

# Economic Horizons



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## EDITORIAL

Issue 1 of Volume 19, Year 2017 of the *Economic Horizons* scientific journal contains one original scientific paper, three review papers, one preliminary communication, and a scientific meeting review.

After a precise determination of the consumer ethnocentrism concept and a critical assessment of the complex relationships between animosity and patriotism towards consumer ethnocentrism, *Veljko Marinkovic* explores the relevant effects of the Republic of Serbia's (RS's) citizens' animosity against the European Union (EU) and their patriotism on consumer ethnocentrism. Through a research process, by using the corresponding research instruments (a personal interview, a reliability analysis, a confirmatory factor analysis, the structural equation model, the paired t-test), it has been confirmed that the animosity of the RS's citizens towards the EU affects their orientation towards buying domestic products that the patriotism of the RS's citizens has a positive statistically significant impact on the overall level of consumer ethnocentrism, too, and that their patriotism has a stronger impact on consumer ethnocentrism in relation to the animosity against the EU. Within the identification of the open issues important for future research, a need for successive studies in the respective field, inclusion in research and such variables as "the effects of nationalism, the national identity and cultural openness on consumer ethnocentrism" and the corresponding cross-cultural studies of consumer ethnocentrism are highlighted.

Relying on the identified basic features of behavioral models in the macroeconomic context

and considering alternative ontology concepts in Economics, *Dragan Petrovic*, *Zoran Stefanovic* and *Ivan Markovic* explore some of the key behavioral errors (hyperbolic discounting, the psychological state, the effect of availability, the errors associated with maintaining the status quo, the errors associated with optimism and pessimism, context dependence) and reassess the realism of the behavioral models in function of paternalistic measures and state intervention. It is concluded that the "behavioral models based on the assumption about the heterogeneity of the economic environment and the complementary goals of the state and economic entities represent an adequate instrumental framework for the implementation of the policy of asymmetric paternalism". As relevant for future research, the identification and detailed analysis of "a wider spectrum of the behavioral anomalies that accompany economic behavior in the region" have been singled out; that "could constitute a suitable basis for designing the measures of asymmetric paternalism that the Republic of Serbia should conduct within its strategy of institutional adaptation to the demands of the market economy".

Within the framework of the research into the relationship between the levels and the speed of the development of the economy of and the economic sectors in the Republic of Serbia (RS) and the intensity and direction of the changes in its sectoral structure, *Vladimir Micic* first of all indicates some approaches to the analysis of the economic structure and structural changes and then singles out industrialization, deindustrialization and reindustrialization as the three basic types of structural changes. The data on the share of the individual sectors of the economy of the RS in the gross domestic product, value added and

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employment have been used in a quantitative analysis of the economic sectors' role in the economic growth and development of the RS. Based on the obtained results, the carried out assessment shows that a small number of the sectors in the RS's economy have more dynamic and more propulsive growth rates, that the structural changes in the RS's economy are slow and late and not persistent and sustainable, that their direction frequently changes between the sections, which thus has quite a small influence on changing the economic structure. It is concluded that "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".

Relying on the appropriate conceptual framework for financial reporting and the conceptual basis of fair value accounting, *Jatinder P. Singh* theoretically considers some significant and controversial issues concerning 'Fair value': 'Exit' versus 'Entry' Value, and Income: Hicksian Income versus Fisherian Income. Beside the possibility of conducting the empirical research for the validation of the related findings, the necessity of doing research programs undertaken by professional accounting bodies and practitioners' forums with the aim of identifying and developing a conceptually superior accounting framework is particularly pointed out.

In examining some of the key socio and economic dimensions of the social security concept, *Meri*

*Boshkoska* explores in detail security and health at work, social and health protection, as well as the Pension System in the Former Yugoslav Republic of Macedonia. Through a research process, a fact was established that in the FYR of Macedonia in the considered period, living expenses have been permanently increased, the unemployment rate has been high in relation to the countries of the European Union and the average minimum wages paid in the region have been the lowest, which contributes to profound poverty in the country. The conclusion is that "it is necessary to revise the laws and the regulations in the field of workers' health and security, make urgent changes in order to ensure the sustainability of the pension system and start the reforms that will provide a sustainable and efficient healthcare system".

Also, this issue of the Journal contains a critical review of the 16<sup>th</sup> Scientific Meeting entitled Institutional Changes as a Determinant of the Republic of Serbia's Economic Development, held at the Faculty of Economics, University of Kragujevac, Kragujevac, Republic of Serbia, on 6<sup>th</sup> April 2017, written by *Vlastimir Lekovic*.

On behalf of the Editorial Board and my own behalf, I would, first of all, like to thank the authors of the contributions published in this issue. At the same time, we owe special gratitude to the reviewers for their efforts and constructive and critical comments and guidelines for the authors of the submitted manuscripts.

Editor-in-Chief

Slavica P. Petrovic

*Slavica P. Petrovic* is a Professor at the Faculty of Economics, University of Kragujevac, in retirement from October 1, 2016. She received her PhD degree in Business Economics and Management at the Faculty of Economics, University of Belgrade, Republic of Serbia. The key areas of her scientific interest and research are systems thinking, systems methodologies for structuring management problem situations, soft and critical Management Science, scientific research methodology.

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## EFFECTS OF THE REPUBLIC OF SERBIA'S CITIZENS' PATRIOTISM AND ANIMOSITY TOWARDS THE EUROPEAN UNION ON CONSUMER ETHNOCENTRISM

Veljko Marinkovic\*

*Faculty of Economics, University of Kragujevac, Kragujevac, The Republic of Serbia*

Economic, political and militaristic tensions between countries are present throughout the world. The devastating effects of the global financial crisis are still generating the ever-increasing instability of the world economy. Patriotism and nationalism, as well as animosity towards the economic and military policies of certain foreign countries, seem to be on the rise across many countries and nations in recent years. It is precisely the current situation in the world that is favorable for encouraging citizens to purchase domestic products. The policy can be particularly useful for less-developed import-oriented economies. Thus, in the conditions of the economic crisis, the study of consumer ethnocentrism is gaining in importance. The paper examines the effects of the patriotism of the citizens of the Republic of Serbia and animosity towards the EU on consumer ethnocentrism. The results show that both these variables stand out as the statistically significant antecedents of consumer ethnocentrism; however, it should be noticed that patriotism shows a stronger influence on the consumer's orientation towards buying domestic products. The research findings indicate that love of one's country may direct consumer choices towards domestic brands, despite the positive image and high quality of foreign ones. In addition, due to citizens' strong dislike towards the EU economic policy, some of them may decide to buy lower-quality domestic products; however, this does not necessarily negatively affect one's perception of foreign products.

**Keywords:** consumer ethnocentrism, patriotism, animosity, buying local products, confirmatory factor analysis, structural equation model

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### INTRODUCTION

Whether it is desirable that the government should encourage citizens to purchase domestic products and whether such measures have a positive effect

on the growth of the national economy is quite an interesting question to be answered by the economic policy makers of a country. On the one hand, encouraging consumers to buy domestic products can indeed support the growth of domestic production and employment, especially when a particular country is facing an economic crisis, as well as in the case of less-developed and/

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or import-oriented countries. On the other hand, whether it is justified to encourage consumers to buy lower-quality local products should be considered. Also, there is the issue of whether it is possible to implement this policy in the same manner in different sectors, particularly in the case where the quality of domestically made products is inferior compared to the quality of foreign ones. Finally, healthy competition in a particular market is stifled in this way.

Therefore, there is a dilemma in terms of the justifiability of shifting demand from foreign to domestic products. The author of the paper disagrees with this practice since it directly leads to consumer ethnocentrism, which is actually the consumer's orientation towards buying domestically made products. T. Shimp (1984) is among the authors who were the first to identify and deal with this phenomenon. His research has made a significant contribution to clarifying the complex nature of consumer ethnocentrism and has encouraged many authors throughout the world to focus their research studies on identifying its key antecedents. He defines consumer ethnocentrism as citizens' belief that products made in their native countries are superior to foreign ones. Accordingly, ethnocentric consumers are more likely to buy domestically made products. Research findings show that many such consumers believe that buying domestically produced products is a patriotic act and that this supports the growth of the national economy as well. According to them, the citizens who buy foreign products are largely responsible for economic problems in the native country, especially for the growth of unemployment (Good & Huddleston, 1995).

The aforementioned arguments have contributed to the growing interest in studying consumer ethnocentrism at the global level. Today, this phenomenon attracts the attention of macroeconomists, particularly in terms of analyzing the cost-effectiveness of the „Buy domestic products“ type of promotional campaigns.

The dilemma “for and against promoting the buying of domestic products” is the subject matter of numerous debates, considered in an attempt to answer the question whether or not this strategy really mitigates the effects of the financial crisis and protects citizens' jobs. Another question must also be posed: do these measures produce only short-term effects, particularly where domestic products are inferior to foreign ones in terms of their quality? Could it be that in this way the long-term development of the national economy is in fact jeopardized? Consumer ethnocentrism is a very interesting concept also from the point of view of marketing research. Accordingly, marketing researchers are particularly interested in finding an adequate methodology to measure consumers' ethnocentric tendencies and to also determine the degree to which consumer ethnocentrism is present among citizens of different countries. Measuring and comparing the levels of consumers' general ethnocentric tendencies across different regions of a single country is an important issue, too. Currently, marketing research is generally oriented towards a modeled approach to measuring consumer ethnocentrism, with the intention of designing research models marked by respective clearly identified key antecedents.

The concept of consumer ethnocentrism, i.e. its analysis and clarification, including its potential antecedents and the measurement methodology, is the objective of this study. The studies of consumer ethnocentrism are, by their nature, very specific since they include different sociological and marketing, as well as macro-economic components. In this respect, finding an adequate methodological solution to measuring consumer ethnocentric tendencies is a challenging task. For more than three decades now, researchers from many countries have been trying to design new and improve the existing scales to measure consumer ethnocentrism. This is a very important research activity since consumer ethnocentric tendencies can have significant social and economic implications.

Therefore, this paper aims to investigate the effect that animosity towards the EU and patriotism may have on the overall level of consumer ethnocentrism. In addition, the paper examines whether the intensity of Serbian consumers' ethnocentric tendencies is higher than the level of their patriotism and animosity towards the EU.

A survey was used as a primary data collection method. As far as the statistical analysis is concerned, reliability analysis and confirmatory factor analysis - CFA (in order to assess the internal consistency and to construct the validity of the model) were applied, as well as the structural equation modeling that was used so as to test the effect of patriotism and animosity on consumer ethnocentrism. In addition to that, by applying the paired t-test, the (non)existence of the statistically significant differences in the respondents' attitudes regarding the three analyzed model variables was determined.

The paper is organized in five sections. Following the Introduction Section, the paper continues with the Literature Review Section, which deals with the concepts of consumer ethnocentrism, patriotism and animosity and their mutual relationships. The research hypotheses to be tested are set out in the concluding part of this section, in line with the results of the previous research. The third section explains the methodology of the research, as well as the structure of the sample. The fourth section contains the results of the empirical study, whereas the fifth section points to the conclusions and contributions of the paper, identifies the limitations of the present research and suggests the directions for future research.

## LITERATURE REVIEW

### **The Concept of Consumer Ethnocentrism**

Prior to the analysis of consumer ethnocentrism, it is necessary to address a broader concept of

ethnocentrism. Ethnocentrism is a sociological concept fundamental to the study of the related concept - consumer ethnocentrism. By its nature, however, consumer ethnocentrism is not only a sociological concept, but it also has an economic aspect, which attracts the attention of sociologists, macroeconomists and marketing researchers. The first formal definition of ethnocentrism was formulated by W. G. Sumner (1906), and according to his definition, ethnocentrism is a view in which one's own group is the center of everything, whereas all others are scaled and rated with reference to it (Shankarmahesh, 2006). In this respect, ethnocentric individuals believe their group is superior to others and their system of values, attitudes and behaviors as well. Ethnocentrism does not only necessarily apply to national, religious or racial groups; it can also occur in small social groups, such as families. Simply put, ethnocentrism is an integral part of human nature.

Scientists' interest in studying ethnocentrism has led to the expansion of the field of the existing analysis and the introduction of a new concept, named consumer ethnocentrism. As previously stated, ethnocentric consumers are largely oriented towards purchasing domestic products. Consumer ethnocentrism is based on the view that imports harm the national economy and can cause numerous economic problems; on the other hand, buying domestic products is considered not only as an economic, but also as an ethical issue (Shimp & Sharma, 1987).

Due to its complex nature and its social implications, consumer ethnocentrism is an important field of cultural and economic research (Maričić, 2011). Assessing a nation's degree of consumer ethnocentrism is very important for export-oriented companies, especially when planning to enter the international market. However, it should be noted that a high level of a nation's ethnocentrism does not necessarily imply that members of a particular nation exhibit a high level of consumer ethnocentrism. For example, the results of a study

indicated that India's citizens were ethnocentric and showed a high degree of patriotism; however, they were also shown to be open to buying foreign products (Deb & Chaudhuri, 2014). The relationship between cultural openness and consumer ethnocentrism is a source of disputes among many authors. The results of certain studies identified a negative (inverse) correlation between these two phenomena (Deb & Sinha, 2016; Prince, Davies, Cleveland & Palihawadana, 2016), on the one hand, whereas on the other, some researchers indicated that consumers' favorable attitudes towards other cultures and their values were not correlated with ethnocentric tendencies (Vida, Dmitrovic & Obadia, 2008).

By analyzing the results of the existing studies, M. Shankarmahesh (2006) provides us with a detailed list of the antecedents and consequences of consumer ethnocentrism. Antecedents in this respect generally include socio-psychological factors (cultural openness, patriotism, conservatism, collectivism, animosity, a list of values), as well as economic factors (the stage of a country's economic development), political factors (political propaganda and leader manipulation) and demographic factors (gender, age, education, income). The main consequence of consumer ethnocentrism is the consumer's intention to buy domestic products, i.e. their unwillingness to buy foreign products.

A. T. Shimp and S. Sharma (1987) developed the most acclaimed scale to measure consumer ethnocentrism. This is the CETSCALE (Consumer Ethnocentric Tendencies Scale), commonly used by many researchers worldwide today. The scale consists of the 17 items that a respondent evaluates by specifying his/her level of agreement or disagreement with a particular item on the scale ranging from 1 to 7. This means that when applying this scale, the highest possible score, i.e. the level of consumer ethnocentrism, is 119, which signifies the consumer's absolute orientation towards purchasing domestic products. On the

other hand, the lowest ethnocentricity score is 17. In addition to the original CETSCALE, some researchers use modified CETSCALEs to measure consumer ethnocentric tendencies and these scales usually contain a smaller number of items (Vida, Dmitrovic & Obadia, 2008). In addition, consumers' ethnocentric tendencies do not necessarily need to be measured within the 17-119 range, or on a 1-7 point scale; 5-point or 9-point scales can be used as well. It is important to note that besides the mentioned CETSCALE, there are other scales used for measuring consumer ethnocentrism. Among these scales, NATID (National Identity Scale) is most frequently used; however, it primarily measures the national identity, whereas consumer ethnocentrism makes one of its four dimensions (Veljković, 2009).

The measurement results show that the level of consumer ethnocentrism varies among different nations. The study conducted by A. O'Cass and K. Lim (2002) produced interesting results: it showed that the level of consumer ethnocentrism in Moscow was lower than the levels of consumer ethnocentrism in three US cities (Los Angeles, Denver and Detroit). The results of this study indicate that the citizens residing in Detroit show significantly higher levels of consumer ethnocentrism in relation to the residents of Los Angeles. This result is logical due to the fact that the American automobile industry is located in Detroit, whereas the population of Los Angeles consists of many nations. In terms of the results of the studies conducted in the territory of the Republic of Serbia, Central Serbia shows the highest level of consumer ethnocentrism, and is followed by Belgrade, whereas the lowest level of consumer ethnocentrism is identified in A. P. Vojvodina. In addition, as household income increases, the tendency to buy domestic products decreases (Veljković, 2009). The rural population generally shows a higher level of consumer ethnocentrism than the urban, which is also the case with the older population in comparison to the young (Marinković, Stanišić & Kostić, 2011).

## **Implications of the Animosity and Patriotism in Terms of Consumer Ethnocentrism**

Animosity implies strong emotions based on the position that it is immoral and unethical to buy products that originate from an offending country (Klein, Ettenson & Morris, 1998). Animosity towards a particular country is usually influenced by military, political or economic events (Deb & Chaudhuri, 2014). Animosity is an emotion that conditions consumers' buying decisions. This implies consumers' unwillingness to buy a product from a particular country that is perceived as the offending country, independently of consumers' judgments about the quality of the products originating from that particular country. Therefore, consumers may have a positive attitude towards the quality of the products produced in a particular country, but due to their animosity towards that particular country they are unwilling to buy these products (Fernández-Ferrín, Bande-Vilela, Klein & del Río-Araújo, 2015; Cheah, Phau, Kea & Huang, 2016). It is important to note that there are disagreements among the authors over this particular issue since the findings obtained in some studies show that animosity may also affect product judgments, as well as purchasing decisions (Lee & Lee, 2013).

The position that there are two distinctive categories of animosity - war animosity and economic animosity - is generally accepted in literature (Klein, Ettenson & Morris, 1998). Thus, hostility towards a particular country is either the result of the military operations that particular country has implemented in other countries or the result of the economic policy of that particular country. This traditional concept was further expanded by E. B. Nes, R. Yelkur and R. Silkset (2012), who identify the four dimensions of animosity: war animosity, economic animosity, political animosity and people animosity. The majority of research models chose to observe animosity as a single variable despite its identified multidimensional character.

The study of animosity is very important for marketing research since it may constitute a significant antecedent of consumer ethnocentrism, willingness to buy and purchasing choices. Animosity and consumer ethnocentrism can be analyzed as the variables of a specific research model. These variables do have certain similarities; however, the essential difference is that animosity relates to the assessment of how justifiable it is to buy foreign products because of some past events, whereas consumer ethnocentrism is related to a preference for domestic products over foreign ones (Cui, Wajda & Hu, 2012). The results of the previous research show that animosity has a positive statistically significant effect on consumer ethnocentrism (Deb & Chaudhuri, 2014). The positive effect of consumer ethnocentrism and animosity towards foreign products was also confirmed in a study conducted by Z. Ahmed, R. Anang, N. Othman and M. Sambasivan (2013). Similarly, animosity has a negative effect on the purchase of foreign products (Rose, Rose & Shoham, 2009; Huang, Phau & Lin, 2010).

In accordance with the review of relevant literature and the analysis of the geographical, economic and political situation of the Republic of Serbia, the author of this study decided to analyze the economic dimension of animosity, more precisely animosity towards the EU economic policy. In this respect, the first research hypothesis is defined as follows:

H1: Animosity towards the European Union influences Serbian consumers' orientation towards buying domestic products.

Patriotism can be defined as love of one's own country and one's concern for the well-being of their country, as well as the level of one's identification with one's nation and its symbols (Burns, 1997). Patriotism is also understood to depend on the two different perceptions of the sense of belonging to one's nation: instrumental and sentimental attachment (Meier-Pesti & Kirchler,

2003). Instrumental attachment implies the benefits that a person can gain as a member of a certain nation. The best example of this type of attachment is the citizenship that defines a person as being a member of a particular nation. In this context, it can be concluded that this type of attachment is based on a person's rational reasoning. Sentimental attachment develops in situations where personal values coincide with national ones. This type of attachment is of emotional nature and stems from cultural heritage, tradition and one's dedication to national symbols. According to the work by K. Meier-Pesti and E. Kirchler (2003), sentimental attachment has a stronger effect on the overall level of patriotism than instrumental attachment, although both effects are statistically significant.

Relevant literature distinguishes between the concept of nationalism and the concept of patriotism. Generally, both terms are related to a positive identification with a particular nation. However, nationalism implies the superiority and domination of one nation over others. On the other hand, patriotism as love of one's country does not imply national dominance (van der Toorn, Nail, Liviatan & Jost, 2014). While patriotism is based on emotional attachment to one's own nation, nationalism discriminates members of other nations. Patriotism also involves a comparison of the quality of one's life with the value system of the nation which they belong. On the other hand, nationalism involves comparing the social values of two or more nations, where members of one nation devalue the values of other nations.

Patriotism evokes a sense of pride in a person and affection for domestically made products; such affection may arise from emotional attachment and can also be related to the intangible elements of quality. The study conducted by I. Vida and J. Reardon (2008) confirms a statistically significant effect of patriotism on consumer ethnocentrism and the purchase of domestic products. Citizens, who consider themselves to be patriots, usually

prefer domestic products to foreign ones (Han, 1988). In accordance with the aforementioned facts, the second research hypothesis is formulated as follows:

H2: The patriotism of the citizens of the Republic of Serbia has positive impacts on consumer ethnocentrism.

## METHOD

The primary objective of the study is to examine the effects of animosity towards the EU and the patriotism of the citizens of the Republic of Serbia on consumer ethnocentrism. Based on such a definition of the objective, it is clear that the proposed research model contains two independent variables (animosity and patriotism) and one dependent variable (consumer ethnocentrism). In addition to this, each of these variables is measured by a series of statements, which is the method commonly used in field marketing research (Table 1). The statements were formulated based on relevant marketing literature (Kosterman & Feshbach, 1989; Vida, Dimitrijevic & Obadia, 2008; Rose, Rose & Shoham, 2009; Ahmed *et al*, 2013). The respondents were asked to indicate their agreement about or disagreement over the statements on the seven-point Likert scale, where score 1 indicates strong disagreement, whereas score 7 signifies strong agreement.

The personal interview method was used for data collection. The research was conducted in six cities in the territory of Central Serbia during 2015. A total of 221 questionnaires were completed by the respondents. The analysis of the demographic profile of the sample shows that women are represented in a slightly higher percentage compared to men, i.e. 57% of the respondents are women and 43% are men. The younger respondents (aged 18-31) account for 29.4% of the

**Table 1** Model variables and statements

Model variables	Statements
Consumer ethnocentrism	S1: Serbian products first and foremost. S2: We should buy products made in Serbia instead of letting other countries become rich at our expense. S3: Buying Serbian products is always the best choice. S4: It may cost me more in the long run; however, I prefer buying Serbian products.
Patriotism	S1: I am proud to be a citizen of Serbia. S2: I am emotionally attached to Serbia and everything that happens in it concerns me to a great extent. S3: I am proud to live in Serbia. S4: I am proud to see the national flag waving.
Animosity towards the EU	S1: One should be careful when dealing with EU companies. S2: EU companies are not reliable trading partners. S3: EU companies have a negative attitude towards Serbian companies.

Source: Author

sample. The middle-aged persons (32-45) are the largest demographic group and constitute 40.3% of the sample. The respondents aged 45 and older constitute 30.3% of the sample. The respondents are also classified according to their education level. In this respect, the sample mostly contains highly educated respondents (44.3%). The respondents who completed secondary education account for 36.2% of the sample. The persons with a college degree take a share of 19.5% of the sample.

The data were analyzed by using the SPSS and Amos software. For the purpose of determining statistically significant differences in the levels of animosity, patriotism and consumer ethnocentrism, a Paired t-test was applied. The reliability and validity of the research model were tested by the CFA. The structural equation model was used to test the statistical significance and the magnitude of the effect of animosity and patriotism on consumer ethnocentrism.

## RESULTS

In the first step of the statistical analysis, the arithmetic means and standard deviations for all of the three observed variables (consumer ethnocentrism, patriotism and animosity) were calculated. In addition, the average values for each of these variables were determined for all the respondents based on their evaluation of the questionnaire's statements. Then, the arithmetic means were calculated for all the three variables in terms of the total sample. The paired t-test was applied so as to find out whether there were statistically significant differences between the values of the arithmetic means of the two observed variables. This test shows whether the average values of the answers to the two specified questions are equal or whether they vary from one another, where the respondents evaluate these questions on the same measurement scale (Soldić-Aleksić i Chronos-Krasavac, 2009).

The results of the paired t-test indicate that there is a significantly higher level of patriotism in the sample in relation to the intensity of consumer ethnocentrism and animosity towards the EU (Table 2). On the other hand, the sample does not show any differences between the general level of consumer ethnocentrism and animosity towards the EU ( $p = 0.865 > 0.05$ ) Based on the results of the paired t-test, as well as the respondents' subjective perceptions, it is evident that they express a high level of patriotism and the moderate levels of consumer ethnocentrism and animosity. In general, in terms of the seven-point scales, the values of the arithmetic means that exceed 5 can be considered as high values for all constructs. On the other hand, the values lower than 3 can be characterized as low, whereas the values ranging from 3 to 5 are considered as moderate. The highest degree of the heterogeneity of the respondents' attitudes was identified for the consumer ethnocentrism variable ( $SD = 1.55$ ).

In the second step of the statistical analysis, the reliability of the three observed variables, as well as the internal consistency of the statements used for their measurement, were assessed. Reliability analysis usually implies the calculation of Cronbach's alpha. The minimum acceptable value of Cronbach's alpha is 0.7 for each variable

(Nunnally, 1978). All of the three variables fulfilled this reliability condition. Consumer ethnocentrism shows the highest reliability level (Cronbach's alpha = 0.93). Furthermore, the other two variables are also characterized by the high level of reliability (patriotism: Cronbach's alpha = 0.89; animosity: Cronbach's alpha = 0.80).

Since this study implies the testing of the effects of patriotism and animosity on consumer ethnocentrism, it is only logical that the proposed research model contains two independent variables and one dependent. The accepted practice is to assess the validity of the model prior to testing the effects. With this in mind, the CFA was applied. This analysis includes a series of tests and calculations of a number of indices based on which the validity of the research model is determined (RFI - the relative fit index; NFI - the normed fit index; GFI - the goodness-of-fit index, CFI - the comparative fit index, TLI - the Tucker-Lewis index; IFI - the incremental fit index; RMSEA - the root mean square error of approximation; AVE - the average variance extracted; CR - composite reliability).

The results of the CFA are shown in Table 3. Based on the data presented, all the obtained values of the indices are considered to be satisfactory. The ratio of  $\chi^2 / df$  is lower than 3, which is the set threshold value (Byrne, 1998). The values of the RFI, NFI,

**Table 2** The results of the paired t-test

Variable	Arithmetic mean	Standard deviation	t	df	p
Consumer ethnocentrism	4.32	1.55	-10.038*	220	0.000
Patriotism	5.23	1.40			
Consumer ethnocentrism	4.32	1.55	-0.170 <sup>ns</sup>	220	0.865
Animosity	4.33	1.42			
Patriotism	5.23	1.40	8.961*	220	0.000
Animosity	4.33	1.42			

Note: \* The result is significant at the 0.01 level; <sup>ns</sup> The result is not statistically significant.

Source: Author

GFI, CFI, TLI and IFI indices are approximately equal to or exceed the threshold value of 0.9 (Hair, Black, Babin, Anderson & Tatham, 2006), whereas the value of the RMSEA index is lower than the threshold value of 0.1 (Steiger, 1990). The AVE values of all of the three variables exceed the threshold of 0.5 (consumer ethnocentrism: AVE = 0.77; patriotism: AVE = 0.67; animosity: AVE = 0.59). Therefore, the model meets all the requirements in terms of convergent validity (Fornell & Larcker, 1981). In addition, the CR coefficient values are higher than the threshold value of 0.7 for all of the three variables (consumer ethnocentrism: CR = 0.93; patriotism: CR = 0.88 animosity: CR = 0.81). It is important to note that all of the factor loadings are greater than 0.65 and at the 0.05 level of significance.

patriotism expressed by the citizens of the Republic of Serbia are indicative of their orientation towards buying domestic products. This confirms both hypotheses formulated in this paper. However, based on the higher value of the  $\beta$  coefficient, it is evident that patriotism stands out as a significant antecedent of consumer ethnocentrism. Obviously, love of one's country has a stronger effect on consumers' choices over buying domestically made products than antipathy towards the EU economic policy. The research findings indicate the fact that consumers may perceive foreign products as high-quality ones, but because of the emotion of love for their home country, or anger towards the EU, some may decide to buy domestic products, despite their poorer quality.

**Table 3** The goodness-of-fit indices of the research model

Goodness-of-fit indices of the model	Recommended values	Calculated values
$\chi^2 / df$	< 3	2.90
RFI	> 0.9	0.91
NFI	> 0.9	0.93
GFI	> 0.9	0.91
CFI	> 0.9	0.96
TLI	> 0.9	0.94
IFI	> 0.9	0.96
RMSEA	< 0.1	0.09

Source: Author

Following the testing of the validity of the model, the structural equation model (SEM) was applied in the final step of the statistical analysis. The SEM analysis was used in order to calculate the statistical significance and the magnitude of the effects of the two tested variables. The results of the SEM analysis are shown in Table 4. Both tested effects were statistically significant ( $p < 0.01$ ). Thus, we can conclude that animosity towards the EU and

**Table 4** Hypothesis testing

Hypothesis	Standardized $\beta$ coefficient	Conclusion
H1: Animosity $\rightarrow$ consumer ethnocentrism	0.341*	Confirmed
H2: Patriotism $\rightarrow$ consumer ethnocentrism	0.456*	Confirmed

\* The result is significant at the 0.01 level ( $p < 0.01$ ).

Source: Author

Finally, it is important to note that the independent variables describe the 48.4% of consumer ethnocentrism variability ( $R^2 = 0.484$ ). Since this model contains only two independent variables, this percentage can be characterized as a very satisfactory one. The degree of linear correlation between the two observed variables is 0.517, and this value is significant at the 0.05 level. It is evident that the degree of the linear correlation in the model is not high; therefore, multicollinearity does not represent a serious problem in this study.

Multicollinearity was also tested by assessing the level of tolerance in terms of the observed independent variables and by analyzing the VIF (the variance inflation factor) values. Given the fact that the model contains two independent variables, the level of tolerance is 0.804 (which is significantly higher than 0.1), whereas the VIF value of 1.244 is lower than the threshold value of 5 (Field, 2000). This further confirms the low level of multicollinearity in the given research model, as well as the validity and reliability of the calculated values of the standardized coefficients.

## CONCLUSION

The concept of consumer ethnocentrism has traditionally attracted the attention of economists and sociologists. Although researched over several decades, this issue is still relevant and engaging. Moreover, it can be concluded that its importance has been growing in recent years due to the effects of the global economic crisis. The economic crisis is perhaps the right time to encourage an ethnocentric behavior, or to point citizens in the direction of buying domestic products in order to strengthen domestic production and reduce unemployment. The implementation of this policy is especially characteristic of less-developed export-oriented economies.

Another factor giving importance to the study of consumer ethnocentrism and the identification of its antecedents is the rise of nationalism in many countries and increasing tensions in the world, which are not only of economic, but also of militaristic nature. The political crises in the North African countries, the tensions in the Middle East, the Kashmir conflict between India and Pakistan and the Russian military intervention in Syria are just some examples of the unstable economic situation in different regions and it is these occurrences that add to the importance of this study, primarily focused on testing the effects of patriotism and animosity on consumer ethnocentrism.

The above discussion points to the suitable choice of the model variables, especially concerning the current geopolitical situation, where the patriotism of many nations, as well as the animosity towards economic and/or military policies of certain countries, has been growing increasingly stronger. The contribution and originality of this paper are precisely reflected in this context, which is characterized not only by a strong economic dimension, but also by the social and political ones. However, it should be noted that there are a small number of the studies of consumer ethnocentrism in the Western Balkan Region. The special contribution of this research paper refers to the design of the research model, which has made it possible to analyze the antecedents of consumer ethnocentrism; thus, the paper is characterized by a pronounced marketing research dimension. Modern methods (CFA and SEM) are used in the research, which nowadays are considered as standard methods worldwide in terms of the similar types of field research.

Although the paper presents a relatively simple model that contains only two potential antecedents of consumer ethnocentrism, the choice of these variables makes a unique feature of the proposed model. In fact, patriotism is a very significant and frequently used variable in related cultural and economic research, particularly when identifying the magnitude of the effects of various factors on consumer ethnocentrism. On the other hand, researching the relationship between animosity and consumer ethnocentrism is a more recent topic. In a relatively small number of studies, researchers examine the impact of animosity on consumer ethnocentrism. Since this variable is rarely used in similar studies, its incorporation into the research model gives a distinctive contribution to the paper. In addition, if the papers where animosity is included in the research model as a variable are analyzed, it can be noted that the animosity of different countries/nations towards either the USA or the UK (Rose, Rose & Shoham, 2009; Ahmed *et*

al, 2013), as well as the animosity of Asian countries towards the economic policy of China or Japan (Huang, Phau & Lin, 2010; Cui, Wajda & Hu, 2012; Lee & Lee, 2013) is usually analyzed in them. Although, generally, these types of studies examine the attitudes of Asian consumers (especially those from the Middle East and East Asia), there are also the studies that examine the animosity of European countries towards the economic policy of the USA or Germany (Riefler & Diamantopoulos, 2007). However, as far as the author of this paper is aware of that, the animosity of the citizens of one European country towards the EU has this far not been studied.

The research findings confirm that the two independent variables (animosity and patriotism) stand out as the statistically significant antecedents of consumer ethnocentrism. Here, patriotism has a stronger effect on consumer ethnocentrism compared to animosity towards the EU. Consumers are primarily driven to buy domestically made products because of their emotion of love for their own country. On the other hand, antipathy towards the EU is also an important factor affecting Serbian consumers' purchasing decisions. This does not mean that consumers have a negative attitude towards the products that come from the EU; they feel animosity towards the economic policy of the European Union, which can influence them to buy domestic products. The results also confirm the presence of a high degree of patriotism and the moderate degrees of animosity and consumer ethnocentrism in the sample. Love of one's country among citizens is greater than their orientation towards purchasing domestic products. The lower level of consumer ethnocentrism in relation to patriotism indicates that, in spite of their love of their own country, some citizens prefer buying foreign products, probably because of the quality and branding of those products.

There are certain limitations to this study. Firstly, the research was carried out only once and it would be desirable that such research be conducted

successively (on the same sample) in order to monitor changes in citizens' attitudes and behavior in relation to purchasing. Secondly, the study uses a simple research model that contains only two independent variables. It is desirable that future research models should contain a more complex set of variables. New models can be designed in order to additionally test the effects of nationalism, the national identity and cultural openness on consumer ethnocentrism. This would provide valuable and interesting results. Thirdly, the current research was conducted in the territory of one single country. The cross-cultural studies of consumer ethnocentrism would definitely provide a highly valuable input since that would provide an opportunity to compare the attitudes of different nations.

## REFERENCES

- Ahmed, Z., Anang, R., Othman, N., & Sambasivan, M. (2013). To purchase or not to purchase US products: Role of religiosity, animosity, and ethno-centrism among Malaysian consumers. *Journal of Services Marketing*, 27(7), 551-563. doi: 10.1108/JSM-01-2012-0023
- Berns, W. (1997). On patriotism. *Public Interest*, 127(2), 19-32.
- Byrne, B. M. (1998). *Structural equation modelling with LISREL, PRELIS, and SIMPLIS: Basic concepts, applications, and programming*. Mahwah, NY: Lawrence Erlbaum.
- Cheah, I., Phau, I., Kea, G., & Huang, Y. A. (2016). Modelling effects of consumer animosity: Consumers' willingness to buy foreign and hybrid products. *Journal of Retailing and Consumer Services*, 30, May, 184-192. doi: 10.1016/j.jretconser.2016.01.018
- Cui, A. P., Wajda, T. A., & Hu, M. Y. (2012). Consumer animosity and product choice: Might price make a difference? *Journal of Consumer Marketing*, 29(7), 494-506. doi: 10.1108/07363761211275009
- Deb, M., & Chaudhuri, H. R. (2014). Impact of firm's reputation and ethnocentrism on attitude towards foreign products. *Marketing Intelligence & Planning*, 32(5), 646-664. doi: 10.1108/MIP-04-2013-0070

- Deb, M., & Sinha, G. (2016). Impact of culture on religiosity, cosmopolitanism and ethnocentrism. *Asia Pacific Journal of Marketing and Logistics*, 28(1), 56-72. doi: 10.1108/APJML-12-2014-0173
- Fernández-Ferrín, P., Bande-Vilela, B., Klein, J. G., & del Río-Araújo, M. L. (2015). Consumer ethnocentrism and consumer animosity: Antecedents and consequences. *International Journal of Emerging Markets*, 10(1), 73-88. doi: 10.1108/IJOEM-11-2011-0102
- Field, A. (2000). *Discovering statistics using SPSS for Windows*. Sage Publication: Thousand Oaks.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Good, K. L., & Huddleston, P. (1995). Ethnocentrism of Polish and Russian consumers: Are feelings and intentions related? *International Marketing Review*, 12(5), 35-48. doi:10.1108/02651339510103047
- Hair, Jr. J. F., Black, W. C., Babin, B., Anderson R., & Tatham, R. (2006). *Multivariate Data Analysis* (6<sup>th</sup> ed.). Upper Saddle River, NY: Prentice Hall.
- Han, C. M. (1988). The role of consumer patriotism in the choice of domestic versus foreign products. *Journal of Advertising Research*, 28(3), 25-32.
- Huang, Yu-An, Phau, I., & Lin, C. (2010). Consumer animosity, economic hardship, and normative influence: How do they affect consumers' purchase intention? *European Journal of Marketing*, 44(7/8), 909-937. doi: 10.1108/03090561011047463
- Klein, J. G., Ettenson, R., & Morris, M. D. (1998). The animosity model of foreign product purchase: An empirical test in the people's Republic of China. *Journal of Marketing*, 62(1), 89-100. doi: 10.2307/1251805
- Kosterman, R., & Feshbach, S. (1989). Toward a measure of patriotic and nationalistic attitudes. *Political Psychology*, 10(2), 257-274.
- Lee, R., & Lee, K. T. (2013). The longitudinal effects of a two-dimensional consumer animosity. *Journal of Consumer Marketing*, 30(3), 273-282. doi: 10.1108/07363761311328946
- Maričić, B. (2011). *Ponašanje potrošača*. Beograd, Republika Srbija: Ekonomski fakultet Univerziteta u Beogradu.
- Marinković, V., Stanišić, N. i Kostić, M. (2011). Potrošački etnocentrizam građana Srbije. *Sociologija* 53(1), 43-58. doi: 10.2298/SOC1101043M
- Meier-Pesti, K., & Kirchler, E. (2003). Nationalism and patriotism as determinants of European identity and attitudes towards the euro. *Journal of Socio-Economics*, 32(6), 685-700. doi:10.1016/j.socec.2003.10.006
- Nes, E. B., Yelkur, R., & Silkoset, R. (2012). Exploring the animosity domain and the role of affect in a cross-national context. *International Business Review*, 21(5), 751-765. doi:10.1016/j.ibusrev.2011.08.005
- Nunnally, J. C. (1978). *Introduction to Psychological Measurement*. New York, NY: McGraw-Hill.
- O'Casey, A., & Lim, K. (2002). Understanding the younger Singaporean consumers' views of western and eastern brands. *Asia Pacific Journal of Marketing and Logistics*, 14(4), 54-79. doi: 10.1108/13555850210764954
- Prince, M., Davies, M., Cleveland, M., & Palihawadana, D. (2016). Here, there and everywhere: A study of consumer centism. *International Marketing Review*, 33(5), 715-754. doi: 10.1108/IMR-06-2014-0205
- Riefler, P., & Diamantopoulos, A. (2007). Consumer animosity: A literature review and a reconsideration of its measurement. *International Marketing Review*, 24(1), 87-119. doi: 10.1108/02651330710727204
- Rose, M., Rose, G. M., & Shoham, A. (2009). The impact of consumer animosity on attitudes towards foreign goods: A study of Jewish and Arab Israelis. *Journal of Consumer Marketing*, 26(5), 330-339. doi: 10.1108/07363760910976583
- Shankarmahesh, M. (2006). Consumer ethnocentrism: An integrative review of its antecedents and consequences. *International Marketing Review*, 23(2), 146-172. doi: 10.1108/02651330610660065
- Shimp, T. A. (1984). Consumer ethnocentrism: The concept and preliminary test. *Advances in Consumer Research*, 11(1), 285-290.
- Shimp, A. T., & Sharma, S. (1987). Consumer ethnocentrism: Construction and validation of the CETSCALE. *Journal of Marketing Research*, 24(3), 280-289. doi: 10.2307/3151638

- Soldić-Aleksić, J., i Chroneos-Krasavac, B. (2009). *Kvantitativne tehnike u istraživanju tržišta*. Beograd, Republika Srbija: Ekonomski fakultet.
- Steiger, J. H. (1990). Structural model evaluation and modification: an interval estimation approach. *Multivariate Behavioral Research*, 25(2), 173-180. doi: 10.1207/s15327906mbr2502\_4
- Sumner, W. G. (1906). *Folkways: A study of the sociological importance of usages, manners, customs, mores, and morals*. Boston, MA: Ginn and Company.
- van der Toorn, J., Nail, P. R., Liviatan, I., & Jost, J. T. (2014). My country, right or wrong: Does activating system justification motivation eliminate the liberal-conservative gap in patriotism? *Journal of Experimental Social Psychology*, 54, 50-60. doi: 10.1016/j.jesp.2014.04.003
- Veljković, S. (2009). Uticaj etnocentrizma na potrošače u Srbiji. *Marketing*, 40(2), 97-106.
- Vida, I., Dmitrović, T., & Obadia, C. (2008). The Role of ethnic affiliation in consumer ethnocentrism. *European Journal of Marketing*, 42(3/4), 327-343. doi: 10.1108/03090560810852968
- Vida, I., & Reardon, J. (2008). Domestic consumption: rational, affective or normative choice? *Journal of Consumer Marketing*, 25(1), 34-44. doi: 10.1108/07363760810845390.

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## BEHAVIORAL MODELS IN ECONOMICS AS A FRAMEWORK FOR INDIVIDUAL ADAPTATION TO THE INSTITUTIONAL ENVIRONMENT

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Behavioral models are a useful instrument of the analysis of interdependent impacts of the institutional structure and macroeconomic trends. Their role, among other things, is reflected in presenting the advantages and disadvantages of different interpretations of economic reality, associated with the subjective perceptions of the possibilities of the adaptation of economic actors to the requirements of the existing institutional structure. Having in mind the fact that the economic decision-making process is an integral part of macroeconomic and broader social ontology, as well as the different opinions regarding the basic features of behavioral models, the subject of this work is focused on trying to determine their theoretical relevancy and practical foundation. Special attention is paid to the phenomenon of the realism of behavioral models in order to analyze their instrumentalist importance for the implementation of the policy of asymmetric paternalism in conditions of uncertainty.

**Keywords:** behavioral models, institutional structure, macroeconomics, paternalism

JEL Classification: D03, E03, B29, B41, P29

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### INTRODUCTION

Using a method assumes the existence of a certain explicit or implicit notion of reality (ontology), at least to the extent that the nature of reality is such that it may be the subject of knowledge. The ontological basis, therefore, refers to what exists, i.e. to the nature of things and events. Thanks to

ontological assumptions, it is possible to identify certain differences between various methodological procedures. The reason for methodological confrontation should be sought in terms of the functioning of multidimensional and layered social reality, which in order to be adequately described and explained requires using various research approaches, methodologies and analytical techniques (Samuels, 1998). The multiplicity of methods and theories (Dow, 2008) testifies to the challenges and potentials of scientific research,

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taking into account the fact that each research question is specific enough to require a special way of research. In this case, a blind struggle for “one best answer” would have led researchers astray. Hence, ontological “sensitivity” is a necessary component of any serious attempt to differentiate theoretical approaches and their inherent methodological procedures (Dobusch & Kapeller, 2012, 1042).

To understand economic ontology as the basis of economic knowledge is of great importance for the philosophy and methodology of economic science. In modern economics, there is no single generally accepted approach to economic ontology. In accordance with this ontological context, different viewpoints should be treated, among which those related to micro-/macro-, static/dynamic, short- and long-term, endogenous/exogenous factors etc. should be mentioned. When the level of the observation and analysis of economic phenomena is concerned, the relationship between reality and its presentation is particularly interesting in the context of considering the basic features of macroeconomic ontologies as part of a wider social ontology (Lawson, 2015).

Starting from a need for a more realistic interpretation of economic and social ontology with respect to obvious differences in the structure of the observations of real economic processes, the subject of this paper is the highlighting of the importance of behavioral models for an improvement of the understanding of the actual characteristics of the economic environment.

The main objective is to highlight their ontological relevance through the analysis of the key characteristics of behavioral models and consider the benefits of the relativization of the assumption about the perfect rationality of economic actors.

Accordingly, the basic hypothesis is: The behavioral models based on the assumption about the heterogeneity of the economic environment and the complementarity of the goals of the

state and economic entities represent a proper instrumental framework for the implementation of the policy of asymmetric paternalism. By abandoning the mechanistic understanding of the process of economic decision-making and insisting on empirically established data on behavioral “anomalies” and psychologically determined deviations from the rational choice model, the message is directed towards about the state regarding the need for designing rules and regulations in order to mitigate the extent of the “irrationality” of decisions on the use of resources.

The basis of the approach in this research is represented by the theoretical, structural analysis of the subject matter of the research derived from the elaboration of available sources. This means that, in order to test the said hypothesis, empirical studies conducted by various authors who have dealt with this issue will be used in the research. Then, by combining the analytical economic analysis with the descriptive and qualitative economic analysis, general conclusions will be derived about the existence of the “irrational” forms of economic behavior and the need for a certain involvement of the state in terms of the implementation of the policy of asymmetric paternalism.

Structurally, the paper is divided into four sections. After the Introduction, the basic features of the behavioral models, with a special emphasis on the relevance of the ontological assumptions about the uniformity/heterogeneity of the economic environment and the degree of the complementarity of the goals of the state and economic entities will be discussed. In the second section of the paper, the alternative concepts of ontology that, according to the subject matter of this research, affect the level of the rationality of economic agents, the models of economic decision-making and the comprehension of the functioning of the economic environment will be the subject matter of consideration. The evaluation of the differences between mainstream economics and the secondary streams of economic thought will take into account both the logical and

the empirical assessment criteria for the relevance and sustainability of alternative interpretations. In the third section, the research study will focus on behavioral economics and its representatives' insisting on the fact that reality abounds with the examples of irrational behavior, which is primarily associated with numerous psychological limitations and "anomalies". The practical importance of the identification of the ontological structure of the behavioral models in terms of the support they provide in designing the instrumentalist support measures of asymmetric paternalism will be the subject matter of discussion in the fourth section of the paper. In the conclusion, the research study will formulate the final stance on the initial hypothesis, as well as some open questions relevant for future research.

## BASIC FEATURES OF BEHAVIORAL MODELS IN THE MACROECONOMIC CONTEXT

The relationship between economic reality and its presentation in science is extremely complex. When economic ontology is concerned, the ontological status of individuals and society is a particularly delicate problem. On the one hand, there is the concept of atomistic social ontology (Zwirn, 2007), according to which the preferences and characteristics of an individual are preformed and independent of the context. On the other hand, there is the ontological concept that recognizes the interdependent interaction of individuals, evaluating the impact of institutions on economic behavior. Within this social ontology, the individual and the social characteristics of the system are declared equally relevant, which raises the question of establishing relationships and interaction between and the potential compliance of the objectives of the state and economic actors.

In the context of interpreting the aforementioned relationship, the two aspects of economic reality are of special importance: the degree of the

homogeneity of the economic environment and the complementarity of the objectives of economic entities and the state (Likhachev, 2013, 789). The homogeneity of the economic environment assumes that all or the majority of economic actors use the identical decision-making procedure, which can be presented as the general behavioral model. In this case, the optimal strategy for the determination of the government regulation is substantially simplified, since the reaction of economic agents exclusively depends on their functional role within the system. When economic actors' behavior is seen as homogenous, the identical efforts aimed at achieving the maximization of individual goals, the implementation of the state regulation depends on the assumed degree of the complementarity of the goals of the state and economic entities. If it is assumed that this level is quite high, the task of the state is reduced to searching for the optimal variant of regulation, which simultaneously maximizes the target functions of the state and economic agents. If the degree of the complementarity of the goals is insignificant, the state is to create a system of contra-stimulations (which limit the possibilities of maximizing the objective function of economic agents) in order to mitigate the effect of the limiting factors for the purpose of the maximization of its own objective function.

Assuming the diversity of the economic environment, i.e. allowing for the possibility of the existence of different models of decision-making, the diverse reactions of economic actors to the measures designed and implemented by the state are logical to expect. In such a theoretical approach, it is possible to group economic actors not only according to their functional characteristics, but also according to their decision-making models and their potential reactions to the activities carried out and measures taken by the state. In this case, the choice of the optimal macroeconomic strategy depends on the structural characteristics of the inhomogeneous economic environment – the assumed level of the non-homogeneity of the operations performed by economic actors.

## ALTERNATIVE CONCEPTS OF ONTOLOGY IN ECONOMICS

The assumption about the total homogeneity of the economic environment is one of the key features of neoclassical economic theory, as well as of all of its modifications embodied in monetarism, rational expectations and real economic cycles. The aforementioned homogeneity is based on the universal principle of maximizing rationality, described in the model of the "representative agent". This approach is essentially designed to postulate the "representative individual" or "representative firms" on the basis of aggregated information on decision-making processes (Simon, 1992, 41). This approach does not view the operation and procedures of an economic activity from the perspective of the complementarity of the objectives of economic actors and the state. State intervention is instead seen as the hindering factor for achieving optimal economic parameters in the long run. The relationship between the state and businessmen is treated as a kind of an antagonistic "game", in which the gains of the one side are the equivalent to losses of the other (Likhachev, 2013, 790), which usually results in the reduction in overall social welfare. Therefore, the minimization of the discretionary role of the state is proposed through the establishment of an institutional regulatory framework and a stabilization policy.

For neoclassical theory, the principle of rationality has both an analytical and a normative meaning, which manifests not only in the description and explanation of the observed phenomena, but also in assessing alternative options by the "good/bad" terms. The mere assertion that individuals always act rationally is inextricably linked to the presumption that they know what is in their best interest and that they know it better than anybody else does. Accordingly, this presumption is both normative and positive: individuals should act and always act in their best interest. In this way, the question of "how to decide" becomes important, which, *inter alia*, contributed to the emergence of

normative decision theory in the mid-twentieth century. Unlike descriptive theory aimed at a positive description, normative decision theory deals with the concept of the rationality and logic of decision-making, thus being aimed at how they should look (Milićević, Pavličić & Kostić, 2007, 147)

In contrast to neoclassical economic theory, the alternative stream of the understanding of economic ontology is based on the assumption about the heterogeneity of the economic environment. This viewpoint claims that individuals cannot be seen as uniformed agents not differing in terms of their individual preferences, demands and aspirations. Instead, it insists on the fact that they are prone to the non-identical understanding of the functioning of the economic environment and that they are characterized by an uneven level of educational and technological capabilities. Individuals are not similar neither in terms of their preferences nor in terms of opportunities, from which follows that the explanation of economic behavior needs something beyond a mere postulate of rationality (Blaug 1992, 232). In addition to the above, the real circumstances suggest that in order to understand an individual's behavior, it is necessary that the influence of habits, tradition, inertia, imitation etc. should be considered.

While not neglecting the general "rational" direction of humans, one still needs to be very cautious when the justification for the thesis of universal egoism inherent in the so-called "homo oeconomicus" of the neoclassical approach is concerned. The assumption about the real existence of "relational man", who is not in any case an absolute uncompromising egoist, is probably more realistic instead. There are, for example, opinions that requirements for the continuous and often ruthless process of enlarging capital cannot only be seen as a product of rational logic, but also as a product of the fact that the owners of capital are forced to accumulate it, primarily due to strong competition inherent in open markets. Observed from the family perspective, it is indisputable that

some households primarily tend to increase their material wealth. For other households, however, a source of satisfaction can be an idyllic and relatively modest lifestyle; there are households devoted to achieving broader social interests, whereas there are those believing that their altruistic sacrifice performs a certain social mission. From the above, it follows that people have the ability, and often a tendency, to understand and respond to other people's troubles. In the field of the economic activity, in addition to the rational motives, they are ready to conform to some other standards of behavior, such as trust, affection, empathy, etc. (Олейник, 1999, 140).

The idea of rationality in the neoclassical model is based on the assumption that the economic action takes place on the basis of the possession of all necessary information needed for the correct evaluation of alternative choices and their consequences. In practice, however, the behavior directed towards the choice of the most suitable ways of and means for achieving objectives is faced with many difficulties. Unfortunately, people live in the world of uncertainty, which raises the question of decision-making in the circumstances of a lack of the knowledge of the final consequences of decisions. It is certain that in the conditions of the existence of a number of limiting factors people develop models of subjective choices, which are deprived of a foothold in the abundance of perfect pieces of information. The absence of a single model further contributes to increased uncertainty and, therefore, different economic actors manifest a tendency to take risks, depending on the subjective experience of the specific content from the external environment. The volatility of the subjective perceptions of satisfactory economic outcomes is associated with a variety of possible decision-making procedures leading to different levels of rationality. If an individual wants to be rational, he must carefully approach the decision-making procedure in terms of a detailed analysis and the processing of necessary pieces of information. On

the other hand, an individual who does not have enough time and money will use less complex algorithms. It turns out, therefore, that the achievement of full rationality is an extreme case, which, in the decision making process, requires using the perfect algorithm designed with respect to a huge number of limiting factors. In all other cases, the decision output is the result of the imperfect implementation of the decision-making algorithms that are nothing else but the practical realization of limited rationality.

Although risking to find themselves under suspicion of abandoning the very science of economics (Hodgson, 1988, 74), those who raise the issue of rationality still have quite a reasonable explanation supportive of the relevance of their research efforts. In this respect, pragmatic interpretation should be emphasized, according to which only by contesting the maximizing of rationality can some steps be taken in order to direct economic actors' behavior towards encouraging this very same rationality. This line of thinking, among other things, can explain the complementarity of the goals of the state and economic actors. When one recognizes that people can make choices inconsistent with their "best" interests, the opinion that the state can help people make better and more informed decisions becomes relevant.

Taking into account numerous negative experiences of having had the state involved, as well as those of the frequent absence of the expected effects of its measures, the clarification of state intervention within the framework of institutionalism and behavioral economics appears to deserve special attention. Unlike neoclassical economics, according to which people as living beings have innate individual preferences and motives, institutionalists believe that the roots of human action must be sought in the functioning of institutional structures (Dugger, 1979, 903). It is implied that institutions are not merely the constraints that a rational actor must take into account in its optimizing calculus, but as basic regulators of relations between

people, they are in fact the very presumption of rationality (Олейник, 1999, 140). More specific recommendations regarding the overcoming of the problems caused by irrational behavior are provided by behavioral economics.

Behavioral economics is based on the premise that the thought processes and people's decision-making are based on the two types of procedures: intuition and reasoning, which are also known as System 1 and System 2. The operations of System 1 are fast, automatic and associative and do not require a significant mental effort and are often emotionally loaded. They are managed by habits and are hard to change. The operations of System 2 are slow, serial, require an effort and are managed consciously. They are relatively flexible and subject to rules. Most decisions are the product of intuitive thinking, given the fact that people are not habituated to invest too much effort in making decisions. According to the model of rational behavior, one's cognitive system is actually a mixture of the aforementioned two mechanisms: it possesses the infallibility of System 2 and a low cost advantage inherent in intuitive thinking. While maintaining the aforementioned description of the human cognitive apparatus, behavioral economics indicates its limits and shortcomings in the field of human decision-making in real situations (Kahnemann, 2003a; Stefanović, 2016). Human behavior actually displays systematic deviations from the conventional model of economic orthodoxy.

During the 1970s, the founders of this approach, D. Kahneman and A. Tversky, launched a research study aimed at examining the deviations of people's actual beliefs and choices in relation to those predicted under the model of rational choice. Specifically, this research study initially critically reconsidered the basic assumptions of conventional economic theory, according to which agents are rational and selfish and have stable preferences (Kahnemann, 2003b, 162). Although their contributions were aimed at the psychological

scientific community, they have drawn a considerable attention of economic theory.

This approach obtains technical and methodological support from experiments, although in recent times it has also used field research, computer simulations, etc. Regarding the method, there are significant similarities with the related research orientation, known as experimental economics. However, unlike behavioral economics, which has more diversified methodological techniques, the latter approach identifies itself only with the method of experimentation. There is one significant difference between behavioral and experimental economics. Behavioral economics detects deviations from the model of rational choice in the real world in order to obtain actors' real behavior in accordance with its prescriptions. For experimental economists, if an experiment proves a deviation in an individual's behavior in relation to the neoclassical model, it does not mean that such behavior is essentially irrational, but rather that the research study actually started from the wrong model of rationality. Although irrational in terms of the model of rational choice, individuals' behavior is rational in terms of their economic environment. Their behavior is not neoclassically rational, but environmentally rational (Smith, 2005, 135-150; Stefanović, 2016).

## BEHAVIORAL ERRORS

Behavioral economics does not interpret economic behavior in accordance with the standard model of rational choice. Its representatives insist on the fact that reality abounds with the examples of irrational behavior, which is primarily associated with numerous physical limitations and anomalies. In this regard, the most frequently mentioned behavioral imperfections are those relating to inconsistency in terms of discounting, the variability of psychological and emotional states, the context dependence, a lack of self-control,

excessive optimism, a status quo bias, etc. (Rizzo & Whitman 2009, 932-943).

*Hyperbolic discounting.* There is a well-known fact that individuals prefer present goods and that, therefore, they are willing to sacrifice a greater amount of future goods in order to consume a smaller amount of the same good at the present time (Wright & Ginsburg, 2012, 1043). The proportions of such conversions, however, are the result of subjective norms connected to the evaluation of time in terms of enjoying the benefits of the current consumption. Since the subjectively shaped estimates may differ significantly among actors, it can happen that in their making decisions on the use of resources, individuals begin from various discount rates. Thus, for example, a discount rate is by rule low when patient persons are concerned, whereas it is generally high for the impatient. High impatience is accompanied by a high short-term discounting rate in those decisions that are supposed to immediately bring certain benefits, whereas the costs accompanying the process of decision-making gradually become due over time. Unfortunately, such an approach can lead to negative phenomena, such as the postponement of making important decisions, forming portfolios of mutually exclusive financial instruments (when, for example, individuals use credit cards for which they pay high interest rates while buying securities with lower yields), too much borrowing, low savings, etc. (Kapeliushnikov, 2015, 87).

*The psychological state.* The decision-making process is greatly influenced by individuals' psychological states, which can result in significantly different effects from those that would have been produced if the actors were guided by the elementary norms of rational behavior. In some affective, biological "hot" and "burning" states, individuals are prone to making hasty decisions, which prove to be wrong and very "expensive" over time, and it is impossible to return to the former state after adopting them (Camerer, Issachoroff, Loewenstein, O'Donoghue & Rabin, 2003, 1238; Rizo & Whitman, 2009, 929).

In such cases, an individual usually overestimates potential short-term benefits, simultaneously ignoring a possible long-term damage and the high cost of making such decisions. For instance, in a state of disappointment caused by initial financial results and the fears that they will not be able to cope with competition, beginning entrepreneurs may decide to end the operation and close their companies, which in the long run may turn out to be a completely wrong move.

*The effect of availability.* These are the errors that occur when individuals attach too much importance to easily accessible or key information. It is widely known that, chronologically speaking, the first experience (the primacy effect) or the last experience (the recency effect) are easier to evoke than those taking place between them (McFadden, 2003, 186-187). For example, if they have recently learnt that a well-known company has been undergoing liquidation or that there is a strike in a big company, many people will come to a conclusion that bankruptcies and strikes have lately taken hold. This, however, does not have to be supported by statistical data. Perhaps more complete research may lead to the crude fact that these occurrences have always happened and that they just reflect the complexity of the market economy and its functioning (Petrović, 2014, 199).

*Errors associated with maintaining the status quo.* People tend to be reserved to a certain extent about everything novel, even in cases when such a novelty can bring significant benefits or when the costs associated with "parting" with the old are relatively low. One of the reasons for such a sensitive evaluation of changes is the fact that people have quite an emotional attitude towards their work and the results of their acting, which, however, is not the case when they themselves are not the actors of the observed actions and events. Another reason is their hesitation, delays in making important decisions for some future times. Finally, people have an aversion towards a loss, which is why, when comparing equivalent amounts, they

rather ascribe a relatively larger negative value to potential costs than they are ready to make a positive assessment of the potential benefits (Kapeliushnikov, 2015, 88).

*Errors associated with optimism and pessimism.* Depending on whether people are too confident, or, in turn, characterized by a lack of confidence, errors arise and, within behavioral economics, they are associated with optimism and pessimism. Errors caused by optimistic thinking arise as a result of ignoring a certain probability of the occurrence of undesirable events (Wright & Ginsburg, 2012, 1043), which may cause serious, often irreversible damage for an individual. For instance, an optimist can take too big a risk by investing assets in securities with a high rate of return. However, due to its dynamism and mobility, the secondary capital market is a typical area where there is a high level of uncertainty, which an individual must be aware of when deciding on the purchase of securities. On the other hand, errors on the basis of pessimism are characteristic for people unsure of themselves, for those who are therefore prone to exaggerating the probability of the occurrence of undesirable events. The consequence of this is excessive prudence, which usually results in avoiding any risks when investing is concerned.

*Context dependence.* This anomaly occurs in two different forms. One of them is known as the framing effect, when decisions are made on the basis of the impact of a less important feature of the particular situation or phenomenon. Accordingly, an individual is prone to choosing certain options depending on the order of their appearance and the manner in which their selection is presented. For example, more people support the economic policy when the reasoning for the envisaged measures highlights the importance of the employment rate than in a case when the unemployment rate is the spotlight (Druckman, 2001). In the case of a particular company, the workers will express one opinion when it is announced that the goal of the purchase of modern equipment is to make an

increase in labor productivity, whereas they will probably opine differently when it is stated that such new equipment is purchased for the purpose of reducing labor costs. Context dependence can also be seen through a possibility of the evaluation of available alternatives on the basis of a comparison with certain reference values, amounts or quantities. The point of reference used to make a particular comparison can be a result of personal experience, as well as of certain factors originating from the environment. For instance, if a business owner is measuring his success in absolute terms, he may be dissatisfied with the company's operations, believing that he did not achieve the desired results. In another context, however, based on comparisons with the business results achieved by the companies in his environment, he may even be relatively satisfied with the achieved results (Petrović, 2014, 199).

#### REALISM OF BEHAVIORAL MODELS IN FUNCTION OF PATERNALISTIC MEASURES AND STATE INTERVENTION

The identification of behavioral anomalies confirms the fact that economic behavior is often inconsistent with the assumption about the rationality hypothesis and maximizing behavior. Therefore, special attention is deserved by the efforts to replace the established understanding of the concept of rational economic behavior with a new, more realistic description of human behavior based on the assumption about limited rationality. Hence the need for the elaboration of behavioral models with larger instrumentalist importance in terms of the support of the adoption of the government measures aimed at alleviating the problems caused by the non-rational aspects of decision-making. The assumptions of the behavioral models based on empirically established facts relating to more or less rational/irrational forms of behavior and different decision-making procedures provide strong support to the creation of instrumentalist

paternalistic measures and interventions. The very recognition that people can make choices inconsistent with their best interests contributes to the development of the idea about how a paternalistic-oriented state can help people make "better" and more informed decisions.

The instruments of the state policy are a complex combination of legislative and administrative restrictions, taxes, provisions of necessary information and the established ways of persuasion and manipulation with the "architecture" of choice. Among the aforementioned forms of state interference in the process of making individual decisions, the "strongest" are believed to be those introducing explicit prohibitions of and restrictions on economic choices. Limiting individual behavior is justified when the irrationality of economic entities is so much pronounced that it is almost impossible to correct it by using "soft" paternalistic measures. In this regard, it is proposed that legislation should be established in all areas characterized by a high risk of the irrational behavior of economic entities. For example, it is possible to introduce a tax on a "sin" (alcohol, smoking, gambling), junk food and alcoholic beverages (fatty foods, carbonated beverages, etc.) (O'Donoghue & Rabin, 2003, 190-91).

There is certainly a more favorable solution to directing restrictions and prohibitions, which is based on the supporting measures of "asymmetric paternalism", essentially associated with the above-mentioned assumptions about the heterogeneity of the economic environment and the complementarity of the goals of the state and economic entities. Asymmetric paternalism associates the achievement of economic objectives through different decision-making procedures and their inherent levels of rationality (Thaler & Sunstein, 2008, 9). Decision-making problems are particularly pronounced in the cases in which it is necessary that a complex decision should be passed. Individuals can then have problems regarding the understanding of the situation they have found themselves in, which is the reason why they

do not react in the same way to stimuli from the environment. The doubt that all men always and by rule make decisions in their best interests (Camerer *et al*, 2003, 1217) is accompanied by the idea that people need help in order not to inflict damage to themselves with their own decisions. Accordingly, the opinion has matured that the involvement of the state should focus on the prevention of the errors made by "less rational" individuals, whereas these measures should not impose costs on those who make decisions based on the application of the more sophisticated decision-making algorithms, taking into consideration a large amount of necessary information. The task of the asymmetric paternalism is, therefore, to "gently" direct individuals' behavior towards the rational model, stimulating sufficiently less rational individuals to improve their choices, simultaneously not harming the interests of rational individuals (Camerer *et al*, 2003, 1219). The goal is not to change behavior, but rather to direct it so that it could contribute in the most efficient way to the realization of individual interests.

As an illustrative example of the asymmetric paternalism and selective mitigation of irrational decisions, the so-called legal determination of the "cooling-off period" in the form of the two possible alternatives may be mentioned (Camerer *et al*, 2003, 1240). The first alternative allows individuals an opportunity to postpone the adoption of certain decisions after a "cooling-off period". Another option concerns making immediate decisions on the execution of economic transactions, with a possibility that, during the "cooling-off period", they can be subject to change. Let us now take an example determined by a possibility of a three-day cooling-off period when buying a new car is concerned. According to the first option, when an individual is signing a contract of the purchase of a car, he can wait, for example, for three days before he can take the car (during which period he can change his mind) - the case of the *ex ante* "cooling-off period". Another option implies taking the car

immediately, provided that it can be turned back within three days - the case of the *ex post* cooling-off period. Thanks to this measure, rational individuals are imposed minimal costs - the costs of a delay in purchasing a car for a few days. At the same time, the "cooling-off period" protects those less rational, who make decisions in the so-called "hot state".

Some proof of how asymmetric paternalism can be helpful in assessing the effectiveness of government measures and policies can be provided by the concept of "default options" (Thaler & Sunstein, 2008). The point of using this institution is to help individuals overcome ambiguous situations specific to certain important decisions. Empirically, the majority of people are found to pay more attention to the current situation and current consumption, simultaneously significantly sacrificing their future needs. Therefore, instead of a freedom of choice regarding a decision on the voluntary allocation of work income for pension insurance, it is more logical to "call out" the government to make a choice for and instead of an individual. A well-known solution in this sense, present in many national legislations, is the one relating to automatic participation in savings plans (Rizo & Whitman, 2009, 914; Thaler & Sunstein, 2003, 1172), which excludes errors associated with inconsistency, the weakness of will, hyperbolic discounting, etc. Participation by default primarily starts from the problem of inconsistency over time, which indicates the need for people's future commitment to the postured plans. In the case of savings in the pension funds, this requires finding ways to ensure employees' consent to deductions from their salaries prior to payment. Thus, the money is deposited into the pension fund account, whose mission is to invest in their name.

One of the instruments of asymmetric paternalism also concerns the compulsory disclosure of certain information when concluding valuable contracts connected, for example, with crediting, mortgage, leasing, as well as the purchases of high-risk goods and services. In this regard, there is a belief that

the sellers of health harmful products are obliged to provide citizens with detailed information about certain risks (with explanations, statistical data, etc.) (Kapeliushnikov, 2015, 93). The information mandatory disclosure policy is particularly effective when the issuance of consumer loans is concerned. Since "wrong" behavior is widespread in the financial sphere, which produces high damage, it is recommended that consumers should be properly informed about all banking products. This need for information cannot only be reduced to the fulfillment of the justified demands for the disclosure of all the relevant information related to the process of lending. It is more important that the conclusion of loan agreements, in which the mandatory elements of standard banking products will have an advantage over the implicit credit clauses, should be receive support.

Starting from the fact that the state has discretion to establish formal institutions and design paternalistic measures and interventions, its role in the context of economic and social development can be considered as crucial (Petrović, 2015, 353). Due to the accumulated social and economic problems, as well as to the slow acceptance of the "market" norms of behavior, it seems that the state of Serbia and its political authorities are being faced with the enormous tasks of institutional design, which will probably affect the models of behavior of the relevant domestic actors. The process of the accession of Serbia to the European Union is a type of the framework for the undertaking such a reform.

Having in mind all the challenges that the state of Serbia is being faced with, it seems quite reasonable that, in the implementation of its program, the government should identify the key reasons for economic actors' "irrational" behavior, with the intention of taking the full account of the tendency shown by the majority of the population to commit behavioral anomalies, within the process of conceiving and designing activities towards meeting the membership criteria of the EU. As a

reminder, during the 2000s, the holders of political power and a large number of the citizens of the Republic of Serbia showed, to express it in the language of behavioral economics, a psychological tendency to make errors associated with optimism and hyperbolic discounting. Namely, an atmosphere was created that the country was at the door of the European Union and that the benefits of the membership in this international economic integration are within citizens' reach. The atmosphere exuded the euphoria caused by the expectations of leaving the Balkan zone of poverty, which resulted, among other things, in the numerous behavioral anomalies associated with the inconsistency and high rate of discounting. The pronounced impatience was followed by the adoption of the decisions supposed to immediately bring certain benefits, whereas the costs accompanying the decision-making process would gradually become due over time. In order to enrich themselves as quickly as possible, too confident entrepreneurs recklessly resorted to loans and excessive investment, ignoring the possibility of the occurrence of undesirable events. The citizens of the Republic of Serbia also engaged themselves in imprudent borrowing, which, in addition to the effects associated with optimistic thinking and hyperbolic discounting, can also be associated with the influence of the "hot" psychological condition. In fact, after a long credit abstinence during the 1990s, with the opening of transitional changes, the arrival of foreign banks and the expansion of their numerous financial products, a large number of Serbian citizens could hardly wait to solve their housing issues, replace their old vehicles, go on vacation, buy new furniture, etc. These borrowings were often done without adequate information about the cost of a consumer credit, the costs of the processing and administration, the interest rate for using credit cards (i.e. the permitted and the prohibited "in the red" status) which, along with the numerous hidden fees and charges contributed to a sharp increase in the citizens' credit indebtedness.

The tendency to commit behavioral failures was also a feature of the political power holders. The excessive expectations regarding the financing of the projects from the pre-accession funds and the obtaining of significant resources from the Regional Development Fund and the Agrarian Fund of the European Union probably influenced the hasty adoption of certain decisions with long-term harmful effects. Within this context, the measures relating to the liberalization of the market, which Serbia was committed to when concluding the Stabilization and Association Agreement with the European Union, can be especially interesting. Accordingly, harmonization starts from the following areas: the protection of competition and the control of the allocation of state aid (subsidies), intellectual property rights, public procurement, standardization and consumer protection. Once the SAA entered into force, the harmonization obligation spread to the other areas of the acquis. The Interim Agreement, which came into force in January 2009, planned the creation of a free trade zone between Serbia and the EU for a period of six years. The deadline for the liberalization of trade appears to have been too optimistically determined in relation to the ability of the Serbian industry and agriculture to adapt to free trade, regardless of Serbia's citizens' and politicians' impatience with a faster completion of the reforms and accession to the European Union.

In contrast to the mood that prevailed during the first decade of the twenty-first century, the euphoria regarding the rapid and cost-effective EU accession has significantly abated after the outbreak of the global economic crisis in 2008. One is under the impression that citizens have become aware of the fact that the membership in any international economic integration does not only bring benefits, but it also generates certain obligations and increased costs as well, whereas in some cases it also brings possible negative occurrences. According to some analysis carried out on the basis of R. M. Solow's model, the costs of Serbia's accession to

the EU should amount to between 110 and 130 billion dollars in order to reach an average level of the development of the countries of the European Union. The cost of legal harmonization with the EU legislation would amount to about 10% and the implementation costs to about 20% of that amount, whereas the largest part of the amount should be used for the modernization of the economy and the infrastructure. This would assume an investment rate of around 30% of the GDP, the savings rate of about 25% of the GDP, etc. (Marković & Petrović, 2016, 157). The awareness of the specificity and high costs of the accession process can easily result in the irrational behavior of citizens and political elites. The specific situation of the economy on the path towards the European Union can stimulate thinking about the non-complementarity of the goals of the state and the population. Therefore, it is realistic to expect an intensification of the psychological anomalies related to maintaining the status quo and pessimistic thinking, as well as the decision-making models based on the influence of the less important characteristics of contemporary phenomena and events. Bearing in mind the fact that, in certain circumstances, people are suspicious of novelties and prone to hesitation and the postponement of making important decisions, is the all the more present lack of the support of the citizens of the Republic of Serbia towards the European Union is not a surprise.

## CONCLUSION

This research study points out the importance of actors' behavioral models in improving the comprehension of the real characteristics of the economic environment. According to the generally accepted standpoint, economic models need to reflect the real economic behavior and conditions of the given economic and social environment. Although there are many cases in which such requirements have been met, the impression is that the formal economic models often fail to find

confirmation in empirical research. The key reasons for these observations are, among other things, looking for the sustainability of the mainstream ontology, based on the homogeneity of the economic environment and the complementarity of the goals of the state and economic entities. The assumptions about the universal principle of maximizing rationality and homogenous economic decision-making procedures, whereby the relationship between the state and economic actors is treated as a kind of an antagonistic game with conflicting interests, are in accordance with this.

The question of the real merits of the mainstream ontology and the methodology established on its basis makes room for the emergence of alternative ontology comprehensions. In this context, the consideration of the ontological structure is directed towards the elaboration of the behavioral models that challenge the assumption about the complete rationality of economic actors and the homogeneous procedures of economic decision-making. The reasons for this approach to the nature of economic behavior should, among other things, be linked to a number of practical pieces of evidence suggesting that real economic behavior often deviates from maximizing the behavior of the "homo oeconomicus".

The potentiation of the empirical research results with respect to the human tendency to behavioral anomalies inspired the emergence of the conflicting reactions on the part of economic theorists. On the one hand, there are those who believe that challenging the issue of rationality is an attack on the "hard core" of economic science. On the other hand, it has been pointed out that insisting on the strong presence of irrational behavior has specific instrumentalist importance, which can also be considered as a message of its own kind of this paper. The recognition that people can make choices inconsistent with their "best interests" is becoming a powerful argument for the inclusion of the state in the development of measures and regulations in order to improve their rationality.

Accordingly, the hypothesis that the behavioral models are based on the assumption about the heterogeneity of the economic environment and the complementary goals of the state and economic entities represents an adequate instrumental framework for the implementation of the policy of asymmetric paternalism.

The findings presented in this paper suggest a need for a further investigation of the possibilities for the improvement of the behavioral models by taking into account the ontological characteristics of the specific economic and social environments. In this regard, the efforts aimed at a deeper understanding and a thorough analysis of the economic decision-making process, including the identification of a number of departures from the rational forms of economic behavior, should be supported. Since the paper initiates a discussion about certain forms of psychological "anomalies" from rational behavior generally present in the behavior of the citizens of the Republic of Serbia within the process of adopting the rules and standards of the European Union, it is reasonable to expect that future research may be directed towards the identification of a wider spectrum of the behavioral "anomalies" that accompany economic behavior in the region. Research efforts focused on a detailed analysis and explanation of the external and internal reasons for irrational behavior could constitute a suitable basis for designing the measures of asymmetric paternalism that the Republic of Serbia should conduct within its strategy of institutional adaptation to the demands of the market economy.

## REFERENCES

- Blaug, M. (1992). *The Methodology of Economics or How Economists Explain, Second Edition*. Cambridge: Cambridge University Press.
- Camerer, C., Issachoroff, S., Loewenstein, G., O'Donoghue, T., & Rabin, M. (2003). Regulation for conservatives: Behavioral economics and the case for asymmetric paternalism. *University of Pennsylvania Law Review*, 151(1), 1211-1254.
- Camerer, C. F., & Loewenstein, G. (2004). Behavioral economics: Past, present, future. In C. F. Camerer, G. Loewenstein & M. Rabin (Eds.), *Advances in Behavioral Economics* (pp. 3-51). New York, NY: Russell Sage Foundation and Princeton University.
- Dobusch, L., & Kapeller, J. (2012). Heterodox united vs mainstream city: Sketching a framework for interested pluralism in economics. *Journal of Economic Issues*, 46(4), 1035-1057. doi: 10.2753/JEI0021-3624460410
- Dow, S. C. (2008). Plurality in orthodox and heterodox economics. *Journal of Philosophical Economics*, 1(2), 73-96.
- Druckman, J. (2001). Evaluating framing effects. *Journal of Economic Psychology*, 22(1), 91-101. doi.org/10.1016/S0167-4870(00)00032-5
- Dugger, W. M. (1979). Methodological differences between institutional and Neoclassical economics. *Journal of Economic Issues*, 13(4), 899-909.
- Hodgson, G. M. (1988). *Economics and Institutions: A Manifesto for a Modern Institutional Economics*. Cambridge, UK: Cambridge University Press.
- Kahnemann, D. (2003a). Maps of bounded rationality: Psychology for behavioral economics. *American Economic Review*, 93(5), 1449-1475. doi: 10.1257/000282803322655392
- Kahnemann, D. (2003b). A psychological perspective on economics. *American Economic Review*, 93(2), 162-168. doi: 10.1257/000282803321946985
- Kapeliushnikov, R. (2015). Behavioral economics and the 'new' paternalism. *Russian Journal of Economics*, 1(1), 81-107. doi: 10.1016/j.ruje.2015.05.004
- Lawson, T. (2015). *Essays on The Nature and State of Modern Economics*. London, UK: Routledge.
- Likhachev, M. O. (2013). Ontological problems of modern macroeconomics. *Middle-East Journal of Scientific Research*, 14(6), 788-794. doi: 10.5829/idosi.mejsr.2013.14.6.2137

- Marković, I. i Petrović, D. (2016). Međunarodna ekonomska integracija: Efekti i izazovi članstva. U V. Leković (Ur.), *Institucionalne promene kao determinanta privrednog razvoja Republike Srbije* (str. 157-173). Kragujevac, Republika Srbija: Ekonomski fakultet Univerziteta u Kragujevcu.
- MekFadden, L. D. (2003). Racionalnost za ekonomiste? *Ekonomski anali*, 156, 169-199.
- Milićević, A., Pavličić, D. i Kostić, A. (2007). Odlučivanje u uslovima rizika i teorija izgleda. *Psihologija*, 40(1), 147-164.
- O'Donoghue, T., & Rabin, M. (2003). Studying optimal paternalism, illustrated by a model sin taxes. *American Economic Review*, 93(2), 186-191. doi: 10.1257/000282803321947029
- Petrović, D. (2014). Behavioral analysis of economic choice: Contribution to improving economic rationality. *Facta Universitatis, Series: Economic and Organization*, 11(3), 191-205.
- Petrović, D. (2015). Behavioral economics - The new approach to designing the paternalistic role of the state in the economy. *Teme*, 39(2), 345-360.
- Rizzo, M. J., & Whitman, D. G. (2009). The knowledge problem of new paternalism. *BYU Law Review*, 4, 904-968.
- Samuels, W. J. (1998). Methodological pluralism. In J. Davis, D. Wade Hands & U. i Mäki (Eds.), *The Handbook of Economic Methodology* (pp. 300-303). Cheltenham: Edward Elgar.
- Simon, H. A. (1992). Methodological foundations of economics, In J. Lee Auspitz (and other) (Eds.), *Praxiologies and the Philosophy of Economics, Series Praxiology* (pp. 25-42).
- Smith, V. (2005). Behavioral economics research and the foundations of economics. *Journal of Socio-Economics*, 34(2), 135-50. doi.org/10.1016/j.socec.2004.09.003
- Stefanović, Z. (2016). *Savremena ekonomska misao: ortodoksni i heterodoksni pravci*. Niš, Republika Srbija: Ekonomski fakultet Univerziteta u Nišu.
- Sunstein, C. R., & Thaler, R. (2003). Libertarian paternalism is not an oxymoron. *University of Chicago Law Review*, 70(4), 1159-1202.
- Thaler, R. H., & Sunstein, C. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. New Haven & London, UK: Yale University Press.
- Wright, D. J., & Ginsburg, D. H. (2012). Behavioral law and economics: Its origins, fatal flaws and implications for liberty. *Northwestern University Law Review*, 106(3), 1033-1089.
- Zwirn, G. (2007). Methodological individualism or methodological atomism: The case of Friedrich Hayek. *History of Political Economy*, 39(1), 48-80. doi:10.1215/00182702-2006-005
- Олейник А. (1999). Институционална економика, Тема 2. Норма как базовый элемент институтов, Лекция 3. Норми: результат рационального выбора или абсолютный детерминант действия? *Вопросы экономики*, 2, 137-156.

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**Review paper**

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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 (Mičić, 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 & Mičić, 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<sup>1</sup>). 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

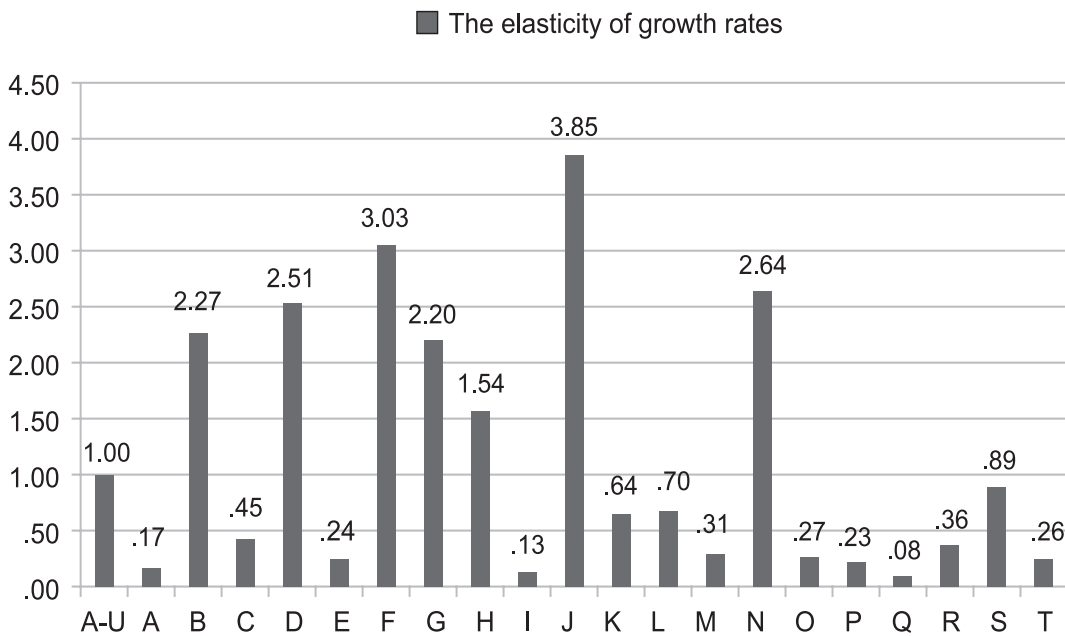


Figure 1 The intensity of the structural changes, 2001-2014.

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 21<sup>st</sup> 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 section in 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*.

## REFERENCES

- Baldwin, R., Braconier, H., & Forslid, R. (2005). Multinationals, endogenous growth and technological spillovers: Theory and evidence. *Review of International Economics*, 13(5), 945-963. doi: 10.1111/j.1467-9396.2005.00546.x

- Bortis, H. (2000). Some considerations on structure and change. *Structural change and economic dynamics*, 11(1-2), 185-195. doi.org/10.1016/S0954-349X(99)00028-4
- Chenery, H. B. (1975). The structuralist approach to development policy. *The American Economic Review*, 65(2), 310-316.
- Cimoli, M., & Katz, J. (2003). Structural reforms, technological gaps and economic development: A Latin American perspective. *Industrial and corporate change*, 12(2), 387-411. doi.org/10.1093/icc/12.2.387
- Croitoru, A. (2012). Book review Schumpeter, J. A. 1934 (2008). The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle. *Journal of Comparative Research in Anthropology and Sociology*, 3(2), 137-148.
- Jakopin, E. (2012). Post-crisis reallocation of growth factors. *Economic Horizons*, 14(2), 79-90. doi: 10.5937/ekonhor1202077j
- European Commission (EC). (2008). *NACE Rev. 2 - Statistical classification of economic activities in the European Community*. European Commission, Eurostat, Brussels.
- European Commission (EC). (2012). *A Stronger European Industry for Growth and Economic Recovery*. European Commission, Eurostat, Brussels.
- Fagerberg, J. (2000). Technological progress, structural change and productivity growth: A comparative study. *Structural change and economic dynamics*, 11(4), 393-411. doi.org/10.1016/S0954-349X(00)00025-4
- Lewis, W. A. (1954). Economic development with unlimited supplies of labour. *The Manchester school*, 22(2), 139-191. doi: 10.1111/j.1467-9957.1954.tb00021.x
- Lin, Y. J. (2012). *New Structural Economics: A Framework for Rethinking Development and Policy*. Washington, USA: World Bank, 5.
- Machlup, F. (1991). *Economic semantics*. New Jersey, USA: Transaction publishers.
- Marjanović, V. (2010). Značaj i uticaj privredne strukture na privredni razvoj. *Ekonomске teme*, 48(3), 369-382.
- Marjanović, V. (2015). Strukturne promene i strukturna transformacija u savremenoj razvojnoj ekonomiji. *Ekonomске teme*, 53(1), 65-84.
- Mičić, V. (2016). Strukturne promene i konkurentnost prerađivačke industrije Republike Srbije, U: V. Marinković, V. Janjić, i V. Mičić, (Red.). *Unapređenje konkurentnosti privrede Republike Srbije* (str. 153-161). Kragujevac, Republika Srbija: Ekonomski fakultet Univerziteta u Kragujevcu.
- Moore, J. H. (1978). A measure of structural change in output. *Review of Income and Wealth*, 24(1), 105-118. doi: 10.1111/j.1475-4991.1978.tb00034.x
- Republički zavod za Statistiku (RZS). (2010). *Klasifikacija delatnosti*. Beograd, Republika Srbija: Republički zavod za Statistiku.
- Republički zavod za statistiku (RZS). (2017). *Statistička baza podataka*. Beograd, Republika Srbija: Republički zavod za Statistiku.
- Roman, Z. (1969). A note on measuring structural changes. *Review of Income and Wealth*, 15(3), 265-268. doi: 10.1111/j.1475-4991.1969.tb00809.x
- Rowthorn, R. E., & Ramaswamy, R. (1997). Deindustrialization: Causes and implications. *IMF Working Paper 97/42*.
- Savić, Lj., Bošković, G., & Mičić, V. (2015). Structural changes in manufacturing industry at division level - Serbia and new EU member states. *Industrija*, 43(4), 25-45. doi: 10.5937/industrija43-8484
- Syrquin, M. (2008). 4 Structural change and development. *International Handbook of Development Economics*, 1, 48.
- Timmer, C. P., & Akkus, S. (2008). The structural transformation as a pathway out of poverty: Analytics, empirics and politics. *Working Paper, No. 150*.
- United Nations (UN). (2008). International Standard Industrial Classification of All Economic Activities. Revision 4, *Statistical papers Series M, No. 4/Rev.4*, United Nations Industrial Development Organization.
- UNIDO. (2013). *Industrial Development Report 2013, Sustaining Employment Growth: The Role of Manufacturing and Structural Change*. United Nations Industrial Development Organization.
- Upadhyaya, S., & Yeganeh, S. M. (2015). Competitive Industrial Performance Report 2014. *Working paper series*, 12/2014, 10-11, United Nations Industrial Development Organization.

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## ON THE CONCEPTUAL UNDERPINNINGS OF FAIR VALUE ACCOUNTING

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The metamorphosis of business processes and corporate strategies is rapidly progressing across the globe. The critical role of intangibles in corporate performance is receiving its due recognition. Complex tradeable financial products are flooding financial markets. In attempts to gear up for the challenge of financial reporting in this upstaged environment, standard setters have substantively restructured reporting systems, with 'fair value' being the bedrock thereof. Moving away from the traditional 'revenue/expense' matching measure of income towards the 'asset/liability' measure together with the adoption of the Hicksian concept of income is clearly discernible in the pronouncements and ongoing projects of the US Financial Accounting Standards Board (hereinafter referred to as FASB) and the International Accounting Standards Board (hereinafter referred to as IASB). In this article, an attempt is made to analyze the issues that are controversial and equivocal, or those that need further refinement insofar as fair value accounting is concerned.

**Keywords:** fair value, financial accounting, 'exit' and 'entry' values, income, conceptual framework, FASB, IASB, asset/liability measure

JEL Classification: G30, M41, N30

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### INTRODUCTION

Financial statements prepared under statutes and/or regulatory pronouncements are invariably mandated to portray a 'true and fair' picture of the reporting entity's financial affairs. Thus, it may either be that such financial statements have, hitherto, presented a 'true and fair' description of

the entity's financial position and performance (whence no radical changes in the regulatory framework were required) or that, paradoxically, provisions or applicable pronouncements have continually been violated. Nevertheless, the paradox is easily resolved. Society is continuously evolving and so is human knowledge and understanding. With this progression, the perceptions and, indeed, the defining characteristics of 'true and fair' are undergoing radical changes. Thus, what has been perceived to be 'true and fair' hitherto

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may not be understood in the same sense hereon. The two defining features of financial reporting are reliability and relevance, with an *inter se* tradeoff between them dictating the underlying philosophy of all financial reporting models. Hitherto, reliability has been perceived as critically important in financial reporting, leaving relevance relatively unattended. The accounting fraternity worldwide has been obsessed with the ascendancy of 'reliability' over 'relevance'. However, times have moved on and views have changed almost diametrically in the preceding few decades. With the increase in the contribution of intangibles and complex financial products in contemporary business (Boulton, Libert & Samek, 2000; Eccles, Herz, Keegan & Philips, 2001; Lev, 2001; Chabrow & Colkin, 2002), the tradeoff has perceptibly tilted in favor of the 'relevance' of financial reporting to stakeholders and other users (Eckstein, 2004; Uzma & Singh, 2009a; 2009b). As party to this transition, 'income' characterization has moved back from the 'matching' approach to the 'asset/liability' approach, signaling a radical shift in the underlying 'conceptual basis of financial reporting'. Furthermore, the appropriateness of associating 'income' with the marketplace by using market-based valuations is felt immensely desirable by the community, thereby ushering in the era of fair value accounting (FVA).

Financial reporting under the 'fair value' based accounting system states assets and liabilities at their respective current values. Therefore, this accounting system is occasionally called 'mark-to-market' accounting. Formally, 'fair value' is defined in Accounting Standards Code 820 (FASB, 2009) (formerly SFAS 157; FASB, 2001) of the US and the corresponding IFRS 13 (IASB, 2012), in essence, as 'the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement

date.' Nevertheless, the very definition of 'fair value' is beset with controversies and ambiguities. For one thing, accounting standards define the 'fair value' of assets and liabilities conceptually in terms of respective 'exit value', rather than their 'entry value'. This aspect assumes immense significance in environments beset with market frictions and other imperfections. Another critical source of ambiguity and controversy in the contemporary accounting setup that was identified in course of the literature review was the adoption of Hicksian income as its underlying philosophy. However, an equally popular conceptual approach to income measurement is attributed to the noted economist I. Fisher (referred to as Fisherian income) (Rayman, 2007).

This article has the key objective to examine the implications of these issues that have left fair value accounting short of being a perfect accounting framework, rather than a 'panacea for all evils'. Precisely, we explore the ramifications of:

- the paradigm shift of the accounting regulatory bodies to the redefinition of the conceptual basis of reporting from the 'revenue/expense' approach to the 'asset/liability' model;
- the use of 'exit' value in contradistinction to the 'entry' value and the 'value in use' in defining 'fair value';
- the adoption of 'Hicksian' income as the underlying philosophy of income measurement.

This paper's objectives have been attained through a comprehensive and critical study of the conceptual underpinnings of the pronouncements of the accounting regulatory bodies and a detailed review of the relevant research literature.

In line with the study's objectives, the following null hypotheses are set up for evaluation:

- H1: The 'asset/liability' conceptual framework recommended by the FASB and IASB invariably correctly reports the financial affairs of an entity;
- H2: The 'exit'-based valuation adopted by the FASB and IASB in the definition of the 'fair value' of assets and liabilities is the appropriate accounting measure of fair value in all circumstances;
- H3: The 'Hicksian' concept of 'income', adopted by the FASB and IASB, in conjunction with the 'asset/liability' framework, is essentially the appropriate accounting measure of income;

with the usual corresponding respective alternative hypotheses.

We put these hypotheses to test through a study aimed at analyzing various standards and other pronouncements of the FASB and IASB and their possible impact on the adoption of the 'asset/liability' framework, the 'exit'-based definition of fair value and the Hicksian concept of income by affected entities.

It is pertinent to point out here that SFAS 157 (FASB, 2001) and several other related standards have been substantively adapted into the Accounting Standard Code (ASC) promulgated by the United States Financial Accounting Standards Board (FASB). This ASC of the FASB constitutes the complete source of the extant authoritative Generally Accepted Accounting Principles (GAAP), recognized by the FASB, to be applied to nongovernmental entities. The ASC is effective for interim and annual periods ending after September 15, 2009. It has been formulated through the comprehensive restructuring and reorganizing of the various pronouncements of the FASB from time to time and now constitutes the sole authoritative diktat of the FASB on the US GAAP, superseding all the erstwhile accounting standards. All accounting literature not explicitly included in the ASC has been declared to be non-authoritative by the FASB.

## CONCEPTUAL FRAMEWORKS FOR FINANCIAL REPORTING

There are two alternative conventional conceptual frameworks underlying the preparation of the financial statements of an entity viz. the 'revenue/expense' approach and the 'asset/liability' approach (Nissin & Penman, 2008). Under the former approach, the income statement, which is formulated as a matching of the revenues and expenses relating to the relevant accounting period, is the primary accounting output. It portrays the performance and progress attained by the entity in executing an envisaged business model, whereas the balance sheet is returned as a residual. As such, the value figures in the balance sheet do not and are not intended to reflect the present values of projected future cash flows or other business valuations in any sense. The eventuality of their reflecting such valuations is an idealization bordering on aberration. The accounting standards of and conventions on 'Revenue Recognition' dictate the *modus operandi* for recognizing and gains. Compliance with the 'matching' principle ensures that expenses and revenues are properly matched and related to the same accounting period.

The balance sheet under the 'revenue/expense' approach constitutes the grouping of residuals. Such residuals arise from timing differences, so that assets are the accounts that are likely to enter into future income statements as and when their consumption actually takes place for producing income/cash flows (in accordance with the 'matching' principle). Liabilities are similarly construed. Most balance sheet accounts, other than those arising on account of revenue recognition, are not market marked. As such, they do not indicate economic values, nor do they represent the present valuations of future cash flows. They are merely the expressions of consumption value as per the business model being pursued by the entity.

In the 'asset/liability' approach, assets and liabilities are the primary elements and are defined

initially. They form the basis for defining the other accounting elements viz. 'equity', 'income' and 'expenses'. Income for an accounting period equals the change in net assets (apart from transactions with owners). Thus, the emphasis shifts from the income statement (which, now, becomes a collection of residuals) to the balance sheet. The income statement merely presents the changes in valuations between the beginning and the end of the relevant accounting period.

Against the above, the primary merit of the 'revenue/expense' approach propounded by its votaries is that it enables the smoothening out of the volatile effects of certain types of transactions through the mechanism of deferring charges and credits. The 'asset/liability' approach may result in a fluctuating income statement that may include unrealized holding gains and losses (Benston, 2006; Gwilliam & Jackson, 2008).

Presently, there is an unambiguous perception of the superiority of the 'asset/liability' approach, primarily on account of its following attributes:

- Assets and liabilities are real, usually physical and tangible objects. As such, they are more amenable to actual identification, classification and measurement than the contents of the income statement. The adoption of the 'asset/liability' approach thus adds to precision in financial reporting.
- The 'causal' flow also advocates the 'asset/liability' approach. i.e. a change in the value of net assets constitutes the 'cause' and income is the 'effect' thereof, not the other way round.

Of late, the 'asset/liability' approach has found immense favor with the standard setters, in particular with the IASB, as testified by the IASB's Conceptual Framework of 2010 that defines an asset as a 'resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity' and a liability in the same vein as 'a present obligation of

the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits'. Thereafter, the said framework goes on to define income in terms of the op-defined assets and liabilities as 'increases in economic benefits during the accounting period in the form of inflows or enhancements of assets or decreases of liabilities that result in increases in equity, other than those relating to contributions from equity participants'. Although this transition to the 'asset/liability' approach is well-received by stakeholders in general, several aspects of the framework need ironing out (Bromwich, 1992; Sunder, 1997; Christiansen & Demski, 2003; Watts, 2003a; 2003b; Benston, Bromwich & Wagenhofer, 2006; Sundem, 2007; Benston, 2008; Whittington, 2008; Christiansen, 2010). Appreciating this concern, the IASB has invited comments through the issue of Discussion Paper No. DP/2013/1 in July 2013.

Some proponents of the 'asset/liability' approach perceive the existence of a strong nexus between this approach and the recognition, measurement and carrying of accounts at fair values to the extent that the former implies the latter. This presumption, however, seems questionable, as evidenced by the following counterexamples:

- Consider the situation when a customer makes an advance payment prior to the actual delivery of goods. Most of us would agree that revenue recognition should take place in the accounting period in which the job to which the payment pertains is actually performed. This would be the period in which the payment is earned. Prior thereto, it should be recorded as deferred revenue. In case the job is spread over several accounting periods, we note that the asset that is driving revenue recognition is the job being performed for the customer. As such, revenue should be recognized commensurate with the value enhancement (determined by some appropriate estimation process) of the job. This is analogous to the percentage completion method.

- An alternative to above would be to recognize revenue on the basis of the entity's satisfaction of its own contractual commitment to transfer the good to the customer. In this model, revenue recognition is driven by the entity's contractual commitment to transfer the good to the customer. This model would yield outcomes similar to the usual 'delivery' models.
- The third choice would be to recognize revenue as and when actual cash is received from the customer. In this case, the cash itself is the asset that drives the revenue recognition process. This, in fact, constitutes the cash basis of accounting.

The above accounting conundrum, along with several others, was deliberated as part of the Joint FASB and IASB Project on Revenue Recognition, completed in June 2014. Intense discussions eventually culminated in the Boards' agreeing to adopt, as the general rule, that revenue shall be recognized by an entity upon its compliance with its contractual obligation to transfer a good or service to the customer. More importantly, however, having established this standard of recognizing revenue commensurate with changes in the value of a liability (i.e. the entity's performance obligation under the contract with the customer), the Boards did not jump forthwith to measuring this liability on the basis of fair value. On the contrary, it was ultimately resolved that the said performance obligation of the entity should be measured by the allocation of the measure of the rights in the contract to all of the identified performance obligations. Thus, in this particular instance, although the 'asset/liability' approach was applied to revenue recognition insofar as revenue recognition was linked to changes in the value of a liability, the measurement of that liability was not prescribed at fair value.

Notwithstanding the above anomaly, not as an imperative consequence of adopting the 'asset/

liability' approach, but rather as a judicious conscious decision stemming from a desire to make reporting more aligned with economic substance, rather than statistical accuracy, the IASB seems to have made a paradigm shift in order to usher in FVA as rapidly as practicable. It would be in place, therefore, to discuss the conceptual underpinnings of FVA, fair value and the income measurement strategy under FVA (Bromwich, 2001; Dean & Clarke, 2003; Wells, 2003; Potter, 2005; Dennis, 2006; 2008; Rayman, 2006; AAA, 2007; 2010; Penno, 2008).

## THE CONCEPTUAL BASIS OF FAIR VALUE ACCOUNTING

The cardinal activity in the overall process of financial reporting is, obviously, the value 'measurement' process (Barth, 2007). Two elemental constituents (sub-processes) aggregate to form this measurement activity viz. choosing a suitable measurement base, e.g. the historical cost, fair value at entry (the replacement cost), fair value at exit (net realizable value), value in use etc., and measuring the relevant account in the selected measurement base.

A structured procedure is put in place by the provisions of the US ASC 820 (FASB 2009), which may be regarded as the benchmark in FVA for addressing the latter issue. However, the choice of the measurement base is left open to the discretion of the entity adopting FVA. In other words, ASC 820 (FASB, 2009) gives us the methodology for calculating fair value, on the one hand, but fails to explicitly set out the circumstances in which FVA is to be adopted, on the other. As exceptions to this norm, FVA is prescribed exclusively or as an alternative in the context of some categories of assets in the provisions of several other FASB standards, e.g. SFAS 133 (Accounting for Derivatives & Hedging Activities; FASB, 2000), SFAS 141 (Business

Combinations; FASB, 2001), SFAS 142 (Accounting for Intangibles; FASB, 2001) and so forth.

The votaries of FVA cite the following in support of its efficacy:

- Financial statements are primarily used in order to make economic decisions;
- An entity's current and prospective investors and creditors are the reference users of its general-purpose financial reporting. The primary purpose for which these interest groups would use the entity's financial statements is to assess its investment and credit worthiness. For this objective to achieve, they would make suitable future cash flow forecasts. Thus, it would be desirable from this perspective that accounting information, as reported in financial statements, should be aligned with the future to the extent possible, rather than reflect the past. Reporting the information that reflects the past would only serve this purpose if it were indicative of the future and, therefore, useful for making projections. Now, fair valuations encapsulate presentation in terms of the present values of future cash flows.
- The cardinal attribute of financial statements is, now, strongly perceived to be 'relevance', in contradistinction to 'reliability'. Reliability has largely been overshadowed by the attribute of representational faithfulness in the context of financial reporting.
- Prices are believed to give an unbiased assessment of the present values of cash flow forecasts in efficient market conditions. Thus, these figures are based on the economic behavior of the aggregates of market players instead of entity-specific assessments. One may also assume representational faithfulness to be present in contemporary markets on account of high efficiency and completeness.

## 'FAIR VALUE': 'EXIT' *versus* 'ENTRY' VALUE

Fundamentally, this issue relates to the relative superiority of the valuation of assets and liabilities for financial reporting at the funds they would generate on sale (current exit value) *vis-à-vis* the funds necessary for making them available to and ready for the entity to use (current entry value). In a marketplace endowed with pure and perfect competition, with no market frictions, these two measures of value would converge. However, in the presence of significant market frictions, like transaction costs, commissions, transportation costs, etc., the net cash inflows received by the seller are likely to be different from the cash payments made by the buyer. As such, in most real-life situations, the exit value of an asset may be significantly different (usually lower) than its entry value. Before proceeding to an analysis of this issue, we set forth the relative features and virtues of both.

The exit value of an asset is the maximum net amount that can be obtained on the sale/disposal of that asset in the normal course of business (i.e. not in a forced sale) in a short period of time. For this purpose, the net amount represents the sale proceeds less the costs of disposition, on a post-tax basis, discounted to the date of financial reporting/valuation, as desired.

Precisely, the exit value of an asset determines, in monetary terms, the generalized command over the resources that the accounting entity can attain by selling the relevant asset. The entry value, on the other hand, ascertains the present cost of acquiring the cheapest asset (in the markets in which the entity normally trades) that provides to the entity, services congruent to those that the asset being valued is providing *en presenti* and is expected to provide in future.

It would seem that exit value would, *prime facie*, be the more relevant form of asset valuation in the context of bodies corporate on the following premises:

- The primary objective of bodies corporate is to further the interests of their stockholders;
- Exit valuation would provide information on the amount that can be realized by the entity and distributed to the stockholders through the sale of the relevant asset in the normal course of business;
- The amount so realized and distributed to the stockholders could be used by them to satisfy some of a variety of wants (that they may have) through the expenditure of the distributed proceeds.

Another characteristic that strongly favors exit valuation relates to the computation of return ratios from financial statements. The principle adopted for asset valuation impacts both the denominator (directly as the value of the funds employed) and the numerator (in the form of a depreciation charge) of these ratios. Now, at any point in time, the realistically viable options available to an entity's management are either to 'sell' or 'not sell' the assets it possesses (that are the subject matter of the valuation). Thus, it would seem that the appropriate valuation of such assets would be at the amount for which they could be exchanged (i.e. exit value), rather than the current market price of equivalent assets. Exit value represents the implicit current investment in an asset. Return computed on entry valuation is based on the investment that the entity's management refuses to renounce in exchange for receiving the assets. Entry valuation seems redundant on this count because the action of 'not buying' the asset may not be acceptable whence the return calculated on the basis of entry valuation would tantamount to a performance measure that the entity's management has discretion to refuse. The evaluation of the entity's management through benchmarking against such a measure would amount to evaluating them on the premise of an investment that they might now refuse. However, return computed on exit valuation is based on the investment that the entity's management refuses to

accept in exchange for the assets, the base that is relatively fair and equitable.

Let us now look at the numerator of return computation. For facilitating consistency, this should reflect the income generated from the deployment of the assets constituting the denominator. Contemporary theorists prefer to define income (loss) as the surplus (deficit) of the aggregate of the net revenue (before depreciation, but after charging all 'matching' expenses) generated during the relevant accounting period together with the saleable value of the net fixed assets at the end of the said accounting period less the saleable value of the net fixed assets at the beginning of the said accounting period. Equivalently, income (loss) would be the surplus (deficit) of net revenues over the decline in the net saleable (exit) value of the fixed assets over the period. It follows as a corollary that the existence of income is *prima facie* the testimony of the veracity of the management's decision taken at the beginning of the accounting period in order to continue operations for the accounting period by holding on to the assets because the net cash revenues generated from the use of these assets exceeded the decline in their exit value (depreciation). On the other hand, if an entry-based asset valuation is adopted, depreciation reflects the change in the 'cost of acquisition' of the said assets over the relevant accounting period. The corresponding return ratio is, therefore, built on the premise that the entity's management had the option of retaining the market price of the asset in lieu thereof at the beginning of the accounting period, which, in fact, they never did have. It follows that net income as well as depreciation in the return ratios need to be computed on the basis of exit values so as to enable a meaningful interpretation of such ratios.

On the other hand, the entry value of an asset emphasizes the 'going concern' characteristic of an entity. It assumes the survival of an entity as a 'necessity', for the attainment of which it may need to replace an asset that goes out of commissioning.

This obligatory replacement would, obviously, involve the acquiring of the equivalent asset at the current market price, i.e. entry value. Thus, in the event that a positive income is returned based on this valuation philosophy, the survival of the entity as a going concern may justifiably be inferred, and vice versa. 'Survival' in this context is also characterized by the entity's ability to replace the used services so that the expense should also be measured by the current acquisition cost (entry cost) of those services. In this scenario, income is not precisely the surplus of the end of the accounting period balance sheet over the one at the beginning of the accounting period. A significant merit of entry valuation is that it facilitates comparability among entities, thereby enhancing the utility of the statements so prepared. The statements would also be indicative of the nature and context of the resources that the entity expects to use in its projected activities. As mentioned earlier, the cardinal application of financial statements is to help make future projections by investors and creditors. In this context, entry valuation would seem to hold an edge over exit valuation, the choice, basically representing the tradeoff between information on the entity's intention (entry) and the entity's flexibility (exit) for the future. The exit valuation of assets that purports to indicate the cash market value of the relevant assets is largely of current interest only, being reflective of the entity's flexibility. Furthermore, such exit valuation is likely to be relatively much less precise as it represents the valuation of the assets in their second or third best use. Anomalous situations may also arise in instances where the expenses of asset disposal exceed the market value of the asset, resulting in negative exit valuations.

At this point, it is necessary to emphasize the fact that, without understating the importance of the 'survival' aspect of an entity, the primary goal of financial statements is to depict the efficiency of asset utilization by the entity. If an asset does not contribute to the generation of the net revenue

exceeding the decline in its exit-based valuation, financial statements should enable the extraction of information on this fact, so that the owners could make a decision on the possible termination of the asset, the management or the entity. Exit value provides information on the option available to the entity of the periodic (yearend) opportunistic calculator that may be exploited by selling the assets. However, using this measure may divert the focus of the entity's management solely to the trading function from production and the creation of value.

Against this backdrop, it needs to be understood that the entity's owners would definitely desire to receive information enabling them to decipher the extent to which the entity's management has availed of appropriate asset replacement opportunities. Thus, the alternative valuation methods could be benchmarked against the management's asset replacement decision.

Let us, now, examine the interplay between the exit and entry valuations of an asset. A decision to replace an asset, presently optimally used by the entity, shall be made only if the entry valuation of the services being provided by the asset is less than the exit valuation of the asset providing such services. For assets providing only one service, this situation is unlikely to arise in perfect markets because, in such instances, entities would immediately replace and sell until the values are realigned. Nevertheless, such a scenario is sustainable for the assets providing more than one type of service, e.g. in the following situations, entry values could fall below the corresponding exit values when desired services are provided by a new asset, now available, more cheaply, and when the existing asset's service(s) become more valuable.

The foregoing analysis does unequivocally emphasize the fact that both valuation bases provide significantly valuable and non-overlapping pieces of information for the users of financial statements. It would, thus, be optimally sound

if the management and other stakeholders could continually be made aware of both valuations of each one of the entity's assets. Financial statements may, thus, be prepared for using the measurements based on both valuation bases. This strategy would further the philosophy behind exit valuation viz. the principle of goal congruence in the construction of evaluation systems. The underlying tenet of such systems is that those actions that are most desired by evaluators viz. the entity's owners are the actions which result in the best evaluation.

We illustrate the impact of the mode of valuation on the example of the income statement and the consequential evaluation of the entity's management, by considering an asset with the following values:

	Time end of the period	
	2	3
Entry value	1,300,000	600,000
Exit value	1,050,000	500,000

Let the income before depreciation in Period 3 be 650,000; then, the net income under exit value works out to  $[650,000 - (1,050,000 - 500,000)] = 100,000$  while that under entry valuation is  $[650,000 - (1,300,000 - 600,000)] = -50,000$ . Thus, although the exit valuation vindicates the decision made by the entity's management to hold the assets at the beginning of Period 3 and continuing operations during this period, the entry valuation indicates a contrary inference. It follows that the management's performance evaluation based on the entry valuations would provide the inference that the management erred in continuing operations for the said period - it ought to have sold the asset at the beginning of the period. This inference would clearly be contraindicated if the exit valuations had been used for the asset, which would provide testimony to the veracity of the management's decision on continuing operations, at least, for the relevant period. This dichotomy in decision making

may be traced to the fact that entry valuation carries the option with the management of not purchasing the asset. However, in the case of an asset already held, this option does not exist in reality, whence entry valuation is, as a matter of principle, not justified for performance evaluation because any evaluation system must be based only on the options available to the evaluatee. This problem in evaluation does not arise if exit valuation is adopted.

Nevertheless, there is an intriguing exception to the above strong advocacy of exit valuation. This arises in the case of the first accounting period, when the asset is considered for purchase. At the commencement of the first accounting period, the management does have the option of not buying the asset at the time of the initial purchase. Thus, in the context of the first accounting period after the asset purchase, income needs to be assessed by comparing the returns from the asset with the reduction in its entry value. If the analysis shows that the latter exceeds the former for the first accounting period, but thereafter the asset returns exceed the decline in the asset's exit valuation, the asset could be acquired (at the entry value) at the end of the first period. Thus, the cost of services in the first period would be the change between the beginning and ending entry values. In summary, then, the following appropriate reporting basis for asset valuations can be stated entry valuations for the first period, and exit valuations thereafter.

The fallout of the above-postulated scheme of valuation that needs addressing is the accounting disposition of possible differences between the entry and exit valuations of an asset at the end of the first period. In this context, the following seems to be logical:

- If exit (entry) valuation is adopted throughout, including the first period, the difference between the entry and exit values should be accounted for at the time of the purchase (disposal) of the asset. This is so because the assets valued on an

entry (exit) basis will be given up (received) and the purchased (disposed) asset will be valued on an exit (entry) basis.

- However, If any mix of both exit and entry bases is adopted, the difference needs to be recognized and accounted for whenever a change in the method occurs, e.g. if the aforesaid scheme-of-valuation mix is adopted on an entry basis for the first year and on an exit basis thereafter, the discrepancy has to be accounted for at the end of the first period.

The differences between exit and entry asset valuations, in case a combination of both bases is adopted, may be dealt with either by allocating the difference on the basis of change in exit value or entry value or the equal rate of return, or by ignoring the difference in performance evaluation relating to individual periods.

In summary, the following scheme can be presented:

- Performance evaluation for any period should be done on the valuation basis that reflects the alternatives available to the entity's management in that period;
- The difference, if any, due to the use of a (possible) mix of the valuation bases should be accounted for when the asset's life is evaluated;
- At the point in time the income from the assets shall be determined by comparing the returns generated by the assets with their net cost viz. the excess of the entry value at the time of purchase over the exit value at the time of disposal.

It needs to be emphasized once again, at the cost of being repetitive, that the preceding analysis is premised on the 'asset/liability'-based measure of income, which construes income as the accretion in value between two balance sheets, the philosophy that has regained the favor and confidence of the

accounting fraternity in recent years. Nevertheless, if income is determined by the 'matching' concept, entry value tends to camouflage the effects of various external fortuitous events in the expense statement from operating income, whereas exit values tend to highlight such issues (Landsman, 2007; Magnan, 2009; Veron, 2009).

The above debate leads to the unequivocal inference that both bases of valuation have their well-defined and mutually exclusive meritorious features. As such, the financial reporting based on both valuation bases would unquestionably enhance the information content and, therefore, the utility of such statements for stakeholders and users thereof. As an alternative, 'value in use' seems to have the majority of the cardinal attributes required of a value measure. For one thing, value in use encapsulates the value of the asset in the context of the value of the entity. Furthermore, such value in use also harmoniously gels with the 'going concern' convention. Nevertheless, the use of this measure is severely constrained by the problems associated with its reliable ascertainment. Obviously, such determination entails entity-specific inputs, adding to the subjectivity in such calculation. However, logical considerations imply that: value in use shall be more than entry value at purchase, and value in use shall be less than exit value on disposal (Barth & Landsman, 1995).

#### INCOME: HICKSIAN INCOME *versus* FISHERIAN INCOME

The contemporary financial accounting and reporting framework has Hicksian income as its income measure in contradistinction to Fisherian income (Rayman, 2007). We illustrate these two contrasting methodologies underlying income measurement to facilitate the understanding and

appreciation of the implications thereof for financial statements by the following example:

A Ltd. is a company having a life span of  $n$  years, projected to generate the free cash flows of  $C_i$  in the year  $i$  over this life span. On the basis of an assessment of the risk profile of this company and the prevalent market return rates, the appropriate risk-adjusted discount rate for A Ltd. is determined as  $k$  whence its fair value is calculated as:

$$V = \sum_{i=1}^n C_i (1+k)^{-i} \quad (1)$$

Let A Ltd., now, be impacted by an economic event whence its free cash flow projections are modified to  $C'_i$  in the year  $i$  together with a change in the risk profile of these cash flows, captured by the revised risk-adjusted discount rate  $k'$  whence its fair value becomes:

$$V' = \sum_{i=1}^n C'_i (1+k')^{-i} \quad (2)$$

Now, if  $V'$  exceeds  $V$ , there occurs an accretion in the entity's fair value. This will find its way into financial statements as a gain under the provisions of ASC 820 (FASB, 2001) or the corresponding IFRS 13 (IASB, 2012). This is in line with the Hicksian concept of income. However, the recognition of this gain may strongly violate the convention of 'conservatism', for the income so recognized may not actually have been realized at that point in time. In fact, the income may be construed to have actually been realized if, and only if, the investors of A Ltd. liquidate their investments in the entity forthwith to realize the market value of their holdings and then spend it immediately. In the event that such investors reinvest the proceeds of the sale of their holdings or equivalently, defer consumption for  $m < n$  years, the market realizations of their holdings at the end of  $m$  years would now be  $V'(1+k')^m$ , rather than  $V(1+k)^m$ , due to the impact of the economic event. If  $V' > V$  and  $k' < k$ , then  $V'(1+k')^m$  need not necessarily exceed  $V(1+k)^m$ .

There is the cutoff point:

$$m = \frac{\log V - \log V'}{\log(1+k) - \log(1+k')} \quad (3)$$

at which  $V'(1+k')^m = V(1+k)^m$ . For consumption periods shorter than this cutoff, the investor would benefit more by deferring consumption, and vice versa.

The recognition of any unrealized increase in fair value is fundamentally erroneous. This is so because any accretion in fair value that is not realized forthwith may not necessarily be translated into increased consumption power if realized at a later date. Thus, the reporting on accretion in fair value as a gain in the income statement is 'true and fair' only if all investors intend to instantly consume such accretion - a scenario grossly unrepresentative of the ground realities. In fact, this is where the merit of the Fisherian concept of income sets in.

This Hicksian concept of income (Hicks, 1946; Solomons, 1961) is not necessarily compatible with the asset/liability perspective now being advocated by the FASB and IASB. There are several reasons for this. To start with, the FASB and IASB have claimed objectivity in measurement as cardinal for shifting to the 'asset/liability' approach to income measurement. However, this claim seems implausible. There is unequivocal evidence that an entity's assets, other than its identifiable net assets, contribute significantly to its earning capacity. These assets, including human capital, may not be tradeable; hence, the estimation of their market values may be beset with imprecision. Thus, the incompleteness of markets, even if they are in competitive equilibrium, may generate internal goodwill, whose measurement is largely subjective, to say the least (Van Cauwenberge & DeBeelde, 2007).

Another impediment to the adoption of the Hicksian concept of income also relates to its measurement. Hicksian income is measured not by a change

in the value of the net assets of the entity, but by a change in the value of the entity itself instead. Precisely speaking, the latter represents the income of the owners of the entity, rather than that of the entity's business. Such change in the entity's value, even *ex post*, is primarily caused by the changed expectations of the entity's future cash flows. The change is not substantively brought about by the realized cash flows of the relevant period (Benston *et al*, 2006; Bromwich, 2007; Hitz, 2007; Dean, 2008; Sunder, 2008).

The adoption of the Hicksian concept of income for financial reporting also seems fallible on the grounds of making reporting fundamentally inefficient. J. Hicks himself accepted that any practical *ex post* measure of income is largely irrelevant for decision making. It is conceded that reporting on such a basis can, at best, have predictive value only to the extent of providing relevant statistics. However, this may imply that decision makers, as users of such statements, may be the best persons to make, on their own, necessary adjustments in the data of past transactions so as to provide for changes in future expectations. However, if this is to be so, the option in the hands of such users of using decision support systems from within or outwith the entity, such as outputs provided by analysts, the press and academia for ancillary and supporting inputs in lieu of adjusting financial statements may turn out to be superior on the premise that the unsubstantiated and estimated inputs of the future would not find their way into audited financial statements and reports.

The issue relating to the suitability of or otherwise to Hicksian income in the financial reporting system subsists in perfect markets as well. This is unlike several other characteristics of FVA that emanate from market imperfections.

## CONCLUSION

In this paper, an attempt has made to examine several issues occupying center stage in the contemporary accounting environment *viz.*

transition to the 'asset/liability' conceptual framework for income determination, the use of exit-based valuation in measuring the 'fair value' of assets and liabilities, and the adoption of the Hicksian measure of income. Various implications of these aspects have been assessed and reported. The antagonists of the current accounting paradigm are likely to strongly espouse their concerns on these lines. The incumbent analysis highlights the cardinal issues that warrant serious discussion and debate among the accounting fraternity. It is universally accepted that accounting information needs to be significantly relevant for use in the user's decision making processes. The contentions raised herein tend to dilute this relevance of financial reporting for end users.

The analysis of the pronouncements of the regulatory bodies together with the review of the relevant literature presented in this work unequivocally reject the null hypotheses set up, leading to the acceptance of the 'alternative' hypotheses *viz.*

- H1: The 'asset/liability' conceptual framework recommended by the FASB and IASB does not invariably correctly report the financial affairs of an entity.
- H2: The exit-based valuation adopted by the FASB and IASB in the definition of the 'fair value' of assets and liabilities is not the appropriate accounting measure of 'fair value' in all circumstances.
- H3: The 'Hicksian' concept of income adopted by the FASB and IASB, in conjunction with the 'asset/liability' framework, is not essentially the appropriate accounting measure of income.

It must, however, be emphatically underscored that this is purely a theoretical study. Although the findings seem to be unequivocal, the study carries the author's perceptions, views, skill and understanding and interpretations as its main limitation. There is, therefore, a possibility that

the inferences of the study could be influenced by such perceptions, biases and interpretations. This observation opens up vistas for future research. Empirical studies may be undertaken to corroborate and validate these findings. Ideally, conceptual inferences should invariably be validated by empirical studies for trustworthy inference. However, the inferences obtained through statistical analysis may also need to be accepted with caution, howsoever sophisticated these tools may be. Besides, the studies that explore the various issues relating to human decision making have certain intrinsic limitations. There is no mathematical framework that can model such decision making processes quantitatively in all their degrees of freedom. Any quantitative model invariably involves the truncation of the system space by a reduction in the number of the degrees of freedom that can be tracked. This causes fuzziness in system modeling with a loss of information. Consequently, it becomes impossible to frame the set of the evolution equations that could possibly lead to an exact mathematical solution to such problems.

In addition to the possibility of taking up empirical studies in order to validate the findings herein, research programs need to be taken up by professional accounting bodies and practitioners' forums so as to identify, develop and formulate a conceptually superior accounting framework that cuts through the ambiguities created by the issues presented herein. Medium-term research that explores further shortcomings/limitations of the contemporary framework in its current applications or identifies further sectors/areas which could be targeted in order to improve the quality of financial reporting could also be contemplated.

However, it does seem that the conceptual framework presently propounded by the FASB and IASB may not be able to dispense with either of the two issues highlighted in this article viz. the use of exit valuation together with the Hicksian concept of income forthwith, although the shift of emphasis to

the 'asset/liability'-based conceptual framework is clearly discernible except, possibly, in a few cases where the revenue/expense model is retained for the reason of its being more representative of the maintainable earnings concept. There is some indication of a review of this movement by the FASB and IASB in their Revenue Recognition and Fair Value Projects. It is important to emphasize at this point that the issues raised herein can also be sourced to the well-entrenched conventions that form the backbone of business performance appraisal. Although these conventions may lack scientific and/or rational underpinnings, yet their existence and role in accounting practice cannot be disputed. Thus, for a cohesive accounting framework/model, the interrelationships between concepts and conventions need to be embedded therein. Merely the adoption of Hicksian income as a measure neither implies nor is implied by an exclusive asset/liability-based income determination, nor does it facilitate the use of ex post financial reporting for assessing business performance. The 'objectivity' and 'unambiguity' of Hicksian income for financial reporting, so claimed by the FASB and IASB, seems to be substantively overstated. However, notwithstanding the flaws embedded in the conceptual underpinnings of FVA, as espoused hereinbefore, its gradual, but rapid, acceptability and adoption among standard setters is unequivocally welcome - it represents a paradigm shift in emphasis among the accounting fraternity towards the 'relevance' of financial reporting to the users thereof. An encouraging start to ushering in the era of 'fair value accounting' has been made. Understandably, some critical aspects need addressing, but these represent evolutionary glitches, rather than catastrophic mis-endavors. FVA is widely being viewed as an integral constituent of the regulator's toolbox for ushering in an efficacious suite of upgradations for user-friendly financial reporting. There seems to be little doubt that the philosophy of fair value accounting is here to stay and should be fostered by all its votaries.

## REFERENCES

- American Accounting Association's Financial Accounting Standards Committee. (2007). The FASB's conceptual framework for financial reporting: A critical analysis. *Accounting Horizons*, 21(2), 229-238. doi.org/10.2308/acch.2007.21.2.229
- American Accounting Association's Financial Accounting Standards Committee. Ohlson, J. A., Penman, S., Bloomfield, R., Christensen, T. E., Colson, R., Jamal, K., Moehrle, St., Previts, G., Stober, T., Sunder, S., & Watts, R. L. (2010). A framework for financial reporting standards: Issues and a suggested model. *Accounting Horizons*, 24(3), 471-485. doi.org/10.2308/acch.2010.24.3.471
- Barth, M. E. (2007). Standard setting measurement issues and the relevance of research. *Accounting and Business Research*, Special Issue, 7(1), doi.org/10.1080/00014788.2007.9730079
- Barth, M. E., & Landsman, W. R. (1995). Fundamental issues relating to using fair value accounting for financial reporting. *Accounting Horizons*, 9(4), 97-107.
- Benston, G. J. (2006). Fair-value accounting: A cautionary tale from Enron. *Journal of Accounting and Public Policy*, 25(4), 465-484. doi.org/10.1016/j.jaccpubpol.2006.05.003
- Benston, G. J. (2008). The shortcomings of fair value accounting described in SFAS 157. *Journal of Accounting and Public Policy*, 27(2), 101-114. doi.org/10.1016/j.jaccpubpol.2008.01.001
- Benston, G. J., Bromwich, M., & Wagenhofer, A. (2006). Principles- versus rules based accounting standards: The FASB's standard setting strategy. *ABACUS*, 42(2), 165-188. doi: 10.1111/j.1467-6281.2006.00196.x
- Boulton, R. E. S., Libert, B. D., & Samek, S. M. (2000). *Cracking the Value Code: How Successful Businesses are Creating Wealth in the New Economy*. New York, NY: HarperBusiness.
- Bromwich, M. (1992). *Financial Reporting, Information and Capital Markets*. London, UK: Pitman.
- Bromwich, M. (2001). The ACCA/BAA distinguished academic 1999 lecture- angels and trolls: The ASB's statement of principles for financial reporting. *The British Accounting Review*, 33(1), 47-72. doi.org/10.1006/bare.2000.0150
- Bromwich, M. (2007). Fair values: imaginary prices and mystical markets. In P. J. Walton (Ed.). *The Routledge Companion to Fair Value and Financial Reporting*. London, UK: Routledge.
- Chabrow, E., & Colkin, E. (2002). *Information Week*.
- Christensen, J. A. (2010). How do conceptual frameworks contribute to the quality of corporate reporting regulation? *Accounting and Business Research* Special Issue: International Accounting Policy Forum.
- Christensen, J. A., & Demski, J. S. (2003). *Accounting Theory. An Information Content Perspective*. New York, NY: McGraw-Hill.
- Dean, G. W., & Clarke, F. L. (2003). An Evolving Conceptual Framework. *ABACUS*, 39(3), 279-297. doi: 10.1111/j.1467-6281.2003.00133.x
- Dean, G. W. (2008). Editorial: Conceptual Frameworks, Fair Value Measurement and Decision Making. *ABACUS*, 44(3), I-VII. doi: 10.1111/j.1467-6281.2008.00260.x
- Dennis, I. (2006). Here We Go Again ..., Oxford Brookes University Working Paper, available as Comment Letter #50 on the IASB/FASB project website: <http://www.iasb.org/NR/rdonlyres/2D4D6717-557F-47AA-8BB2-A22E6FCCADF0/0/CL50.pdf>
- Dennis, I. (2008). A conceptual enquiry into the concept of a „principles-based“ accounting standard. *The British Accounting Review*, 40(3), 260-271. doi.org/10.1016/j.bar.2008.05.005
- Eccles, R. G., Herz, R. H., Keegan, E. M., & Philips, D. M. H. (2001). *The Value Reporting Revolution: Moving Beyond the Earnings Game*. New York, NY: John Wiley.
- Eckstein, C. (2004). The measurement and recognition of intangible assets: Then and now. *Accounting Forum*, 28(2), 139-158. doi.org/10.1016/j.accfor.2004.02.001
- Financial Accounting Standards Board. (2000). Financial Accounting Standard 133. *Accounting for Derivatives and Hedging Activities*, USA.
- Financial Accounting Standards Board. (2001). Financial Accounting Standard 141. *Business Combinations*, USA.
- Financial Accounting Standards Board. (2001). Financial Accounting Standard 142. *Goodwill and Other Intangible Assets*, USA.

- Financial Accounting Standards Board. (2001). Financial Accounting Standard 157. *Fair Value Measurements*. USA.
- Financial Accounting Standards Board. (2009). Accounting Standards Code 820. *Fair Value Measurements*. USA.
- Gwilliam, D., & Jackson, R. H. G. (2008). Fair value in financial reporting: problems and pitfalls in practice. *Accounting Forum*, 32(3), 240-259. doi.org/10.1016/j.accfor.2008.01.003
- Hicks, J. R. (1946). *Value and Capital*. Oxford, Clarendon Press.
- Hitz, J. M. (2007). The decision usefulness of fair value accounting - A theoretical perspective. *European Accounting Review*, 16(2), 323-362. doi.org/10.1080/09638180701390974
- International Accounting Standards Board. (2012). International Financial Reporting Standard 13, *Fair Value Measurements*.
- Landsman, W. R. (2007). Is fair value accounting information relevant and reliable? Evidence from capital markets. *Accounting and Business Research*, 37(1), 19-30. doi.org/10.1080/00014788.2007.9730081
- Lev, B. (2001). *Intangibles: Management, Measurement and Reporting*. Brookings Institution Press.
- Magnan, M. (2009). Fair value accounting and the financial crisis: Messenger og contributor? *Accounting Perspectives*, 8(3), 189-213. doi: 10.1506/ap.8.3.1
- Nissin, D., & Penman, S. (2008). Principles for the application of fair value accounting. *White Paper No. 2*, Columbia Business School.
- Penno, M. C. (2008). Rules and accounting: Vagueness in conceptual frameworks. *Accounting Horizons*, 22(3), 339-351. doi.org/10.2308/acch.2008.22.3.339
- Potter, B. (2005). Accounting as a social and institutional practice: Perspectives to enrich our understanding of accounting change. *ABACUS*, 41(3), 265-289. doi: 10.1111/j.1467-6281.2005.00182.x
- Rayman, R. A. (2006). *Accounting Standards: True or False?* Routledge.
- Raymen, R. A. (2007). Fair value accounting and the present value fallacy: the need for an alternative conceptual framework. *The British Accounting Review*, 39(3), 211-225. doi.org/10.1016/j.bar.2007.03.006
- Solomons, D. (1961). Economic and accounting concepts of income. *The Accounting Review*, 36(3), 374-383.
- Sundem, G. L. (2007). A Note on the Information Perspective and the Conceptual Framework. In R. Antle, F. Gjesdal, & P. J. Liang (Eds.), *Essays in Accounting Theory in Honour of Joel S. Demski* (pp. 285-293). New York, NY: Springer.
- Sunder, S. (1997). *Theory of Accounting and Control*. Cincinnati, OH: South-Western.
- Sunder, S. (2008). Econometrics of Fair Values. *Accounting Horizons*, 22(1), 111-125. doi: doi.org/10.2308/acch.2008.22.1.111
- Uzma, S. H., & Singh, J. P. (2009a). Intangibles accounting - Issues & dimensions. *The Accounting World*, 19.
- Uzma, S. H., & Singh, J. P. (2009b). *Brand Recognition: The Contemporary Scenario*. Chartered Secretary.
- Veron, N. (2009). Fair value accounting is the wrong scapegoat for the crisis. *European Accounting Review*, 5(2), 63-69. doi.org/10.1080/17449480802510542
- Van Cauwenberge, P., & DeBeelde, I. (2007). On the IASB comprehensive income project: an analysis of the case for dual income display. *ABACUS*, 43(1), 1-26. doi: 10.1111/j.1467-6281.2007.00215.x
- Watts, R. (2003a). Conservatism in accounting Part I: Explanations and implications. *Accounting Horizons*, 17(3), 207-221. doi.org/10.2308/acch.2003.17.3.207
- Watts, R. (2003b). Conservatism in accounting Part II: Evidence and research opportunities. *Accounting Horizons*, 17(4), 287-301. doi.org/10.2308/acch.2003.17.4.287
- Wells, M. (2003). Forum: The Accounting Conceptual Framework. Introduction. *ABACUS*, 39(3), 273-278. doi: 10.1111/j.1467-6281.2003.00132.x
- Whittington, G. (2008). Fair Value and the IASB/FASB Conceptual Framework Project: An Alternative View. *ABACUS*, 44(2), 139-168. doi: 10.1111/j.1467-6281.2008.00255.x

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## SOCIAL AND ECONOMIC ASPECTS OF THE HUMAN SECURITY CONCEPT

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The objective of this work is to analyze the real state in the field of the Macedonian Health and Social Policy, the pension system and human security at work. This type of analysis will make it possible to deduce certain conclusions and recommendations about accomplishing a higher level of general human security in the Former Yugoslav Republic of Macedonia. The results of this study enable us to conclude that, in the Former Yugoslav Republic of Macedonia, living expenses have been permanently increased, the unemployment rate is high and the average minimum wages paid in the region are the lowest, which all contributes to profound poverty in the country. It is also necessary to revise the laws and regulations in the field of workers' health and security, make urgent changes in order to ensure the sustainability of the pension system and also start the reforms that will provide a sustainable and efficient health care system.

**Keywords:** pension system, social security, poverty rate, health care system

JEL Classification: I31, I32, H55

### INTRODUCTION

In order to make our contribution to a better understanding of the human security concept and its successful introduction and practical use in the Former Yugoslav Republic of Macedonia (FYR Macedonia), the limelight of this work is to study the real state of social living as well as the legislation

and the institutions of the FYR Macedonia whose subjects of work are: health and social insurance, pension insurance and human security at work. The analysis of the achieved results will help to offer recommendations for the improvement of the conditions in the previously mentioned fields, which are quite important if we want to reach general human security.

Having in mind the objective of the study, the main hypotheses of our research are as follows: It is essential to implement profound reforms in the Macedonian Health and Social Sectors, the Pension

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System and in the field of human security at work in order to achieve a higher level of general human security in the FYR Macedonia.

The research methodology consists of a combination of different methodological aspects based on:

- a content analysis of various institutional documents and research papers dealing with human security, a pension system analysis, social and health safety and health and safety at work;
- using administrative databases and numerical data for the purpose of explaining the research issues;
- a deduction approach will be applied through the content analysis.

The rest of the paper is structured as follows: in the second section, a literature review is presented, focusing on understanding the meaning of the human security concept. In the third section, the results of the current situation and the legislative framework in the areas of security and health at work, social and health protection and the state and the problems in the pension system of the FYR Macedonia are presented. In the fourth section, the research results are subjected to discussion. The last section of the paper presents the conclusion of the study.

## LITERATURE REVIEW

There are various definitions of the human security concept, depending on the starting point of their explanation. S. Stanarević (2014, 10) emphasizes the fact that, first of all, a distinction between national and human security should be made. Human security is the concept that refers to people and the community, not to countries and their territories. This author points out the explanation of the United Nations Organization (UNDP) from 1994,

according to which human security is a concept oriented towards humans, the basic element of which is our becoming free from fear and poverty. According to R. Thakur (1997, 53-54), social and political empowerment, economic growth and improved access to resources are among the factors that can influence the improvement of human security. K. Anan (UNESCO, 1999, 15) points out that human security could no longer be explained by military terms. In itself, it includes economic development, social justice, environment protection, democratization, disarmament, respecting human rights and the rule of law. According to S. Ogata (1998), human security consists of several key elements, namely:

- an opportunity for all citizens to live in peace and securely within the state borders;
- people should enjoy their rights and obligations (human, political, social, economic and cultural rights) with no discrimination;
- social inclusion or the same approach to political, social and economic politics;
- rule of law and an independent legal system.

In the 1994 Human Development Report (UNDP, 1994, 22-23), the UNDP points out the two main aspects of human security:

- security against famine, diseases and repression, and
- protection from sudden, harmful disorders in a human's everyday life.

The said report emphasizes the fact that human security could be analyzed from the seven categories (UNDP, 1994, 24-25): economic security, health security, food security, environmental security, personal security, political security and community security.

A. Devon (2014) sums up that human security concept also includes challenges people face on a daily basis, such as job security, education opportunities, social and cultural freedoms.

P. Veselinovic (2014) states that in order to improve the quality of life in the Republic of Serbia, it is necessary that structural reforms in the pension, social security and healthcare systems be undertaken.

Various definitions of the human security concept indicate the necessity of having an integral perception of human security in order to prevent it from disseminating in different directions (Sokov, 2012).

Opinions similar to these suggest that the human security concept includes the important elements of social living that allow a high level of citizens' quality and secure life.

## AN ANALYSIS OF THE STATE OF AND THE LEGAL REGULATION IN THE PENSION, SOCIAL AND HEALTH FIELDS, AS WELL AS THE WORK RELATIONSHIPS

### Security and Health at Work

Security and health at work is an interdisciplinary concept dealing with prevention from professional risks connected to every work activity. The main objective of this concept is to induce and maintain the highest level of security and health at work, that is to say providing conditions to prevent and protect workers from occupational risks (Alli, 2008, 20).

In the FYR Macedonia, workers' security and health are regulated by the following laws (Grozdanovski *et al*, 2015, 7): Security and Health at Work Law; Working Relationships Law; Health Protection Law; Pension and Disablement Insurance Law; Law on Protection from Disturbance at Work; Labor Evidence Law; Health Insurance Law; Labor Inspection Law.

From the aspect of regulating Security and Health

at Work Conditions, the existence of the above-mentioned law, as well as numerous subordinate legislation acts, a picture has been created in which the security and health of employers in the FYR Macedonia has been provided. However, in the FYR Macedonia, there is an insufficient provision of workers' security and health of at work (Grozdanovski *et al*, 2015, 8-9). It is confirmed by the data in the annual reports of the State Inspectorate, according to which a remarkable and continuous increase in body injuries is noticeable in 2010, 2011 and 2012. In 2010, 625 injuries at work were recorded; in 2011, their number was 786, whereas in 2012, the total number of the registered injuries at work was amounted to 1446 (State Labor Inspectorate - SLI, 2016). These data confirm the ranking of the countries in this field, done by the European Foundation for the Improvement of the Life and Work Conditions (EUROFOUND).

In the EUROFOUND research, the FYR Macedonia is the country with the highest level of exposure to physical risks. This research included 34 countries and 44,000 workers in the period from January to June 2010. The research is conducted every five years and the results are estimated on the basis of a representative sample of European workers, not on the basis of the whole of the population. The data show that a great number of injuries which often end with fatal consequences upon a human life and inappropriate conditions and carelessness with respect to workers' health cause long-term social problems that affect workers' ability. This conclusion leads to a need for measures and activities of the institutions responsible for doing so, by which the existing risks at work will be decreased. This will provide higher security for the employed and better working conditions.

In the recommendations part, the measures and activities that could contribute to an improvement of the state in the field of security and health at work in our country will be pointed out.

## Social and Health Protection

The social and health protection of citizens have been an important segment of the rule of the Government. The social policy term has been used in order to mark governmental policies for the realization of welfare and social protection, as well as the ways in which welfare in a society is achieved (Spicker, 2000, 111-112).

„Social safety refers to the services provided by the social state in many kinds and forms designed for the protection of citizens” (Pejkovski & Majovski, n.d, 113).

Social protection is a system of measures, activities and policies for preventing and overcoming the basic social risks citizens are exposed to during their lives, for decreasing poverty and social exclusion, and for strengthening the citizen's capacity for his/her own protection (Law on Social Protection, Article 2, 2009, 1).

The Ministry of Labor and Social Politics is the central institution that creates policies, strategic planning, administration and monitoring of the realization and application of laws and regulations in the field of social protection in the FYR Macedonia. The Government of the FYR Macedonia hands down the National Program for Social Protection Development, which defines the objectives, priorities and directions of the development of social protection for citizens (MLSP, 2010, 8).

The Social Protection System in the FYR Macedonia is the system of measures, activities and policies for the prevention of and exceeding the basic social risks citizens are faced with during their lives. The basic social risks include: health risks, the risk of aging and becoming old, the single parent risk, the unemployment risk, the poverty risk and other kinds of social exclusions (PWC, 2014, 211).

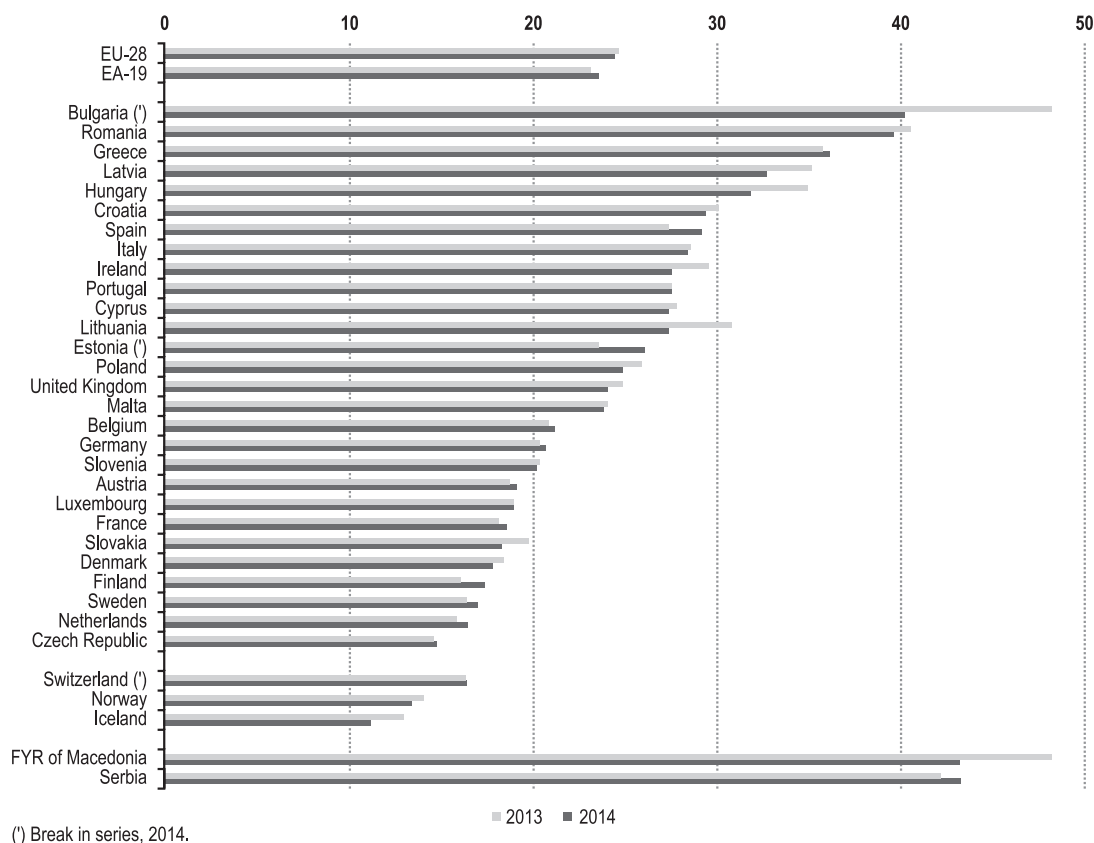
The Social Security Law settles the system and organization of social protection, social protection rights, financing and the procedure of the realization of social protection rights (“Social Protection Law”, Article 2, 2009, 1).

Among other laws falling within the field of social protection in the FYR Macedonia, there are the following ones as well: The Family Law; The Asylum and Temporary Protection Law; The Disability Organizations Law and other laws.

The existence of an appropriate legal regulation and reform processes in the field of social protection is not sufficient to improve the social state of almost one-half of citizens in our country. This has been confirmed by numerous inland and foreign studies as well as by the State Statistical Office (SSO) of the FYR Macedonia. The Income and Living Conditions Poll is an annual research study carried out by the State Statistical Office and a source of data on poverty and social exclusion. According to the data about income and living conditions obtained from this poll, the State Statistical Office estimates the so-called Laeken indicator of the poverty rate. In 2015, the rate of poverty-stricken individuals in the FYR Macedonia was 21.5% of the total population, i.e. 457,000 individuals (State Statistical Office, 2016, 35). This means that these individuals can be categorized into at least one of the following situations:

- a poverty risk, after social transfers;
- socially and materially deprived individuals;
- individuals who live in households with very low work intensity.

The fact that the greatest number of citizens who live in the FYR Macedonia are faced with poverty is shown in Figure 1, where a comparison between the poverty rate, i.e. social exclusion in the FYR



**Figure 1** Poverty or Social Exclusion Rate, 2013 and 2014

Source: Eurostat statistics, 2016a

Macedonia, on the one hand, and that of the European Union (EU), on the other, is presented. According to the diagram data, in 2014, the FYR Macedonia was at the top of the list of the citizens who have faced poverty.

Living expenses have a great impact on an increase in the poverty rate. According to the COICOP Classification, the Cost of Living Index was annually increased by 2.8% in 2013. Table 1 accounts for the costs of living index of some important groups.

According to the data demonstrated in this chart, an increase in prices is noticed in the groups of: health, education, alcoholic drinks, clothes and

footwear, soft drinks, other goods and services, furniture, household goods and maintenance of the household goods and housekeeping, water, electricity, gas and other fuels. A decrease in prices is noticed in the Communication and Transport Sector, Recreation and Culture (State Statistical Office, 2014, 31).

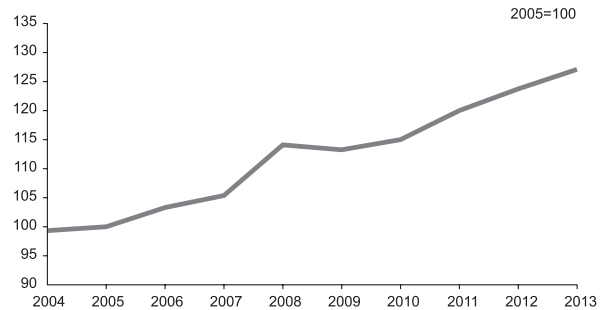
The Cost of Living Index in the FYR Macedonia is presented in Figure 2. It could be noticed that, in the period from 2004 to 2013, the Cost of Living Index permanently increased, which had an impact on the poverty rate in that the same made it increase.

**Table 1** The Cost of Living Index Classification according to COICOP

	2011	2012	2013
Total	103.9	103.3	102.8
Food and non-alcoholic beverages	106.2	102.3	103.4
Alcoholic beverages, tobacco	101.0	100.2	104.0
Clothes and shoes	101.4	105.4	107.0
Housing, water, electricity, gas and other fuels	105.0	109.2	101.0
Furnishings, household equipment, maintenance of the house	100.9	100.6	101.9
Health	103.8	103.0	108.4
Transport	105.3	106.3	99.3
Communication (PTT services)	98.3	95.8	99.0
Recreation and culture	99.1	98.6	97.9
Education	94.3	103.6	106.6
Restaurants and hotels	101.9	103.1	104.1
Other goods and services	102.4	103.4	102.7

Source: State Statistical Office, 2014, 31

The employed also have problems with poverty and they mainly have financial means to only satisfy their elementary needs for food and pay their bills. It is due to the fact that, beside the fact that living costs have permanently been increasing, the salaries paid out in the FYR Macedonia are the lowest average and the lowest minimum throughout the region. In May 2016, the average net salary per worker was 362 Euros (State Statistical Office - SSO, 2016). Since 1<sup>st</sup> January 2016, the paid out net amount of the minimum salary has been 164 Euros, whereas the net salary in the amount of 146 Euros has been paid out in the sectors for the production of textile, clothes and leather products (Minimum Wage Legislation Act, 2012; 2015). In the FYR Macedonia, about 70% of the employed receive a net salary lower than the average salary. Only 7.5% of the employed receive a net salary in the amount exceeding 571 Euros.

**Figure 2** The Cost of Living Index in the Former Yugoslav Republic of Macedonia

Source: State Statistical Office, 2014, 32

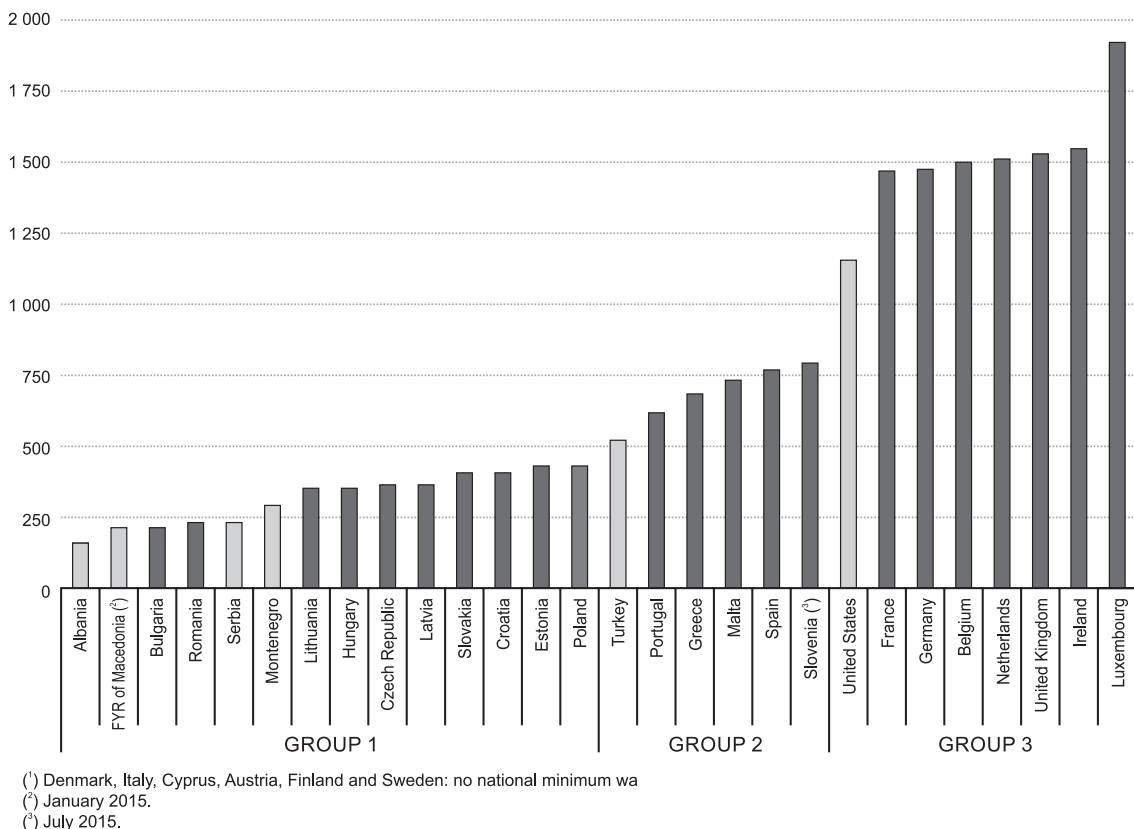
Figure 3 shows the amount of the minimum salary in the European countries. The data have been grouped into three groups. The countries with the lowest salaries are in the first group, and the FYR Macedonia is one of them. The countries from the Western Balkans and Southeast Europe and Turkey belong to this group as well. Compared to the countries of the region, the citizens of the FYR Macedonia and Albania had the lowest minimum salary in January 2016, while the citizens of Slovenia received the highest.

Health protection is an essential segment for human security. The Ministry of Health is responsible for preparing the Health Policy in the FYR Macedonia and for monitoring the implementation of the same, for defining priorities in health protection and monitoring the functioning of the Health Protection System (Pavlovski, Antik, Friscik, Gelevska, Misev & Kasapinov, 2014, 22). The Health Insurance Fund of the FYR Macedonia has the responsibility to collect and deliver financial means for obligatory health insurance. The two fundamental laws formulate the health system: Health Protection Law and Social Insurance Law. The Health Protection Law regulates citizens' rights to health protection, relationships and health insurance rights, the procedure of applying health protection as well as the system and organization of health protection. The Health Insurance Law regulates citizens'

health insurance, rights to and obligations of the implementation of health insurance (Health Insurance Fund of Macedonia - HIFM, 2016).

According to the World Health Organization’s data, the percentage put aside in the FYR Macedonia from the GDP for the purpose of covering healthcare costs is the lowest in comparison to the neighboring and the rest of the European countries. In the FYR Macedonia, 6.5% of the GDP is allocated for this purpose, whereas 10.4% is allocated in the Republic of Serbia, 7.8% in Croatia, 9.2% in Slovenia, 9.6% in Bosnia and Herzegovina and 8.1% in Greece. France is the only European country with the highest allocated percentage of 11.5% of its GDP.

The European Health Consumer Index (EHCI) is a report prepared by the Health Consumer Powerhouse to evaluate the European Health Protection systems on the basis of the 48 indicators, according to which the ranking of the 35 countries included in the HCP research is defined. According to this index, the FYR Macedonia was ranked the 18<sup>th</sup> (the eighteenth) out of the 35 countries in 2015. The improvement of the FYR Macedonia from the 28<sup>th</sup> position in 2013 to the 18<sup>th</sup> in 2015 is, first of all, the result of the access indicator (the time of waiting). Macedonia is the lowest-ranked country in respect of apoplexy decrease cases (35<sup>th</sup>), newborn baby mortality (33<sup>rd</sup>), high blood pressure (22<sup>nd</sup>), kidney



**Figure 3** The minimum salary, January 2016 (the monthly amount in Euros)

Source: Eurostat Statistics, 2016b

transplantation (29<sup>th</sup>), dialysis treatments done at the time and in the place suitable to patients (35<sup>th</sup>), etc. These data lead us to conclude that, according to the European Health Consumer Index, the FYR Macedonia is a middle-ranked country, which is indicative of the fact that additional comprehensive reforms are necessary in financing, organizing and defining personnel affairs in order to improve the conditions and the quality of the Macedonian Health Services (Health Consumer Power House - HCPH, 2016).

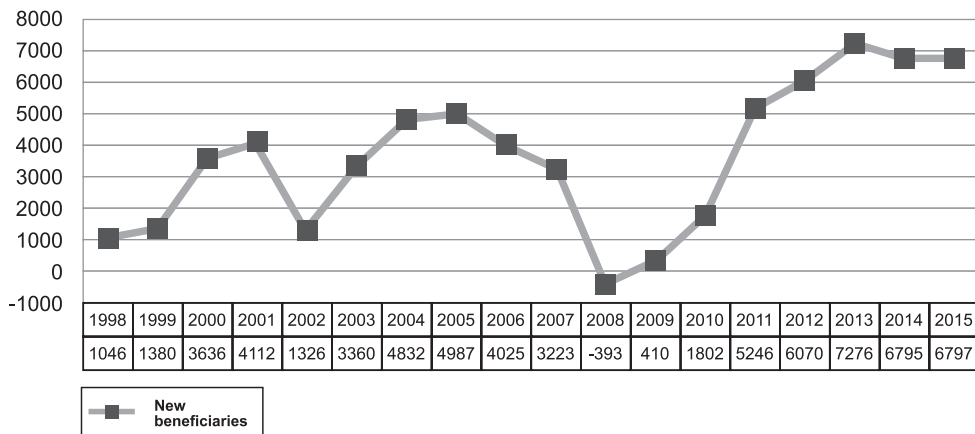
**The Pension System of the FYR Macedonia - the State and the Problems**

Pension insurance is a part of social insurance. The Pension and Disability Insurance System and the disability insurance are implemented through the Pension and Disability Insurance Fund of the FYR Macedonia. The Pension and Disability Insurance Law regulates the rights to pension and disability insurance for the insured in the FYR Macedonia (Pension and Disability Insurance Fund of Macedonia - PDIFM, 2016).

The Pension and Disability Insurance System consists of:

- The First Pillar: Obligatory Pension and Disability Insurance on the basis of the generation solidarity;
- The Second Pillar: Obligatory and Capitally Financed Pension Insurance;
- The Third Pillar: Voluntarily and Capitally Financed Pension Insurance.

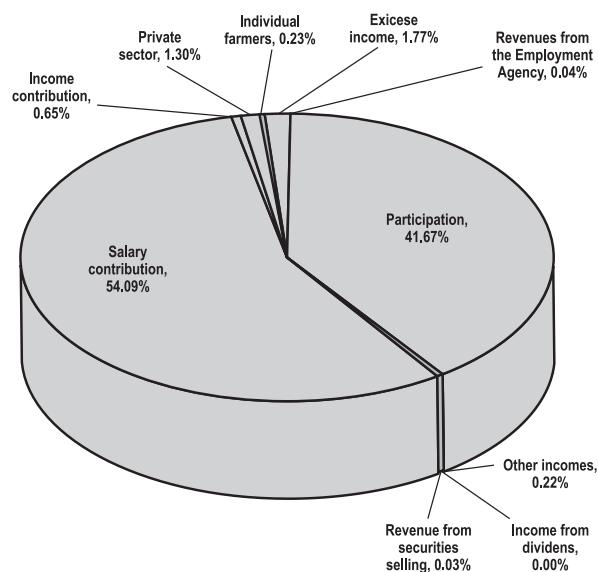
According to the PDIFM Report for 2015, the number of the insured for whom tax was paid account for 509,844, i.e. 91.23% of the total number of the insured. The ratio of the insured that pay tax to pension users is 1.7 of an employed person for one user. (PDIFM, 2016, 8). If the trend of increasing the number of new age pension users in the period from 2008 to 2015 (Figure 4) is added to this ratio, as well as the population structure in the direction of an enlarged number of old persons in the total population, the situation is expected to be worsening. It will result in a further decrease in the ratio between the insured who pay tax and pension users (PDIFM, 2016). This change is, in fact, an indicator of the unsustainability of the existing pension system, which is operated on the basis of the age solidarity principle, in which those employed pay the present pensioners. The trend of new age pension is shown in Figure 4.



**Figure 4** The influx of new age pension users in the period from 1998 to 2015

Source: PDIFM, 2016, 13

The income structure is an important segment of the pension system, which is presented in Figure 5.



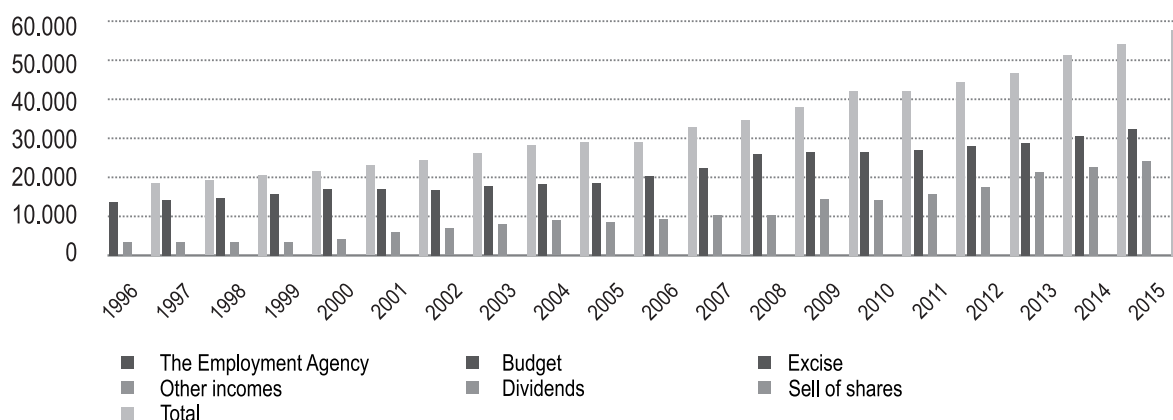
**Figure 5** The income Structure

Source: PDIFM, 2016, 33

It could be noticed that, out of the total income, the participation of 41.7% is the one that follows. The

data about the income in the period from 1996 to 2015 suggest a permanent rise in transfers from the Budget of the FYR Macedonia, which overloads the budget, on the one hand, and is not a solution to the PDIFM Fund problems, on the other. The fact that the Fund remains dependent of Budget Transfers (Figure 6) is highlighted. The data express the income sources: the greatest inflow of funds originates from the Employment Agency, which is followed by the income attributable to different categories and then succeeds the State Budget income. A permanent growth of the previously mentioned income is noticeable in the period taken into consideration. In 2015, the participation of expenditures for the pension and disability insurance in the GDP was 10.1%.

In the World Bank Report (World Bank - WB, 2015, 119), the Macedonian Pension System is fiscally unsustainable in the mid-term and, in relation to the EU countries, the FYR Macedonia is a country with high pension costs. The contribution to the second private pension pillar is small to make a contribution to the compensation for decreased benefits of the first public pension pillar. According to a conservative scenario, pension deficiency will have been 10.5% of the GDP by 2030. An implicit



**Figure 6** Income fluctuations per years (expressed in Denars - 1 Euro = 61.69 Macedonian denar)

Source: PDIFM, 2016, 38

pension debt is projected to be over 400% of the GDP, which is much higher than the European standard. The obligations created by the non-financed pension diagram for future pensions to be paid are called an implicit pension debt. These future promises are demands from a future GDP of a country (van Kamiel, 2014, 9). A high implicit pension debt (IPD) could have serious consequences for the macroeconomic stability and it is a fiscal burden that must not be ignored, especially not so by the countries with high and medium income. The Government could reduce the IPD by increasing the retirement age (Palacios & Kane, 1996, 38). A permanent increase in budget transfers towards the Fund of the PDIFM, a high implicit pension debt and the fiscal unsustainability of the Fund in the medium and long term point out a need for additional pension reforms. The recommendations for overcoming this problem are given in the following chapter.

## DISCUSSION OF THE RESULTS

The low level of conditions provided for security and health at work points out the fact that the existing legal regulation is not fully applied. The absence of responsibility and care for companies' security and health in the FYR Macedonia is one of the reasons that pose a threat to the health and life of the employed. The unfavorable state in the field of security and health at work could be overcome by improving and efficiently applying the regulations in the field of security and health at work and through the promotion of the security and health standards at work. In this context, we would mention the conclusion drawn by the European Commission with respect to the improvement of the FYR Macedonia in this field. That is to say, it was alleged in the Report on the FYR Macedonia for 2015 related to security and health at work that change in the Security and Health at Work Law had to be made and two new books of rules passed, which was not done in consultation with

the National Security and Health Council at work, but rather without any previous evaluation of their reconciliation with the European Union Law. The Report also emphasizes that the administrative capacity to provide an appropriate application of the regulations is not sufficient. So, additional reforms are necessary in order to comply with the European Union's Law in this field. Taking into consideration the stated conclusions, it is necessary to revise the regulations in this field by including appropriate institutions competent for the issues of security at work as well as experts from the EU countries, which will enable reconciliation between these regulations and those of the EU. The effective and efficient application of the laws is impossible without the existence of a certain capacity of the administrative services, including inspection supervision over the application of the laws. It implies taking measures and activities so as to increase the capacity in this field. It is also necessary to find ways how to raise owners' and companies' management's awareness of the benefit the workers could be obtain if they were satisfied and healthy. Organizing workshops and training courses, as well as certain stimulation measures regarding business, could have an impact on the betterment of conditions in this field.

An efficient social policy, social protection and a decrease in unemployment are the fundamental components of decreasing poverty, providing a minimum living standard and a possibility for an active participation of all citizens in a society. The low employment rate, the low income of the employed and enlarged living costs point out that so far the social policy has not been solving a greater part of the social problems that the citizens of the FYR Macedonia are faced with. The European Commission (EC, 2015, 59) recommends that some measures and activities are necessary to take and carry out, respectively, in the field of the social policy and employment in order to raise the employment rate of the young and those who have been unemployed for a long time and provide

appropriate institutions and financial resources in order to reduce poverty in the country. To reduce poverty and improve the living standard in the country, it is necessary to increase the minimum and the average net salary of the employed. The sustainability and competition of the domestic and foreign companies should be the Government's priority. This could be achieved by converting a part of the funds from the state budget, from unproductive to capital investments, which would allow a rise in the economic growth of the country, the creation of new jobs and unemployment reduction.

The EU and other countries' experiences in the world indicate the existence of a long-term process of the pension system adaption depending on the changes of the influential factors on their functioning. Modern economic research studies suggested the using of a gradual transfer from the pension system operated on the basis of the generation solidarity principle to and towards the modern private pillars, i.e. relying on the second and the third pension pillars instead of relying on the first public pension pillar. This transfer could be facilitated by providing a simple entry in the private pension plans under such circumstances in which the entry is not conditioned by funding and employment. Future pensioners would have to decide whether they are going to choose the so-called Individual Pension Plans (e.g. the Individual Retirement Account, in the USA, or the Individual Savings Account, in GB) or the so-called Profession or Training Pension Schedules, in which the funds paid in such an account are managed through Trade Unions, Unions, Clusters or Trade Organizations. Some additional activities should also be carried out for the purpose of the development of life insurance as an alternative kind of savings in order to provide additional funds to supplement pension income. With the latest changes in the Labor Relations Act in the FYR Macedonia, the retirement age limits are 64 years of age for men and 62 years of age for women, with the opportunity for the

employed to decide whether they will have their employment agreement prolonged for yet another three years or not. So, in contrast to other countries, according to our legal changes, the extension of the employment agreement is not a legal obligation, but rather a choice made by an employee. In order to secure the sustainability of the Macedonian Pension System, it is necessary to make changes in relation to an increase in the retirement age limit following the example of the rest of the European countries. This measure could be supplemented with the application of appropriate stimulations in a sort of a monthly pension raise for those who will retire later on or penalties for each month of early retirement. By prolonging the work age, as well as by eliminating a decision on freeing foreign investors from paying tax, pressure on the PDIF of the FYR Macedonia and pressure on the Budget of the FYR Macedonia will both be reduced (Gruevski & Gaber, 2014).

An efficient health system is essential for achieving general welfare in every country. As directions given with respect to the improvement of the conditions in the Macedonian Health System, the recommendations of the World Bank will be mentioned, according to which, in order to improve their health systems, countries should focus on:

- the improvement of health results;
- better financing, in order to provide sustainable health; and
- the strengthening of the institutional positioning.

The unsatisfactory conditions in Macedonian health point out a need for the urgent diagnosing of the reasons for such bad results in the health system in order to overcome the existing problems. That is why a detailed analysis of the conditions in the health system is necessary, together with their comparing with the regulations and positive practice in European countries.

Only with this kind of a comprehensive approach could reconciliation be achieved in compliance

with citizens' real needs and conditions for general human security in the FYR Macedonia created because they are interconnected with each other in a domino effect. It means that any disruption of the conditions in the analyzed segments leads to the deterioration of general human security.

## CONCLUSION

Human security is an important concept referring to the citizens of a society. The concept contains a few key elements referring to the social and political environment, economic development, social and health protection and workplace security, which has a direct impact on the quality of life in a society.

The analysis that has been carried out regarding the conditions in the above-mentioned segments of the public sector in the FYR Macedonia has indicated the fact that the human security concept is very little talked about. Simultaneously, there is no devotion and no political will on institutions' part to implement the European principles of human security that would be used as a guide for a clear formulation of the human security concept in accordance with the Macedonian conditions and the needs of the citizens of the FYR Macedonia.

The FYR Macedonia has been making economic, political, social and other efforts in order to fulfil the obligations for its membership to the EU. In this sense, it is necessary that reforms should be implemented in the Pension System, the Health System and the Social Protection System and that the conditions for the protection and security of workers at their workplaces should be improved, too. From the analysis of the conditions in the focused segments of the public sector, it could be concluded that the reforms which have been implemented have not given the desired effects. The offered measures and the suggested activities with respect to the application of the human

security concept in this paper offer opportunities to highlight the issues referring to this particular concept. The further ignoring and postponement of a debate over changes in the conditions in the public sector from the aspect of human security could be surpassed by the contribution that could be made by research papers of this kind so that administration could gain know how in order to solve the open issues referring to the clear understanding of human security.

Writing about and debating over the surpassing of the problems in the public sector, however, require transparency and cooperation with public institutions, which, in this case, is missing. Actually, this is the limiting factor of our research.

Our research has confirmed the hypothesis that it is essential to implement profound reforms in the Macedonian Health and Social Sectors, the Pension System and in the field of human security at work in order to achieve a higher level of general human security in the FYR Macedonia.

The research results presented in this work are a motivation factor for conducting future research studies in this field. Our future research studies will give an opportunity to close up numerous open questions, such as: Which strategy should be applied in the FYR Macedonia in order to achieve a general level of human security? Which way should the chosen strategy be used in? Which effects are going to be achieved with the application of the human security concept? Our future research will help to have this concept successfully implemented in the FYR Macedonia.

## REFERENCES

- Alli, B. (2008). *Fundamentals principles of occupational health and safety*. International Labour Office. Geneva.
- Devon, A. (2014). Human security concept in political and academic circles. *Tehnički glasnik*, 8(3), 309-313.

- EUROFOUND. (2012). *Fifth European Working Conditions Survey*. Publications Office of the European Union. Luxembourg.
- European Commission. (2015). *Report on the Republic of Macedonia for 2015*. Brussel.
- Eurostat Statistics. (2016a). Retrieved from [http://ec.europa.eu/eurostat/statistics-explained/index.php/File:At-risk-of\\_poverty\\_or\\_social\\_exclusion\\_rate,\\_2013\\_and\\_2014.png](http://ec.europa.eu/eurostat/statistics-explained/index.php/File:At-risk-of_poverty_or_social_exclusion_rate,_2013_and_2014.png)
- Eurostat Statistics. (2016b). Retrieved from [http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Minimum\\_wages,\\_January\\_2016\\_\(%C2%B9\)\(EUR\\_per\\_month\)\\_YB16-II.png](http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Minimum_wages,_January_2016_(%C2%B9)(EUR_per_month)_YB16-II.png)
- Grozdanovski, A. et al. (2015). *Strategies for improving the safety and health at work Republic of Macedonia through the active participation of civil society organizations, Macedonian association for protection at work*. Skopje. Retrieved from [http://www.cso-osh.org/images/dok/STRATEGIJA\\_BZR.pdf](http://www.cso-osh.org/images/dok/STRATEGIJA_BZR.pdf)
- Gruevski, I., & Gaber, S. (2014, September 11-13). *Pension reform globally (general trends and directions)*. Paper presented at the International scientific conference Social change in the global world, Stip, Macedonia. Retrieved from <http://eprints.ugd.edu.mk/11561/>
- Health Consumer Power House. (2016). Retrieved from <http://indicators.healthpowerhouse.com/ehci2015-indicators>
- Mayor, F. (1999). *Letters to future generation*. France: UNESCO. Retrieved from <http://unesdoc.unesco.org/images/0011/001185/118573E.pdf>
- Ministry of Labor and Social Policy (2010). *National Program for Development of Social Protection: 2011-2020*. Skopje.
- Ogata, S. (1998). *Inclusion or exclusion: Social development challenges for Asia and Europe*. Statement of Mrs. S. Ogata, United Nations High Commissioner for Refugees at the Asian Development Bank Seminar. Retrieved from <http://www.unhcr.org/admin/hcspeeches/3ae68fcd54/statement-mrs-sadako-ogata-united-nations-high-commissioner-refugees-asian.html>
- Palacios, R., & Kane, C. (1996, June). The Implicit Pension Debt. *Finance & Development*, 36-38. Retrieved from <https://www.imf.org/external/pubs/ft/fandd/1996/06/pdf/kane.pdf>
- Pavlovski, B., Antik, D., Friscik, J., Gelevska M., Misev, S., & Kasapinov, B., (2014). *We are all human: Health care for all people regardless of their ethnicity*. Health status, health care and the right to health among Roma people in the Republic of Macedonia. Foundation Open Society. Skopje, The Former Yugoslav Republic of Macedonia.
- Pejkovski, J., & Majovski, I. (n.d.) *Reform process and challenges of social policy in Macedonia*. Framing a new social policy: actors, dimensions and reforms Friedrich Ebert Foundation, Office of Skopje, The Former Yugoslav Republic of Macedonia.
- Pension and Disability Insurance Fund of Macedonia. (2016). Retrieved from <http://www.piom.com.mk>
- PWC. (2014). *Social security systems around the globe*. Retrieved from <https://www.pwc.com/socialsecurity>
- Social Protection Act, Official Gazette of the Republic of Macedonia. (2009). Retrieved from [http://mtsp.gov.mk/WBStorage/Files/zakon\\_so\\_zastita\\_osnoven.pdf](http://mtsp.gov.mk/WBStorage/Files/zakon_so_zastita_osnoven.pdf)
- Sokov, I. (2012). Human security as the universal value. *The Journal of Human Security*. 8(1), 68-79.
- Spicker, P. (2000). *The Welfare State: a general theory*. London, UK: Sage.
- Stanarević, S. (2014). State/national security and human security. *Small Guide through the Human Security*. Novi Pazar, The Republic of Serbia: Cultural center DamaD.
- State Labor Inspectorate. (2016). Retrieved from <http://www.dit.gov.mk/godisnilzvestai.php>
- State Statistical Office. (2014). Macedonia in numbers.
- State Statistical Office. (2016). Survey on Income and Living Conditions - 2015.
- StateStatisticalOffice. (2016). Wages: Newsrelease. Retrieved from <http://www.stat.gov.mk/pdf/2016/4.1.16.57.pdf>
- Thakur, R. (1997). From National to Human Security, In S. Harris, & A. Mack (Eds.), *Asia-Pacific Security: The Economics, Politics Nexus* (pp. 52-80). Sydney, Australia: Allen & Unwin.
- UNESCO. (1999). *Letters to Future Generations*. United Nations Educational, Scientific and Cultural Organization. Paris, France.
- United Nations Development Programme (UNDP). (1994). *Human Development Report*. New York, NY: Oxford University Press.

van Kamiel, L. (2014). *Implicit Pension Debt and Credit Rating: International comparison of implicit pension debts with particular focus on the Netherlands*. (Master thesis, Tilburg School of Economics and Management), Retrieved from <http://arno.uvt.nl/show.cgi?fid=136220>.

Veselinovic, P. (2014). The reforms of the public sector as the key determinant of the transition economy of the Republic of Serbia. *Economic Horizons*, 16(2), 137-155. doi: 10.5937/ekonhor1402141V.

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## THE 16<sup>TH</sup> SCIENTIFIC MEETING: INSTITUTIONAL CHANGES AS A DETERMINANT OF THE REPUBLIC OF SERBIA'S ECONOMIC DEVELOPMENT

April 6, 2017, Faculty of Economics, University of Kragujevac, Kragujevac, The Republic of Serbia

Vlastimir Lekovic\*

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Institutions, by creating a business environment that facilitates the activities of economic agents and making the decisions on how to use limited resources, determine the performance of all economic actors and the level of economic development. Their role has been confirmed by specific examples of the functioning of different national economies, as well as by a number of economic studies which established that the quality of institutions, their consistency, reliability and efficiency determine the quality of economic growth and sustainable development and prosperity of the society in the material, spiritual, cultural and other respects. Therefore, it is reasonable to expect that any country which establishes economic institutions by means of its political system, will also seek to establish such an institutional environment that will be conducive to economic activity, and thus generate more dynamic rates of economic growth and support sustainable development.

However, despite their relevant and indisputable contribution, different countries have different understanding of institutions, therefore, many economies operate in conditions of underdeveloped and inefficient institutions. The reality shows that the institutions, by their nature, differ considerably from one country to another, which is precisely why the countries differ in the level of economic and social development. Hence, both empirical economic research and theory produce extensive evidence on the characteristics and performance of the different institutional arrangements by especially pointing to the existence, properties and effects of the inclusive and extractive institutions.

The key criterion for evaluating the performance and efficiency of the institutions is the manner in which these institutions are accepted as the undisputed guarantor of the realization and protection of the needs and preferences of the society as a whole. The main indicator of quality, efficiency and reliability of the institutions is the rule of law, which implies that all people and all economic entities are subject to law that is fairly enforced, thus preventing any group of people or any individual to implement

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the law in a manner that violates the rights of others. Only such an institutional framework is able to establish and develop a dynamic economy and limit the possibilities of obtaining economic benefits through the usurpation of political power and other dominant positions by influential groups or individuals. It is in the highest interest of the society and the economy that all activities should take place in conditions of inclusive political and economic institutions; therefore, it is vital that such institutions are established and that the institutional infrastructure is subjected to regular critical reviews, since this represents the single correct approach to continuous improvement of institutions.

Bearing in mind that the role of the national economic doctrine, based on the appropriate theoretical, methodological and empirical research, is to inform the creators of political and economic institutions on the key aspects of establishing and developing adequate, reliable and efficient institutions in the Republic of Serbia (RS), the Faculty of Economics, University of Kragujevac, in cooperation with the Serbian Association of Economists, organized the 16th National Conference Institutional Changes as a Determinant of the Economic Development of Serbia on 6 April 2017. The Conference was opened with four keynote lectures, while by the end of the Conference, another twenty-one scientific papers were presented by thirty-seven Conference participants.

The keynote lectures, given by E. Jakopin, M. Labus, V. Vuckovic and V. Lekovic, discussed some of the most important issues of economic growth and sustainable development in the RS. The mentioned discussions indicated that in order to improve the current state of the economy, it is essential to develop a new model of economic growth and sustainable development, which would intensify production activities and increase competitiveness in the domestic and foreign markets. In this respect, the need to increase investment in the manufacturing industry as the driver of economic growth and development was emphasized, given the fact that

it produces sophisticated products which are more competitive on the market. Furthermore, bearing in mind that fiscal consolidation is an important factor of sustainable economic stability, the necessity of improving the fiscal institutional framework was also stressed.

In particular, the emphasis was given to the necessity of significantly improving the existing institutions, as well as the attitudes of all political and economic actors towards them, in accordance with the principle of the rule of law. In addition, the underdevelopment of the institutional environment within which economic activity takes place, was identified as one of the key causes of the economic lagging of the RS compared to other transition economies. Thus far, implemented institutional changes substantially lagged behind other transitional changes in every aspect (their timing, structure, quality, quantity and function), and therefore failed to support, stimulate and guarantee economic transition. The strategic importance of institutional changes and their crucial role in terms of economic policy were disregarded (especially in terms of the largely implemented neoliberal economic policy). Based on the key performance indicators of the institutions and the economy, it was noted that the institutions of the RS are extractive, i.e., they are created and managed in accordance with the interests of the ruling political and economic elite and the foreign capital. In this way, economic reality has confirmed the view that inadequate institutions and policies lead to insufficient and unsatisfactory economic growth.

The papers presented by the Conference participants discussed the relevant issues of structural changes in the economy of the RS, as one of the priority goals of the economic reformation. Namely, sustainable economic development involves solving the issues related to structural changes, as one of the most complex questions of every economy. This segment of economic activity, which is of strategic importance for the long-term growth and sustainable development of the country, cannot be efficiently generated by market alone. It is therefore

the responsibility of the government to intervene in sectors that are crucial for the development of the country, which implies the necessity of developing a new model of economic growth based on reindustrialization, thus making it possible to realize significant benefits in the form of economies of scale, synergy between economic activities and new knowledge which generates innovation and technological change. This is important because the success of the implementation of structural changes and reindustrialization of the country determine the opportunities for initiating a more dynamic economic growth and sustainable development.

In addition to the aforementioned institutional aspects of the economy, the participants of the Conference also discussed other topics, including: economic populism, roles of voters and institutions in terms of the contemporary socio-economic trends, economic and social effects of the cartelization and importance of a competition protection policy as a driver of economic growth and development.

Several papers discussed relevant issues related to the functioning and development of the financial system, whose market actually represents a segment of the integral market and is an essential factor which determines the extent and the conditions for the efficient investment of free funds, as well as the allocation of risks to the entities that are able to handle them in the most effective manner. The authors also pointed to the need to define

and implement appropriate regulations in order to minimize the impact of shocks in the financial system and facilitate creation of such institutional conditions that would provide long-term financial, and thus, overall economic stability in the country, which is crucial for the successful functioning of the real economy and the sustainability growth and development.

The lectures and papers presented at the Conference, as well as the related discussions, provide relevant scientific and practical guidelines for the future institutional arrangements in the RS. Through critical examination of the complex issues of the institutionalization of the economy and society, whose successful resolution is a prerequisite for improving the current economic and social situation and creating the favorable conditions for dynamic economic growth and development, the Conference *Institutional Changes as a Determinant of Economic Development of Serbia* confirmed its significance and relevance. Continuous improvement of political and economic institutions is of crucial importance for the economy and the society; thus, this represents the indisputable reason that the Conference should be organized in the future. The papers presented at the Conference will be published in the Conference Proceedings and made available to the scientific and professional public, as well as the creators of institutions and economic policies in the Republic of Serbia.

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