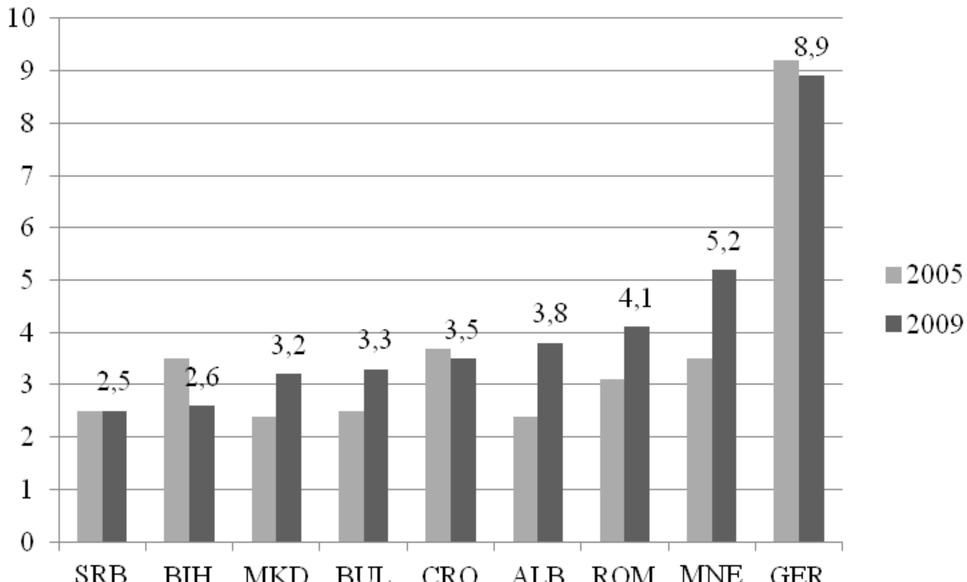
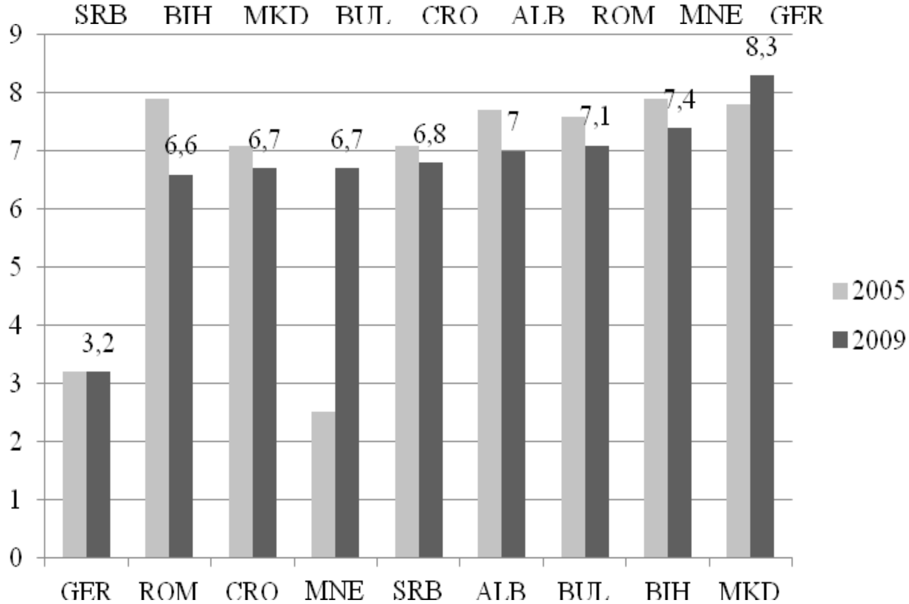
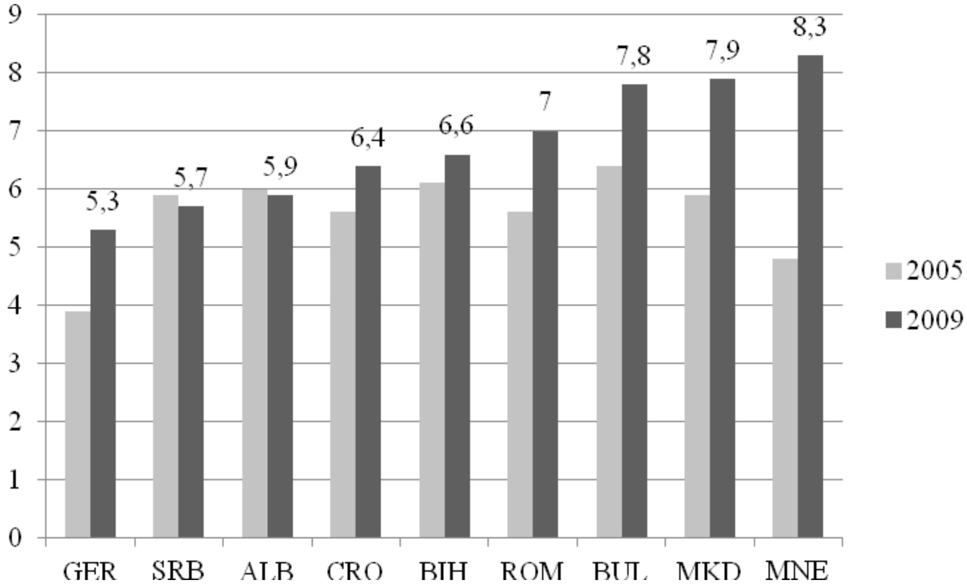
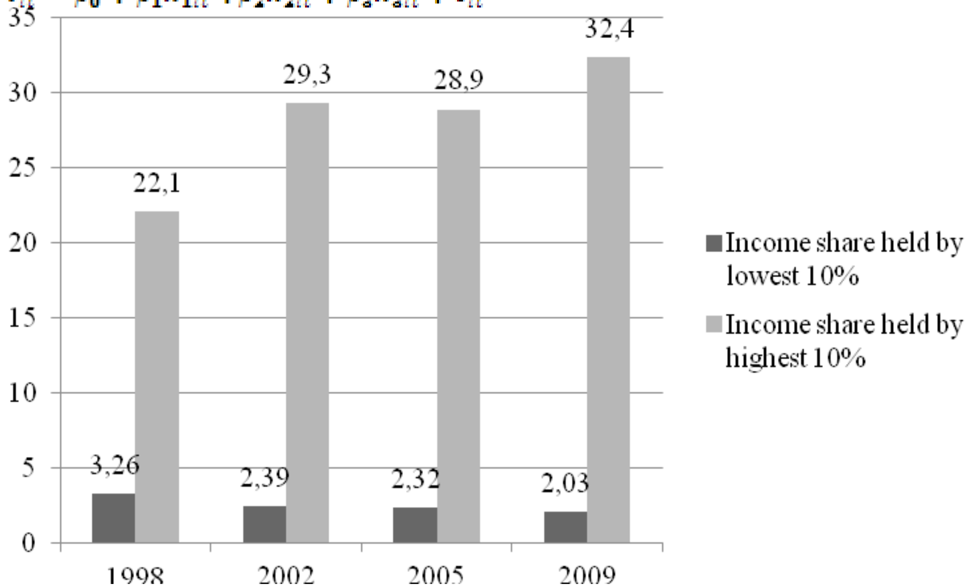

2,5
2,6
3,2
3,3
3,5
3,8
4,1
5,2
8,9
2005
2009
SRB
BIH
MKD
BUL
CRO
ALB
ROM
MNE
GER
0
1
2
3
4
5
6
7
8
9
10


3,2
6,6
6,7
6,7
6,8
7
7,1
7,4
8,3
2005
2009
GER
ROM
CRO
MNE
SRB
ALB
BUL
BIH
MKD
0
1
2
3
4
5
6
7
8
9

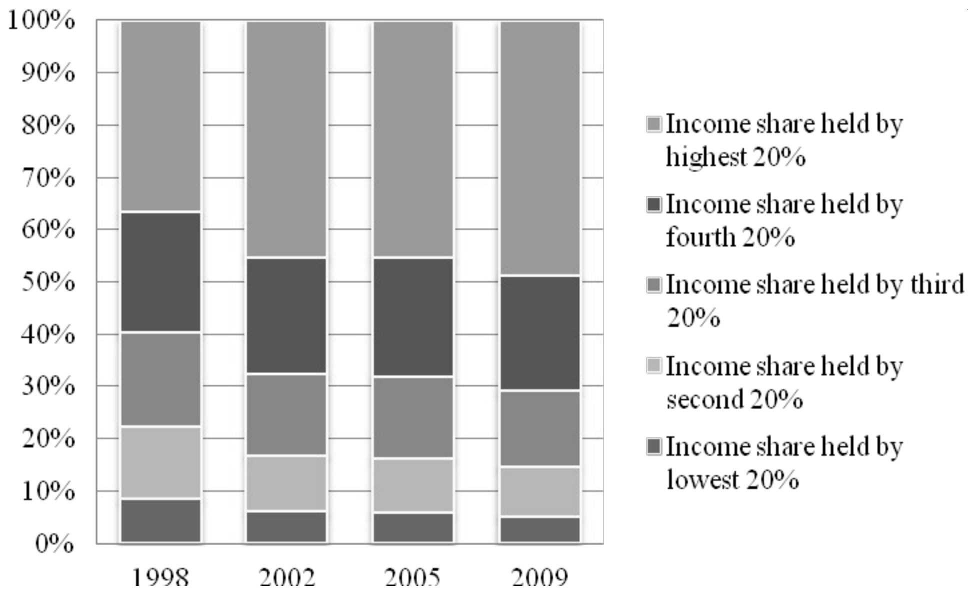


$\varepsilon_{it}\ \varepsilon_{it}\ t\ t\ i\ i\ X_{3it}\ X_{3it}\ t\ t\ i\ i\ X_{2it}\ X_{2it}\ t\ t\ i\ i\ X_{1it}\ X_{1it}\ t\ t\ i\ i\ Y_{it}\ Y_{it}$

$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \varepsilon_{it}$



D



ragan Tevdovski
Igor Ivanovski
Ss. Cyril and Methodius University, Faculty of Economics-Skopje, Macedonia

INCOME INEQUALITIES AND SYSTEMATIC ECONOMIC CRISIS: FOCUS ON SOUTH-EAST EUROPE

UDC:330.56.0552/.3:330.831.8]:519.233.5(4-12)

Abstract

The rising income inequalities are one of the most important structural reasons of the global economic crisis. This paper focuses on SEE region. It uses the latest available data of relevant source. The income inequalities increased significantly in the most of the SEE countries until 2009, while the two EU member states are characterized by the trend of income inequalities decrease after joining EU. The highest income inequality is found in Macedonia. The analysis is based on two research questions: (i) Does the forcing of neoliberal ideology increase the income inequalities?; and (ii) Does the distortion of legal system made by political elites increase the income inequalities? The analysis provides evidence that policy makers in SEE region used neo-liberal ideology in the period 2005-2009. All SEE countries introduced the flat taxation in some year. In addition, the labour market regulations become highly flexible.

Panel regression model with fixed effects is used in order to quantify the influences of neoliberal ideology and the distortion of legal system. The model provides evidence that the implementation of neoliberal ideology and the distortion of legal system by political elites increase income inequality.

Keywords: *income inequality, GINI index, neoliberal model, panel regression, South-East Europe.*

1. Introduction

The global economic crisis has put the income inequality in the focus again. The most important structural reason of the global economic crisis, along the deregulation of financial markets, is the increasing income inequality. In the developed countries two tendencies are evident. First, the percentage of the salaries in the national income is decreasing constantly, which means that the growth of the salaries is not following the growth of productivity. Second, the gap between the highest and the lowest salaries is widened significantly. On one side, there is a increase in the salaries of a relatively small group of high income individuals, and on the other side, the number of people who work for a very low salary is rapidly increased. It is also very important to point out that people with high income have evidently higher rate of savings than those with a low income.

The result of this significant deepening of the inequality gap and the increase of profitability, has led to a situation where an even greater part of the national income is distributed toward the capital owners, who spend less than they earn. At the same time the employees, who live of their salary, because of the increasing living costs, are forced to spend all of their life savings and get into debts so they can have a decent standard of living. The only way to keep the economy alive is the one where the government supports the newly formed demand by increasing the budget deficit, while the banks have to approve loans even to people with bad credit. And while the expansion of the loans creates sufficient demand, the economy is kept alive. A crisis is inevitable when the economy is at a point where the inequality of the income is so big that the low income individuals cannot service their loans. The thing that needs to be remembered is that the high saving rates of the people with the highest income are one of the reasons behind the enormous growth of the financial markets before the global crisis. Because of that, an imperative is given to all of the economies, to create a greater equality of income.

While there are numerous researches examining the income inequality in the developed countries and even in the Central and Eastern Europe (CEE), there are only small amount of research that deals with income inequality in South-East Europe (SEE). Therefore, this paper has two goals. The first goal is to presents the most recent development regarding the income inequalities in the SEE region. The second goal is to define some of the factors of the rising income inequality. We focus on the integrity of the legal system and the economic ideology in SEE countries. We argue that the political elites in SEE distort the function of the system for their own purposes and that this process creates an increase in income inequalities. The argument is taken from Tevdovski and Filipovski (2013). They stressed out that the institutions in the SEE economies are in the "hands" of the ruling political elites. When someone is the part (or close) to ruling elite, the courts "will see him by different eyes", his "chances" to get some business from the government are higher, or his "chances" to receive the money from government obligations are also higher than "the other". Or, in contrary, for "the other", there is great insecurity, because some inspection could state penalty without the breakage of the laws (because the government need more money), or some investment could be closed or even physically destroyed if "the other" is opposition of the ruling elite. Of course, there are many or, in both situations. In this case, it is not important, if the domestic credit activity is increasing, or the infrastructure is improve, because there will be firms which are "more equally" than the others. This situation is excellently explained in the book Acemoglu and Robinson (2012).

In regard to economic ideology, we argue that the SEE governments force a form of neoliberal model which creates "paradise" for investors, while creating maximum flexible labour market. It is in line with Mencinger (2012), who give the following argument for the new member states (NMS) of European Union (EU):

"NMS, or at least their governments, have been much more attracted by the American market model and the neo-liberalism than the "old" EU states ever were. The EU showed very little interest in promoting social market model in transition countries. The vacuum created by the collapse of socialism was filled by American advisers promoting a pure "shareholder value" type of capitalism; they were immediately followed by many domestic "Marxists" who quickly turned into "Hayekians". It is also true that many features of the widely admired European social market model no longer existed there when the transition began or when the NMS joined the EU. Current economic policies of the European Commission dominated by Germany threaten the social market model in NMS even more than in the rest of the EU".

The analysis is based on panel regression model with fixed effects. It contains three explanatory variables: index of judiciary independence, index of labour market regulations and dummy variable for existence of flat taxation. The first variable is proxy for legal system distortions and the others are proxies for neoliberal ideology. The dependent variable is GINI index.

The rest of this paper is consisted of four sections. The review of relevant literature is given in the second section. The third section presents the income inequalities in SEE. The panel regression modeling is done in the fourth section. The end section is reserved for the conclusions.

2. Literature Review

There is a large amount of economic literature that examines inequality from different aspects: inequality and economic growth (Kuznets, 1955; Alesina & Rodrik, 1994; Benabou, 1996; Deininger & Squire, 1998 and Ravallion, 2001), inequality and trade liberalization (Bhatta, 2002; Milovanovic & Squire, 2005), inequality and demographic development (Lam, 1986; and Chu & Jang 1997), inequality and health (Anand et al 2005), inequality and migrations (Davies & Wooton, 1992; Black, 2005; and Stark, 2006), inequality and human resource (Chiu, 1998), inequality and technologic changes (Acemoglu, 2002), inequality and government policies (Davies, 1986; Lambert, 1993; and Benedict & Shaw, 1995).

The literature examining income inequality regarding developing countries has a 20 year tradition (Ahmad, 1992; Milovanovic, 1998; Simai, 2006; Leitner & Holzner, 2008; and Tridico, 2010). One of the most relevant paper is Branko Milovanovic's "Explaining the Increase in Inequality During Transition" (1998). He determined that the most important factors which are responsible for the widening of the inequality gap are the occurrences on the labor market i.e. the loss of jobs. Recently, a great amount of attention is given to the research paper of Leitner and Holzner: "Economic inequality in Central, East and Southeast Europe". They found that the increasing income inequality is a result of the transition changes and the decrease of formal employment of labor in the period 1998-2003. Also, through econometric analysis, they concluded that the liberalization of public infrastructure increases the inequality, while the liberalization of prices and trade lower the inequality. In addition, they point out that the increase of government expenditure is correlated to higher inequality.

3. Income inequalities in South-East Europe: Stylized facts

Income inequality is measured with the GINI index. It presents the extent to which the distribution of income expenditure among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The GINI index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a GINI index of 0 represents perfect equality, while an index of 100 implies perfect inequality (World bank, 2013).

Table 1: GINI index developments in Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Montenegro, Romania and Serbia

ALB	1997	2002	2004	2008
GINI index	29.1	28.2	31.1	34.5

BIH	2001	2004	2007
GINI index	28.0	35.8	36.2

BGR	1992	1997	2001	2007
GINI index	30.7	26.4	34.3	28.2

HRV	1998	2002	2005	2009
GINI index	26.8	31.1	29	33.7

MKD	1998	2002	2005	2009
GINI index	28.1	38.8	39.1	43.2

MNE	2005	2008
GINI index	30.1	30.0

ROM	1992	1998	2002	2009
GINI index	25.5	29.4	31.5	30.0

SRB	2002	2005	2009
GINI index	32.7	33.4	27.8

Source: The World Bank Database.

Table 1 presents the values of the GINI index in SEE countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Montenegro, Romania and Serbia. The data are taken from the World Bank database. The years are chosen according to availability of data. The most recent publish data about the index are from: 2007 for Bosnia and Herzegovina and Bulgaria, 2008 for Albania, and 2009 for Croatia, Macedonia, Montenegro, Romania and Serbia.

The GINI index has significant trend of increase in Albania (from 29.1 in 2997 to 34.5 in 1997), Bosnia and Herzegovina (from 28.0 in 2001 to 36.2 in 2007), Croatia (from 26.8 in 1998 to 33.7 in 2009) and Macedonia (from 28.1 in 1998 to 43.2 in 2009). The GINI index has trend of decrease in Serbia (from 32.7 in 2002 to 27.8 in 2009) and remains stabile in Montenegro (there are no publicly available data for Serbia and Montenegro for the period before 2002). The GINI index in the two EU countries, Bulgaria and Romania, is characterized with the trend of increase in the period 1991-2001, which is followed by the trend of decrease in the period 2002-2009 (Bulgaria: from 30.7 in 1992 to 34.3 in 2002, and to 28.2 in 2007; Romania: from 25.5 in 1992 to 31.5 in 2002, and to 30.0 in 2009).

Macedonia has the highest income inequality in the SEE region. The value of GINI index for Macedonia in 2009 is 43.2 and it is much higher than Albania (34.5 in 2008), Bosnia and Herzegovina (36.2 in 2007), Bulgaria (28.2 in 2007), Croatia (33.7 in 2009), Montenegro (30.0 in 2009), Romania (30.0 in 2009) and Serbia (27.8 in 2009). In Europe similar value of the index can be found in Russia and Georgia. The GINI index above 50 is characteristics of some countries from South America.

Figure 1: Income distribution in Macedonia, 1998 - 2009

Source: The World Bank Database.

Figure 1 presents the income distribution in Macedonia in the period 1998 - 2009. Income share held by highest 20% of population was increased from 36.7% in 1998 to 48.6% in 2009. So in 2009, the income share held by highest 20% of population is almost equal to income share held by the rest 80% of population. This figure is strong evidence of impoverishment of central middle class and low middle class in the country (the third 20% and second 20%). Income share held by the lowest 20%, second 20% and third 20% of the population in total decrease from 40.2% in 1998 to 29.2% in 2009, and it become even lower than income share held by highest 10% of population which is equal to 32.4% in 2009 (Figure 2).

Figure 2: Income distribution in Macedonia - lowest 10% and highest 10% of population, 1998 - 2009

Source: The World Bank Database.

4. Methodology and Empirical Results

Panel regression model with fixed effects is used in order to be determined the influence of possible factors of rising income inequalities. The mathematical expression is:

where is GINI index of country in year , is index of labour market regulations of country in year , is index of judicial independence of country in year and is dummy variable, which takes value 1 if the country in year have flat taxation and 0 otherwise. The standard error is denoted with . All the variables, except dummy variable, are transformed into natural logarithms. The time span is from 2005 to 2009. The fixed effects should capture country specific characteristics. The model includes six countries: Macedonia, Montenegro, Romania, Serbia, Slovakia and Poland. The only criterion for selection of the country was existence of time series data of GINI index in the observed period. Two CEE countries, Slovakia and Poland, are included in the model in order to be increased degrees of freedom (data for GINI index in the observed period from CEE are available only for these two countries).

The basic idea of the models is taken from Leither & Holzner (2008). However, the model used different explanatory variables in order to answer the two research questions:

(1) Does the forcing of neoliberal ideology increase the income inequalities?

(2) Does the distortion of legal system made by political elites increase the income inequalities?

The model contains two proxies for the neoliberal ideology. The first is the index of labour market regulations. It is published by the Economic Freedom of the World. The index takes values from 1 to 10, where 1 means that the labour market is strongly regulated (it is on the side of workers) and 7 means that the system is flexible (it is on the side of employers). Figure 3 compares the values of the index of the SEE countries in the years 2005 and 2009. The figure is strong evidence that the labour market regulation become more flexible (the rights of workers are reduced) in almost all countries from SEE, except Serbia and Albania, in the period 2005-2009. This process was strongest in Montenegro (the value of index went from 4.8 in 2005 to 8.3 in 2009) and Macedonia (from 5.9 to 7.9). Also the value of the index of labour market regulations is 7 and higher in a half of the SEE countries, which indicates that the labour legislation is not sufficiently protecting the workers. In order to make comparisons, the figure gives the information about the values of the index in Germany. It is significantly lower than the values of the index in all SEE countries.

Figure 3: Index of labour market regulations, SEE, 2005 and 2009

Source: Economic Freedom of the World.

Figure 4: Index of centralized collective bargaining, SEE, 2005 and 2009

Source: Economic Freedom of the World.

The figure 4 is another strong evidence for existence of neoliberal ideology among SEE policy makers. It presents the index of centralized collective bargaining. It is the component of the labour market regulations index. The index is based on the Global Competitiveness Report's (published by World Economic Forum) question: "Wages in your country are set by a centralized bargaining process (=1) or up to each individual company (=7)". It also varies from 1 to 10. The values of the index for all SEE countries imply that the wages are set by each individual company, without influence of the centralized bargaining process.

Opposite example is Germany, where the centralized bargaining process has significant influence on the wage setting.

The second proxy for neoliberal ideology is the existence of flat taxation. All countries from the SEE region in different years starting from 2003 introduced flat taxation.

The index of judicial independence is a proxy for distortion of legal system made by political elites. It is also part of Global Competitiveness Report. The index varies from 1 to 10, where 1 means that judiciary in the country is heavily dependent from political influences of members of government, citizens, or firms, and 7 means that the judiciary in the country is entirely independent. The figure 5 shows that judiciary in SEE countries are in different extent dependent from political influences. The situation is opposite in Germany where the judiciary where the judiciary in the country is entirely independent.

Figure 5: Index of judicial independence, SEE, 2005 and 2009

Source: Economic Freedom of the World.

Table 2: Estimated results of the panel regression model with fixed effects

	Coefficient	Standard Error	t-statistic	p-value
Constant	3.541	0.177	20.037	0.000
Judicial independence	-0.135	0.0871	-1.548	0.137
Labour market regulations	0.026	0.109	0.235	0.816
Flat taxation	0.072	0.038	1.8733	0.076

Source: Author's calculations.

The estimated results of the model are given in the table 2. Only the flat taxation variable has the statistical significance. However, the signs before the estimated coefficients of the model are appropriate to theoretical expectations. The improvement of judicial independences leads to lower income inequality. The increase of flexibility of labour market regulations leads to higher income inequality. Also, the flat taxation has higher income inequality in comparison to progressive taxation. This implies that the problem of the significance of the coefficients before the two variables (judicial independence and labour market regulation) could be due to short time series used. Therefore, the answer of the first research question is yes – the forcing of neoliberal ideology increase the income inequalities, and the answer of the second research question is yes, but with caution, that the distortion of legal system made by political elites increase the income inequalities.

5. Conclusion

The rising income inequalities are one of the most important factors of the systematic economic crisis. This paper focuses on SEE region using the latest available data of relevant sources. The income inequalities increased significantly in the most of the SEE countries (Albania, Bosnia and Herzegovina, Croatia and Macedonia) until 2009, while two EU countries (Bulgaria and Romania) are characterized with two opposite trends: the trend of increase of income inequality (1991-2001) and the trend of decrease (2002-2009). The highest income inequality is found in Macedonia, where the level is comparable with those of Russia and Georgia, and start to be closer to some Latin American countries. It should be expected that economic crisis that hit the region from 2008 leads to even higher increase of income inequalities SEE countries.

The paper is based on two research questions: (i) Does the forcing of neoliberal ideology increase the income inequalities?; and (ii) Does the distortion of legal system made by political elites increase the income inequalities?

The analysis provides evidence that policy makers in SEE region used neo-liberal ideology in the period 2005-2009. All SEE countries introduced the flat taxation in some year. In addition, the labour market regulations become highly flexible. So, SEE economies become 'paradise' for investors, but not for workers. This trend is opposite in comparison with Germany - the most productive economy, where this neoliberal paradigm is not happening.

The analysis also is using the argument that the political elites in SEE region distort the function of the system for their own purposes and that this process creates an increase in income inequalities.

Panel regression model with fixed effects is used in order to quantify the influences of neoliberal ideology and the distortion of legal system. It contains three explanatory variables: index of judiciary independence, index of labour market regulations and dummy variable for existence of flat taxation. The first variable is proxy for legal system distortions and the others are proxies for neoliberal ideology. The dependent variable is GINI index. The model provides evidence that the implementation of neoliberal ideology and the distortion of legal system by political elites increase income inequality. However, there is caution in the confirmation of the second thesis.

The problem of the model is the small number of observations, which is due to not existence of time series data for the dependent variable. The data for GINI index for the most SEE countries are highly fragmented. Still, the model could be improved in the future by adding other countries from SEE, as well as some of the variables suggested by Leitner and Holzner (2008).

References

Acemoglu D, Robinson J. 2012. Why Nations Fail: The Origins of Power, Prosperity and Poverty. Crown Business.

Isaksson, A. (2010). Public Capital, Infrastructure and Economic Development, Vienna: United Nations Development Organization.

Kakwani, Nanak and Son, Hyun (2003). Pro-poor Growth: Concepts and Measurement with Country Case Studies. *The Pakistan Development Review* Vol. 42, pp. 417–444

Leitner, Sebastian and Holzner, Mario (2008). *Economic inequality in Central, East and Southeast Europe*, Vol. 5, pp.155-188.

Mencinger, Joze (2012). The Economics of Enlargement. In *EU Enlargement Anno 2012: A Progressive Approach*, Ed. by Hannes Swoboda, Ernst Stetter and Jan Marius Wiersma, pp. 155-162.

Milovanovic, Branko (1999). Explaining the Increase in Inequality During Transition. *Economics of Transition* Vol.7, No.2, pp. 299-341.

Ravalion, Martin and Shaohua, Chen (2003). Measuring Pro – Poor Growth. *Economic Letters*, Vol.78, pp.93-99.

Tevdovski, Dragan and Filipovski, Vladimir (2013). A Diagnostics Approach to Small and Open Economies: The Case of the Republic of Macedonia. *Journal of International Development* (in the process of publication).

World Bank (2013). Gini index (http://data.worldbank.org/indicator/SI.POV.GINI). Last access: 10.3.2013.