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ECONOMIC DEVELOPMENT OF THE REPUBLIC OF SERBIA DETERMINED BY THE SECTORAL STRUCTURE OF THE ECONOMY

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Experience and good practice show that, in order to achieve economic growth and development, changes in the economic structure need to be made. They have an influence on the relative share, place and role of certain activities in the economy and they are the driver of sustainable economic development. Efficient structural changes are related to the capability of an economy to create more propulsive economic activities. The subject matter of the research in this paper is the determination of the degree of the determination of the economic development of the Republic of Serbia by the sectoral structure of the economy. The research goal is to indicate the adequacy of the size of and contribution of the sectors to the creation of gross value added and the total employment, i.e. the influence of the size, intensity and directions of changes between the sectors on the economic development. The research results are indicative of the fact that the achieved level of the development and low growth rate of the economy of the Republic of Serbia are the consequence of insufficiently comprehensive and intensive changes, changes that are late and are not stable. The future development of the economy will directly depend on the speed of changes and the creation of a modern sectional economic structure, especially the development of a propulsive manufacturing structure or "4.0 industries".

Keywords: economic development, structural changes, economic growth rate, employment, value added

JEL Classification: L16, O11,O47, E24, H24

INTRODUCTION

Economic development is a multidimensional and complex process; apart from economic growth, it also encompasses changes in the structure of an economy, as well as changes in resources, institutions, technology and processes and numerous other changes in a social system. When developing countries are concerned, such as the Republic of Serbia (RS), structural changes are necessary so as to ensure in order to faster growing gross domestic product (GDP) *per capita*. Practice shows that, in order to achieve sustainable economic growth and development, efficient changes in the economic structure need to be made. They have an

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influence on the creation of propulsive activities, whereas the growth of the GDP *per capita* has an influence on the achievement of the reallocation of the labor force and newly-created value from labor- and resource-intensive activities, as well as the activities that are knowledge- and technology-more intensive.

The economic structure is a factor influencing the economic growth and development of a national economy, thus including those of RS. Therefore, the subject matter of the research in this paper is the determination of the degree of the determination of the economic development of RS by the sectoral structure of the economy.

The research goal is to indicate the adequacy of the size of and contribution of the sectors to the creation of gross value added and the total employment, i.e. the influence of the size, intensity and directions of changes between the sectors on the economic development.

In accordance with the established subject matter and goal, the paper will test the research hypothesis that the level and speed of the development of the economy and economic sectors of RS are connected with the size, intensity and direction of changes in its structure.

In the research, the secondary sources of data from the statistical base of the Statistical Office of the Republic of Serbia for the growth rates of the economy and the sectors, newly-created value and the total employment will be used. In the paper, the standard deviation will be used to measure the sizes of the structural changes as per sectors. The intensity of the structural changes of the sectors will be examined will be examined by the elasticity of the growth rates of the sectors. By applying the correlation of the growth rate ranks of the sectors, the direction of the structural changes of the sectors of the economy of RS will be analyzed. The data will be processed and analyzed by using the SPSS statistical package.

An economy consists of the activities producing tangible goods i.e. tradable goods and the activities producing intangible goods i.e. goods impossible to trade. The sectors of an economy are defined according to the manufacturing principle or the statistical classifications of activities of the United Nations (UN) and in the European Union (EU). According to these classifications, all activities are categorized at the highest hierarchical level into sections. In this paper, the data are aggregated at the level of 21 activities, according to which the economy is divided into 21 sections in total.

The structure of the paper is organized into seven parts. In the second and the third parts, the theoretical frameworks of the analysis of the economic structure, the structural changes and their types are presented. The fourth part is dedicated to the analysis of the basic indicators and the measuring of the structural changes. The fifth part is the presentation of the sectional structure of the national economy and the statistical classification of the economic activities. The sixth part contains the results of the research or the role of the economic sectors in the economic growth and development of RS. In the seventh part, the conclusions and certain recommendations are presented.

LITERATURE REVIEW

The economic structure is an important factor influencing economic development. Most frequently, the economic structure implies a whole consisting of the parts that are related to each other in a certain way and interdependently. Such a whole is changeable, and changes are influenced by different factors. The structure of foreign trade and the balance of payments depends on it, and it is also connected with technical progress, innovations, labor productivity, employment, inflation, the economic system, the economic policy, and even with specific factors, such as culture (Marjanović, 2010, 370).

Should an economy be observed as a whole consisting of parts, then a change in any one of such parts or in the manner in which such parts are connected with one another means a change in the economic structure. It is in an uninterrupted process of changing, but those changes are not fast and frequent (Bortis, 2000, 186). The cumulative and long-term processes of technological changes and learning are the reason for that (Upadhyaya & Yeganeh, 2015, 10-11). Structural changes are narrowly connected with the reallocation and redistribution of labor force, as well as of the other factors of economic growth, between the economic activities.

The analysis of the economic structure and the explanations of structural changes are different in growth theories and development models. It is J. A. Schumpeter himself who, considering the role of different development factors, first of all the role of entrepreneurs and technological changes in economic development, highlighted the fact that innovations and their application through imitations and further improvements were the basic driver leading to structural changes in an economy (Croitoru, 2012, 137-148).

While the structure and structural changes are the focal point of attention of classical economics, neoclassical economics considers structural changes to be a result of the market development and that the same are not a condition necessary for economic development. The theories of structural changes pay most attention to the economic structure, structural changes and development patterns (Lewis, 1954, 139-191; Chenery, 1975, 310-316). They are directed towards the mechanism by means of which undeveloped economies transform their own economic structures from traditional agriculture towards industry and diverse services. By applying neoclassical price theory, resource allocation and models, they tend to explain how the process of the transformation of the economic, industrial and institutional structures is initiated and also to econometrically quantify the significance of structural changes as a factor of economic growth as precisely as possible. According to them, both the growth pattern and the development of an economy depend on the internal factors (accumulation, investment, resource use, the population size, the demand structure, urbanization, institutional limitations, changes in social-economic factors) and the external factors (of which the most significant are the transfer of technology from abroad and international trade).

The economic crisis of the late 1960s and the early 1970s, which according to a general assessment had a structural character, led to researching the causes and the factors, and especially to the size, degree, speed and directions of the structural changes of the economy, which had the statistical series of the growth rates of the sectors as their basis. According to these research studies, structural changes imply different arrangements of manufacturing activities in the economy and the different distribution of the manufacturing factors among different sectors of the economy, different activities, regions and types of products (Machlup, 1991, 76).

When endogenous theories are concerned, technology takes the central place in the explanation of structural changes and economic development (Baldwin, Braconier & Forslid, 2005, 495). They also examine the role of research and development, the infrastructure, the state, as well as institutional factors and organizations. They also include the role of the intangible factors in the explanation of structural changes, such as the organizational structure, managerial capabilities and culture.

In the economic literature, structural changes are considered to be influencing the relative share, significance and location of certain wholes and parts in the economy and to also be an important driver of economic development (Syrquin, 2008, 48). Although they are mainly universal, the relations, speed and directions of structural changes depend on the specificities of an economy (Cimoli & Katz, 2003, 387-411). Efficient structural changes

are important for the growth of productivity, as well as for an efficient allocation of resources and taking advantage of technology and innovations (Fagerberg, 2000, 393-411). When developing countries are concerned, structural changes are necessary so as to ensure faster progress into a higher development level (Lin, 2012, 5), i.e. in order to reach the countries with a higher level of the GDP *per capita*.

Today, apart from innovations and new technologies as the main drivers of structural changes, knowledge, investments, externalities, skills, use of resources, offer and demand, international trade, relationships and agglomerations, institutional frameworks, globalization are also highlighted (UNIDO, 2013, 16).

What is quite important is that structural changes have an influence on the creation of the economic policy as a conscious influence of a state on the achievement of certain developmental goals. An economic policy can have either a positive or a negative influence on changes in the economic structure, by driving it more closely to or moving it farther away from its optimum (Marjanović, 2015, 67). Because of that, the capability of the state to shape and influence the structure of the economy and the structure of particular sectors by implementing an adequate economic policy, i.e. to implement structural changes efficiently, continuously and actively in compliance with available factors which development rests on, is also important (Mićić, 2016, 153-161).

In the theory and practice of economic development, there are three basic types of structural changes that are specially singled out and recognizable: industrialization, deindustrialization and reindustrialization.

During the process of industry development, changing the manufacturing manner is to a substantial extent conditioned by major changes and technical and technological innovations, or more exactly by industrial revolutions or inventions and the improvement of new products, machines and technologies. The First Industrial Revolution was initiated by the steam engine, the Second by electric energy and conveyor belts, and the Third by electronics, computers and robotics. The newly-emerging, Fourth Industrial Revolution is of a global character and rests on the development of the „4.0 industries" i.e. integrated industry. Due to an accelerated cycle of technical innovations, it influences all the participants in the chain of industrial manufacturing and changes the structure of both industry and economy. It is based on a series of new trends and technologies, first of all on artificial intelligence, knowledge and new generations of digital technologies and the digital infrastructure.

Industrialization encompasses a complex of structural changes made due to technical innovations, through which the share of industry in the creation of the GDP and employment is increased, simultaneously continually decreasing the share of agriculture and the growth of the share of the service sector. Practice has shown that in undeveloped countries, in which the agrarian structure is predominant, industrialization has led to economic development and change in the economic structure. In all phases of economic development, industry has a dominant influence on the economic structure, for which reason the other two types of structural changes, namely reindustrialization and deindustrialization, are also brought into connection with technical innovations and industrial development. These two processes and types of structural changes are parallel and in a cause-and-effect connection.

Deindustrialization is a process of structural changes characterized by a reduction in the share of industry and growth of the share of the service sector in the GDP and employment. It is a long-term process, which is to a certain extent different from one country to another (Timmer & Akkus, 2008, 7). The correlation of trends between the level of the GDP *per capita*, sectoral contribution to the creation

of the GDP, value added, employment distribution and labor productivity is the common feature of this process. Deindustrialization leads to the tertiarization of the economic structure thanks to the powerful development of the service sector.

A difference must be made between deindustrialization as a positive and as a negative process (Rowthorn & Ramaswamy, 1997, 1-2). In a positive sense, it denotes the maturity of the industry whose manufacturing is based on science, knowledge and technical innovations. The classes of high technological intensity and a high intensity of using working skills and knowledge have a dominant share, by which the identity of the classical industrial structure is lost. In a negative sense, it results in bad economic performances of an economy. Most frequently, it is caused by a wrong strategy of the development of an industry in the crucial phases of its development.

Reindustrialization is related to change in the developmental paradigm, according to which successful development is no longer in possessing natural resources and capital, but it has increasingly been dependent on technology, innovations, research, knowledge and the quality of the labor force. Today, these factors are the basis of reindustrialization, the creation of modern, technologically new, sophisticated, knowledge-intensive, ecologically responsible and energy-efficient industries that employ highly-qualified labor force. New technologies, based on nanotechnologies, microelectronics, robotics, the 3-D print process, biotechnology and genetic engineering, new materials, ecological cars and vehicles, ecological transport, smart networks for energy transmission and so forth have been developed and used with an ever increasing speed.

Innovations, research and education are the foundations of reindustrialization and the development of a strong, dynamic and sustainable industrial base (European Commission, 2012, 3), which contributes to structural changes and sustainable economic growth, the creation of new jobs, ecological efficiency, the development of new products with high value added and the creation of a knowledge-based economy. Apart from its direct contribution to the development of industrial productivity, reindustrialization also has an influence on the growth of the productivity of the other sectors, especially of the service sector, namely by the scope of investment in new technologies. More precisely, it is in the center of a new model of economic growth and the development of a larger number of highly-developed and fast-growing economies.

MEASURING STRUCTURAL CHANGES AND THE STATISTICAL CLASSIFICATION OF ECONOMIC ACTIVITIES

There are numerous indicators of structural changes. The most frequently used, however, are the indicators that measure changes in the sectoral structure of an economy with respect to manufacturing, employment, value added, export, knowledge, innovations, technology and investments. While carrying out a quantitative analysis of structural changes in an economy as per sector, the most frequently used data are those related to the share of certain sectors in the GDP, gross value added (GVA) and employment.

The size of the structural changes as per sectors can be measured by the standard deviation of the growth rates of those sectors. The standard deviation of the growth rates as per sectors is directly proportional to the dispersion of the growth rates of the sectors and the structural changes between those sectors. A greater dispersion shows that structural changes are bigger, whereas a smaller dispersion means that structural changes are smaller (Savić, Bošković & Mićić, 2015, 30).

For the purpose of the analysis of the intensity of structural changes, two approaches can be used.

Regarding the first approach, the intensity of the structural changes at the sectoral level is calculated on the basis of the relative growth rates of each sector. Those rates are obtained as $Q_{i1}/Q_{i0} : P_1/P_0$ or as $((Q_{i1}/P_1 : Q_{i0}/P_0) - 1) \times 100$. In the first case, change in the size of an individual sector Q_i with the aggregate size of P is determined, whereas the subject matter of the determination in the second case is the share of an individual segment of the structure in the total size. The indicator of structural changes is obtained as the arithmetical average of the sum total, which is weighted by the share of relative growth rates in the total expression. The second approach uses the elasticity of growth rates for the analysis of the intensity of structural changes at the level of a sector. They are calculated by dividing the growth rate of the observed sector by the growth rate of the economy (Roman, 1969, 265-268). If a coefficient greater than one is obtained, it means that the sector is increasing its share, thereby increasing their role and significance in an economy as well.

Together with these indicators, the correlation of the activities' growth rate ranks is frequently used. It is used to analyze the directions of the structural changes of those sectors, whereas the direction of the structural changes is shown by the Spearman Rank Correlation Coefficient for the growth rates of the sectors for consecutive pairs of years (Savić *et al*, 2015, 31). Rank correlation is high if changes are constantly made in favor of the same sectors, and it is low if the directions of changes are frequently changed between the sectors of the economy.

Also, the economic structure in one year can be expressed as the n-dimensional vector, too. The coordinates of that vector represent the share of certain sectors in the aggregate size, such as the GDP. Structural changes are mirrored in the change in the coordinates of those vectors. Dynamically observed, the differences between the structures of the vectors in certain years can be expressed by a cosine between those vectors (Moore, 1978, 107).

Different economic activities of manufacturing and services are classified into economic sectors. The sectors can be divided and grouped according to a larger number of the criteria, and the phases in the manufacturing chain, according to which they are grouped into the primary, the secondary and the tertiary sectors, are most frequently used. The tertiary sector has become the most heterogenic over time because it has spread and differentiated itself the most. Therefore there is an aspiration that the tertiary sector must further be differentiated into the quaternary sector in the economically and industrially most developed countries.

Since an economy can consist of quite different, dynamic and heterogenic activities, due to the temporal and spatial comparability of data, the statistical classification of the economy and economic activities according to the manufacturing principle is most frequently used in economic analyses today. For the needs of this paper, the statistical classification of the economic activities of the EU that has been derived from the industrial classification of the economic activities of the UN will be used (European Commission, 2008, 11-17).

The official statistical division of all economic activities is done according to the International Statistical Classification by the UN (United Nation, 2008, 1-21). Its title is: United Nation's International Standard Industrial Classification of all Economic Activities - ISIC). For the most part, ISIC is followed by the EU Standard Classification (NACE[1]). According to the NACE and ISIC classifications, all the activities are classified into sectors at the highest hierarchical level.

NACE and ISIC provide a framework for the collection and demonstration of a large scope of statistical data according to economic activities both in the field of economic statistics (manufacturing, employment, national accounts) and in the other statistical fields. NACE is derived and represents a part of the ISIC Classification. The categories at all the NACE levels are defined so as to be identical to the ISIC Categories. ISIC and NACE have the same

number of the categories at the highest level, but NACE provides more details at the lower levels. The ISIC first and second levels, Revision 4, i.e. the sections and divisions of the economy, are identical to the NACE sections and divisions, Revision 2. The third and the fourth levels, namely the groups and the classes, are divided in a more detailed manner in NACE, Revision 2, according to the European needs. The goal of more detailed divisions in NACE, Revision 2, is to obtain a classification more adapted to the structures of the European economies.

Since 2011, RS has been applying the Classification of Activities from 2010, within the process of compliance with the standards of the EU and the European Statistical System. The new Classification of Activities is the EU standard classification of activities from 2008, taken over without any changes (SOR, 2010, 4).

ROLE OF THE SECTIONS OF THE ECONOMY IN THE ECONOMIC GROWTH AND DEVELOPMENT OF THE REPUBLIC OF SERBIA

The structure of the economy of RS as per sections, as well as change in that structure, is accounted for in Table 1. Observed as per sections, the sections of Manufacturing (C) with 15.6%, Wholesale and retail trade; repair of motor vehicles and motorcycles (G) with 10.2%, Real estate activities (L) 8.9% and Agriculture, forestry and fishing (A) with 6.8% had the most significant share in the formation of the GDP, i.e. made the greatest contribution to the creation of GVA in 2014.

Apart from a high share of the Manufacturing and Agriculture, forestry and fishing sections in the creation of the GDP, the economic structure of RS has been changed since 2001 in favor of the service sector, which has the biggest sectional share.

Table 1 The structure of the GDP of the Republic of Serbia

Sections	2001.	2009.	2014.	*+/-
A	18.2	8.0	6.8	-11.4
B	1.2	1.3	1.0	-0.2
C	21.7	13.6	15.6	-6.1
D	0.6	3.2	3.7	3.1
E	0.8	1.1	1.1	0.3
F	3.5	4.1	4.5	1.0
G	7.6	9.5	10.2	2.6
H	3.7	4.7	4.4	0.7
I	0.9	1.0	1.1	0.2
J	3.3	4.2	4.4	1.1
K	1.8	3.1	3.0	1.2
L	13.2	10.9	8.9	-4.3
M	1.8	3.6	3.3	1.5
N	0.9	1.4	1.4	0.5
O	6.4	3.3	3.5	-2.9
P	2.3	4.4	2.9	0.6
Q	3.7	5.5	4.5	0.8
R	0.7	1.3	1.0	0.3
S	0.6	1.4	1.4	0.8
T	0.1	0.1	0.1	0.0
U	-	-	-	-
GVA	93.1	85.8	82.8	-10.3
Taxes on products	6.2	13.5	17.8	11.6
Subsidies on products	0.7	0.7	0.6	-0.1
GDP	100.0	100.0	100.0	-

Source: Author, based on: RZS, 2017

The dynamic growth of the service sector in the GDP until 2008 was achieved thanks to an increase in the share of, first of all, the sections of Wholesale and retail trade; repair of motor vehicles and motorcycles, Information and communication, Financial and insurance activities and Professional, scientific and technical activities. These sections

based their propulsion and higher growth rates on investments, especially in telecommunications, the liberalization of exports, the growth of personal consumption, privatization and the restructuring of the banking and financial sectors. The growth of the share of the service sector, together with a reduction in the share of the real sector, especially the sections of Manufacturing and Agriculture in manufacturing and employment, are the usual marks of the transition process and the tertiarization of the economy.

The number of workers slightly increased in the economy of RS in 2015 (Table 2). Simultaneously, the number of the employed in the sections of Manufacturing (C) and Accommodation and food service activities (I) was reduced by 16,000 per each, whereas in the section of Wholesale and retail trade; repair of motor vehicles and motorcycles (G), their number was reduced by over 20,000. Apart from that, the sectional changes of the employed are characterized by an ever-increasing number and percentage of the employed in the service sector.

Yet, since 2010, the service sector has not been capable of creating a sufficient number of new jobs, especially due to the consequences of the Global Economic Crisis so as to compensate for the fall in industry. For that reason, a part of the labor force is being reallocated from industry to the primary sector, especially to agriculture. Also, it is a fact that the reallocation of the labor force within the sectors is still dominant over reallocation between the sectors. A high unemployment rate is the major issue, as a result of inefficient structural changes, which bears special importance from the social and developmental point of view (Jakopin, 2012, 86).

According to the manufacturing principle, in 2015, there were about 452,000 employees in the sections of Mining and quarrying (B), Manufacturing (C) and Electricity, gas, steam and air conditioning supply (D), whereas there were about 538,000 employees in the sections of Agriculture, forestry and fishing (A). At the same time, the relative share of the employed in the three sections of industry (B, C, and D) is about 18.4% in the total number of employees, whereas the relative share of the employed in the section of Agriculture, forestry and fishing accounts for 21.9%. This is the best indicator of what the level of economic development and the reallocation of the labor force are, of how inefficient the structural changes in the economy are, of the condition in which the industry is, and most importantly, what and how significant its role in the economic development of RS is.

Table 2 The total number and structure of the employed, 2010-2015

Sections	2010.	%	2015.	%	+/-*
A-U	2,396,244	100.00	2,459,048	100.00	62,804
A	532,969	22.24	538,040	21.88	5,071
B	23,316	0.97	29,198	1.19	5,882
C	401,711	16.76	385,369	15.67	-16,342
D	36,293	1.51	37,386	1.52	1,093
E	41,097	1.72	35,548	1.45	-5,549
F	120,689	5.04	120,476	4.90	-213
G	326,283	13.62	305,493	12.42	-20,790
H	125,563	5.24	121,550	4.94	-4,013
I	71,610	2.99	55,442	2.25	-16,168
J	47,682	1.99	49,253	2.00	1,571
K	44,852	1.87	40,839	1.66	-4,013
L	3,268	0.14	2,467	0.10	-801
M	57,053	2.38	61,701	2.51	4,648
N	37,694	1.57	56,725	2.31	19,031
O	120,459	5.03	138,827	5.65	18,368
P	159,381	6.65	164,215	6.68	4,834
Q	157,137	6.56	141,713	5.76	-15,424
R	36,964	1.54	45,794	1.86	8,830
S	47,627	1.99	49,499	2.01	1,872
T	3,770	0.16	78,810	3.20	75,040
U	825	0.03	705	0.03	-120

* +/- 2015 as compared to 2010

Source: Author, based on: RZS, 2017

The data show that, since 2008, the share of the tertiary sector has been the only one to have recorded the growth of employment, namely from 48.7% to 53.4%. The share of the secondary sector has been reduced from 25% to 23.5%, whereas the primary sector has reduced its share from 26.3% to 23.1%.

It can be assessed that, in comparison with the EU average, where the share of the employed in the primary sector accounts for around 5%, in the secondary sector around 17% and the tertiary sector around 78%, the sectoral structure of the employed in the economy of RS significantly deviates from it.

The previous analysis at the level of the sectors of the economy of RS, quantified by the share in the GDP and employment, shows that bigger structural changes between the sections correspond with bigger fluctuations of the growth rates of those sections. This is also confirmed by the standard deviation, as well as by the dispersion of the growth rates as per sections, which are directly proportional to the fluctuation of the growth rates of the observed sections (Table 3).

What is not good for structural changes is the fact that the sections whose share is bigger and whose growth rates record bigger fluctuations do not have an increasing share in the structure and do not drive changes in the economy. Namely, the standard deviation shows that structural changes in those sectors are the declining, rather than growing function of the growth rates. The smallest structural changes have been made in the sections of Human health and social work activities (Q), Education (P) and Real estate activities (L), whereas the biggest changes have been recorded by the sections of Construction (G), Water supply; sewerage, waste management and remediation activities (E) and Agriculture, forestry and fishing (A). The other sections have been recording more moderate standard deviations of the growth rates as per years.

Table 3 The standard deviation and descriptive statistics, 2001-2014

Section	Min.	Max.	Average	Standard deviation
A-U	-3.6	8.8	2.414	0.8630
A	-17.3	20.9	2.086	2.9431
B	-23.3	9.0	-0.571	2.2400
C	-15.8	6.4	0.329	1.4912
D	-28.8	13.0	0.014	2.6227
E	-12.6	3.7	-1.064	1.1986
F	-19.7	36.1	4.607	3.7874
G	-7.5	19.0	6.929	2.3586
H	-10.0	11.3	3.679	1.4974
I	-10.0	7.9	-1.471	1.1660
J	-3.9	27.1	11.721	2.4923
K	-9.5	17.8	4.121	2.1327
L	-1.3	4.1	1.593	0.4035
M	-7.5	10.2	2.979	1.1835
N	-4.3	23.0	5.550	2.1389
O	-2.9	4.7	1.229	0.6103
P	-3.4	1.4	-0.450	0.4058
Q	-3.0	2.8	0.364	0.3807
R	-10.2	10.1	2.179	1.3346
S	-12.0	12.4	0.800	1.6699
T	-6.7	8.5	2.071	1.1554
U	n.d.a.	n.d.a.	n.d.a.	n.d.a.

n.d.a. - no data available

Source: Author, based on: RZS, 2017

The practical experiences of the economic development of other countries show that more propulsive, higher and sustainable growth rates of certain sectors of the economy have an influence on the direction of development and the creation of a modern economic structure of an economy. The trend of the maximum and minimum growth rates of the sections of the economy of RS does not confirm this. The sections that have recorded the highest growing rates have also recorded the highest fall rates, which is especially the case in

the real sectors of the economy, which manufacture exchangeable goods (A-F). The situation is somewhat better in certain service sectors (G-R).

For a more dynamic manufacturing structure in RS, the influence of the market only was not sufficient, it was necessary for the effective implementation of economic policy, first of all the agrarian and industrial policies, especially when triggering off the key factors of structural changes. Unfortunately, this did not happen, so the growth rates could not have been higher, not even the growth rates of some traditional sections of the economy and activities, such as agriculture and food industry (Savić *et al*, 2015, 25-45).

The intensity of the structural changes of the sections of the economy of RS is examined by the elasticity of the growth rates of the sections. In the sections in which the calculated elasticity coefficient is greater than one, there is an increase in their share in GVA, which also increases their importance for and contribution to the economic development of RS (Figure 1).

Researching the intensity of the changes shows that they are the highest in the sections of Information and communication (J), Wholesale and retail trade; repair of motor vehicles and motorcycles (G), Administrative and support service activities (N), Construction (F) and Financial and insurance activities (K). This fact is not confirmed only by the elasticity of the growth rates of the observed sections, but also by their average growth rate after 2001. The intensity of the structural changes of these sections was influenced by privatization and the size of investments in those sections.

The Spearman Rank Coefficient of Correlation between the growth rates for the consecutive pairs

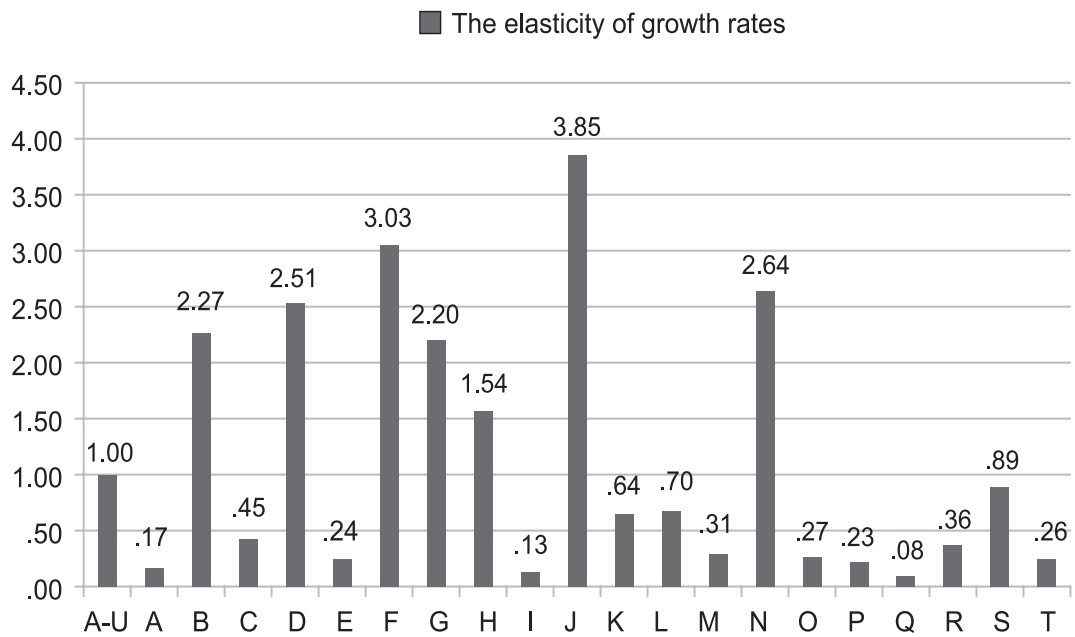

Figure 1 The intensity of the structural changes, 2001-2014.

Source: Author, based on: RZS, 2017

of years, for the 20 sections of the economy of RS, shows the direction of the structural changes between those sections (Table 4). For the 21st section, Activities of extraterritorial organizations and bodies (U), there are no comparable data in the observed time period.

Table 4 Spearman Rank Coefficient of Correlation, 2001-2014

Consecutive pairs of years	Coefficient of Correlation	Sig. (2-tailed)	N
2001/2002	0.277	0.238	20
2002/2003	0.295	0.207	20
2003/2004	0.011	0.965	20
2004/2005	0.427	0.060	20
2005/2006	0.614*	0.004	20
2006/2007	0.441	0.052	20
2007/2008	0.352	0.128	20
2008/2009	0.611*	0.004	20
2009/2010	0.395	0.084	20
2010/2011	-0.099	0.677	20
2011/2012	-0.074	0.758	20
2012/2013	-0.355	0.125	20
2013/2014	0.047	0.845	20

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

Source: Author, based on: RZS, 2017

The values of the Spearman Coefficient show that the majority of the consecutive years and the sections have a low and weak, even negative, correlation of the ranks of the growth rates. This means that the directions of change in the economic structure are not stable, they do not continue year after year in the direction of the same sections, but the directions of changes are rather susceptible to variation. More importantly, no direction of changes has been obtained towards the sectors that have a higher level of productivity, and simultaneously the GVA growth rates, which enables a faster and greater total economic growth, which is unsustainable in the long run. This has an influence on the inability of singling out a sectionin the medium and long term which will be the driver of the growth and development of the economy of RS.

CONCLUSION

The economic structure of the Republic of Serbia consists of different activities, which the amount of the rates of economic growth and the speed of economic development depend on. The structural changes that have been achieved since 2001 have had an influence on the relative share, significance and location of certain sectors in the economy. The most significant share in the formation of the GDP and the creation of GVA is attributed to the sections of Manufacturing, Wholesale and retail trade; repair of motor vehicles and motorcycles, Real estate activities and Agriculture, forestry and fishing. Except for the section of Real estate activities, they also employ the largest number of workers.

The reduction in the share of the Manufacturing and Agriculture, forestry and fishing in the GDP and employment is a consequence of the inefficient transition process, the structural characteristics and tertiarization of the economy. We may agree upon the fact that this is the general characteristic and price of transition and structural changes, but we may not agree upon the role and significance of the overall real sector in the economic development of the Republic of Serbia as a developing country, whose GDP *per capita* is only 5,200 dollars.

It may be assessed that the structural changes in the economy of the Republic of Serbia are slow and belated. There are a small number of the sections whose growth rates are more dynamic and more propulsive, and whose changes are simultaneously characterized by a higher intensity. Also, the structural changes are not persistent and

sustainable, their direction frequently changes between the sections, which thus has quite a small influence on changing the economic structure. This practically confirms the hypothesis that the level and speed of the development of the economy and the economic sectors of the Republic of Serbia are connected with the size, intensity and direction of changes in its structure.

It is a fact that structural changes are not fast and that they require time, but in order for the economy of the Republic of Serbia to achieve sustainable economic growth (4-5%) and more noticeable employment growth in the period to come, and especially to become closer to the economies of the EU new member countries, it is necessary that serious and efficient changes in the structure of its economy should be made. The future development of the economy will directly depend on the speed of changes and the creation of a modern sectional economic structure, especially the development of a propulsive manufacturing structure, i.e. the development of the "4.0 industries" or "networked industries".

This paper basically contributes to the critical evaluation of the development of the economy and the economic sectors from the aspect of the size, intensity and direction of structural changes. The results of this paper can be very beneficial when making decisions on future directions of development, more correctly to the choice of the basic and priority directions of the development of the economy of the Republic of Serbia. Yet, it is also significant to indicate the limitations of this paper, whose research was not dedicated to a comparison with the economies of other countries, and in which no more complex methodology and statistical analysis that would include a larger number of factors and their influence on structural changes were applied. Therefore, future research could be oriented towards the factors that influence the reallocation of employment and value added between the sectors, as well as to the examination of businessmen's attitudes and opinions with respect to the perspective of the development of certain economic sections.

The research has shown that structural changes in the economy are not efficiently implemented in the Republic of Serbia. For that reason, structural changes in the economy should be based on the main drivers and factors of structural changes, and today, they are innovations, research and development, knowledge and skills, although investments, other resources, offer and demand, institutions, relationships and agglomerations, externalities, international trade and globalization must not be neglected, either. These are also the important factors that can also start the reindustrialization of the economy of the Republic of Serbia.

The important message of the paper that could be useful to the Government is the importance of the implementation of an appropriate economic and industrial policy that encourages structural changes. Also, it is very important to know that the concept of complied and balanced development between the sectors must not be neglected.

ENDNOTE

1 The Statistical classification of economic activities in the European Community, abbreviated as NACE, is the classification of economic activities in the European Union (EU); the term NACE is derived from the French *Nomenclature statistique des activités économiques dans la Communauté européenne*.

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