livestock in free and open areas and providing organic food for them;
- A complete production system - balance of plant and livestock production.

## ***ECONOMIC ANALYSIS OF ORGANIC PRODUCTION***

In today's market conditions it is important to take into account all aspects of production, especially the economic performance indicators. From this stems the importance of economic analysis that provides information on how to make a more precise and better short-and long-term decisions within the farm business or enterprise. The information must be based on reliable data base. In order to ensure this it is essential that farmers keep statistics and accounting records.

Unlike conventional agriculture, where the main objective of production is to increase profits at any cost, according to Sredojević (2002), the goal of doing business in organic production is to achieve maximum overall economic results with achieving ecological optimum.

Analysis of economic indicators of effectiveness and efficiency is very similar in organic and conventional production. However, there are certain differences. The economic analysis of organic production is more complex due to the application of different crops that are used in crop rotation (to improve soil fertility), and the calculation of the cost of inputs of own production such as animal feed and manure (Wehinger, 2011).

In Serbia there is still a relatively small number of farmers engaged in organic production. Those are mainly individual farms that organize this production on small areas. They generally do not have adequate evidence on the economic effects of their production. There is still no obligation of bookkeeping on family farms in Serbia, with the exception of those that are in the VAT system. Furthermore, Serbia is still in the process of implementing a system of regular collection of economic data. Pilot project FADN (Farm Accountancy Data Network - a system of accounting data on agricultural holdings in the EU Member States) was launched in late 2011 in IPA 2010 program cycle. For now, the data is monitored for only 40 conventional agricultural holdings, and the plan is to expand that number. In addition, farmers have traditionally been suspicious and very hard on providing information on farm business, especially those of an economic nature.

So, given the underdevelopment of organic production as well as the difficulty of providing reliable data, analysis of the economic characteristics of organic production in Serbia is rare.

## ***CALCULATIONS IN ORGANIC AGRICULTURE***

Conversion involves a change of the production system and it usually affects the economic situation of farmers in the short and long term.

In order to focus their farms on organic production methods, farmers must assess potential risks and opportunities and possibilities of their avoidance or mitigation. Among a number of risks, in terms of economic feasibility and incentives for organic production, it is important to assess ([http://www.poljoberza.net/AutorskiTekstoviJedan.aspx?ime=AG004\\_5.htm&autor=11](http://www.poljoberza.net/AutorskiTekstoviJedan.aspx?ime=AG004_5.htm&autor=11)):

- Does the level of selling prices is able to make up for lost benefits resulting from reduced production volume?
- Does the level of demand for organic products provide the appropriate level of profit?
- Whether and to what extent will incentives subsidies and the like be provided for their conversion?

Therefore, to determine the impact of organic production methods on the economic results of production, as well as changes in economic performance across production lines it is essential that farmers compose planning calculations.

In decision-making process in agriculture calculations have a very important role. They allow farmers a realistic assessment of the costs incurred in the production, processing and realization of the product. In addition to determining the total cost and cost per unit, in calculations other indicators of economic efficiency and effectiveness are determined (value of production, the financial result - profit, degree of efficiency, productivity and profitability of production, etc.). Therefore, the calculation provides a range of economic indicators of effectiveness and efficiency which are necessary for analyzes and evaluation of performance for some production lines.

For individual agricultural entities (enterprises or farms) so-called microeconomic calculations are compiled, where all the elements of the calculation are determined on the basis of specific information related to a given company or farm.

In order to solve various organizational and economic problems of economic entities several types of microeconomic calculation are derived such as (Vasiljević i Subić, 2010):

- calculation of the cost of the use of technical equipment for work;
- analytical calculations of some production lines based on the total cost;
- direct costing calculation;
- differential (organic) calculations;
- optimum calculation;
- investment calculations.



Due to the relatively simple methodological procedure of calculation and the possibility of greater practical application, in developed market economies analytical calculations based on the variable costs (direct costing method) is used. This calculation was created as a response to the need of business enterprises, due to sudden changes in market conditions. It finds more efficient ways of identifying and analyzing costs in relation to the possible changes in the structure, scope and ways of doing business. It is used for the effective cost management and decision making in the company. This methodology is suitable for calculation of costs on family farms, which do not keep books on the farm, and therefore does not have all the necessary data to calculate the analytical calculation of the total cost (full cost of the product) (Vasiljević, Subić, 2010).

It is common that in the calculations of agricultural production, especially on family farms, the main economic result is expressed as a margin or contribution coverage (gross financial result). Ease methodology of preparation of analytical calculations reflects in setting the parameters on the basis of the difference between the actual value of production and variable costs of production of those products (Variable production costs change in when the volume of production is changed. Variable costs of agricultural production are: the cost of materials (seeds, manure and fertilizers, plant protection products, feed, etc.), variable costs of machinery (fuel tank), labour costs, and the variable overhead costs.). Mathematically it can be expressed as:

$$CM = VP - VC$$

where:

CM – cover margin;

VP – value of production;

VC – variable costs.

Indicator of economic results, the cover margin, compared to the final financial result represents sub-score, in which a part for fixed costs (Unlike variable, fixed costs in the total amount does not vary with the volume of production. The fixed costs include: depreciation, maintenance, interest and insurance of fixed assets, payroll full-time employees, the rent, the corresponding part of the general costs of the farm - electricity, water, taxes, contributions, heating, telephone, the cost of passenger cars, commissions, taxes, intellectual services, any costs of marketing, sales and so on. Broken down per-unit fixed costs decrease with the increase in production volume and the degree of capacity utilization to a certain extent) coverage is included and the amount of achieved positive financial results – profit (Milić, Sredojević, 2004).

According to Vukoje i Milić (2009) cover margin is a very useful indicator of the achieved results primarily in terms of making short-term decision (up to one year, or one reproductive cycle in agriculture). Since the fixed costs, in the short term, are mainly unchanging (they can not be avoided to a significant extent), the cost-effectiveness of certain production can be better understood on the basis of coverage margin comparing to profit.

When the margin of cover, as performance indicators of individual lines or production phase, is summed a total margin of coverage for business or household in general is a result. From these values total fixed costs of the company (or farm) are subtracted to give a final net financial result (profit) or loss for the enterprise (farm) as a whole.

*Table1. Calculation based on variable costs ha in conventional agriculture*

<b>Description</b>	<b>Volume</b>	<b>Measure unit</b>	<b>Price per measure unit</b>	<b>Total (din/ha)</b>
<b>(I) Value of production</b>				
Seed				
Byproducts				
Subsidies				
<b>(II) Variable costs</b>				
Seed				
Mineral fertilizers				
- NPK				
- Urea				
Plant protection products				
- insecticides .....				
- herbicides .....				
- fungicides .....				
Cost of machinery				
- tillage				
- disking and harrowing				
- sowing				
- spraying and fertilization				
- harvesting				
- transport				
Direct services				
Labour cots				
Interest on loan for current assets				
Insurance				
Other variable costs				
<b>(III) Cover margin (I-II):</b>				

Table 2. Calculation based on variable costs ha in organic agriculture

<b>Description</b>	<b>Volume</b>	<b>Measure unit</b>	<b>Price per measure unit</b>	<b>Total (din/ha)</b>
<b>(I) Value of productio</b>				
Seed				
Subsidies				
<b>(II) Variable costs</b>				
Organic seed				
Organic fertilizers				
- manure				
- sedge				
- compost				
- green manure				
- microbiological preparations				
Plant protection products				
- biological products				
- lawful means				
Cost of machinery				
- tillage				
- disking				
- harrowing				
- sowing				
- harvesting				
- transport				
Direct services				
Labour cots				
Interest on loan for current assets				
Insurance				
Other variable costs				
<b>(III) Cover margin (I-II):</b>				

Table 3. Differential calculation of production.. ha when converting from conventional to organic agriculture

Description	Conventional production (din/ha)	Organic production (din/ha)	Difference ( Δ )
<b>(I) Value of production</b>			
Seed			
Byproducts <sup>1</sup>			
Subsidies			
<b>(II) Variable costs</b>			
Seed			
Fertilizers - mineral - organic - .....			
Plant protection products - chemical - biological - .....			
Cost of machinery			
Direct services			
Labour costs <sup>2</sup>			
Interest on loan for current assets			
Insurance <sup>3</sup>			
Other variable costs			
<b>(III) Cover margin (I-II):</b>			

1– byproducts do not occur in organic agriculture because in this case they are plowed.

2 – represent direct wage of workers that are specific to a particular product line.

3 – refers to the insurance premium of expected return of the damage that can occur under the influence of the weather.

Table 4. Calculation based on the variable costs of keeping dairy cows in organic production

Description	Volume	Measure unit	Price per measure unit	Total (din/ha)
<b>(I) Value of production</b>				
Milk				
Extracted cows				
Manure				
Subsidies				
<b>(II) Variable costs</b>				
A. Internal costs				
Fodder				
- conserved .....				
- fresh .....				
Concentrated feed .....				
B. External costs				
Concentrated feed .....				
Labour costs				
Cost of machinery				
Veterinary services and medicines				
Interest on loan for current assets				
Insurance				
Other variable costs				
<b>(III) Cover margin (I-B):</b>				

One of the main reasons for achieving favorable economic results of organic producers is achieving significantly more favorable retail price. On the basis of these indicators we can calculate the lowest selling price of certain agricultural products to achieve the same amount of cover margins as the conventional agriculture (Sredojević, 2002):

$$\begin{array}{l}
 P_1c_1 - VT_1 = MP_1 \\
 P_2c_2 - VT_2 = MP_1
 \end{array}
 \quad \Rightarrow \quad
 C_2 = P_1c_1 - (VT_1 - VT_2) / P_2$$

respectively:  $C_2 = (P_1c_1 - \Delta VT) / P_2$

or simply expressed through cover margins, the price of the organic product can be obtained as follows:

$$C_2 = (MP_1 + VP_2) / P_2$$

where:

$P_1$  – the volume of yield in conventional production;

$P_2$  – the volume of yield in organic agriculture;

$C_1$  – price of product in conventional production;

$VT_1$  – direct external variable costs in conventional agriculture;

$VT_2$  – direct external variable costs in organic agriculture;

$MP_1$  – cover margin in conventional agriculture.

In this way an answer to the question what is the best selling (purchase) for organic farming to be economically viable.

The minimum price of the final product at the farm or business, whether it is a plant or animal products is similarly determined.

## ***ECONOMIC EFFECTIVENESS OF ORGANIC PRODUCTION***

Economic efficiency is the absolute value measure of the results of production and operations, and is expressed in monetary units. The most commonly used indicators are: production value and profit.

The value of production is the product of the quantity of the product and its price. The value of production is not the best indicator of economic efficiency, as it observes total gross effects generated in the production process. This means that the production value do not include production costs incurred in its creation.

Therefore, the gain (profit) is more adequate indicator of the economic efficiency of production and business. Gain or profit is a crucial indicator in determining the net effect of any business entity, or any of the products individually. It expresses the value of the economic efficiency within a period of one year.

Profit as the difference between the value of production and the total cost of production is the final net economic or financial results of certain production and can be calculated as follows:

$$D = VP - UT$$

where:

$D$  – profit;

$VP$  – value of production;

$UT$  – total costs.

To calculate the profit on the level of agricultural enterprises or farms profits of different lines of production should be summed.

Profit at the level of agricultural enterprises or farms can also be calculated on the basis of indicators calculated in the above-mentioned analytical calculations based on the variable costs. Namely, when the cover margins gets added up, the total coverage margin for business or household in general is result. From these values total fixed costs of the company (or farm) are subtracted to give a final net financial result, profit or loss, for the enterprise (farm) as a whole.

So, if the total realized value of organic production is greater than the amount of the total production cost producer (agricultural enterprise or farm) will make a profit and thus the production will be economically viable. Conversely, if the realized value of organic production is not sufficient to cover all costs of production profits will be negative and agricultural entity will operate at a loss. Therefore, the main goal of every producer, including those who are engaged in organic production is to achieve the highest possible yield and price, with the lower cost per unit area or to achieve the maximum profit.

Differences in the amount of return, sales/purchase prices of organic products, organic production costs and certain government grants that encourage this type of production are the main factors influencing the level of economic efficiency, and the profitability of organic farming in terms of farmer.

## ***ECONOMIC EFFICIENCY OF ORGANIC PRODUCTION***

After determining the economic effectiveness of organic farming, which is commonly used as an indicator of profit it is necessary to determine whether the farm or business enterprise in the reporting period was, and to what extent economically efficient.

Economic efficiency of production is comparatively measure of economic success. It is determined by comparing the absolute production results and cost.

In the economy the main indicators of the economic efficiency are:

- Labour productivity;
- Cost of production;
- Profitability of production.

These data belong to the group of so-called relative indicators. They are expressed in terms of percentage or ratio.

## ***ANALYSIS OF LABOUR PRODUCTIVITY***

Indicators of labour productivity are obtained by measuring the actual results of operations in relation to the volume of investment of human labour (Milić i Sredojević, 2004).

Labour productivity is obtained as follows:

$$\text{Pr} = \text{R}/\text{Op} \quad \text{or} \quad \text{Pr} = \text{Op}/\text{R}$$

where:

Pr – labour productivity;

R – working hour;

Op – volume of production.

Thus, the productivity as the indicator of the effectiveness of human labour expresses the human labour hours per unit of the product obtained, or vice versa, the amount of product obtained per unit of human labour. Labour productivity according to the first formula shows the amount of work that is necessary to make the unit and the second what volume of production is achieved by one hour of human labour.

Organic farming because of its specificity requires greater involvement of labour, so that labour productivity generally is lower than in the conventional agriculture, requiring higher energy workforce, while yields, in general, are lower.

The total farm productivity can be increased by proper and careful selection of species and varieties of plants. With required nutrients and effective combat against diseases and pests may to some extent increase the yield. Also, the use of stubble crops, intercrops and crop rotation better use of space is achieved. Also, with the integration of crop and livestock production additional products and products of a higher degree of finalization (value added) are obtained.

## ***ANALYSIS OF THE COST OF PRODUCTION***

This is the economic principle of business that is reflected in the effort to achieve a greater effect with the least possible expenditure of labour, assets, resources and services of others, or to achieve a certain amount of output with lower inputs.

It is expressed as coefficient as follows:

$$\text{EP} = \text{VP}/\text{UT}$$

where:

EP – cost of production;

VP – value of production;

UT – total costs.



The greater the ratio the production is more economically viable and vice versa. The business is on the verge of cost if the cost-effectiveness ratio is equal to one and then the financial result (profit) is zero. Thus, this indicator shows how many dinars worth of production is realized on one dinar of production costs. It can be calculated for individual production lines or for the holding or enterprise as a whole. Rational use of all factors of production is one of the important requirements of organic production cost. Also, many organic farming operations have long-term effects (eg application of manure or compost), which must be kept in mind when analyzing the cost of production.

## ***ANALYSIS OF PROFITABILITY***

With indicators of profitability the degree of economic efficiency of production and the efficiency of investment in production is determined. Therefore, this indicator expresses (Milić and Sredojević, 2004):

- profitability of production and
- profitability of investment.

The level of profitability of production is expressed as a rate of return as follows:

$$R = D/V_p \times 100$$

where:

R – profitability;

D – profit;

V<sub>p</sub>– value of production.

Rate of return calculated in this way shows the amount of profit on each 100 dinars market value of production.

Profitability of investment is calculated as follows:

$$R = D/K$$

where:

R – profitability;

D – profit;

K – capital (total assets employed). (The value of any capital is the sum of the current (non-amortized) value of fixed assets and the average annual value of current assets involved)

Thus, this indicator shows the amount of profit on each 100 dinars of investment, ie what percentage of invested capital will return to equity holders during a production process.

Profitability can be negative, if there is loss in production, or may be zero if there is no profit. However, the positive profitability does not necessarily efficient operations. Namely, if the profitability (rate of return) is less than the interest rate paid on the funds invested in banks, this means that the production is inefficient. Thus organic production needs to compare the rate of return (Milić i Sredojević, 2004):

- the required minimum level of profitability;
- the average rate of return in a given production;
- rate of profit which would be possible by investing in conventional or other alternative production etc.

In studying and monitoring the profitability important issue is the threshold (break even point) of profitability. This analysis is important for managers of agricultural enterprises or farms because it shows the relationship between revenues, costs and profits.

Profitability threshold (break-even point or B/E point) is the point at which the actual value of production and total costs are equal and can be expressed graphically (Figure 1) or by using the following formula (Pejanović et al, 2009):

$$BE = TFC / (P - VC)$$

where:

BE – break even point

TFC – total fixed costs

P – price per product unit

VC – variable cost per unit

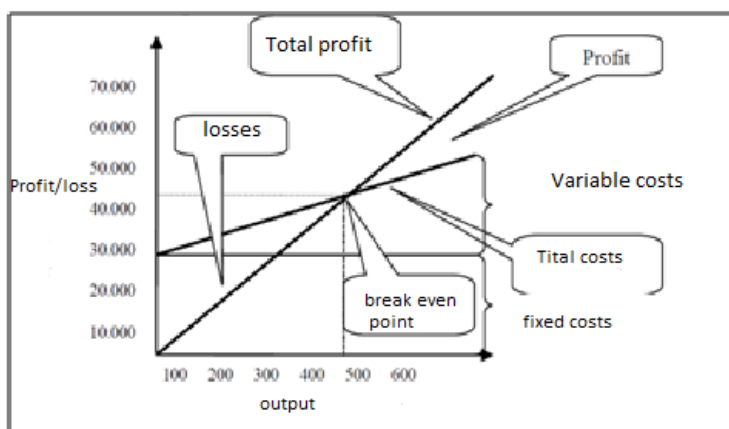


Figure 1: Break-even point of profitability

Source: Pejanović et al., 2009; Sredojević, 2010.

Farm (company) has a positive break even point when its total income is sufficient to cover the total costs. However, total costs have two sides: fixed and variable. Fixed costs do not change regardless of the volume of production, while variable changes in proportion to the performance (output). The above formula shows the following: (a) that the total revenue will be equal to the total cost when one sell enough units at a price that covers all unit variable costs and (b) that the difference between price and variable cost, when multiplied by the number of units sold will be equal to the fixed costs.

The importance of break even point for the current sale is that it can affect the orientation of management regarding the refund and risk, as well as the direction of reducing the cost of business.

According to Sredojević (2010), there are two basic ways to increase the profitability of organic production: increase revenue (through increased prices of organic products, sales volume or marketing new products and services to market and cost reduction (in all stages of business). The first group of factors relates to the marketing activities, development/design and sales. Second group of factors relates to the reduction of operating costs, which leads to a reduction in the cost per unit of product or service, but with increased quality: products, processes, services and overall business. Besides the lower cost, for better quality higher selling prices of products are achieved thus producers achieve greater profitability in the production of organic versus conventional products.

The measurement of productivity, efficiency and profitability of the farms or enterprises is the basis for a complex and objective assessment of actual economic effectiveness of organic farming (Milić, Sredojević, 2004).

## ***CONCLUSION***

While conventional agriculture remains the mainstay of agro-industrial sector, the last few years, organic farming as part of the so-called, Sustainable development system is rapidly evolving around the world and in our country. Despite the slowdown of the global economy, the area under this type of production have increased compared to the previous year, while the share of organic products in international trade flows, as well as the demand for these products is constantly growing.

In the modern market economy and consumerism, apart from the willingness to actively contribute to the achievement of environmental goals and sustainable development, agricultural producers (enterprises or farms) will accept this system of production only if it is economically viable, and economically effective and efficient. To make this production profitable, farmers must be familiar with the technical and technological aspects of organic farming, the economic effects of this production, characteristics and trends in the market for organic products and the marketing of organic products.

Analysis of the economic aspects of organic farming in terms of farmers must be based on reliable data base. For this reason, it is necessary, first of all, that farmers keep statistics - accounting records. In addition, it is important to master the methodology of calculations, as well as basic indicators of economic efficiency (production value, the financial result - profit) and efficiency (cost-effectiveness, productivity and profitability of production) as the basis for a complex and objective economic analysis of organic production.

Farmers cannot affect the selling price of their products, as they are formed on market influenced by supply and demand, as well as state aid to this sector, but they can control the cost of production and to some extent the level of return. On the reduction of production costs, and thus to increase profits, they can affect with following: recycling the largest possible amount of material on the farm by minimizing external inputs (integrated system of plant and livestock production), reducing workload and involvement in different forms of organization. With the implementation of modern technical and technological aspects the reduction of the difference in the level of yields between conventional and organic production is possible.

Although our country has recognized the importance of organic farming, this type of production is less economically supported than in developed countries. Serbian market is still underdeveloped, but there is rising demand for certain products of organic origin (primarily fruits and vegetables) in major cities (Belgrade and Novi Sad).. In addition, it is a great chance for export to a foreign market (demand greater than the supply of organic products, higher prices of organic products compared to the products of conventional agriculture). Due to work intensive character of organic production, it is suitable for small, resource-limited farmers (according to the Agricultural Census 2012 the average farm in Serbia is 4.5 ha). These farmers should turn to the market with much more competitive products as organic products. In addition, with the transition to organic production, they receive greater recognition, media attention, secure placement and consumer confidence. Furthermore, given that soil in Serbia is less polluted compared to developed countries, the main agro-ecological conditions for organic production are met. Hence the decline in yields, as one of the most important factors of profitability of organic production is less.

Therefore, it can be concluded that organic production in the long term, may be economically attractive alternative to conventional agricultural production for many farmers.

## **REFERENCES**

- [1] Council Regulation (EC) No 834/2007.
- [2] Kovačević D. (2005): *Organsko ratarstvo. Poglavlje u monografiji Organska poljoprivredna proizvodnja* (ed. Kovačević D. i Oljača S.). Poljoprivredni fakultet, Beograd-Zemun, str. 35-70.
- [3] Lazić B., Lazić S. (2005): *Put ka ekološkoj poljoprivredi. Poglavlje u knjizi Agrobiznis u ekološkoj proizvodnji hrane* (ed. Babović J., Lazić B., Malešević M., Gajić Ž., i sar.), Naučni institut za ratarstvo i povrtarstvo, Novi Sad, str. 37-58.
- [4] Milić D., Sredojević Z. (2004): *Organizacija i ekonomika poslovanja. Poljoprivredni fakultet, Novi Sad i Poljoprivredni fakultet, Beograd.*
- [5] Mirecki N., Wehinger T., Jaklič M. (2011a): *Priručnik za organsku proizvodnju – za poljoprivredne proizvođače. Biotehnički fakultet Podgorica.*
- [6] Pejanović R., Njegovan Z., (2011): *Principi ekonomije i agrarne politike (za studente smjera "Organska poljoprivreda")*. Poljoprivredni fakultet, Novi Sad.
- [7] Pejanović R., Popović-Vranješ A. (2010): *Organska poljoprivreda kao novi koncept proizvodnje hrane. Poslovna politika, 39(7-8):10-19.*
- [8] Pejanović R., Rodić V., Zekić V. (2009): *Osnovni ekonomski problemi organske poljoprivredne proizvodnje. Magazin poljoprivreda, 50(10-15).*
- [9] *Pravilnik o kontroli i sertifikaciji u organskoj proizvodnji i metodama organske proizvodnje. „Službeni glasnik Republike Srbije“, Beograd br. 48/2011.*
- [10] Sredojević Z. (2002): *Ekonomski problemi ekološke poljoprivrede. Monografija. Poljoprivredni fakultet, Beograd-Zemun.*
- [11] Subić J., Bekić B., Jeločnik M. (2010): *Značaj organske poljoprivrede u zaštiti okoline i savremenoj proizvodnji hrane. Škola biznisa (3): 50-56.*
- [12] Vasiljević Z., Subić J. (2010): *Upravljanje troškovima u agroprivredi Srbije – činilac povećanja konkurentnosti. Tematski zbornik „Agroprivreda Srbije i evropske integracije - (ne)prilagođenost obostranoj primeni Prelaznog trgovinskog sporazuma“*. Društvo agrarnih ekonomista Srbije i Privredna komora Vojvodine, Beograd, str. 77-94.
- [13] Vukoje V., Milić D. (2009): *Ekonomski efekti u proizvodnji važnijih vrsti voća. Ekonomika poljoprivrede, 56(3): 377-387*
- [14] Wehinger T. (2011): *Ekonomija organske poljoprivrede. Poglavlje u knjizi Priručnik za organsku proizvodnju – za osoblje savjetodavne službe.* (ed. Mirecki N., Wehinger T., Repić R.) Biotehnički fakultet Podgorica.
- [15] *Zakon o organskoj poljoprivredi, „Službeni glasnik Republike Srbije“, Beograd broj 30/2010.*

## ***SUSTAINABLE LIVELIHOOD ASSETS AND WOMEN AGRICULTURAL ENTREPRENEURSHIP***

*Mohammad Shajahan Kabir, PhD<sup>30</sup>*

*Mohammad Musfequs Salehin, PhD<sup>31</sup>*

### ***ABSTRACT***

*The study focuses on research themes related to sustainable livelihood assets of rural women entrepreneurs. The sample size for this study was 150. The selected women members were concentrated on poultry rearing, vegetable cultivating, and plant nursing entrepreneurship activities. The survey method was used in the present study. The Tobit regression estimations shows the age, deposits, collateral facilities are positive and significant (1%) associated with financial capital. The amount of credit and shared labor are both positive and has a significant (5%) coefficient with financial capital. It implies that microcredit from NGOs has great impact on entrepreneurship profitability and that profit tends to increase the amount of financial capital.*

*The Probit estimation demonstrates that organic fertilizer, cultivated land, and sufficient rainfall of the area are all highly significant (1%) and positively associated with natural capital. Vegetable entrepreneurship is significant and positively associated with natural capital, because land size, fertilizer, rainfall and vegetation of the area are highly significant in the model. Study shows that entrepreneurship experience, health status, credit and input availability are significant and positively coefficient with physical capital. The study reveals that three variables: group training, food nutrition and sanitation, knowledge on agricultural practices are highly (1%) significant and positively associated with human capital. For social capital, ordered Probit estimation reveals that communication with others entrepreneurs, leadership, social gatherings, political awareness and family support are significant and positively associated with social capital. Poultry entrepreneurship is significant and positively associated with social capital. The study reveals that the financial and physical capital are also positively associated with poultry entrepreneurship, so we can say that financial and physical capital has a significant role in increasing social capital for poultry entrepreneurs in rural area of Bangladesh.*

---

<sup>30</sup>Md. Shajahan Kabir, Department of Rural Sociology. Bangladesh Agricultural University, Bangladesh,

<sup>31</sup>Mohammad Musfequs Salehin

*Respondent women noticed some major problems of entrepreneurship which can be included as a vulnerability context such as lack of credit and training, price instability, insufficient irrigation facilities, shortage of seed/feed, and lack of technical knowledge etc. Change in income, increased well being, reduced vulnerability, improved food security, sustainable use of natural resources and women empowerment are sustainable livelihood outcome of this study.*

**Key words:** *Women Agricultural Entrepreneurship, livelihood Assets. Tobit and Ordered Probit Estimation*

**JEL Classification:** *Q12, Q14, Q18*

**UDK:** *005.961:005.914.3-055.2]:631 005.961:005.914.3]:330.14*

## ***INTRODUCTION***

Bangladesh is primarily an agrarian economy. Bangladesh is predominantly an agricultural country with the sector accounting for 18.64% of the country's GDP and employing around 62% of the total labor force (BBS 2009). Women participation on self employment differs across different regions of the world. In South Asia, women work less in agricultural self-employment (World Bank, 2008). About 75% of the population in Bangladesh depends – directly or indirectly – on agriculture for its livelihood. Bangladesh is an agrarian and belongs to largely subsistence economy, livestock and poultry, dairy, nursery, vegetable, rice husking, fisheries & handicraft enterprises play a crucial role to supply nutritious food and to generate income and employment.

In Bangladesh, women are playing an effective role in agricultural sector. Most of the housewives in rural and urban areas of Bangladesh contribute to their family income through active participation in crop, livestock, poultry, fisheries, nursery, home gardening, vegetable, handicrafts as well as participating in non-farm activities. A number of women are working in the formal sector as entrepreneurs and paid workers, a situation that was not seen in the past. This gradual transformation of women's participation from the informal to the formal sectors has resulted in an upward mobility in the social and economic status of women, especially that of poor rural women in Bangladesh.

Poor rural women represent the most vulnerable group in Bangladesh; they are isolated and deprived (Schuler, Hashemi, 1995). Although women contribute considerably to rural economic activities, women gain neither recognition nor status from their work (Abdullah, Zeidenstein. 1982). They don't have own land, are not allowed to be educated and are socialized to think of themselves as being inferior to men (Papa et al., 1995). Actual development means the development in the three categories of a woman such as individuality, social skills and economic development (Rodney, 1972)

A number of women in Bangladesh have been involved in poultry, plant nursing and vegetable production. Women can do a better job of vegetable production if they are provided with proper training, suitable technological package and with proper inputs. This could enable them to increase their efficiency in vegetable production and income and will thus alleviate poverty. Poultry entrepreneurship has a great potential for providing additional income to our farming community and educated unemployed persons, widows of the rural areas through creating self employment opportunities (Ahmed, Hamid, 1991).

The emergence of women entrepreneurs in a society depends mainly on economic, social, religious, cultural and psychological. One of the key factors for the development of women entrepreneurship in Bangladesh is recognition (Saleh, 1995). Different research studies show that besides their regular household work, 43% of women are involved in activities related to agriculture, and almost 15% undertake agriculture as their second occupation. (The World Bank, 2008). The



emergence of women entrepreneurs in a society depends mainly on economic, social, religious, cultural and psychological factors (Habit et al., 2005).

The concept of sustainable livelihood is an attempt to go beyond the conventional definitions and approaches to poverty eradication. It is now recognized that more attention must be paid to the various factors and processes which either constrain or enhance poor people's ability to make a living in an economically, ecologically, and socially sustainable manner.

An important part of the analysis is thus to find out people's access to different types of assets (physical, human, financial, natural, and social) and their ability to put these to productive use. Among the five categories of assets financial capital is probably the most versatile as it can be converted into other types of capital or it can be used for direct achievement of livelihood outcomes (e.g. purchasing of food to reduce food insecurity). Livelihood outcomes are the achievements of livelihood strategies, such as more income, increased well-being, like self-esteem, health status, access to services, and sense of inclusion, reduced vulnerability, improved food security and a more sustainable use of natural resources such as land property right. The women agricultural entrepreneurship focuses specifically on those rural poor households that are engaged in the production of poultry, vegetable, plant nursery etc. as the main livelihoods strategy. Participation of rural women in income generating activities outside their houses is discouraged and impeded by a number of social, cultural and religious norms and traditions. Environmental factors also affect their access to both assets and activities they need to create a livelihood. These factors can be termed, in a broader sense, as 'Vulnerability context'.

The study of women's agricultural entrepreneurship and livelihood assets needs to be separately for two due to two vital causes. The first is that women's entrepreneurship has been recognized during the last decade as an important economic source of the country. They are creating new jobs for self-employment opportunity and also provide the society with different solutions to organization, management and business or entrepreneurial problems as well as to the exploitation of entrepreneurial opportunities. The second reason is that a separate consideration of employment of women is necessary because historically women have not got equal access to employment opportunities in Bangladesh.

In light of this, the study would be analyzing the relationship between small scale agricultural entrepreneurship and different livelihood assets of rural poor women which create to mobilize women on entrepreneurship development and obtain a sustainable livelihood outcome in household level.

Objective of the study are:

- To identify the relationship between small scale agricultural entrepreneurship and livelihood assets of rural poor women.
- To find out the success and the constraints in different entrepreneurs.

## METHODOLOGY

To achieve the objectives of the present study, a preliminary survey was conducted in three entrepreneurship namely poultry, plant nursery, and vegetable cultivation under the Netrokona district to understand the broad socio-economic characteristics of the respondents. Purposive Sampling Method was used to select the types of entrepreneurship activities those women were concentrated on poultry, plant nursery, and vegetables cultivation. 500 population sizes were in each group. Among them 10% sample were collected in each group 50 samples were selected for each of the groups. The sample frame thus contained 150 women respondents who were randomly selected as a sample unit. This study is mainly based on primary data collected from the survey of rural women.

Data were collected during March-May/2013. The survey method was followed in the present study. It was argued that the method was comparatively less costly, less time consuming, easier to employ and most appropriate for the entrepreneurship working in our country.

The secondary data were collected from the research documents, some book reports documents, Bangladesh Bureau of Statistics (BBS), Bangladesh Economic Review (BER), and Bangladesh Microfinance Statistics etc. also consulted for this study.

Along with descriptive statistics, Tobit and ordered probit regression estimation was used to find the impact of women agricultural entrepreneurship and livelihood assets (financial, natural, physical, human and social capital) and using the E-views software to get the estimation of regression result.

The tobit model can be described in terms of a latent variable  $y^*$ . suppose  $y^* = \beta'x + \epsilon$  where  $\epsilon \sim N(0, \sigma^2)$  and the observed variable  $y$  satisfies:

$$y = y^* \quad \text{if } y^* > a$$

$$y = a \quad \text{if } y^* \leq a$$

This study used tobit regression estimation to find the relationship between small scale agricultural entrepreneurship and livelihood assets (financial capital).

The standard ordered probit model is widely used to analyze discrete data of this variety and is built around a latent regression of the following form:

$$y^* = \chi'\beta + \epsilon$$

Where  $x$  and  $\beta$  are standard variable and parameter matrices, and  $\epsilon$  is a vector matrix of normally distributed error terms. Obviously predicted grades ( $y^*$ ) are unobserved. We do, however, observe the following:

$$y = 0 \quad \text{if } y^* \leq 0$$

$$y = 1 \quad \text{if } 0 < y^* \leq \mu_1$$

$$y = 2 \quad \text{if } \mu_1 < y^* \leq \mu_2$$

This study used ordered probit estimation to find the relationship between small scale agricultural entrepreneurship and livelihood assets (natural, physical, human and social capital)

### ***FINDINGS OF THE STUDY: FINANCIAL CAPITAL AND WOMEN AGRICULTURAL ENTREPRENEURSHIP***

Money as the measure of respect of women: commercialization promotes production simply on the basis of how much money can be earned from it. The value of a product seems to be exactly the amount of money that it can get, no more and no less. This is in opposition to the older notion, “A product is worth more than its equivalent (in money)” (Bourdieu, 2001, quoted in Swedberg, 2004, p.242). As more women engage in economic activities, they gain experience and confidence in their capabilities. Economic activities lead to economic strength through increased access to resources and consequently power, in addition to visibility and input in decision making (Syal, Dhameja 2003).

This study reveals the relationship between financial capital and others entrepreneurship variables that represent the impact of small scale agricultural entrepreneurship on livelihoods assets of rural women. According to the regression result, log likelihood value is 410.4926 which means we can refuse the Zero Test.  $R^2 =$  maximum the likelihood function. (Table 1) shows tobit regression estimations which reveals the coefficient of dependent (financial) variables and independent variables. Here we observe that the independent variables, age of the respondents, amount of micro credit from NGOs, formal education in school or college, shared labor, deposit facilities in Bank, collateral condition, experience on entrepreneurship, attended training on entrepreneurship and livestock and poultry entrepreneurship are positive and significantly associated with financial capital of small scale agricultural entrepreneurship. Lack of credit is negatively significant with financial capital, unpaid loan or credit has negative coefficient and vegetables entrepreneurship has positive co-efficient with financial capital but not significant.

Table 1. Tobit regression estimation of financial capital

Name of the Variables		Coefficient	Z-Statistic
constant		5.157924	47.12942***
age of the respondents		0.001609	3.177684***
Amount of micro credit from NGOs		0.056749	2.255596**
Formal education in school or college		0.002903	1.653416*
Shared labor		0.026031	2.092855**
Lack of credit		-0.037341	-2.430954**
Deposit in Bank		0.049452	3.058227***
Collateral condition		0.043974	3.175901***
Unpaid loan or credit		-0.010296	-1.128951
Experience on own entrepreneurship		0.013764	1.738345*
Vegetables entrepreneurs hip		0.012906	1.383401
attended training on own entrepreneurship		0.108657	2.020172*
poultry entrepreneurship		0.017509	1.903164*
R-squared	0.188178	Mean dependent var	5.516297
Adjusted R-squared	0.129983	var	0.066812
S.E. of regression	0.063080	S.D. dependent var	-2.643284
Sum squared resid	1.138018	Akaike info criterion	-2.470441
Log likelihood	410.4926	Schwarz criterion	-2.574112
Avg.log livelihood	1.368309	Hannan-quinn criterion	

\*\*\*,\*\* and \* denotes significance at 1%, 5% and 10% respectively.

From our analysis the age of the respondents is highly significant in relation to financial capital, from this study we have seen that the mean age of the entrepreneurs was 39 years which implies they belong to an active age, they are more capable and energetic to engage in their entrepreneurship activities. a similar distribution of age groups is also found in other studies on women entrepreneurs in Turkey (Celebi, 1997).Age is one of the important factor of human capital in any sector, young age is called golden period of life, in this period, people are more productive than any other age period. Consequently, the amount of micro credit from NGO is 5 percent positively significant associated with financial capital. It implies that the micro credit from NGO has great impact on small scale agricultural entrepreneurship profitability and that profits tend to increase amount of financial capital.

Tobit estimations further reveals that shared labor (shared labor=1 other=0) is significant and positively associated with financial capital. Shared labor means entrepreneurs combine their work forces to create efficiency and also take advantage of economies of scale. In Small scale agricultural entrepreneurs household's labor plays a significant role to earn more income in their entrepreneurship, in the case of household labor, it's a cost free source of labor hence this free floating saved fund can be rolled over to other productive entrepreneurial activity. Lack of sufficient credit (yes=1 no=0) is significant and

negative associated with financial capital, those entrepreneurs are disadvantaged due to lack of capital which means their financial capital base is lower than those have access to sufficient credit. Due to Lack of credit they can't run their entrepreneurship activities smooth, this has directly impacted on entrepreneurs programs.

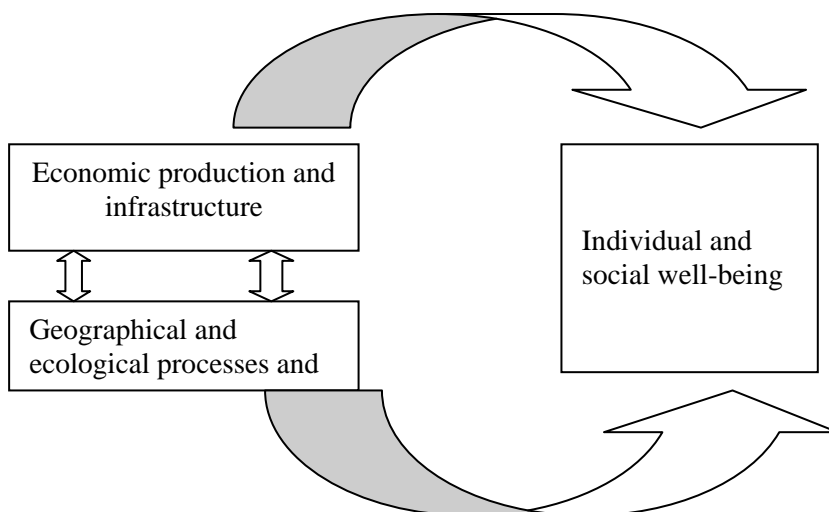
Savings is a pre-condition for increasing financial assets. Small scale agricultural entrepreneurship activities are associated several direct and indirect factors which influence enterprise functioning. A deposit facility in Bank (good=1 bad=0) and collateral condition (good=1 bad=0) is highly positive and significant with financial capital. Most of them respondent of entrepreneurs noticed that they a good chance to deposit money in commercial Bank , they are very much interested to deposit in commercial bank due to high interest rate. Unpaid loan or credit (yes=1 no=0) is not significant associated with financial capital but has negative co-efficient due to ongoing loan servicing process. It means that they pay back the credit on installment basis hence this has the effect of reducing their capital and their general cash flows.

Experience on own entrepreneurship (sufficient=1 not sufficient=0) is also positively significant associated with financial capital. Entrepreneurship experience plays a vital role to run enterprise activities such as when, how, where to invest, buying or selling of product and saving of money, especially financial management capacity etc. Women entrepreneurs claim is that they have sufficient experience on own entrepreneurship activities, it tends to increase their financial capital.

Institutional training has great impact on small scale agricultural entrepreneurship in rural areas. Training is the essential component for producing an able corps of entrepreneurs who not only survive but thrive and contribute to the local and ultimately, global economy, skill based training, technical training, technology training and delivery of management skills are necessary to strengthen not only entrepreneurs but also associations. Attending training on entrepreneurship is significant and positive associated with financial capital. In rural areas different NGOs those are operate micro credit program, besides they arranged training program for entrepreneurs (client) such as micro credit management which is related to financial activities.

This study reveals that poultry entrepreneurship is positively significant associated financial capital. Vegetables entrepreneurship is not significant but positive relation with financial capital. In Bangladesh poultry sector has got top priority in the recent years, poultry and livestock products have high demand in the markets where rural women are working as a self-employed entrepreneurs.

## ***NATURAL CAPITAL AND WOMEN AGRICULTURAL ENTREPRENEURSHIP***



*Figure 1. Natural capital and Human well-being*

Table (2) present the result of the ordered probit model used to investigate the relationship natural capital and small scale agricultural entrepreneurs variables where dependent variables ordered score (0, 1 and 2) while 11 explanatory variables were considered in the model. Table (2) reveals that land, fertilizer, rain, vegetables entrepreneurship, ground water level and vegetation of the area are significant and positively associated with natural capital.

Land is the major factor of production in agrarian rural area. Access to natural capital like land, fertilizer and rain fall are crucial factors for production in small scale agricultural entrepreneurship. Here we observe that land, fertilizer and rainfall are all highly significant and positively associated with natural capital. The size of land, fertilizer (organic=1 inorganic=0), rain fall (sufficient=1 not sufficient =0) which means land size has direct impact on natural capital in agricultural entrepreneurship, without land we can't imagine agricultural production system. As a natural resource land has direct impact on agricultural production process but it also depend on land quality it means soil type and fertility. Rural women are used to produce agricultural product within homestead area and adjacent in their surroundings. In study area, women entrepreneurs opined that although their agricultural land size is small but land is very fertile so they can easily handle production process.

Table 2. Ordered probit regression estimation of natural capital

Name of the Variables		Coefficient	Z-Statistic
Land ownership of women entrepreneur		0.171851	0.562044
Land		4.131993	9.917155***
Fertilizer		0.909181	2.693695***
Rain fall		1.227186	3.491950***
Vegetables entrepreneurship		0.304947	1.6567740*
Ground water level		0.819718	2.350868**
Plant nursery entrepreneurship		0.269593	1.383258
Knowledge about high yielding variety		0.080477	0.497370
Working Experience on own entrepreneurship		0.046214	1.040735
Vegetation of the area		1.699174	4.563784***
Soil preservation		0.276068	0.874135
Akaike info criterion	1.488054	Schwarz criterion	1.673243
Log likelihood	-208.2081	Hannan-quinn	1.562167
R estr. Log likelihood	-387.8192	criterion	-0.694027
LR statistic (11 df)	359.2222	Avg.log	0.463131
Probability (LR stat)	0.0000	likelihood	
		LR index (	
		Pseudo-R2)	

\*\*\*, \*\* and \* denotes significance at 1%, 5% and 10%, respectively.

Organic fertilizer is pre-requisite to preserve soil fertility and productivity and sufficient rainfall tends to increase high production in agricultural sector. In rural area it is very convenient to make organic fertilizer because of available tree leaves, cow dung and by product of paddy etc. after engaged with small scale agricultural entrepreneurship they prefer to use organic fertilizer than inorganic fertilizer because inorganic fertilizer price is high and it's harmful for soil fertility. Rural women can manage organic fertilizer due to availability of raw materials. If they use organic fertilizer then they can reduce cost of production and sustain soil productivity. In rural women especially they are used to apply indigenous knowledge in agricultural cropping pattern.

Rainfall has direct impact on agricultural production process but it also depends on requirement of cropping pattern. Over rainfall or insufficient rainfall has negative effects on agricultural production process. In rural area, poor farmer or agricultural crop producers depend on nature, so rural women also depend on sufficient rain. In this study area respondents women noticed that due to sufficient rain their agricultural production didn't hamper especially vegetable. Vegetation (sufficient=1 not sufficient=0) of the area is also highly significant and positively associated with natural capital, vegetation has vital role to maintain conducive climate, it maintains average temperature, humidity and expected rainfalls in any particular region or area. According to respondent this study area belongs to naturally sufficient vegetation so we can say that in this study area have good opportunities for agricultural production. In rural area of Bangladesh, agricultural production system are depend on nature mean such kind of weather.

Another important variables is that the ground water level (availability=1 non-availability=0) is positive and significant relation with natural capital. Water is very important factor for production purpose especially in agrarian area without water it's impossible to sustain agricultural activities. If ground water level is above the average levels then producers have an easier task to boost their production, they can easily use normal tube well to get sufficient water this way minimizes the higher cost of production. Women entrepreneurs opined that they used to tube well water for drinking purpose and agricultural production purpose and it's easy to get it because ground water level is not so depth. In this study area most of the respondent said that natural environment is in favor of their agricultural production activities.

In this model we see the vegetables entrepreneurship is significant and positively associated with natural capital because land size, fertilizer, rainfall and vegetation of the area are highly significant in the model, these kind of factors are very much related with vegetables production process.

### ***PHYSICAL CAPITAL AND WOMEN AGRICULTURAL ENTREPRENEURSHIP***

Physical capitals comprise capital that is created by economic production process. Building, household goods, tools, machines, equipment and so on are physical assets. Some of the physical capital such as housing, market, machinery, road and transport, health care centre were included in this study.

*Table 3. Ordered probit regression estimation of physical capital*

Name of the Variables		Coefficient	Z-Statistic
Sanitation awareness		0.149790	0.861976
Land rent		-0.189951	-1.255587
Working experience on entrepreneurship		0.118093	2.969487***
Vegetables entrepreneurship		0.618493	3.734421***
Land size		0.646762	2.008908**
Women reproductive health status		0.612887	2.884450***
poultry entrepreneurship		0.402630	2.245419**
Local government support		0.081322	0.546256
attended training on own entrepreneurship		0.023545	1.163434
Source of institutional credit		1.081181	5.311452***
Input supply availability		1.395531	6.113605***
Akaike info criterion	2.145139	Schwarz criterion	2.330328
Log likelihood	-306.7708	Hannan-quinn	2.219252
R estr.Log likelihood	-355.4606	critrion	
LR statistic (11 df)	97.37960	Avg.log likelihood	-1.022569
Probability (LR stat)	5.55E-16	LR index ( Pseudo-R2	0.221802

\*\*\*,\*\* and \* denotes significance at 1%, 5% and 10%, respectively.



This table present the result of the ordered probit model used to investigate the relationship physical capital and small scale agricultural entrepreneurs variables where dependent variables ordered score (0 and 1) while 11 explanatory variables were considered in the model. (Table 3) shows, the experience on entrepreneurship, women reproductive health, sources of institutional credit and input supply availability are highly significant and positive associated with physical capital.

Experience has is fundamental to operate entrepreneurship successfully, experienced entrepreneurs know how to manage funds, how to collect input, market communication and have clear concept about physical infrastructure of entrepreneurs location. In this study we considered experienced means those are engaged 5-10 years in their own entrepreneurship activities. So we can say after involvement in agricultural entrepreneurship their physical capital has increased. In developing countries, women are not so conscious about reproductive health care but in the course of my study area, women entrepreneurs realized that they have reproductive health care facilities (good=1 not good=0) after involvement in entrepreneurship activities. In this study area women entrepreneurs claimed that after involvement in entrepreneurship program they are well concern about reproductive and others health facilities . Institutional credit source is highly significant and positively associated with physical capital. The variable Sources of institutional credit (NGOs=1 Bank =0), has vital influence on women entrepreneurship activities this so because respondents are too much engaged with NGOs as opposed to Banks. Most of the NGOs provide loan without collateral and the terms are more flexible than banks', as a result it has positive impact on physical capital. Input supply (availability=1 not available=0) is also highly and positively associated with physical capital. Input (seeds, feeds, fertilizer) is a major factor of production, without them the production chain would not exist. On the other hand if local infrastructure is well developed and maintained then entrepreneur's mobility is enhanced to facilitate an efficient chain of supply of the products. Availability of input supply enhances market stability in rural area. Land size (acre) has significant and positive coefficient with physical capital, it means that those entrepreneurs homestead and cultivable is high their physical capital is high. Women entrepreneurs usually use land small for scale agricultural production within homestead area and peripherals of their homes because they prefer to be closer to home area. Sanitation awareness (increased=1 not increased=0) is not significant but it belongs to positive coefficient with physical capital. Land rent (high=1 low=0) is negatively insignificant associated with physical capital it implies that entrepreneurs are dependent on rented land hence their physical capital is lower than those who own land. Whenever they settle their rental dues, it tends to have negative effects on others activities of entrepreneurs such as input supply, labor cost etc.

Local government support (good=1 not good=0) and training on entrepreneurship are positively associated with physical capital but not significant. In developing country like Bangladesh, local government is not so developed as developed countries', developing countries have lots of limitations due to lack of adequate funding to support local government. Training facilities tends to women to become more responsible in their locality. When Women build group with other entrepreneurs those are homogeneous then they get more benefit from local community.

We can deduce from (table 3) that vegetables entrepreneurship is highly and positive associated with physical capital than poultry entrepreneurship. This confirms that vegetables entrepreneurship has more opportunity to produce vegetable and operate their entrepreneurship activities than other entrepreneurs. Their physical infrastructural opportunity is better for vegetables entrepreneurship as compared to poultry entrepreneurship. Though a vegetables production activity is like traditional type entrepreneurship but in rural area still more women are engaged with this production system they prefer this kind of activities than others.

## ***HUMAN CAPITAL AND WOMEN AGRICULTURAL ENTREPRENEURSHIP***

Human capital represents skills, knowledge, good health and ability to work. Education can help to improve people's capacity to use existing assets better and create new assets and opportunities. A longitudinal study reported that initial entry to entrepreneurship increased with the increasing level of educational attainment (Dolinski et al., 1993).

Some of the human capital such as formal education in school or college, knowledge and skills on entrepreneurship activities, health status, indigenous and technical knowledge were included in this study.

*Table 4. Ordered probit regression estimation of human capital*

Name of the Variables	Coefficient	Z-Statistic	
Training with groups in NGOs on entrepreneurship	0.279890	9.228943***	
Age of the entrepreneurs	0.014373	1.739390*	
Plant nursery entrepreneurship	0.278101	1.693683*	
household nutrients food and sanitation	2.728863	11.55003***	
poultry entrepreneurship	0.297830	1.601819	
Knowledge about agricultural production	2.432933	10.61724***	
child and adult education	0.962650	1.897046*	
Working experience on entrepreneurship	0.059977	1.221768	
Attitude towards family planning	0.214277	1.396594	
Visit to reproductive health care centre	0.683669	2.060312**	
Akaike info criterion	1.432687	Schwarz criterion	1.605530
Log likelihood	-200.9030	Hannan-quinn	1.501859
R estr.Log likelihood	-386.1331	criterion	-0.669677
LR statistic (10 df)	370.4601	Avg.log	0.479705
Probability (LR stat)	0.000000	likelihood	
		LR index (	
		Pseudo-R2)	

\*\*\*,\*\* and \* denotes significance at 1%, 5% and 10% respectively

Undergoing professional training can increase professional skills, professional expectations and abilities of the entrepreneurs. All this will allow a female entrepreneur to establish profitable social relations and, by using the networks actively, she increases her self-confidence, self-proficiency and establishes full control of her enterprise. From this study we have seen that after taking training most the entrepreneurs become more efficient than before when they were not engaged in any entrepreneurship or group activities.

Household nutrients from foods and sanitation represent the family status in the society. After involvement in entrepreneurship activities women are offering more support to fulfill their basic needs such as nutritional food and improved personal hygiene. When entrepreneur's family affords nutritional food and good sanitations facilities, definitely the overall family health improves. As the proverb goes "health is wealth", they now channel their resources to productive economic activities as opposed to prevention and treatment of diseases. People's own perception of food security is crucial to attaining food security (Frankenberger, 1992). Many households experience seasonal food shortages and they take various measures to cope with these. Households opt for subsistence farming to maintain food security (Glewwe, Hall, 1998).

Knowledge about agricultural production activities is a vital factor for agricultural entrepreneurship. In rural areas, women are often used to apply their indigenous and technical knowledge in their agricultural practices such as how to preserve seed for replanting purpose, how to make organic manure from tree leaves, garbage waste, cow dung etc. The idea is that if one woman knows this technique then it spreads through their practical activities and interaction in productions process. Any technology that makes the most economic use of a country's natural resources and its relative proportions of capital, labor and skills and that furthers national and social goals (Harrison, 1988).

Ages of the entrepreneurs are positive significantly associated with human capital. Age has positive and negative impact on livelihood activities but it depends on which categories of age they belong; naturally children and the old are dependent more than youthful energetic working group all over the world especially if we considered it. Child and adult education expenses also positively and significant associated with human capital. After involvement in entrepreneurship, women are more conscious about their children and adult education so they spend more money for this purpose, and they believe that they are investing money for their children and adult education because they are aware of the benefits of education. Their aim is to provide better support to their children and adult members in the family to become better educated people, as we all know education is the back bone of any nation. By this way sustainable livelihood can be attained. Educational attainment, a recent study found that education plays different roles in countries at different stages of economic development (Van der Sluis et al., 2005). For example, in a developed country like Israel, the level of education was found to be one of the significant variables affecting the performance of female enterprises (Lerner et al., 1997).

Visit to reproductive health care centre is also significant and positively related to human capital of rural women entrepreneurship. Women entrepreneurs often visit rural reproductive health centre or health community centre to get proper service from doctors whether the Doctor is male or female. Before involvement in entrepreneurship activities, women had no idea about this matter, actually they have learnt this matter from group meeting in NGOs training program.

Attitude towards family planning is also positively coefficient with human capital. Family planning has broad meaning but in this study we considered entrepreneurs' women attitude towards small families; those families with one or two children either daughter or son, and women can understand small family's benefit suppose if they keep the family small then they can spend more time on their own entrepreneurship activities, definitely if family is big then they need to spend more money to take care of their children on needs such as food, educations expenses. Table 4 reveals that plant nursery entrepreneurship is significant and positively associated with human capital. We know that plant nursing is quite hard, among the three agricultural entrepreneurship; it needs skill based labor, efficient and effective entrepreneurs who are capable of doing it.

## ***SOCIAL CAPITAL AND POOR WOMEN AGRICULTURAL ENTREPRENEURS***

The most crucial issues in livelihood are its sustainability and coping with vulnerabilities and stress. One way of coping is the use of social capital. "Social strategies i.e., the sharing of resources within the community through family or clan is also a common practice of coping with food deficit" (Campbell, 1991:145). Social capital also plays a strong role in livelihood generation in combination with the other types of capital: financial, physical, human and natural (Ellis, 2000).

This study were considered social prestige, conflict solve capacity, cooperation, husband cooperation, marriage of adultery, self-satisfaction on own job as a social capital of women entrepreneurship. Study reveals the relationship between social capital and others entrepreneurship variables that represent the impact of small scale agricultural entrepreneurship on livelihoods assets of rural women.

Table 5. Ordered probit regression estimation of social capital

Name of the Variables	Coefficient	Z-Statistic	
Formal Education in school or college	0.025672	0.891630	
Training from NGOs with group on entrepreneurship	0.016848	0.798090	
changes in basic needs	0.171846	1.748134*	
Working experience on entrepreneurship	0.103464	2.628725**	
Contact with others entrepreneurs	1.568266	8.806701***	
Plant nursery entrepreneurship	0.064372	0.369244	
Leadership in NGOs group meeting	1.544197	7.964731***	
Participation in social gathering	1.712960	9.630006***	
poultry entrepreneurship	0.304205	1.792775*	
water and sanitation Condition	1.736831	7.460516***	
Political consciousness (voting) and support from family	1.628800	6.146266***	
Akaike info criterion	1.890617	Schwarz criterion	2.088152
Log likelihood	-267.5925	Hannan-quinn criterion	1.969671
R estr.Log likelihood	-391.5555	Avg.log likelihood	-0.891975
LR statistic (11 df)	247.9260	LR index ( Pseudo-R2)	0.316591
Probability (LR stat)	0.000000		

\*\*\*,\*\* and \* denotes significance at 1%, 5% and 10%, respectively

Table 5 presents the result of the ordered probit model used to investigate the relationship between social capital and small scale agricultural entrepreneurs variables where dependent variables ordered score (0, 1 and 2) while 11 explanatory variables were considered in the model. (Table 5) shows that contact with others entrepreneurs, leadership in NGO group meeting, participation in social gathering, water and sanitation, political consciousness and support from family are highly significant and positively associated with social capital. Contact with others entrepreneurs (increased=1 not increased=0) means they have good networking system i.e if women entrepreneurs organize groups or working networks then they can overcome their obstacles easily. Aldrich et al. (1989), too, describe women's networks as networks organized around spheres of work, family and social life.

In this research most of the women's respondents are client of micro credit institution and institution provide training to their clients. In this process, clients are organized into group meeting that are held monthly, in this meeting all are allowed to raise their questions or problems. Leadership in NGOs group meeting can make entrepreneurs more self-esteem, and self-respect by this way woman feel more freedom in patriarchal society. So we can say that leadership enhanced them to take family decision, solve conflict between group member or neighbors' and increased social prestige. There is strong evidence to the effect that women are better at establishing communication and convincing others (Ufuk, Ozgen, 2001),

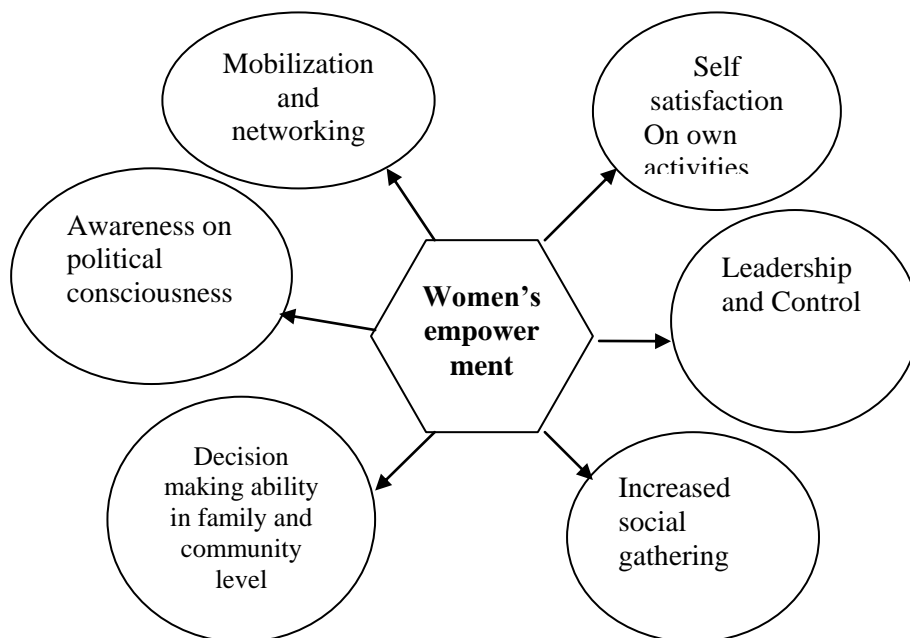
which makes them even better at problem solving and especially in providing solutions for interpersonal problems (Eagley, Johnson, 1990).

Participation in social gathering (increased=1 not increased=0), women entrepreneurs and their family can be benefited by interacting with other family members, to join wedding ceremonies, rural sports programs, school or club annual programs, women cultural or local recreation activities. In this study women agreed that after involvement in earning activities they more empowered and allowed to enjoy social customs.

Water and sanitation (well setup=1 not well setup=0) is crucial for human health; it also has remarkable impact on social life in rural areas. Cleanliness and personal hygiene indicates people's social status and level of civilization, in rural areas, most families don't use piped water additionally, and they do not have good sanitation facilities. In rural area people socially considered prestigious family those are used to good sanitation and pure drinking water from own tube well.

Political consciousness and support from family (increased=1 not increased=0) is a vital issue now a days in rural community especially for women empowerment. In rural Bangladesh, government has established new rural power structure policy whereby any women can participate in local government political system to be elected member or chairman of the local government authority. Respondent women are more aware about their voting rights and to elect eligible person who can solve their problems such as neighbor conflict, family conflict and other social problem easily. Changes in basic needs are also positive and significantly associated with social capital. Basic needs are vital elements to survive in the world. In this study we considered basic needs such as food which included rice, meat, vegetables, fish, eggs, pulses and milk; cloth; medicine and housing. After joining own entrepreneurship activities, they are mentally stable on their own activities or enjoying self-employment opportunities because they are fulfilling family's basic requirements. Working experience on own entrepreneurship is positive and significantly correlate with social capital. In general women entrepreneurs are engaged in entrepreneurship activities (5-10 years). After joining entrepreneurial activities day by day they become more experienced in social aspects or issues. Formal education and training experiences are positive coefficient but not significant with social capital. In this study women entrepreneurs are not highly educated, most of them are primary and secondary drop outs, their mean education year is only 6.5 and training experience is only 25 days, so it is sufficient for them to get a remarkable positive impact but study shows that it has positive sign for social capital.

Here we can observe that, poultry entrepreneurship is significant and positively associated with social capital. What this means is that poultry entrepreneurs are enjoying more social capital than other entrepreneurs. poultry entrepreneurship is semi traditional type of enterprise, which is an attractable activity for rural women. In the previous two models we have seen that financial and physical capital are also higher, so we can say that financial and physical capital has significant role to increase social capital for poultry entrepreneurs.



*Figure 2. Women social empowerment circle*

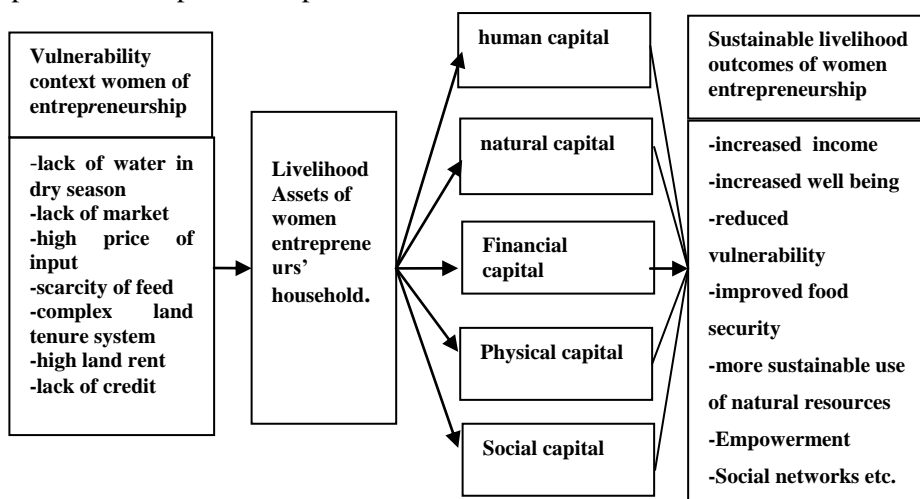
This study also shows that leadership in NGOs group meeting is highly and positive coefficient with social capital which can increase social prestige of women in the community. Participation is social gathering also significant and positively associated with social capital which ultimate result is being women empowerment that is very essential to sustain women in the society as a human being with the fulfillment of life.

This study also reveals that political consciousness and support from family is highly significant and positively coefficient with social capital which is very important factor for women empowerment in patriarchal society. Another very important component is decision making ability in household or community level.

## ***CONTEXT OF VULNERABILITY AND LIVELIHOOD OUTCOME***

Livelihoods are also influenced by lots of external forces, both within and outside the locality in which people lives that are beyond the control of the household. It includes the economic, social, legal, political, environment and institutional dynamics of their local area. The external factors are critical in defining the basic structure and operation of livelihood strategies. In this study we have seen lack of credit and unpaid credit is negatively coefficient financial capital. Land rent also negatively coefficient with physical capital which is one kind of obstacle to obtain sustainable livelihood. The concept of vulnerability is often used as a synonym for poverty, but is not the same (Moser, 1998).

Different components of the vulnerability context affect different people in different ways. Thus, natural shocks may have a more adverse effect on agriculture activity than on urban industrial production. Another way of managing the vulnerability context is to help people to become more resilient and better able to capitalize on its positive aspects.



*Figure 3. Linkages between small scale agricultural entrepreneurship, vulnerability and sustainable livelihood*

*Source: Modified from DFID, 2001*

This study revealed that lack of credit and unpaid credit is negative coefficient with financial capital. Land rent also negatively coefficient with physical capital which is one kind of obstacle to obtain sustainable livelihood. Study also reveals that lack of irrigation water in dry season, lack of market, high price of input, scarcity of feed and land ownership pattern in fish cultivation entrepreneurs is a



vital problem that respondent women noticed in the study area. This kind of problem represents the vulnerability of entrepreneurship activities.

It has already been shown that, poultry entrepreneurship is significant and positively associated with financial, physical and social capital. Vegetable entrepreneurship is significant and positive associated with natural capital, plant nursery entrepreneurship is positive and significant coefficient with human capital. Education, experience and training are positive and significantly (10%) associated with financial capital. This kind of factor increases the well-being of household level of women entrepreneurs.

Land size, rainfall, water availability and vegetation of the area are highly significant with natural capital which can influence more sustainable use of natural resources. Household food nutrients and sanitation is highly significant and positive coefficient with human capital it means it helps to reduce health vulnerability and improved food security. Leadership, participation in social gathering and political consciousness are highly significant and positive coefficient with social capital. This kind of factor influence to increase empowerment of women tends to improve social prestige. Contact with other women entrepreneurs also significant and positively coefficient with social capital so we can say that social network is important for increase social capital. Overall sustainable livelihood outcomes is very positive and play significant role in women entrepreneurship activity.

## ***CONCLUSIONS AND RECOMMENDATION***

“Livelihood” does not just mean the activities that people carry out to earn a living. It means all the different elements that contribute to or affect their ability to ensure a living for themselves and their household. The assets that the household owns or is able to gain access to human include natural, social, financial and physical capital. Activities related to these assets allow the household to use those assets to satisfy basic needs. The different factors that the household itself may not able to control directly, like the seasons, natural disasters or economic trends that affect its vulnerability. There are policies, institutions and processes that may help them or make it more difficult for them, to achieve and adequate livelihood. The livelihood framework identifies five core assets or capital upon which livelihoods are built. This asset can provide a useful starting point for household livelihood analysis, as it encourages investigators to take into account all the different kinds of assets and resources that are likely to play a role in household livelihood.

Livelihoods are also influenced by a wide range of external forces, both within and outside the locality in which a household lives, that are beyond the control of the family. The threat of external shocks and trends directly affect the decision making environment and the outcomes of livelihoods, and provide the vulnerability context. In this study we have seen lack of credit and unpaid credit is negatively

coefficient financial capital. Land rent also negatively coefficient with physical capital which is one kind of obstacle to obtain sustainable livelihood. The study found several major transforming structures and processes that can facilitate the generation of desirable outcomes from the entrepreneurs farming systems. Private and public institutions can catalyzes and facilitate small scale agricultural entrepreneurship development sector

The following specific are suggested recommendations:

- Government agency and NGO's should provide necessary training to the women members so as to make the credit programme viable and to bring about a sustained development.
- Supervision of the activities of the different NGO's programmes of the respective organization should be intensified and provide the idea about sustainable development and livelihood.
- Government should take necessary initiative to improve the infrastructure facilities such as transport and communication, electricity, utility services (fuel, gas and water) etc. This will certainly help to improve the socioeconomic conditions of rural entrepreneurs. Appropriate technology should be adopted to improve quality of the products.
- More credit should be made available for the rural women to boost up different rural development programmes.
- Appropriate technology for women who work in the villages should be hunted so that they do not get fed up with monotonous work and give more working time in production and income earnings. Storage facilities should be improved in local level.
- Women entrepreneurs are still backward in the field of management and marketing. Training arrangement with a view to improving the situation is to be made. Duration of training periods should be sufficient so that woman can get appropriate knowledge about entrepreneurship development technique.
- Recognition of participation of rural women in income earning activities must be ensured nationally so that the women become encouraged to contribute more.

## REFERENCES

- [1] Abdullah, T. A., Zeidenstein, S. A., (1982). *Village Women of Bangladesh: Prospects for Change*, Pergamon Press, Oxford.
- [2] Ahmed, S., Hamid M.A., (1991). "Status of Poultry Production and Development Strategy in Bangladesh", Proceeding of the workshop on livestock department in Bangladesh held on July 16 to 18, 1991 at Bangladesh Livestock Research Institute, Savar, Dhaka.
- [3] Bangladesh Bureau of Statistics (2009). Ministry of Planning, Government of People's Republic of Bangladesh, Dhaka, Bangladesh, 147-292 pp.
- [4] Campbell, D.J., (1991). Strategies for coping with severe food deficits in rural Africa: review of the literature. *Food and Foodways* 4 (2): 143-162.
- [5] DFID (2001). Sustainable Livelihoods Guidance Sheets: Policy Reform: Eldis Document Store.
- [6] Dolinski A, Caputo R, Pasumarty K, Quazi H., (1993). The effect of education on business ownership: a longitudinal study of women. *Entrep Theory Pract* 18(1):43-53
- [7] Ellis, F., (2000). *Rural livelihoods and diversity in developing countries*. Oxford and New York: Oxford University Press.
- [8] Frankenberger, T.R., (1992). Indicators and data collection methods for assessing household food security. Rome: International Fund for Agricultural Development and New York: United Nations Children's Fund.
- [9] Glewwe, P., Hall, G., (1998). Are some groups more vulnerable to macroeconomic shocks than others? Hypothesis tests based on panel data from Peru. *Journal of Development Economics* 56: 181-206.
- [10] Habib, W. M., Naheed R. N., Haque, T. (2005). Factors affecting women entrepreneurship in India: A multivariate analysis, *journal of business studies*, XXVI(1):249-258.
- [11] Harrison B., (1988). *The great U-turn: corporate restructuring and the polarizing of America*. Basic Books, New York
- [12] Hashemi, S., Schuler, S.R., Riley, A.P., (1995). Rural credit programs and women's empowerment in Bangladesh. *World Development* 24(4): 635-653.
- [13] Lerner M, Brush CG, Hisrich R., (1997). Israeli women entrepreneurs: an examination of factors affecting performance. *J Bus Venturing* 12:315-339
- [14] Papa, M.J., Auwal, M.A., Singhal, A., (1995). Dialect of control and emancipation in organizing for social change. A multi-theoretic study of the Grameen Bank in Bangladesh. *Communications theory* 5(3):189-223
- [15] Rodney W., (1972). "How Europe Underdeveloped Africa" London; Bogle L'ou Verture publications
- [16] Saleh, Abu., (1995). A Profile of the Women Entrepreneurship in Bangladesh, *Dhaka University Journal of Business Studies*, 16(1), Faculty of Business Studies, University of Dhaka.

- 
- [17] Syal P, Dhameja S.K., (2003). Entrepreneurship—key to women empowerment.  
timeis/technology/SciTechJune03/entrepreneurship\_womenempowerment
- [18] Swedberg, R., (2004). Principles of Economic Sociology, New Delhi, Rawat Publications.
- [19] Van der Sluis J, Van Praag M, Vijverberg W., (2005). Entrepreneurship selection and performance: a meta-analysis of the impact of education in developing economies. World Bank Econ Rev 19(2):225–261
- [20] World Bank (2008). *Agriculture for Development*, World Development Report 2008. Washington, DC.

# ***CRISIS COMMUNICATION IN AGRIBUSINESS, MEDIA AND CONSUMERS***

*Dragana Jovanovic, PhD<sup>32</sup>*

*Vesna Baltezarevic, PhD<sup>33</sup>*

## ***ABSTRACT***

*Food safety became media question par excellence considering seriousness of this question and how many people are interested in it. Unfortunately, in lack of trustworthy information, consumers relay on media stories which, by its nature, going out of information frame towards sensationalism and disinformation.*

*This paper consider different paths in agro-communication and possibilities to overcome information gap between food producers, media and consumers, considering information laxity within first ones, communication methods of media and growing fear for health by third part.*

*In a word, we analyze communication weakness of agro-companies in crisis, unseriousness of mass media in these vital questions (including incompetent sources and politicization of health issues)and consumer who (overwhelmed with different information) can't select trustworthy sources.*

*We will, also, briefly consider methodology of creating panic among public, but also a methodology that can help agro-companies to influence on their own public image (and d food producing too).*

**Key words:** *Agribusiness, Agro-Communication, Media, Sensationalism, Consumers*

**JEL Classification:** *M31, Q13*

**UDK:** *316.776:631 659.3:614.31*

---

<sup>32</sup>Dragana Jovanovic, Faculty of Culture and Media, Megatrend University, Belgrade, Serbia, djovanovic@megatrend.edu.rs

<sup>33</sup>Vesna Baltezarevic, Faculty of Culture and Media, Megatrend University, Belgrade, Serbia, vesnabal@gmail.com

## ***INTRODUCTION***

Rising market demands for quality and healthy food and the occurrence of national food safety crises have heightened consumer awareness of food quality and safety. Food quality and safety issues attract intensive mass media coverage in recent years, which has led consumers and agri-food stakeholders to change their beliefs and behavior. These changes reflect in moderating food supply, purchasing and consumption patterns. The information related to food products, which are often generic and typical, just enough to fulfill demands of related law obligations, become insufficient for considerable attention of buyers. There is, also, growing interest, not only in the role and mechanisms of information, but also in the evaluation of the various techniques and channels for spreading information.

Despite several scandals related to food quality in past two years not too much effort has been devoted to evaluating the effects of media coverage of food quality and safety issues, investigating the role of trust and credibility of information sources, and analyzing consumer interest in and use of available information cues. The fact is that food has never before been as popular subject in mass media and social networks as it is today, and it seems that consumers are more uncertain and increasingly critical about the quality and safety of their food than ever, despite food producers effort to convince them that food is never safer. But, educated from different sources, official and (more likely unofficial Internet sources) (Recent research results show that food consumers trust more to other consumers' experiences and recommendations than to official information, even governmental, doctors or other. Source <http://www.istmedia.rs/potrosaci-kupuju-po-navici-a-ne-reklami-i-ne-gledaju-dekaraciju-proizvoda/>) consumers want much more information to help them achieve a balanced diet, to avoid certain allergens or ingredients that have proved not to agree with them, or to know the origin and technological conditions under which the food was produced. Dominant motivation for demanding all this information is health concern. So, safety is dominant attribute in consumer evaluation of product, despite marketing efforts of agri-food processing participants.

Under normal circumstances, the majority of consumers are not anxious about food safety but some uncertainty may always be present in a latent state (On Serbian market economic factors often influence consumer buying behavior, so they mostly consider price than food safety. Source <http://www.istmedia.rs/potrosaci-kupuju-po-navici-a-ne-reklami-i-ne-gledaju-dekaraciju-proizvoda/>). Experience with recent cases such as GM foods, food contamination with hormones, bacteria, toxins and even heavy metals, demonstrates that perceived safety can drop dramatically when new information is provided even without medical or scientific evidence.

Lot of information about food quality and safety may be classified as risk information that aims at reducing consumers' uncertainty when making purchasing decisions. It is interesting that consumers often 'misjudge' food risks; food-related

heart and coronary diseases, obesity from poor dietary habits and lack of physical activity are largely underestimated by consumers. In the same time, illnesses caused by contaminants and residues that were recently subject to intensive mass media coverage are examples of the overestimation of a relatively small actual risk.

Perspective we stand for in this paper is that debate about information from agriculture and the food industry needs the consumer behavioral perspective as one of the basic starting points.

## ***CONSUMER BETWEEN HOPE AND FEAR***

Considering food related consumer behavior we can say that there are two basic emotions that determine buying preferences – hope and fear. Hope to prolong healthiness and quality life and fear from illness. So, information about food safety should be create and disseminate considering that consumers balance between hope and fear.

”As well as understanding consumers’ information needs, the management of information provision emerges as a particular challenge for at least two reasons: first, because there are so many potential attributes to provide information about, and second, because consumers are not all alike” (Golan et al., 2001). Food information is effective when it targeted specific needs of the consumers, but several theorists such as Flores (2001) claim that much of today’s information about food quality and safety is irrelevant to consumers, as it does not address particular needs or expectations.

From consumer-centered perspective rational decision-making is consequence of timely, complete and accessible information but, information in agri-food market is mostly imperfect, incomplete, inaccessible, distributed too late, non-standardized etc. In a word, consumers often decide what to buy ”eye blinded” because marketers failure to deliver information about the true nature of product attributes, and as a result, make choices that are not aligned with their true preferences. Marketers fail because sellers have more knowledge than buyers do, especially about product origin, production process and safety issues, which means that information is distributed in one way. Sometimes, relevant information are imperfect, they may not exist or may be even contradictory, as in the early days of aflatoxin crises where scientists and government held opposing views on the potential health risks.

Now, let’s consider consumers’ ability and willingness to process food related information. Here we have to divide consumers into two groups: irrational and rational. Irrationality in consumer behavior is based on several economic and personal facts: above all Serbian consumer (or at least most of them) doesn’t have enough income to buy only quality food; second problem is low level of education and low ability to process complex information; third problem is conformity in illusion that everything which goes through mass media must be a priori truth.

Consumers classified as rational never buy unsafe food knowingly, but in the absence of credible information about food quality and safety this category of buyers faces uncertainty and become extremely skeptic. Cognitive psychology and behavioral research show that the idea of rational consumer who has all necessary inputs, capabilities and willingness to engage in active reasoning is far more complex. Third perspective was created by Swinnen and McCluskey (2004) who introduced the "rationally ignorant consumer" type - consumers imperfectly informed in the specific case of food safety issues. Problem with all listed consumer types lies in agribusiness chain who tries to minimize cost of processing information, considering it too expensive in comparison with the marginal benefits from information.

It is logical that, if lack of information is at the core of market failures, we can reasonably assume that better information and more transparency will be the solution. But, is it so simple in a world of mass media and Internet, conspiracy theories and wide spread uncertainty? In order to enlighten this question, we will first briefly review current insights in consumer information needs and information processing.

From Bettman 1970<sup>th</sup> marketing theories consumers' information seeking behavior and information processing are seeing like crucial to better marketing decisions. Psychology and consumer behavior models assumed that information moves people through so called *hierarchy of effects*, different mental stages that consumers go through when making buying decisions and responding to information: cognitive (learning, knowing), affective (thinking, feeling) and conative (impulse, intending, doing).

The two most relevant models of consumer behavior related to food quality and safety are the heuristic–systematic model (Chaiken, 1987) and the Elaboration Likelihood Model (ELM) of persuasion (Petty and Cacioppo, 1986). The first one proposes two modes that people use to process information: systematic mode is based on analytic orientation in which individuals assess, investigate and integrate all useful information to reach their own judgment. The heuristic mode involves the use of simple decision rules or rules of thumb to reach judgments, allowing consumers to make fast decisions in complex situations, in situations when their motivation to process information and think of potential consequences is low. Limited willpower, self-interest or cognitive capacity explains why consumers prefer routine purchasing or use of heuristics over extended problem solving. Deeper analysis of available information is performed mainly upon first purchase, and then satisfaction quickly leads to routine purchasing using some key information (most of them from advertising) such as brands or quality labels, mostly without credible source for food characteristics. Routine purchasing is based on incomplete information, but lack of competent facts can lead customer to opportunistic behavior. Opportunistic consumer behavior often leads to food related crisis which involving higher marketing costs and selling reduction, not to mention negative influence from mass media.



The Elaboration Likelihood Model holds that individuals process persuasive messages in one of two ways: the central or peripheral route ([http://130.18.140.19/persuasion/elaboration\\_likelihoold\\_model.htm](http://130.18.140.19/persuasion/elaboration_likelihoold_model.htm)). Central route is the active information processing which involves in-depth processing of information; the peripheral route is related to low involvement and the content without recourse to complex cognitive processing.

In last decade agri-food environment is characterized by consumers facing many questions about food quality and safety uncertainty, but it is obvious that food-related decisions and risk perceptions are often based on heuristics or follow peripheral routes of information processing. But, what puzzles agri-communication professionals is fact that consumers do not react systematically, all alike, equally or predictably to information even when they belong to same target group. Uncertainty, risk, stress or threats to health (or even life) related to food quality or safety is most often cause for food information seeking and processing. Uncertainty forced consumers to spend more time on acquiring information before making a decision - the stronger perceived need for information is the higher is chance for active information search and extensive information processing. So, information need is at the very core of present debate about agri-communication, along with socio-demographics characteristics of consumer, his/her personality, level of education, attitudes, lifestyle etc.

## ***MEDIA AND FOOD SAFETY ISSUES – CASE OF AFLATOXIN***

If we assumed that consumers will be more prepared to engage in active information search if they feel some level of uncertainty, we are challenged to make information available at low or no cost for those who feel a strong need for it. This is what Serbian food industry faced during aflatoxin affair happened in 2013 and will facing with incoming GMO related questions. Shock and unwillingness for communication about dangerous toxin, agri-business and government bodies (Ministries of health, agriculture and economy) create gap between milk producers and sellers and consumers who in majority didn't even know what aflatoxin is. Agri-stakeholders didn't have any information campaign, no free telephone number to call for an information leaflet about health risk of, no Internet information services and no activity on social networks.

The impact of such poor campaign on consumer interest in information can be measured mostly by level of mass media attention, speculations and panic. Direct response component totally failed, government has only one official press conference, information silence and failure of crisis management directly provoked panic among consumers, information circulation was too low and unable to reduced consumers fear from intoxication and growing mistrust in official information channels. In the same time, mass media transferred food safety matter on political field, bringing out more and more questions, minimizing matter of health risk. Instead dissemination of

information about aflatoxin and its health risks, government officials and political parties went to negative campaign against each other. The media were not just a place to place aflatoxin "storm in a glass of milk". They were its active participants.

Analysis of the ways media cover aflatoxin issue shown that it hasn't brought more information about central matter itself. Nevertheless, we can learn valuable facts about mass media functioning in crisis - how professional are Serbian journalists, what interests and values they manage when reporting on the situation of various conflicting interests, how to interpret and critically evaluate media content. Audience experienced real storm of partial and entrusted information and was able to saw real credibility of media, as long as fact that it is not enough just to monitor and compare multiple media, or to allude to their professional conscience. It requires a special kind of literacy - media literacy. It allows each individual to look at how the media work and how journalists obtain information and organize them into a comprehensible story. Media literacy is learning the nature of the media of speech and its grammar, which results in understanding media creating a critical distance towards media messages. It's not about reading between the lines, but on reading between journalistic practices in producing a media text, in print, audio or visual form. Media literacy is the main instrument that the audience has at its disposal to defend against the manipulation of information. It means the ability to get media content and do not receive it for granted, but to look at and evaluate in the context of a very complex process that includes the selection of events and facts, blanching between cross-interest sources of information, the optimal use of professional media capacities and respect for journalistic ethics if there is any.

Aflatoxin is at the beginning of entering the public consciousness labeled as the cause of what at the average mind turns red light - "dangerous", "poisonous (toxic)", "health risk", "cancerous", "substances in food", "the most toxic substance in food", "the strongest carcinogenic known compound", "causes liver cancer and damage other organs", etc.

Interest in preserving the health of citizens, however, clashed on the issue of aflatoxin with important economic interests - the interests of corn producers, exporters of maize, corn processors, milk and other dairy products, exporters of milk, and with the interests of the whole country (i.e. budget) as significant exporter of maize and regional exporters of milk, and finally the ministries responsible for agriculture and trade issues.

This conflict involved many social actors, some with a view to the original meaning of the health hazards maintain or strengthen the other to change, deny, relativise, marginalized, ignored. Conflict of health and economic interests is antagonistic - the superiority of one meant the loss of another. The struggle over the meaning is obvious in various aspects of the affair - the amount of risk, consequences, causes, solutions and culprits. Participants' competed over their interpretation of events and their meaning, which is inevitably conditioned by the special interests of these entities; impose as the most meaningful and the most acceptable to all. The locus of this struggle was the media. Journalists, however, by the very nature of their social roles were participants, whether by their acts or omissions.

Media stories about aflatoxin had two parts. The first took place in December 2012 and referred to the corn, and the other was related to milk and the climax was reached in February and March 2013. While the first was relatively easy and has no great interest, the other was complex and has sparked a lot of public attention. In both primate had economic interests, while health interest was neglected.

Model defining the problem as an economic detriment to health is established in the first chapter of the affair. The first source of information about the infected corn - Managing Director of Quality Control "SGS Serbia" Marinko Ukropina - spoke about the economic and health aspects of the problem ("only 32 percent of this year's crop is safe for human consumption") (<http://www.naslovi.net/2012-11-30/akter/strucnjaci-kukuruz-u-srbiji-zatrovan/4141502>). An interpretation of food unsafe corn as the primary economic question has been imposed by the Ministry of Agriculture the very next day. The Ministry has, in fact, in advance discredit anyone - except her - estimates infestations of corn, deeming them as "unsubstantiated and factually baseless" and warned that they could endanger "the economic interests of Serbia as a large exporter of corn," and admonished the media that they do harm it by giving them publicity. The official reason for the problem immediately became and remained dominant in all media. Reporting was focused only on two aspects of the theme - a great economic damage to the country where maize is a strategic export product (all the sources of information confirmed that) and the credibility of the first information on the extent of infection (everyone is disputed). Laterally it was introduced question which interests stands behind placing these topics in public.

The same model of reporting has become a major part in the story of milk, although this was a bigger and more complex question. The Ministry of Agriculture put the health aspect out of the crisis; impose itself as only credible source of information, constantly reminding public on the economic damage that can be caused, presented itself, however, as the only true protector of economic interests of country and health of citizens'. The essential difference was that it was a question of suspicious interest after the affair was present and what is prostrate as a field of political conflict among largest government and the largest opposition party, and the national and provincial governments. Citizens have been imposed to decipher conflicting media messages which involved and their party preferences.

The most important issue in analyzing media coverage of aflatoxin affair is how and why happened that story about a public health risk was shaped like the story of economic interests of agriculture industry and why most of Serbian mass media gave up defense of public interest when they are the most important information resource to public in such a conflict.

Those who defended the journalists could say that they were just objectively monitored what was happening in reality. Contradictory, economically-centered and health-centered messages, and politically (SNS or DS) painted messages were create by a real social actors (government officials, economic actors, the party organs) but not journalists.

But the media did not mirror reality. If the media in general can be associated with mirrors, experts say that they function as mirrors in the circus Home of laughter, in which real objects are lengthen or shorten, widen or narrow, distorted on one side or another. Journalists are no holders of the mirror, but the guards standing at the entrance into the public sphere. The media image of reality is a human product, creates by a certain group of professionals, guided by the rules of trade. For the attention of journalists fight a multitude of stakeholders who want to expose their public information available and present their disputed interpretation of the information. In that case the essence of journalism is - selection. In modern society every day occur a huge variety of events, but they cannot all fit in the newspaper or the TV news. Media routine job is making a series of decisions: which of many events will be presented to the public, what information will be put to fore and what be the last or omitted, whose opinions are relevant and whose are not, and so on. This work is done under the pressure of deadlines, space that is designated to cover some topics, financial and human resources.

Journalist selection exists at the level of facts, and even more in interpretation of the facts. Media research shows that the media in general more often showing interpretations of events rather than the facts of the events and occurrences. And how audiences are interpreting facts is more important than the facts themselves, because there is no extra information, especially the context in which these facts appear and public often does not have enough knowledge about these facts to determine their meaningful significance. In aflatoxin affair, in fact, there was little real events and announced a limited number of facts, most of them carried by all media. Media noise was created by interpreting these facts, offered by various actors of the affair. Statement "milk is safe to use" or "milk is not safe for use" does not contain a single fact; they're just an interpretation of an information that milk which contains a certain amount of aflatoxin (this is a fact) is or is not dangerous to health.

Selection, of course, is not made arbitrarily, but based on generally accepted assumptions about the importance of public events and information, their interests based on the expectations of the audience, acting competition, and time, human and financial resources. Knowledge of these factors is part of professional journalism skills.

One part of the explanation why the media prevailed interpretation issues promoted by state authorities lies in the common journalistic practice to regularly monitor the activities of social actors than any other because their activities always have public significance. Central state institutions are a unique source of information. They have information of interest to public because of the nature of their work, whether it comes to the police, tax authorities, the Ministry of Education, Department of Public Health and the like. They collect information as part of their work and can be quickly prepared for the press, have guaranteed the legitimacy of pre-credible source because the information does not dispose of its interests. Reliance on centralized state institutions as sources of information facilitates the journalistic work, but it also includes the risk that the media overrule

the official vision of reality. This is more due to the fact that state authorities have the power to choose which facts to present to the public.

But even journalists are not without advantages in these relations. They have at their disposal many ways to leverage the power of government information resources. Several laws protect their right to know information of public importance. Journalists may request and choose alternative sources of information and opinion, to decide number and frequency of their occurrence. Journalists' professional knowledge includes the right knowledge of alternative sources of information in order to obtain a balanced picture. Journalists have the opportunity to explore the arguments supporting and opposing the claims of their most important sources of information, from experts on various topics, get a different interpretation to the public sphere and bring those aspects of the story by the authorities, leaving unsolved. They may be from the state authorities are seeking additional information, to indicate the responsibility of state authorities and expose them to public scrutiny.

All these prerogatives make journalistic profession protector of public interest. They are a social factor who asks questions on behalf of citizens to control the elected public officials deciding how to spend the public funds. State control is an essential sense of news media as space open for public debate on the issues, which will confront opinions of all relevant stakeholders or social subjects.

Professional engagement of journalists in reporting on aflatoxin was minimal. What they did require a very small professional effort. Their main activity was reduced to the publication of statements of state and party organs and transmitting statements of government officials at the press conference. Issuing press releases and holding press conferences are usually the easiest ways that powerful social actors use to their interpretations of events placed in public. They allow them to be in public domain at the time and place of their choice as the best for themselves, on topics of their choice and with the information they consider important. In developing its media environment, journalists' use the official press releases and information presented at conferences for media as one and only possible vision of truth and does not treat them as an important social event (they are marked by a "pseudo-event"). Most of journalists do not even take advantage of opportunity to ask questions at the press conference and try to get some other information than those prepared in advance.

Concerned citizens who were unable to decide whether the milk is safe to use or not, however, have not been able to issue press releases and organize press conferences. They use what they have at their disposal - a space for comments on the websites of media companies. There are questions which they wanted to journalists ask the authorities, or they look for answers elsewhere - is it safe to eat maize products, what amount of aflatoxin is in milk, is there aflatoxin in meat and meat products, as in yogurt, cheese, butter, cream and other milk products in order to control the safety of other foods.

Journalists were blind to these questions, missed analysis, more research and interventions to balance information and check the reviews of subjects at different

positions in the chain of production and processing of corn and milk. There was no attempt to verify that the problem seems to be in the field of agricultural producers of corn and milk. The problem of feeding and milking cows was debated almost only in Belgrade, where cows are only in the zoo.

Delegated voice of public in the state field was silent. Not explored how did aflatoxin enters the food chain, did someone could at the time predict and prevent, whose responsibility it was. At the same time, without problematize and checking they published that affair is an attack on "Serbian peasants and inhabitants that live and feed their families from milk production", intend "destruction of Serbian agriculture, Serbian farmers and livestock production", "deliberate destruction of Serbian peasants and Serbian agriculture", "destruction of everything that is Serbian, and which is produced in Serbia ", or some unidentified lobbies (import, monopolistic, GMO lobby), and behind them, of course, a political rival (DS).

Media images of affair with aflatoxin could also be different. What is particularly surprising is that between the individual media there was not much difference in reporting. Media pluralism is used to allow the public through various channels, reach very diverse voices, different interpretations of reality from different parts of society.

In Serbia, there is no functional media market and media are economically dependent primarily on the money that the state bodies and public companies in a variety of ways qualify for the media and thus reward or punish their behavior. Neither the owners nor media editors cannot economically sustain opposite to political pressures. Among the reporters there is no professional solidarity or dominant commitment to professional and ethical rules. The media does not have enough journalists to allow their thematic specialization, such as food security and agricultural policy. Additionally, media public was not ready to financially reward commitment of media to public interest. For responsible journalism, therefore, there is high confidence that they will not be rewarded - even better - there is a strong possibility that they will be the sentenced worsening the current position of media, and therefore all its journalists.

The result of journalistic work was extensive but superficial information, fragmented, inconsistent, outside the context of the causes, culprits and consequences of the problem. It was not result of any conspiracy, but professional routine in gathering information, selecting and organizing the everyday stories. Under conditions in which journalists work today, with low financial, human and technical capacities of the media, it is clearly shown that their usual professional practice in emergency situations translated public interest into state interest.

Common-sense wisdom of the TV audience considering that TV cameras cannot lie but it is not true. The camera transmits what is really going on, but it covers only a fraction of the reality that can fit in the limited frame. That bit of reality is not choosing by public. What camera captures depends on participants' social power and position in the social hierarchy. The real power however is the one that controls the camera. The more we are aware of this fact and its various consequences, more we'll be able to assess the credibility of media and information we need.

## ***CRISIS MANAGEMENT OR REPUTATION ENHANCEMENT?***

The most important source of information about food quality and safety are mass media, with advertising as the most widely used tool. Food industries mostly rely on brand advertising, but the agricultural sector's focus communication efforts on co-operative generic advertising. Generic advertising is primarily concerned with the product class as a whole, while brand advertising envisages market share expansion for an individual brand, with constant discussions about the potential interactions between generic and brand advertising of food. But, although advertising clearly has information value for consumers, much of today's generic advertising, at least in Serbia, aims to counter negative publicity from food quality and safety problems. This potential negative impact of media coverage of health issues is best documented in the case of milk and corn consumption (already mentioned as aflatoxin affair). Last findings pointed towards decreasing milk intake following negative press coverage, despite advertising efforts. It is so-called 'bad news hypothesis' with no respect to the supply of food safety information, and confirms the impression that the mass media prefer publishing negative aspects of news items. But, this preference is, however, driven primarily by the demand of the audience.

Problem for food supply chain is, in fact, consumers' expectation that food information should include not only positive, but also negative welfare effects on human health. Consumers simply highly evaluate the information about potential health risks than risk neutral or health benefit information. Knowing that fact it is obvious why negative news coverage is likely to dominate positive news stories in the food market.

Here we are talking about crisis of confidence that hits not only whole food industry, but also every company included. Main causes for concern are: antibiotic residue, growth promoters, heavy metals in feed trace materials, bacterial contamination, industrial chemicals, mycotoxins, pesticides and animal diseases. That's why the biggest challenge is – to increase trust in food and animal feed. The question is – how - through crisis management or reputation enhancement? There are, actually - three types of food related companies: (1) those that do not have a crisis plan in place; (2) those that say they do and (3) those that have, and work to it.

But, how shall we identify real food crisis? Above all, food crisis mostly starts when there is any kind of consumer risk – risk to life, risk of injury or serious product contamination; then came business risk phase, including financial risk, legal actions and extortion. Third phase of crisis is brand risk, including media coverage and negative position versus competition.

Basic crisis management model consists of five basic phases:

- Preparation – preparation, planning and avoidance
- Early warning – identifying the issue and quantify the extent

- Crisis response – informing relevant people, control of exposure, limitation of risks and putting product into quarantine
- Crisis closure – replacing supply chain
- Learning and communication – communication control and confidence, preventing recurrence.

Related to first phase (preparation and planning) crucial is risk analysis, foundation of food safety policy. It consists of risk assessment, risk management and risk communication. Risk assessment must be founded on science, easy to understand and communicate and easily implemented. Risk should be identify and avoid, than company have to react and respond, assure and prevent for the future. Risk itself can be categorized from minor, over appreciable, major to catastrophic.

Early warning system means identifying key decision makers, gathering facts quickly to act, keeping target audience in focus, understanding the media, controlling information flow, developing third party allies, constantly monitoring the crisis and establishing a crisis centre. Immediate response must answer main questions relevant for consumers:

- Who is involved?
- What happened?
- When, date/time?
- Where, location?

If we analyze this questions, we can see great similarity with famous journalistic 5Ws (who, what, when, where, why) which is always helpful with managing media coverage of crisis. Also, in crisis media relations the best policy is confidence and trust which mean – be prepared, be available and be prepared because the mass media will always find the source, and if it is not involved company it will be someone else (often someone not credible and even malicious).

What standards should traceability systems adhere to? Answer is:

- Traceable forwards/backwards
- Comprehensive system encompassing all materials/ingredients
- Speed of response
- Link traceability to management systems
- Staff training – how to increase safety standards
- Quality improvement teams work proactively on continuous improvement
- Ability to successfully recall.

Learning and communication means: at all times, to all people, in control, trust, prevention better than cure. External interface in crisis includes: investors, customers, suppliers, communities, government bodies, regulatory groups, legal entities, insurance groups and competitors. Internal response includes business recovery and employee communication, while media relations include public



communication. All three elements are closely related and can't be separated or ignore if company want to control crisis.

Related to communication consumer information is vital for crisis management, so company shouldn't let the media manage crisis. Company has to prepare official statement, clear and simple. Wording is crucial to cause/avoid panic. Message must be true, and target audience must be reached. Equally important is internal communication because employees are one of external communication channels. There should be established regular briefings to employees who may be worried about their future and ensure that they all aware of company media communication policy because journalists always try to get information from employees. Companies often forget that in crisis everything happen fast, decisions must be made quickly, media scrutiny intense, media processes (rarely report), victims drive story and information are not always accurate. That's why company message sometimes just does not get out in public. In that case the most important is reputation management.

At corporate level management must shaping events, and not allowed events to shape management. Company must run despite crisis, above all through developed a business continuity plan, keeping vital operations running, allowing the crisis team to control the crisis and keeping regular status communication from the team.

Risk communication is best measured by consumer confidence. For this kind of communication transparency is a fundamental requirement. Consumer confidence requires information to the public, clear relationship with media and managing the perception of risk.

In last decade food producing companies use labeling to disseminate information about products risk and safety. Traceability labelling is modern mandatory recall with certain demands:

- Traceability must be established at all stages of production, processing and distribution,
- It must link a unique batch of feed with information,
- Full labeling to facilitate traceability
- Mandatory recall is essential to safety based on traceability and labelling.

Every agricultural company wants to have brands that people: recognize and respect, trust, has core values, endures and stands out. Food companies should reduce safety risks by better monitoring of the whole production and distribution process from raw material to sales. Although it requires a huge investment to establish an entire monitoring chain, it is good for a company in the long run.

## **CONCLUSION**

Starting from the premise that today's consumers are uncertain about food quality and safety, which together with information asymmetry should yield specific information needs, we tried first to shed some light on individual differences that shape those information needs. Next, the provision of information through mass media and labelling was reviewed with respect to its potential effectiveness. Most of these practices aim at reducing information asymmetry. Despite presumed uncertainty about food quality and safety, general consumer interest in information and willingness to engage in active information search cannot be taken for granted.

From everything wrote, it appears that strategies for reducing information asymmetry through the provision of vast amounts of information to consumers have a limited chance of success, simply because a lot of this information does not target a particular need. Hence, it risks not being attended to and processed by consumers. The particular challenge lies in identifying and effectively reaching market segments. In many cases this is feasible, though it may be problematic when variables such as involvement, personality, motivation or attitudes come into play. A generic approach, involving the provision of massive amounts of information to the general public, stands a real risk of information overload, leading to confusion and lack of interest among the majority of consumers. Hence, over-provision of information in an attempt to solve market inefficiencies caused by imperfect or asymmetrically distributed information may not yield the intended solution to market failures. The implications for information provision, e.g. through generic advertising or labelling, are that the recipient population needs to be well understood, segmented, identified and targeted.

We acknowledge that the picture presented above is far from complete. Specifically, it covers only a selection of potential antecedents of consumers' information needs, while omitting others such as attitudinal or socio-demographic factors. Furthermore, individual characteristics, such as uncertainty level and involvement, are often inter-correlated and their level is likely to be task-related, i.e. depend on the situation and the product purchase or consumption decision at hand. Also, consumer attitudes are very likely to play a key role as mediating variables between information processing and choice. Likewise, the scope in terms of information provision from agriculture and the food industry was limited to mass media and labelling, while ignoring interpersonal information exchange, for instance from direct contact between producer and consumer, and emerging electronic information vehicles. From the diversity of cases discussed, and equally from the diversity of potential cases ignored, it should be clear that interesting though very complex dynamics between information needs, information provision and information processing exist with respect to food quality and safety. The assumption that market deficiencies as a result of information asymmetries can be solved simply through providing more and better information seems not to hold when dealing with food consumers facing quality and safety uncertainty. Instead, the management of information from agriculture and the food industry requires that the target population be identified and their specificities are well understood and taken into account so as to make information meaningful, useful and effective.

## **REFERENCES**

- [1] Aker, J. (2011). Dial “A” for agriculture: a review of information and communication technologies for agricultural extension in developing countries, *Agricultural Economics*, Volume 42, Issue 6, pages 631–647, November 2011
- [2] Bettman, J. R. (1970). Information processing models of consumer behavior. *Journal of Marketing Research* 7: 370–376. Source <https://faculty.fuqua.duke.edu/~jrb12/bio/Jim/1.pdf>
- [3] Bettman, J. R., Park, P. W. (1980). Effects of prior knowledge and experience and phase of choice process on consumer decision processes: a protocol analysis. *Journal of Consumer Research* 7: 234–248. Source <http://www.jstor.org/discover/10.2307/2489009?uid=3738928&uid=2&uid=4&sid=21104619186683>
- [4] Golan, E., Kuchler, F., Mitchell, L., Greene, C., Jessup, A. (2001). Economics of food labelling. *Journal of Consumer Policy* 24: 117–184.
- [5] Henson, S., Caswell, J. (1999). Food safety regulation: an overview of contemporary issues. *Food Policy* 24: 589–603. Source [http://www.ucipfg.com/Repositorio/MIA/MIA-03/BLOQUE-ACADEMICO/Unidad5/lecturas/complementarias/Private\\_Sector\\_Management\\_of\\_Food\\_Safety.pdf](http://www.ucipfg.com/Repositorio/MIA/MIA-03/BLOQUE-ACADEMICO/Unidad5/lecturas/complementarias/Private_Sector_Management_of_Food_Safety.pdf)
- [6] Miles, S., Frewer, L. J. (2003). Public perception of scientific uncertainty in relation to food hazards. *Journal of Risk Research* 6: 267–283.
- [7] Swinnen, J. F. M., McCluskey, J. J., Francken, N. (2005). Food safety, the media, and the information market. In D. Colman and N. Vinck (eds), *Reshaping Agriculture’s Contribution to Society*. Oxford: Blackwell, 175–188. Source <http://onlinelibrary.wiley.com/doi/10.1111/agec.2005.32.issue-s1/issuetoc>
- [8] <http://www.istmedia.rs/potrosaci-kupuju-po-navici-a-ne-reklami-i-ne-gledaju-dekaraciju-proizvoda/>
- [9] [http://130.18.140.19/persuasion/elaboration\\_likelihood\\_model.htm](http://130.18.140.19/persuasion/elaboration_likelihood_model.htm)
- [10] <http://www.naslovi.net/2012-11-30/akter/strucnjaci-kukuruz-u-srbiji-zatrovan/4141502>

## **NEW CRITERIA FOR SUCCESS OF AGRARIAN FIRMS**

*Goran Maksimovic, PhD<sup>34</sup>*

*Radovan Pejanovic, PhD<sup>35</sup>*

### **ABSTRACT**

*The authors discuss about the new criteria of success of firms (firms, companies, farms). Without minimizing the importance of the classic criteria (which are reduced on the efficiency and effectiveness) the authors suggest new criteria in the "new economy" and which are becoming more significant. The role of the intangible, immaterial capital, namely, is increased. The key resource of the 21st century ("knowledge society") becomes, in fact, intellectual capital. The structure of this capital includes: human capital, structural capital and customer capital.*

*For the development of knowledge as a key resource of a new society and a new age, we need research and development, the authors pay particular attention to the further analysis.*

**Key words:** *The Success of The Company, Criteria, Knowledge, Intellectual Capital and Research and Development.*

**JEL Classification:** *Q19*

**UDK:** *005.52:005.336.1*

---

<sup>34</sup>Goran Maksimovic, University in Kosovska Mitrovica, Kosovska Mitrovica, Kosovo, Srbija.

<sup>35</sup>Radovan Pejanovic, University in Novi Sad, Novi Sad, Srbija, pejanovic@polj.uns.ac.rs.

## ***INTRODUCTION***

The criterion (greek kriterium) is measure, a sign of recognition for example criteria for a formal truth are laws (Vujaklija, 1980). Criterion (judgement) is a feature by which something is different from something else, "experimental rock", measure, the criterion of truth is what confirms the truth of knowledge (Klaić, 1988).

Firm (ital. firma) is the name under which it takes some works (Vujaklija, 1980). It is a company, a firm, name of a job (Klaić, 1988). The firm is synonymous for the company, institution. The firm is also the name under which the company operates. The company is an enterprise, commercial or industrial society, which brings together a larger number of co-owners and operating by their associated capital for profit. Companies are usually organized as stock companies.

The company is "an institution that transforms inputs into outputs" (Pejanović, 2013). It is an independent economic organization which carrying out economic activity for profit, or creation of surplus of income, compared to the cost of production or cost of operations. The company carries out its business activities by creating of use value and performance of services which settled the diverse needs of society. The way to achieve this goal (maximum satisfaction of the consumer) is the strategy of the company. The efficiency business of enterprises is measured by the degree of achievement of company goals.

The modern company is a coalition of interests of entrepreneurs, managers, workers and financiers. Through the business project it was established the manner of operation of all those involved in it to create value, risk-taking and innovation. Companies meeting the social needs indirectly, because of the realization that higher wages must produce goods to be sold on the market. The competition is forcing companies to develop the means of production and improve the organizational forms of business. That it encourages the pursuit of acquiring of extra profit.

In our legal system, the company is a legal entity who carries out any economic activity (production, trade and services) for profit. It can be formed into a public, cooperative, mixed or private ownership. They may be different, as small, medium and large enterprises, according to the size of capital or number of employees. In terms of modern business traffic is not strictly dependent on the size of the enterprise and small and medium businesses can achieve higher turnover and profit of the great ones.

The classical criteria for the business success company are efficiency and effectiveness. Efficiency (latin *eficitas* - effectiveness) indicates the criteria stated in productivity, efficiency and profitability. There are economic and technological efficiency. Economic refers to the cost and value, and is even higher if less expenditure achieves the same effect or the same expenditure greater effect. Technological measures the output per unit of used factors of production - expressed in their physical size.

Effectiveness (latin effectivus - real, true, eng. efficiency - the degree of actual effect) is the ratio between the useful output of a system and the input to the system which causes this output. In this sense we may speak of the diverse expressions of effectiveness: efficiency equipment, production efficiency, effectiveness of learning, and so on. Effectiveness in a wider sense is the company's ability to obtain the necessary resources and to use them as efficiently as possible to achieve their goals. Effectiveness in the narrow sense expresses by the degree of achievement of company goals. Figuratively speaking, the effectiveness can be seen as effort enterprises (management) to choose the right area of your business (doing the right things).

There are different economic principles and tenets of business: the principle and the tenet of the productivity; principle and the tenet of efficiency; principle and the tenet of rentability; microeconomics principle of budgetary constraints; principle of optimization; liquidity and solvency; accounting and the balance as indicators of status and success of the company. There are, also, various indicators of the company: indicators of profitability, debt indicators, indicators of equipment, gross margin, and so on.

Without further undoubted in significance and role of many traditional indicators of success, in this paper we will address the new success criteria, which are the result of changes that occur due to the dynamic of scientific and technical progress, which requires a modern economy and society, and which require the application of the concept of sustainable development.

## ***THE TREND OF SUCCESS CRITERIA***

The new society, based on the knowledge economy, characterized by a new approach to economic enterprises. Competitiveness and growth of businesses are built on, namely, the power of knowledge. In contrast to profit imperative to a successful business is to create additional value.

In other words, the "new" economy, increases the importance of intangible, immaterial capital of the company. Tangible resources are those that are commonly found in the balance sheet reports the company: cash, buildings, machinery. The second category includes intangible resources: people and their expertise, work processes and market values, such as customer loyalty, renewed operations, and the company's reputation. The problem is that the traditional accounting methods, designed for tangible resources, are shown inadequate for the evaluation of companies whose assets are largely intangible nature. The so-called company of knowledge its profits largely generated through the commercialization of ideas and innovation.

The key resource of the 21st century becomes, in fact, intellectual capital. What is knowledge today, it used to be classic factors of the economy formerly. Therefore, it is natural that this resource gets the status it deserves - to become

investment rather than a cost. This is because today, the most important resource for achieving competitive advantage is no longer capital, natural resources and labour, but knowledge, i.e. intellectual capital.

Intellectual capital as a concept does not have a complete and uniform definition. It is relatively new, complex economic category, which includes all the factors which have not been explicitly expressed in traditional financial reports, but significantly affects on long-term profitability and competitiveness of enterprises (Sundać, Pulić, 2001). The term intellectual capital involves the creative application of knowledge in production and any other creative activity (Pejanović, 2013).

The structure of intellectual capital (Sundać, Švast, 2009) includes: human capital (as a combination of knowledge, skills, abilities and innovation of employees); structural capital (intellectual property - patents, licenses, copyrights, franchises, software, organizational processes - intellectual processes, standardization of processes, organizational culture); relational/consumer-capital (business network, brand, customers - relationships and communications with customers).

One of the pioneers in the study of intellectual capital L. Edvinsson divides it into three parts: human capital, organizational capital (structural capital) and capital of the customer. According to this model, each of the three parts can be measured and evaluated for investment. Human capital means required capacity of individuals to implement solutions to the customers, the amount of innovation and improvement, either through research in laboratories or by leading companies. Organizational capital is the organizational ability of the company to meet market demands. It is a structural intellectual asset, such as information systems, laboratory, knowledge of market channels, which converts individual know-how in ownership of the group. The best example of this is the "McDonalds" with smart organization, able to produce the same quality in different countries. Capital of the customer represents the relationships with the people with whom the company operates. It is probability of those customers will continue in business with us in the future. Capitals of the customer include the relationships with suppliers and with the environment. All three parts of the capital are interconnected.

The key to a new, successful business becomes displacement from cost control to find effective strategies for creating value. The point is that, besides a clear downward trend in the share of material production, the present production is more intensive based on knowledge, on creation of appropriate business models, innovative products and sales of them and create appropriate solutions for clients. Modern technology allows the production for known customer, which used to be a privilege. Individualized production today, featuring many products, and is particularly noticeable in the service industry. So today, the cost of materials and buildings in the total costs becomes negligible in comparison with the situation in 1990, when they were accounted for nearly 80%. Inputs such as competence, image, innovative solutions, original ways of selling, developed relationships with customers, today carry the bulk of the total cost. In the software industry, participate in the total costs by 95%, and 60% in the car industry.

Another trend of change is the need to increase the eligibility of work, i.e. creation of knowledge workers. Increasing the eligibility of work is important both for intellectual activity, and the production, which is increasingly dependent on the intellectual input. In the 20th century the most valuable assets of a company have been manufacturing equipment. New Century (21) their focus values of business entities transferred to knowledge workers and enhance their productivity. Peter Drucker (1999) argues that the main success of the management of the 20th century was fifty times increase of productivity of workers in manufacturing, while the management challenge of the 21st century is increasing productivity of knowledge workers.

The main feature of the "new" economy is that unlike the industrial era do not rely exclusively on the volume of commodity units, with the imperative of achieving economies of scale. Today it is imperative to create value. In this connection, it says: "The business logic today is based on achieving growth and creating long-term value. The problem is that traditional indicators, such as revenue growth, cash flow, market share and technology leadership does not provide information on whether the company really create value for shareholders and owners." We are talking about creating value when the company created more than invested in resources. For shareholders is important that the business strategy is directed towards a goal, creating value, and measurement systems reflect the ability of management to achieve that goal... Increase of pressure and accountability towards shareholders and employees is directed focus on value creation as a new criterion for business success (research carried out on the stock market shows a correlation between the efficiency of creating value and the market value of the company). The fundamental objective is long-term increase in operating capacity of enterprises, which can be achieved by investing in intellectual resources (especially in human capital, which is a key factor in the creation of modern business values), and by increased mobilization of internal potential of companies (primarily intangible factors).

New business conditions are dominated by quality and innovation. They are looking for new success criteria. Edmund Jenkins says: "Today, the biggest shares of the costs of some products are R&D, intellectual property and other services. The old accounting system that gives the cost of materials in new conditions becomes unenforceable." It is necessary, therefore, to develop reliable and knowledge-based resources for measuring management of business activities. In the classical company, relationship between the production company and other costs, in the average it was 80:20. In today's enterprise is almost the opposite. Production costs, which account for most of the industrial economy of today's enterprises were almost irrelevant. Becoming more, added value is a matter of knowledge rather than material resources and labour. To productive work and resources put in a position to produce a product (the value) the assumption was the capital. To intellectual capital (Mu Shun Wang, 2011) placed in the position of creating a value assumption is knowledge, information and IT infrastructure. In fact, intellectual capital should be "raw material" from the resulting financial results.



Today, technologies are rapidly changing, there are new products and new competitors. It is necessary to constantly innovating activities in the market, as a key activity for the company. Despite of whether the product comes into the market for leisure, as manufacturing or consumer goods, banking and hairdressing services, innovation and increase of knowledge is a fundamental assumption for survival. In this context is a completely new approach to evaluating companies. The value of the company does not seem particularly tangible assets (although it cannot be said that is without importance), it is a significant to getting the value of "property" that is in the minds of employees. Knowledge refers to the ability to create additional value and, as such, becomes an important indicator of the value of the company (Fortune Magazine, 2007).

What are the hidden drivers of value for the "old" economic logic cannot provide the answers? It has become obvious that the industrial value chain ceases to be the dominant pattern of creating them. In Porter's (1985) conventional value chain output is the one who brings value to the consumer. This type of value creation is based on standardized processes and their repetition and mass production, i.e. economies of scale. In the new scheme of value creation through intellectual capital, the most important is the focus on solving customer problems. In contrast to the logic of the value chain, the value lies not only in the final solution and an output (goods and services), but also in individuals who have come to this decision and the manner in which they came up with a solution. This emphasizes that the possession of knowledge within an organization is not enough by itself. There is a huge difference between having resources such as competencies, processes, systems, intellectual property, internal and external relationships... and their optimal involvement in the creation of value, which in fact is the ability of transforming one resource to another. It is necessary, namely, the value of intangible (knowledge, service, experience, benefits, processes, speed, quality, reputation, relationships with clients and the community) to transform the material forms (revenue, profit, market value, added value). Because, as he says Edvinsson: "Intellectual capital is useless if it is not moving." Worthless, in fact, have quality people who sat alone in his office.

Sustainable competitive advantage is the goal of every company: self-preservation, and the steady growth and development of the company. It is the result of the successful use of intellectual capital (Mu Shun Wang, 2011), because the intellectual capital of the most important source of sustainable competitive advantage. It is necessary to achieve a competitive advantage based on intellectual capital - in research and development, training and employee development, new technology, marketing, and so on - because competitive advantage by itself is not sustainable (Pulić, 2004). It must be maintained (investments in intellectual capital).

Land, labour and capital are limited resources. In using these resources acting law of diminishing returns (after optimum revenue declines). Intellectual capital, as a resource, is not limited and can be exhausted. Therefore, by its use in the production, the income is constantly growing, and the cost decreases with increasing production. It may say that for knowledge resource is valid the law of

increasing returns (exponentially). In addition, knowledge of the unique resources: there are no restrictions (unlike all other resources, and it is limited only by the human mind) and therefore provides endless possibilities for development: it is not spent by using, but its value is constantly increasing; use of knowledge does not spend a lot of energy and does not destroy the environment. In this way, intellectual capital is becoming the most valuable assets of the company and may become its strongest competitive factor.

Added value is a matter of knowledge rather than material resources and labour. Increasing of the share of knowledge in the newly value is the main feature of the new economy. In the knowledge economy (Edvinsson, 2001) the most important resource for achieving competitive advantage is not capital, natural resources and labour, but knowledge, and based on it the intellectual capital.

The value of a company does not make only the physical and financial capital, but also intellectual capital (Trivić, Nada, 2013).

The problem, however, it is difficult to measure and monitor of intellectual capital. It is difficult, namely, to give a mathematical expression. If intellectual capital cannot be quantified or put into the equation, does it not exist? Economists who have adopted the positivist orientation will answer with no. However, on the other hand, there are stronger economic interests in this important but invisible economic factor. Numerous empirical studies show that companies with significant intellectual capital have better performance and that they are more competitive. In order to measure intangible capital, however, it is necessary to define appropriate measure, which corresponds to the accepted definition. It is necessary, therefore, an indicator (ratio index), which will provide an objective assessment of business success. It seems that for now the most suitable indicator of business success is additional (realized) value (Pirjo Stahle, Stahle Stren, Smule Aho, 2011, according to: Trivić, 2013).

## ***RESEARCH AND DEVELOPMENT (RD)***

Knowledge-based society, has led to the focus of interest in the review of previous development concept. Sustainable development, as a new development concept, which involves the growth of a knowledge-based (so-called "smart growth"). Priority development areas are: (1) information society; (2) science, research and development, innovation. Strong support for this process should provide education.

## ***RD – INNOVATION AND MANAGEMENT ACTIVITIES***

Activities in the area of research and development lie at the foundation of economic growth of modern society and businesses. They are key factors in the development of a knowledge society.

We live in a time that the economy is, in fact, based on knowledge. Intellectual capital today represents 90 - 95% value of the companies, even those engaged in the production. So, all tangible capital (real estate, factory facilities, equipment, facilities, money in the bank, storage, etc.) form a 5 - 10 percent of the value of the organization. That intangible, "weightless" capital form about 90% of the value. Therefore, the paradigm of value creation is changed (and continues to be continuously changing). Linear thinking has replaced by the lateral mode of creative thinking and problem solving. The only thing that can run an economy based on knowledge is knowledge about modern ways of doing business. For this and other knowledge is necessary research and development.

The development dimension of companies presents the need for use new production processes and innovation of production programs to continuously improve their operations. Initiating technological and other innovations that want to provide a competitive advantage and achieve market activity. Only in a limited number of cases, production program is static. New products with new features are continuing to introduce, existing functions can be divided into separate products or performs a combination of existing functions in a new way. Market knowledge, constant research and innovation make it possible to perform continual improvement, not just waiting for the larger shifts in the business, which still are possible only from time to time. In some branches the innovation is assumption for the survival of the company. Product innovation may have an impact on the growth of the branch, because it allows better meeting needs and improving performance in relation to substitutes.

In this regard it is important to point out the difference that Schumpeter makes between "invention" and "innovation". The findings are the top of the research and present ideas, designs and models for a new product or process that can often be patentable. About innovations in economic terms, we say when a product out on the market or when a process used for commercial purposes and when is the highest level of achieved development, production or marketing. Many inventions never become innovations, and that does not mean that they have no value. Furthermore, when this is the case, between the present invention and innovation is a long and complex chain of events.

Research and development (R&D) are the most important source of innovation. Research means the application of human intelligence and experience in the organization, and systematic scientific study of the problems whose solution had not been known. Such as "research is planned search or critical investigation aimed at discovery of new knowledge that would be useful knowledge for new product development (process) or services", then is "the development is

conversion the results of research and knowledge to plan or sketch for new or modified products, for improved processes and better services" (Pejanović, 2010).

Research and development activities are: (1) fundamental research, (2) applied research, and (3) experimental development (Pejanović, 2010).

The fundamental (basic) research "is meant to increase the overall knowledge and understanding of the laws of nature". These studies do not have a specific goal of a practical purpose, but are performed to move the limits of human knowledge. By means of fundamental research scientists verified hypotheses, theories and laws. It can be freely research (these are all kinds of scientific research) or focused fundamental research (where are expanding knowledge in a particular scientific field).

Research which is directed towards a specific practical aim or some practical purpose is called applied (applicative) research. It is undertaken in order to acquire new knowledge through which will apply the results of fundamental research. So, the existing knowledge is deepening in order to solve specific problems, and ideas are developed into operational form. On this way acquired knowledge is related to a product or a limited number of products that can be patented or kept as a trade secret.

Fundamental research significantly impacts on the applied research. Due to the growth of the general fund of scientific knowledge leads to the rapid development of applied research by means of which the results of fundamental research could be applied in practice.

"Experimental development is the use of scientific knowledge to create new products or substantially improved materials, devices, processes, systems or services". It is located in business and involves systematic work based on existing knowledge. It represents a continuation of applied research and his task is to bring inventions to the stage of commercialization. When creating a prototype or pilot of project experimenting is one of the most important characteristics. From the standpoint of the company, this phase of research and development activities is the most important and can be seen as one of the mechanisms for making changes in the company. Application of the results obtained through research and development activities in the company it will improve existing products and processes, while applying the brand new products and processes will meet the current market needs in a new, better, more practical way or it will even create entirely new need.

In practice, the highest number of research is located at universities and institutes, and only a small number of research and development activities in the business entities. It is understandable if we know that research as a continuous process in addition to personnel of various profiles (which will systematically study the problem whose solution is being investigated), require more information-communication equipment (hardware, software, and database), other modern equipment (laboratory instruments, materials), library etc. It is also necessary continuous training of personnel, as well as their international trade.

As the input of scientific and research activities are: personnel, resources and information, from which resulting as outputs: new products, new processes, perfected and improved existing products and technologies.

Management of research and development is an important aspect of business management. It is necessary to consider who and how will continuously take new, educated and creative staff, holders of development opportunities? How to guide internal processes and organization? In an effort to constantly push the innovation process, while maintaining a stable structure in a dynamic environment. Management in this area includes: planning research and development activities, policy making, choice of strategy, organization of tasks, management of research and development department, cost control activities.

In developing its plans, the company should look at the place and role of research and development in pursuit of its strategy. When it comes to the more traditional branches and if the company is using a market penetration strategy, the need for research and development will be less. In the branches where is present fierce competition where he represented high technology, and if the company strategy includes the development of new products or diversify, then research and development activities have much greater importance for the company. Phase of the life cycle in which there is a company, its products and technology will also have an impact on the meaning and application of research and development activities. Application of the results obtained through the research may be one way of growth, enterprise development and a means to prolong its life.

In planning the investments in research and development should be separate assets relating to the existing business from investments which enter into completely new areas, which are not included in the activity of the company. Planning goals and objectives of the research and development have strategic importance and needs to be part of a global plan, which is in accordance and compared with the plans of other functions in the company. Because of their specificity, these plans also require a certain freedom.

For the importance, role and planning of research and development activities of the company affect the degree of change, both the technology and the marketplace. There is no company that will successfully carry out these activities in all business areas. During the research, companies need to specialize in a particular research and development activities, mostly for the development of those areas and technologies that are essential to their business and that are of the greatest contributions to business results, and other technology to obtain from other (with from scientific institutions, specialized laboratories or from other producers).

## ***POLICY R&D ACTIVITIES IN THE EU AND THE SITUATION IN SERBIA***

Developed countries of the EU have an active policy of R&D activities. During the last two decades, EU countries have significantly reduced the antimonopoly barriers in favour of the development of joint R&D activities. The main objective of introducing incentives for the conclusion of joint R&D activities is to promote the international competitiveness of certain industries. The main reason for concluding the contract of joint R&D activities of the company is in high fixed costs of R&D activities, which are not able to independently cover. It is, in fact, effect of economies of scale on R&D activities, where the competition is taken as a natural process of selection of the most effective economic entities and their most efficient forms of organization and size. When the joint R&D activities are organized in the form of joint ventures, it becomes acceptable from a structuralist point of view, because it represents the entry of yet another competitor in the market of R&D services. However, for the structuralist, the danger is an unfair conduct of these companies to market products. Options for making secret agreements are much larger in the horizontal than in vertical R&D contracts.

In Germany, for a long period is accepted the general principle that R&D cooperation does not represent a restriction of development for competitive relations, if this activity would not be possible otherwise arranged. However, in a particular case it may be that fear of abuse of monopoly power overwhelms the desire for the realization of the potential benefits from the effects of economies of scale. The Federal Office for the cartels, for example, expressed her disagreement with a proposal involving the merger of companies to develop software for new electronic media storage, because it is estimated that there was a case of attempted monopolization of the market at the beginning of its constitution.

Single rule, that government in the EU is based on the premise that R&D joint ventures encourage technological and economic progress, so that the EU Commission positively assessed this type of contract. However, certain R&D agreements may be an exception. In "White Paper" which is dedicated to restrictive trade practices, the UK government established a special test for the detection of contracts to be excluded from this practice, based on the rules of the EU Treaty.

In the Netherlands, the Law about Economic Competition does not define a general rule to ban or allow R&D cooperation, it requires the implementation of a public benefit test. Basically, R&D cooperation agreements between firms must be approved by the Dutch authorities, but they, as a rule, take a positive attitude when it comes to cooperation in the field of science and research.

In proportional to economic power in Serbia is not sufficiently invested in encouraging R&D activities. The percentage share of the costs for research and development of the GDP during the last decade of the last century and the first half decade of the new century, stabilized at the level of 0,51% to 0,54%, which is extremely small compared to the competition. For example, in the Republic of

Korea share of costs for R&D in GDP increased in the period 1991-2004, from 1,9% to 3,1%. Taking into account that the level of investment in R&D in Japan at that time was 7 times higher, and in the U.S. 14,7 times higher than in Korea, it becomes clear how the most developed and dynamic countries of the world take care of maintaining the leading position in this field.

To compensate for the lack of accumulation in the Serbian economy, the government had to maximize liberalize conditions for the development of joint R&D activities, the permit competition of capital that could be invested in this area, but also the development of new technology, and education and training of professional staff. The privatization and EU accession, was supposed to contribute to the achievement of this goal.

As a candidate country for accession to the EU, Serbia is in the process of negotiations with the members of the EU, adapting its economy in the manner and operating conditions which are prevailing in the developed European countries. With approximately 7,2 million inhabitants (excluding Kosovo and Metohija), Serbia are representing 1,4% of the total EU population (about 504 million population), and with a per capita GDP in 2011, in the amount of 4.290 USD, it is at a level of about 17% of the average EU27. In the same year, in Serbia, the share of gross expenditure on R&D (GERD-Gross Expenditure on Research and Development) in GDP was 0,78%, which is significantly below the level of investment in this area in most of the countries of South Eastern Europe. For example, in Slovenia in 2011, proportion of GERD in GDP was 2,47%, 2,38% in Estonia, 1,84% in the Czech Republic, and 1,21% in Hungary. In 2012, participation GERD in Serbia's GDP increased to 0,96%.

*Table 1. Investment in research and development in Serbia and the EU, 2007-2012*

	Serbia 2007.	Serbia 2008.	Serbia 2009.	Serbia 2010.	Serbia 2011.	Serbia 2012.	ØEU-27 2011.
<b>GERD</b> (gross expenditure on R&D, mill. euro)	182,61	239,07	265,55	216,39	242,09	-	9503,2
<b>GERD per capita</b> (per capita gross expenditure on R&D, euro)	24,68	32,46	36,27	29,61	33,35	-	510,5
<b>The intensity of R&amp;D</b> (share of GERD in GDP, %)	0,63	0,72	0,92	0,79	0,78	0,96	2,03
<b>BERD</b> (business expenditures on R&D, mill. euro)	4,71	21,72	38,02	25,80	22,72	-	5925,03
<b>GERD financed by business enterprises</b> <b>in total GERD (%)</b>	11,51	14,37	16,61	18,39	15,48	-	53,9 (Y2010)
<b>GERD financed from abroad in total</b> <b>GERD (%)</b>	6,69	9,03	7,18	3,58	5,48	-	8,9 (Y2010)
<b>GRAORD</b> (outflows of budgetary resources in R&D, mill. euro)	116,05	143,81	166,96	131,78	153,60	-	64,34
<b>GRAORD as a percentage of total public</b> <b>expenditure (%)</b>	1,06	1,15	n.a.	n.a.	n.a.	-	1,49

*Source: Đuro Kutlača, Erawatch Country Reports: Serbia, Institut Mihajlo Pupin, Beograd, 2013.*

Instability is the most prominent feature of the long-term policy of Serbia towards research and development activities. So in 2010, proportion of GERD in GDP was 0,79%, which is one-fifth less than in 2009, primarily due to the impact of the economic crisis on GDP and total unfavourable performance of the domestic economy.

Except for a small share of allocated funds to research and development, Serbia cannot boast with a favourable investment structure in this area. Based on the data of the National Statistics Institute in 2011, share of expenditures for R&D within the higher education sector (HERD-Higher Education Research and Development) in the gross expenditure for R&D amounted to 56,7%, while the share of investment of the business sector (BERD-Business Enterprises Research and Development) was only 9,4%. In contrast to Serbia, the structure of investment in R&D in the EU-27 is inverted - the share of HERD is in this year amounted to 24,1% of GERD, and the share of BERD was 62,1% of GERD. State spending on R&D in 2011, in Serbia participated with 33,8%, and in EU-27 with 12,8%, while investments by private non-profit organizations in Serbia amounted to 0,13% of GERD, and EU 0,99%.

Within the "Strategy of Scientific and Technological Development of Republic of Serbia from 2010 to 2015." from 2010, as priorities in this area are the following:

- biomedicine and health,
- new materials and technologies,
- environmental protection and monitoring of climate change,
- agriculture and food,
- energy and energy efficiency,
- information and communication technologies, and
- improvement of the process of decision making and affirmation of national identity.

Simultaneously with determining the objectives of scientific and technological development, according to which the allocations in this area should be increased to 2015, to 1,05% of GDP. In the context of the planned increase in funding for R&D activities, it is necessary effect on the structure of investors and users of funds in this area, because the state's monopoly in this area does not contribute a significant step forward Serbian economy to market products and services, high technology and knowledge.



## ***CONCLUSION***

Influenced by scientific and technical progress are happening the dynamic changes taking place in all aspects of modern society, both at the macro and micro level. Knowledge-based development is a key determinant of the modern theory of development, which has found a high place in the EU strategic documents. In this paper, we have investigated the effects on the micro level, i.e. at the company level (companies), including agricultural subjects. The findings which we have collected are applicable to the practice of socioeconomic development.

At the level of microeconomics, competitiveness of entities is imperative for their survival and development. Synonym for competitiveness is a success. Success criteria are different. They can be conditionally, divided into classic and new criteria. It is necessary to respect both of them.

New criteria for the success of companies are, however, a consequence of the new society ("knowledge society"), which is which is more emerging. In relation to this the growing the role of intangible capital increases. The key resource of the new century ("knowledge society") becomes, in fact, intellectual capital. It is a resource-based on knowledge.

For the development of knowledge, as a key resource of a new society and a new age, we need research and development, which should be given special attention. In this respect, instructive experience of the European Union is very important.

## REFERENCES

- [1] Baumol, V. (2006), *Inovativna mašinerija slobodnog tržišta, Analiza čudesnog rasta u kapitalizmu*. Podgorica: CID.
- [2] Brodel, F. (1989), *Dinamika kapitalizma*. S. Karlovci-Noví Sad: IK Zoran Stojanović.
- [3] Draker, P. (2005), *Upravljanje u novom društvu*. Novi Sad: Adižes.
- [4] Edvinsson, L. (2001), *Intellectual capital: the new wealth of corporations*. The New Economy Analyst Report Fortune Magazine, (2007). Annual report Top 500 companies.
- [5] Edvinsson, L., Malone, M.S. (1997), *Intellectual capital: Realising your company's true value by finding its hidden brainpower*. New York: Harper Collins.
- [6] *Ekonomski rečnik* (2001), Beograd: Ekonomski fakultet.
- [7] Firer, S., Williams, S. Mitchell (2003), *Intellectual capital and traditional measures of corporate performance*. Journal of Intellectual Capital.
- [8] Freeman, C., Soete, L. (1997), *The Economics of Industrial Innovation*, 3rd edn, London.
- [9] Fridman, M. (1997), *Kapitalizam i sloboda*, Novi Sad: Global book.
- [10] Fukujama, F. (1995), *Social capital and global economy*. Foreign Affair. 74 (5), pp. 89-103.
- [11] Galbraith, J. K. (1987), *Anatomija moći*. Zagreb: Stvarnost.
- [12] Grontni, Dž. D., Strup, R. L. (1996), *Ekonomija i prosperitet*. Beograd: IDN.
- [13] Hajek, F. (2002), *Individualizam i ekonomski poredak*. Zagreb: FPZ.
- [14] Komnenić, Biserka (2006), *Intelektualni kapital – novi put stvaranja vrednosti*. Ekonomski anali, Beograd: Ekonomski fakultet, br. 1.
- [15] Kotler, F. (2003), *Marketing od A do Z*. Novi Sad: Adižes.
- [16] Kutlača, Đ. (2013), *Grawatch Country Reports: Serbia*. Beograd: Institut Mihajlo Pupin.
- [17] Leadbeater, C. And London, D. (1999), *New measures for the new economy*. International Symposium: Measuring and Reporting Intellectual Capital: Experience; Issues and Prospects, Amsterdam: Technical Meeting.
- [18] Maksimović, G., Pejanović, R., Njegovan, Z. (2013), *Ekonomika poljoprivrede, agrarna politika i ruralni razvoj*. Lešak: Poljoprivredni fakultet.
- [19] Milisavljević, M. (1997), *Osnovi strategijskog menadžmenta*. Beograd: Naučna knjiga.
- [20] Mu Shun Wang (2011), *Intellectual Capital and firm performanse*. Annual Conference on Innovations in Business and Management, London, UK.
- [21] Ostrom, M. (2000), *Social capital: a fad or a fundamental concept?*. In Partha Ostrom and Ismail Serageldin: *Social capital: a multifaceted perspective*, Washington, The World Bank, pp. 172-214.
- [22] Pejanović, R. (2007), *Principi ekonomije*. Novi Sad: Poljoprivredni fakultet.
- [23] Pejanović, R. (2009), *Agroekonomskih analiza poljoprivrednih subjekata*. Škola biznisa, VPŠ, Novi Sad, br. 4, str. 3 – 13.

- [24] Pejanović, R. (2010), Uvod u metodologiju ekonomskih nauka. Novi Sad: Poljoprivredni fakultet.
- [25] Pejanović, R. (2013), Uvod u (mikro)ekonomiju. Novi Sad: Poljoprivredni fakultet.
- [26] Pulić, A. (2004), Intellectual capital – does it create or destroy value. *Measuring Business Excellence*, Vol. 8, Iss: 1, pp. 62-68.
- [27] Rasel, B. (2003), *Mudrost Zapada*. Beograd: Dereta.
- [28] Rentzhog, O. (2005), *Temelji preduzeća sutrašnjice*. Novi Sad: Prometej.
- [29] Senić, R. (1993), *Upravljanje rastom i razvojem preduzeća*. Beograd: Savremena administracija.
- [30] Sundać, D. (2002), *Znanje – temeljni ekonomski resurs*. Rijeka: Ekonomski fakultet.
- [31] Sundać, D., Pulić, A. (2001), *Intelektualni kapital – ključni resurs 21. stoljeća*. Rijeka: I.B.C.C.
- [32] Sundać, D., Švast, N. (2008), *Značaj i uloga intelektualnog kapitala u proizvođenju konkurentskih prednosti poduzeća*. Zagreb: Hrvatsko Komunikološko društvo.
- [33] Sundać, D., Švast, N. (2009), *Intelektualni kapital*. Zagreb: Ministarstvo gospodarstva, rada i poduzetništva.
- [34] Šumpeter, Dž. (1975), *Povijest ekonomske analize I –II*. Zagreb: Informator.
- [35] Todorović, J., Đurićin, D., Janošević, S. (2000), *Strategijski menadžment*, Beograd: ITI.
- [36] Tomer, F. John (1999), *The human firm: a socio-economic analysis of its behavior and potential in a new economic age*. New York: Routledge.
- [37] Tomer, F. John (2008), *Intangible capital – its contribution to economic growth, well-being and rationaliity*. Massachusetts, USA: Edward Elgar Publishing, Inc.
- [38] Trivić, Nada (2013), *Uloga intelektualnog kapitala u savremenim uslovima i nužnost njegovog merenja*. *Anali Ekonomskog fakulteta u Subotici*, Subotica, br. 29/2013, str. 9-21.
- [39] Vukotić, V. (2000), *Nova paradigma ekonomije*. Beograd: IDN.
- [40] Weber, M. (1989), *Protestantska etika i duh kapitalizma*. Sarajevo: Veselin Masleša.

# ***DIAGNOSTIC STUDY OF AGRICULTURAL POTENTIAL OF THE MUNICIPALITY OF BUJANOVAC, IDENTIFYING STRATEGIC VALUES AND STRATEGIC DEVELOPMENT OBJECTIVES IN THE FIELD OF AGRICULTURE***

*Edita Kastratovic, PhD<sup>36</sup>*

*Milan Dragic, PhD<sup>37</sup>*

## ***ABSTRACT***

*This paper is based on studies that were conducted during the development strategy of the municipality of Bujanovac.<sup>3</sup> The paper presents results of research related to the diagnosis of the agricultural potential of the municipality of Bujanovac. Strategic value and strategic development objectives in the field of agriculture were identified. It explains the priorities and profiles related to the improvement of existing and the introduction of more profitable agricultural production, organizational and market performance, infrastructure, quality and safety in agricultural production.*

***Key words:*** *Agricultural, Bujanovac, Strategic*

***JEL Classification:*** *Q13, Q15*

***UDK:*** *352:631.164(497.11) 005.52:631*

---

<sup>36</sup>Edita Kastratovic, Faculty of Business Economic and Entrepreneurship, Belgrade, Serbia, [kastratovice@yahoo.com](mailto:kastratovice@yahoo.com)

<sup>37</sup>Milan Dragic, Faculty of Business Economic and Entrepreneurship, Belgrade, Serbia, [milan.dragic79@gmail.com](mailto:milan.dragic79@gmail.com)

## ***INTRODUCTION***

The municipality of Bujanovac in all primary indicators of the level of economic activity, significantly is behind the average of the Republic of Serbia. It is located in the extreme south of Serbia, on 360-kilometer on highway from Belgrade to Macedonia and Greece. Town of Bujanovac is the administrative, economic, cultural, health and educational centre of the municipality with a characteristic relief. Territorially it belongs to Pcinj district. Bujanovac municipality lies between 42 ° 15`35 `` and 42 ° 23` 30 `` north latitude and 21 ° 36`30 `` and 21 ° 57` 00 `` east longitude on the surface of 461 km<sup>2</sup> and it is categorized as one of the largest settlement places in Serbia. (Kastratovic E. et al, 2013:1).

Bujanovac as the administrative centre of the municipality is situated at an altitude of about 400m. Bujanovac lies in a valley that is surrounded by hillsides. About 30% of the territory is flat, and about 70% is mountainous areas. Agricultural area of the municipality of Bujanovac is 26,768 ha, of which 84.19% is in the private sector. Of the total agricultural land: arable land and gardens include 56.19%, orchards 2.38%, vineyards 1%, meadows 6.70% and pastures 33.70%. In recent years, agricultural land is shrinking, and changing the structure of production, it reduces the fields and gardens in favour of meadows and pastures.

Arable land includes:

- Grains: wheat, corn, rye, barley and oats at 70%
- Vegetable crops: potatoes, beans, peppers, tomatoes, onions and garlic, cabbage, cauliflower, melons, watermelons and other at 14%
- Industrial: tobacco and sunflower at 2%
- Forage crops: clover, alfalfa, mixed pulses and grains, a mixture of legumes and grasses at 14%

Livestock in the municipality by type is as follows:

- Cattle: 6000 animals,
- Pigs: 2500 animals,
- Sheep and goats: 5400 animals,
- Poultry: 55000

Starting from the existing resources of the municipality, ownership structure, characterized by small possession which is orientated in animal husbandry and the production of tobacco, the concentration of future agricultural development of the municipality relies on intensive livestock development and potential use of grass.

Best way for taking advantage of this municipality is by improving livestock, especially since this territory has modern abattoir for small and big animals.

## ANALYSIS

The detailed SWOT analysis has been conducted of the key factors for the development of agriculture in the municipality of Bujanovac. This allowed the consideration of human resources in terms of agricultural development, living conditions in the rural areas of the municipality, the analysis of the food and agricultural industry.

SWOT analysis is a technique for identifying the strengths, weaknesses, opportunities and threats (Djurić, 2018:2). SWOT analysis presents the key elements for identifying strategic values and strategic development objectives in the field of agriculture.

*Table 1. SWOT Analysis of human resources in terms of agricultural development*

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
Population (human resources)			
<ul style="list-style-type: none"> <li>▪ Cheap labor</li> <li>▪ Tradition of production</li> <li>▪ Young workforce</li> </ul>	<ul style="list-style-type: none"> <li>▪ Low level of market knowledge</li> <li>▪ Lack of education</li> <li>▪ Low productivity</li> <li>▪ Lack of motivation</li> <li>▪ Poor cooperation with institutions in the field of agriculture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Large number of workers return to farms from the bankrupt factories</li> <li>▪ Retirees from the city and from abroad return to farms</li> <li>▪ Increased knowledge of agriculture in order to increase production and quality</li> <li>▪ Increase production of existing crops</li> <li>▪ Production of new and more profitable crops</li> <li>▪ Production of organic products</li> <li>▪ Creating agricultural brands of Bujanovac</li> </ul>	<ul style="list-style-type: none"> <li>▪ The migration of population from villages to cities</li> <li>▪ Extensive agriculture</li> <li>▪ Poor infrastructure</li> </ul>

Table 2. SWOT analysis of living conditions in rural areas of the municipality

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
<b>The living conditions in the rural areas of the municipality of Bujanovac</b>			
<ul style="list-style-type: none"> <li>▪ Ecologically preserved environment</li> <li>▪ High quality pastures</li> <li>▪ Area rich in medicinal herbs and mushrooms</li> </ul>	<ul style="list-style-type: none"> <li>▪ Poor infrastructure</li> <li>▪ Not enough voltage in electric networks</li> <li>▪ Lack of telephone networks (fixed and mobile)</li> </ul>	<ul style="list-style-type: none"> <li>▪ The development of rural tourism</li> <li>▪ Greater interest of local government for the rural environment</li> <li>▪ More attention from government</li> <li>▪ Greater interest from donors for rural environment</li> </ul>	<ul style="list-style-type: none"> <li>▪ Poor social and physical infrastructure</li> <li>▪ Decreasing interest of young people for living in the countryside</li> </ul>

Table 3. SWOT analysis of agricultural industry (crops, livestock, fruit)

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
<b>Agricultural industry (crops, livestock, fruit)</b>			
<ul style="list-style-type: none"> <li>▪ A good geographical position and climate for a particular cultures in farming and fruit growing</li> <li>▪ The fertile soil for particular cultures</li> </ul>	<ul style="list-style-type: none"> <li>▪ Outdated machinery</li> <li>▪ The decline in livestock possessions</li> <li>▪ Shutting down most farming cooperatives</li> <li>▪ Unorganized market performance</li> <li>▪ The lack of new brands</li> <li>▪ Lack of urban farming associations</li> <li>▪ Weak management and marketing</li> <li>▪ Inadequate development strategies</li> <li>▪ Poor sowing structure</li> <li>▪ Misconceptions regarding the quality</li> </ul>	<ul style="list-style-type: none"> <li>▪ Increased demand for healthy food</li> <li>▪ Increased financial assistance from the Government</li> <li>▪ The assistance of international organizations</li> <li>▪ Innovation</li> <li>▪ Supplying larger customers</li> <li>▪ Opening to the EU</li> </ul>	<ul style="list-style-type: none"> <li>▪ Strong competition from other cities</li> <li>▪ Strong competition from other regions (Macedonia, Kosovo, Turkey)</li> <li>▪ Uncontrolled import policy</li> <li>▪ Natural disasters</li> <li>▪ Unorganized purchase</li> </ul>

Table 3: SWOT analysis of the food industry

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
Food Industry			
<ul style="list-style-type: none"> <li>▪ Several well-known bakery</li> <li>▪ Factory for the production of mineral water "Heba", "Bivoda" and "Vrelo"</li> <li>▪ Factory for production of confectionary products "Kondiva"</li> <li>▪ The current production capacity is less</li> </ul>	<ul style="list-style-type: none"> <li>▪ Unfinished privatization</li> <li>▪ Loss of market</li> <li>▪ Poor equipment</li> <li>▪ Strong competition in the region</li> </ul>	<ul style="list-style-type: none"> <li>▪ The development of better manufacturing techniques</li> <li>▪ Entering Serbia to the EU</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lack of investment in the development of food industry</li> <li>▪ Expensive loans</li> <li>▪ Unfair competition</li> </ul>

The development of agriculture and the food industry is one of the strategic development goals of the municipality of Bujanovac. The current situation in the sector is not at all satisfactory. Fully outdated way and use of extensive agricultural production, low productivity, obsolete machinery, almost non existing cooperation between producers, the rapid decline of livestock, loss of market are just some of the reasons why the situation in agriculture is very low.

Potential in this sector certainly exists; there is a good climate and geographical position for particular cultures in farming and fruit growing.

Several factories exist for many years, and they survive in the market. However, increased competition in the country and the region caused that this sector, in the last fifteen years is standing still or going backwards.

Great opportunity is in the determination of the Republic of Serbia to subsidize the agricultural sector and to establish the balance in regional development. With such an attitude of state, this region will certainly get investment and incentives aimed at the development of this important economic sector. These state incentives are reflected in cheap loans for new equipment, implementing new technologies and technological processes in agriculture, subsidies by the amount of produced units. One of the most important prerequisites for the development of agriculture is a better organization and linking producers and their joint appearance on the market. Otherwise, through networking, it is possible to achieve a number of alliances, or cooperation and sharing of knowledge and experience. (Milošević D. et al, 2014:3)



## ***STRATEGIC GOALS OF DEVELOPMENT OF AGRICULTURAL POTENTIALS OF THE MUNICIPALITY OF BUJANOVAC***

Objectives are needed in every area where performance and results directly and vitally affect the survival and prosperity of the organization. (Peter F. Drucker, 1954:4) In terms of increased complexity and turbulent environment, in which the organization carries out its economic and / or the wider social mission, goals become primary planning decisions, by which directing and coordinating of their activities is done. (Mašić, 2001:5)

Agriculture in Serbia over the period of the secession of the former Yugoslavia, has been operating in a volatile and extremely adverse conditions, including changes in production structure, primarily capital-intensive production (livestock and industrial crop production), often because the whole period is lacking effective measures of economic policies. Inherited and unresolved issues from the past are the main reason why agriculture for many years experienced slower growth in relation to its objective production capabilities and its importance in the economic structure of the country. Decline in production volume is particularly evident in the existing expanded modes of production, in which unfavourable climatic conditions are extremely displayed.

The share of livestock production in the structure of farmers of a particular country indicates the level of development of its agriculture. If this share is below 50 percent, it is considered that the agricultural production in general is extensive and undeveloped. More than half the share of livestock shows developed agriculture. Without a stable and developed animal husbandry, the overall reform process in agriculture does not produce the expected results, and process of changing planting structure, in plant production, is almost impossible. Bujanovac municipality in its possession has 56 cadastral settlements. Most of these settlements are rural type. These settlements are dispersed in the plain and hilly area. In most settlements agriculture is the largest source of income. However, although it is one of the main incomes of the population, agriculture is extensive type, and is done in a traditional way, so that productivity is low.

Of the total agricultural land, which amounts to 26,768ha, of which 84, 19% is in the private sectors, fields and gardens make up 14,740ha or 56.19% (here are some of the most important crops: cereals (wheat, corn, rye, barley and oats) 7,722ha or 70%, industrial crops (tobacco and sunflower): 547ha or 2%, Vegetables (potatoes, beans, peppers, tomatoes, onions, garlic, cabbage, cauliflower, quince and melon, etc.) 1,926ha or 14% , fodder crops (clover, alfalfa, a mixture of pulses and cereals, mixture of legume grass ) 3,404ha or 14%) and orchards 595ha or 2.38%, vineyards 357ha or 1% meadows 1,871ha or 6.7% , and pastures 9,172ha or 33.7%.

Bujanovac municipality has a total of 16,972 ha of forest and forest land, as compared to the total area of the municipality forests cover 37% of the land. State

forests covering an area of 8,857 hectares and private forests covering an area of 6,566 or 43%. The social structure of the forest is dominated by young forests 73%. High forests account for 25%. The dominant are trees with leaves with a share of 96%, mainly beech and oak.

Slicing of the land adversely affect the achievement of higher agricultural production and application of modern agricultural technology. In structure of actual agricultural production in the municipality of Bujanovac, traditional production of tobacco, wheat, corn prevails. Starting from the existing resources of the municipality of Bujanovac, ownership structure, which is characterized by small estate, the future development of agriculture in this municipality will rely on intensive livestock development and utilization of grass potential and development of vegetable crops etc.

Best advantage of this municipality could be improvement of livestock, especially because in its territory there is a modern abattoir for sheep and cattle. The main program of livestock production must be cattle breeding (milk production and fattening cattle), sheep breeding and goat breeding. Increasing the number of cattle will be accompanied by improving nutrition and improving the racial composition and greater increment per head. Some investment in reclamation and increasing pasture, and also improving veterinary services are required, so higher level of animal husbandry could be achieved.

In order to improve livestock within each local community, local government plans in the next period, to specialize couple households for production of milk and dairy products. That is why in most households reconstruction or adaptation of existing facilities needs to be done. Depending on the size of the building and the possibility of production of animal food, a household would hold from 5 to 10 head of cattle (dairy cows). Based on the survey conducted by representatives of local government, there are requirements and preferences of individual households, who wishes to engage in cattle fattening, and even 5-10 animals per turn.

Configuration of terrain (mountainous part of the municipality) allows development of sheep and goat, there are opportunities for the development of facilities for that purpose of capacity 50-100 animals.

Analyses show that the concept of the future development of agriculture must rely on more intensive development of vegetable production using early production in greenhouses. Even though in territory of the municipality there are different types of high-quality mushrooms, forest fruits and medicinal herbs, there are no organized activities of collecting them, as well as their purchase and classification. It is therefore necessary that the municipality initiates projects of collecting medicinal herbs.

The municipality of Bujanovac has large areas of forests and meadows, which are also ideal for the development of beekeeping. Of course, this potential has not been used much either. Currently, on this territory there are only a few permanent bee farms. Even classification and sale of honey is not organized in the municipality of Bujanovac and there is no Beekeeper Association.

A major drawback with individual agricultural producers is that they possess the basic machinery for cultivating the land, which is outdated and amortized. It is necessary to get new machinery, so that established goals for the future could be realized. In addition to this defect, the weakness of agricultural production in Bujanovac is also old elderly workforce, fragmented holdings with vast borders without road access and plenty of trees in the midst of fields. Therefore, it is desirable to organize consolidation of pitches.

It is necessary to arrange the parcel through land consolidation, regrouping or applying other forms of landscaping. Perform watering system using "drop by drop" and other systems using artificial accumulation lakes, and from existing rivers and streams. Using these measures, there could be a growth in employment, and in perspective refrigerator could be built, which tells us that the development of agriculture is one of the priorities in implementation of local economic development strategy for the town of Bujanovac.

Population in rural areas is relatively young but professionally unqualified. Farmers are not well informed about the latest technological developments and production methods. They are not informed and are not trained to apply for funds from the government institutions and funds from international organizations.

The basic elements of infrastructure (electricity, water and sewer) are not fully available in all areas of the municipality of Bujanovac. The most vulnerable are local communities in the mountainous area of the municipality. Bujanovac village in the hilly district is facing extinction, since the process of degradation of the village is very intensive. Moving from village to city is not recorded anywhere such it was recorded in the former Yugoslavia. In the second half of the 20th century, villages were abandoned by about 8,000,000 people. By comparison, this process for the most other countries lasted at least a century and a half. Until the Second World War, more than 80 percent of the population lived in rural areas. In Serbia there are 4,800 villages, and for a decade and a half from map will disappear one in four - about 1,200 villages. Already, there are about 2,000 completely deserted villages, and similar fate could experience another 200 of them, because they do not have any residents under the age of 20 years.

Young people mostly go abroad or to the larger cities. To develop rural villages, new and offensive policy of rural development of villages needs to be done. This policy should be a permanent commitment of state and local governments. Especially today, when due to restructuring of large complexes and privatization, workers are losing their jobs. Bujanovac has a high unemployment rate, and on the other side villages are dying, chances haven't been used to stop negative trends in the country, and thus develop the rural areas.

It would be preferred, if most of these people would be employed in the countryside by donors of the state, local governments and other actors. This wouldn't mean that workers will return to picks and tractors, but their employment in agriculture of Bujanovac and its surrounding, that is in forestry, water management, crafts, home-made stuff, small and medium industrial facilities etc. States should support the development of rural village areas. In realization of rural

development concept, they should directly involve mixed and non-agricultural households, who own farmland, but they are not handling it.

Education, additional improvement, culture and health, are adequately available only in larger villages. Transportation of workers and goods is very low in rural areas of the municipality. The strength of this area is in a healthy environment and the development of rural tourism.

Agricultural production is mostly done in small and chopped lands, which slows productivity and makes more difficult conditions for living in the countryside. Agricultural machinery is obsolete, which represents a limiting factor in growth.

The positive impact will occur through the renewed interest of the Government of the Republic Serbia for the development of agriculture, the growing interest of certain international organizations to stimulate agriculture; making certain support services and the provision of information to farmers; the creation of specific services at the municipal level, which will provide marketing support for agricultural products from Bujanovac. The task of these services at the municipal level should be cooperation with institutions dealing with certification and standardization of agricultural products.

Agriculture is a sector that is characterized by excess of supply in relation to demand in all developed countries. This means that competition within the sales of agricultural products is very large in the world, which means that agricultural prices and profits tend to decline.

Strategic goals of the agricultural potential of the municipality of Bujanovac are formulated as real possibilities that can be fulfilled over a period of ten years. These goals should have wide acceptance, to be evident and not too far from the current reality in the municipality of Bujanovac. The strategic objectives are presented in the form of defined priorities and profiles in the following tables.

#### PRIORITY 1

Improvement of existing and introduction of more profitable agricultural production

Detailed objectives:

1. The introduction to innovative production processes and new products, in order to enhance the quality, productivity and to reduce costs
2. Structural changes - changed and accumulative crop, vegetable and fruit production
3. Structural changes - changed and accumulative livestock production

*Table 4. Profile 1. Support for the introduction of innovative production processes and products in order to enhance the quality, productivity and reduce costs*

Name of the project	The introduction to innovative production processes and new products, in order to enhance the quality, productivity and to reduce costs
Short description of the project	Agricultural production is done on small plots in the municipality of Bujanovac, in a rather traditional way, without new production processes and new products that are now profitable, and which would be able to produce in this area, on the basis of geographical and other conditions. This project aims to initiate a new production methods and new products in agriculture.
Target groups	Individual farmers and agricultural unions and enterprises in the field of agriculture
Suggested activities	<p>Creating a research and technology center for technology transfer to local agricultural producers;</p> <p>Giving grants to public investments in innovation and quality;</p> <p>Creating a Fund to participate in the equity of innovative agricultural businesses;</p> <p>Creating a program of information, based on seminars, in order that local manufacturers could be in progress with major scientific and technological innovations in agricultural products worldwide;</p> <p>Cover the costs, or providing training or technical assistance for implementation of quality system;</p> <p>Lobbying activities in relation to the central government, focusing on the adoption of new laws and regulations for raising quality standards of production of agricultural products, which are sold in the domestic market, avoiding unfair competition based on lower prices and low quality food.</p> <p>Organizing practices at home and abroad for students and young farmers</p> <p>Support to establish pilot households;</p> <p>Prepare study for potential new production programs;</p> <p>Encouraging technological partnerships;</p> <p>Support to innovations in agricultural production.</p>
Implementation institutions, owner of the project	Local governments, development agencies, unions
The estimated time frame for implementation	Three years
Estimated financial arrangement for investment	According to the commercial market conditions
Expected beneficiaries (target groups)	The market in the municipality of Bujanovac, regional market in southern Serbia and beyond
Expected benefits (expected profits or savings, new jobs, the type and level of improvement of life quality, etc.)	Big profit is expected that would come from new manufacturing processes and new agricultural products

*Table 5. Profile 2. Restructuring - changed and accumulative crop, vegetable and fruit production*

Name of the project	Restructuring - changed and accumulative crop, vegetable and fruit production
Short description of the project	Agricultural production is done on small plots in the municipality of Bujanovac, in a rather traditional way, with old cultures, without accumulative and a lot more profitable production. This project aims to change the structure of crop production with new seeds and new standards of manufacturing products in agriculture.
Target groups	Individual farmers and agricultural unions and enterprises in the field of agriculture
Suggested activities	<p>Pass a program of development and use of agricultural land of the municipality of Bujanovac</p> <p>Development of farming: cereals and industrial crops on individual, community and private farms. The main direction in farming is restructuring, that is, changes in the structure of production. Traditional production is necessary to be replaced by accumulative production in watering systems.</p> <p>Development of vegetable growing, would be reflected in the modernization of existing greenhouses (watering system, heating) as well as building new ones, to obtain both - the quality and the quantity.</p> <p>Raising the level of supplying rural areas with mechanical equipment, especially tractors and attachments for primary tillage.</p> <p>Increasing the production and purchase of grain, industrial and vegetable crops (agricultural producers, banks, donors, and government).</p> <p>Applying new seed cultures of all kinds (seeds of forage plants, candles, aromatic and medicinal plants, etc.).</p> <p>Reconstruction and construction of watering systems.</p> <p>The development of fruit growing (more active production, new crops, the development of viticulture).</p> <p>Healthy food programs</p> <p>Purchase of modern machinery for farming.</p> <p>The realization of the project of medical herbs and vegetable plants.</p> <p>Realization of the programs of mushrooms and snails.</p> <p>Growing of mushrooms.</p> <p>The construction, modernization and expansion of processing capacity (finalization of finished products, capacity building for cold vegetable processing, expansion and adaptation of existing storage capacity, construction of an additional center as experimental plots).</p> <p>Realization of the program of manufacturing energy briquettes from agricultural residues and forestry.</p> <p>Registration of agricultural farms</p>
Implementation institutions, owner of the project	Local governments, development agencies, unions
The estimated time frame for implementation	Three years
Estimated financial arrangement for investment	According to the commercial market conditions
Expected beneficiaries (target groups)	The market in the municipality of Bujanovac, regional market in southern Serbia and beyond
Expected benefits (expected profits or savings, new jobs, the type and level of improvement of life quality, etc.)	Big profit is expected from the restructuring of agricultural production .

*Table 6. Profile 3 Restructuring - changed and accumulative livestock production*

Name of the project	Restructuring - changed and accumulative livestock production
Short description of the project	The main program of livestock production must be cattle breeding (milk production and fattening cattle), sheep breeding and goat breeding. In the upcoming period, the local government plans to, in order to improve livestock within each local community, to specialize couple households for production of milk and dairy products. Configuration of terrain (mountainous part of the municipality) allows development of sheep and goat breeding, there are opportunities for the development of facilities for that purpose of capacity 50-100 animals.
Target groups	Individual farmers – ranchers, agricultural unions and enterprises in the field of animal husbandry
Suggested activities	<p>In most households it is necessary to perform the reconstruction and renovation of existing buildings.</p> <p>Depending on the size of the building and the possibility of production of animal food, a household would hold from 5 to 10 head of large livestock (dairy cows).</p> <p>Based on the survey conducted by representatives of local government, there are requirements and preferences of individual households, who wishes to engage in cattle fattening, and even 5-10 animals per turn.</p> <p>Filling capacities of farms.</p> <p>The revitalization of the existing mini farms.</p> <p>Modernization and adaptation of buildings for fattening.</p> <p>Programs of artificial insemination.</p> <p>The continuous purchase of basic herds, cattle, sheep, pigs, on private and individual farms throughout the area (municipality, government, donors).</p> <p>Development of fattening broilers and chicken meat production (private sector).</p> <p>The construction, modernization and expansion of processing capacities.</p> <p>Modernization of veterinary stations.</p> <p>Registration of agricultural households.</p>
Implementation institutions, owner of the project	Local governments, development agencies, unions
The estimated time frame for implementation	Three years
Estimated financial arrangement for investment	According to the commercial market conditions
Expected beneficiaries (target groups)	The market in the municipality of Bujanovac, regional market in southern Serbia and beyond
Expected benefits (expected profits or savings, new jobs, the type and level of improvement of life quality, etc.)	Big profit is expected from the restructuring of agricultural production. Increasing the number of cattle will be followed by improving nutrition, improving the racial composition and greater growth increase per head. Some investment in reclamation and increasing pastures, and also improving veterinary services are required, so higher level of animal husbandry could be achieved.

## PRIORITY 2

### Improved organizational and market performance

#### Detailed objectives:

1. Expansion of individual farms and production possessions
2. The formation of urban agricultural centre for technical, professional, and informational support in agricultural production
3. The creation of agricultural cluster

*Table 7. Profile 1. Expansion of individual farms and production possessions*

Name of the project	Expansion of individual farms and production possessions
Short description of the project	This project will contribute to increase income of small farmers, it will allow the purchase of new technology, and this will affect in effective implementation of these technologies, as well as quality standards and better market performance.
Target groups	Individual farmers and agricultural unions and enterprises in the field of agriculture
Suggested activities	Support for establishing new and the transformation of old agricultural unions; Financial and technical support to large farms for lease of uncultivated land; Support merging of farms through the development of business plans; Mapping of agricultural land in the municipality of Bujanovac; The process of consolidation and irrigated land; Support the formation of specialized clusters
Implementation institutions, owner of the project	Local governments, development agencies, unions
The estimated time frame for implementation	Three years
Expected beneficiaries (target groups)	The market in the municipality of Bujanovac, regional market in southern Serbia and beyond
Expected benefits (expected profits or savings, new jobs, the type and level of improvement of life quality, etc.)	Big profit is expected from the enlargement of individual farms and production estates, it will increase the competitiveness, quality of products and increase in protection of the interests of farmers.



*Table 8. Profile 2. The formation of urban agricultural centre for technical, professional, and informational support in agricultural production*

Name of the project	The formation of urban agricultural centre for technical, professional, and informational support in agricultural production
Short description of the project	The biggest problem of agricultural production in Bujanovac is not only to produce the product according to EU standards, but rather, how, to whom and where to sell it. Lack of adequate support system for market performance of agricultural producers will partly be overcome by forming a single urban agricultural center that will professionally give technical, professional, and informational support to agricultural producers, for exposing to new markets and a breakthrough in existing markets. In addition, this center can perform and educate farmers in terms of application of HACCP standard.
Target groups	Individual farmers and agricultural unions and enterprises in the field of agriculture
Suggested activities	<p>Explore the market and establish adequate agricultural map and database;</p> <p>provision of advisory services and promotional activities (website, media campaigns, education);</p> <p>Establish an association of interested agricultural producers, which, in cooperation with the National Development Fund, the European Agency for Reconstruction and the Serbian Ministry of Agriculture, will made a long-term program development of agricultural complex in the municipality and which would monitor implementation;</p> <p>Conduct economically financial, organizational, production and personnel assistance to agriculture;</p> <p>Organize a visit to fairs of agriculture and eating at home and abroad;</p> <p>Study visits in the region;</p> <p>Development of a single register of farms and individual agricultural producers in the municipality;</p> <p>Support the formation of clusters;</p>
Implementation institutions, owner of the project	Local governments, development agencies, unions
The estimated time frame for implementation	Three years
Estimated financial arrangement for investment	According to the commercial market conditions
Expected beneficiaries (target groups)	The market in the municipality of Bujanovac, regional market in southern Serbia and beyond
Expected benefits (expected profits or savings, new jobs, the type and level of improvement of life quality, etc.)	Big profit is expected for agricultural producers, competitiveness and the quality of the product will increase, as well as protection of interests of agricultural producers, the new jobs will be opened and quality of life of the rural population will be improved.

### PRIORITY 3

#### Improved infrastructures, quality and safety of agricultural production

##### Detailed objectives:

1. Improving basic infrastructure elements in agriculture
2. Establishment of a HACCP system and other quality systems for the management of safe food production
3. The establishment of the municipal centre for consultation and collaboration with certifying organizations for introduction of safe food production systems

*Table 9. Profile 1. Improving basic infrastructure elements in agriculture*

Name of the project	Improving basic infrastructure elements in agriculture
Short description of the project	The analysis identified the poor state of most of access roads to arable lands. That lack is particularly evident in the reception capacity. Therefore, the objective is to make a selection of the most critical sections, so that these roads could be renovated and improved and thus enabling easier access to agricultural land and processing capacities. All of that would allow more efficient use of technology. Life in the countryside will be more attractive to young people and there will be new opportunities for education and additional improvement.
Target groups	Municipality and local communities
Suggested activities	The Municipal studies to estimate conditions and selection of critical roads; Investments in renovation and construction of primary roads; Forming an agency for development of rural areas of the city; An investment in other infrastructure elements; Waste management in villages; Construction of multi-functional facilities
Implementation institutions, owner of the project	Local government and local communities
The estimated time frame for implementation	Five years
Estimated financial arrangement for investment	According to the commercial market conditions
Expected beneficiaries (target groups)	Agricultural producers
Expected benefits (expected profits or savings, new jobs, the type and level of improvement of life quality, etc.)	Big profit is expected, competitiveness and quality of products will increase, the will to protect the interests of agricultural producers will also increase, as will the quality of life of the rural population.

*Table 10. Profile 2. Establishment of a HACCP system and other quality systems for the management of safe food production*

Name of the project	Establishment of a HACCP system and other quality systems for the management of safe food production
Short description of the project	<p>Training of agricultural producers in the management of safe food.</p> <p>Establishing agricultural production according to requirements of HACCP and ISO 22000.</p> <p>Certification of agricultural producers who have established HACCP or ISO 22000.</p> <p>Certification of agricultural products-branding and geographic origin protection.</p>
Background and goals	<p>Food safety and quality in its production requires strict control of the business production processes. The manufacturer must prove and document that all processes have been identified, to be able to manage all their stages, to identified all the places where there is a potential risk and the possibility of compromising the quality and safety of products, and all those elements he needs to have under control.</p> <p>Goals of using HACCP or ISO 22000 are::</p> <p>Monitoring the production process,</p> <p>Respond to any deviations in the production,</p> <p>Maintain control at all times and in all places in the production process,</p> <p>Timely reporting of all interested parties in the use of food and beverage items: staff that produces, customers and authorized government departments.</p>
Implementation institutions, owner of the project	Consulting organizations
The estimated time frame for implementation	Ten years
Estimated financial arrangement for investment	According to the commercial market conditions
Expected beneficiaries (target groups)	Customers-users, citizens, residents of the Bujanovac municipality
Expected benefits (expected profits or savings, new jobs, the type and level of improvement of life quality, etc.)	Quality and safe food, increasing the number of employees, increase awareness of safe and quality food, increase customer satisfaction, increase placement of agricultural products in domestic and foreign markets, increase the life quality of agricultural producers and citizens.

## ***CONCLUSION***

It can be seen that local actors are interested in the agriculture improvement of municipality of Bujanovac. Detailed SWOT analysis has been done in order to comprehend the human resources in terms of agricultural development, living conditions in the rural areas of the municipality, the analysis of the food industry and agricultural sector.

Studies have shown that it is necessary to organize following activities in order to develop agriculture in Bujanovac:

- The introduction to innovative production processes and new products, in order to enhance the quality, productivity and to reduce costs
- Structural changes - changed and accumulative crop, vegetable and fruit production
- Structural changes - changed and accumulative livestock production
- Expansion of individual farms and production possessions
- The formation of urban agricultural centre for technical, professional, and informational support in agricultural production
- The creation of agricultural cluster
- Improving basic infrastructure elements in agriculture
- Establishment of a HACCP system and other quality systems for the management of safe food production
- The establishment of the municipal centre for consultation and collaboration with certifying organizations for introduction of safe food production systems

## ***REFERENCES***

- [1] Djurić, Z., (2008), The management of the family business. Belgrade: Business School, pp 154;
- [2] Kastratović, E., et al, (2013), Investment projects of municipality of Bujanovac seen through the prism of ecological demands, II international conference Employment, Education and Entrepreneurship, Belgrade, pp 135.
- [3] Mašić, B., (2001), Strategic Management. BK Belgrade: University, pp 202;
- [4] Milošević D. et al, (2014), Management of small and medium enterprises. Graduate School for Business Economics and Entrepreneurship, Belgrade, pp 208.
- [5] Peter F. Drucker, (1954), The Ptractise of Management. New York: Harper & Row, pp 70.