Center for Economic Theories and Policies Sofia University St. Kliment Ohridski Faculty of Economics and Business Administration

ISSN: 2367-7082



Macroeconomic Determinants of Income Inequality in Bulgaria

Silviya Bratoeva-Manoleva

BEP 07-2017 Publication: August 2017

Online: http://www.bep.bg Contact for submissions and requests: bep@feb.uni-sofia.bg

Macroeconomic Determinants of Income Inequality in Bulgaria

Silviya Bratoeva-Manoleva¹

August 18, 2017

Abstract

Income inequality in Bulgaria increased noticeably over the period 1990-2015. This paper aims to identify the main macroeconomic determinants of income inequality. We find that GDP growth and structural changes in Bulgarian economy are among the determinants which deepen income inequality. The statistically significant negative estimate of the government expenditures on social protection means that an increase in social transfers mitigate income inequality. The empirical results show that inflation, foreign direct investment and education are statistically insignificant in affecting income inequality.

JEL Classification:D31, C32, P24Key words:income inequality, OLS regression, transition economies

¹Assistant Professor, Department of Economics, University of Economics – Varna, smanoleva@ue-varna.bg

1. Introduction

The economic development of Bulgaria after 1990 has been accompanied by a considerable increase in income inequality. The transition from a centrally planned economy to a market economy and the establishment of market mechanisms of forming and distributing income have led to restructuring the household income, as well as to quantitative and structural changes in income inequality. As a result of this, Bulgaria was ranked among those with the highest level of income inequality within the European Union.

The purpose of the present study is to bring forward the major macroeconomic determinants for the increase in the income inequality in Bulgaria, taking into account the specific characteristics of the development of the country in the period 1990-2015. Revealing these determinants is important and can be used for the choice of policies, which could decrease income differentiation and safeguard the economy of the country and its population from the unfavorable consequences of the high level of inequality.

2. Trends of income inequality in Bulgaria

During the period 1990-2015, income inequality in Bulgaria grew significantly in spite of some cyclical fluctuations in its development. Figure 1 shows the dynamics in Gini coefficient, which is one of the major criteria for income differentiation. It is evident from the graph that the Gini coefficient has increased by more than 14 percentage points or with about 62% over the last 25 years.

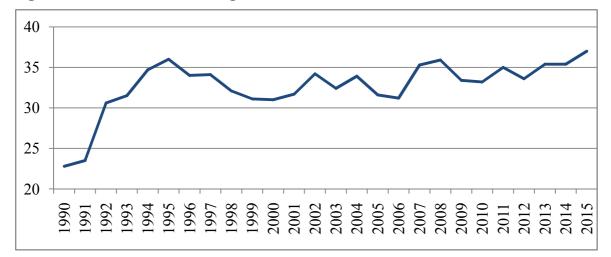


Figure 1. Gini coefficient in Bulgaria, 1990-2015

Source: National Statistical Institute

The most dramatic increase in income inequality was observed in the first five years of the transition, which was a reflection of the deepening economic crisis spreading across the country in the early 1990s. The liberalization of the economic activities, the structural reforms, the collapse in the manufacturing sector, the formation of a massive hidden economy, as well as the conducted very restrictive policy in respect to the labour income in the public sector and the social transfers have all led to restructuring of income, impoverishing of wide circles of the population and growing inequality during that period. The peak of the income differentiation was in 1995, when the Gini coefficient was 36.

During the period 1996-2000, which covers both the period of the financial and economic crisis of 1996-1997, as well as the following stabilization, the income inequality decreased, and in 2000, the Gini coefficient was 31. According to Tsanov (2012), one of the major factors determining the dynamics of inequality in 1996 and 1997 was the restructuring of the sources of income, related to the reduction of the share of the salaries, the social transfers, and the revenue from entrepreneurship and property ownership. A leading role for reducing income differentiation after 1997 was played by the conducted income compensation policy and the reforms in the taxation system.

From 2001 until 2006, there was an unstable change observed in the income differentiation, and in 2006, the Gini coefficient had the same values as in 2000. During the period 2007-2015, the Gini coefficient grew compared to the previous years, and its value in 2015 was 37. A number of factors had an impact on the inequality dynamics after 2001, which reflected various aspects of market economy², including the deepening integration of the national economy within the global economy. The crisis of 2008-2009 also had an impact on the distribution and redistribution processes, going on in the country, and led to further income differentiation after 2009.

From the perspective of drawing comparisons on international scale, the level of inequality in income distribution in Bulgaria can be defined as average, however, from the perspective of the regional criteria, it is one of the highest within the European Union. The data about the Gini coefficient for the EU member-states for the period 2006-2015 is presented on Figure 2.

² The European Commission recognized Bulgaria as a functioning market economy in 2002 in its regular Annual Report on Bulgaria's progress in the EU accession process.

It makes evident that income inequality in the EU, as a whole, slightly increased from 30,3 to 31.

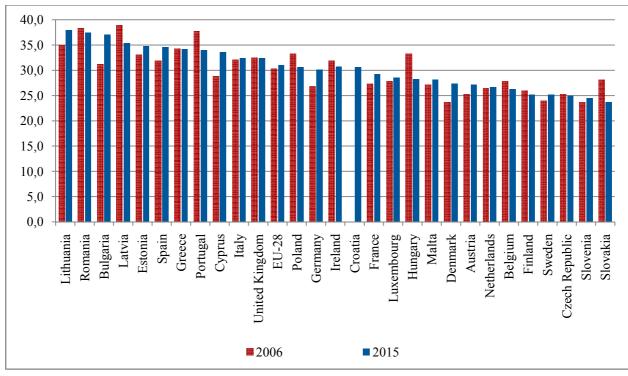


Figure 2. Gini coefficient in European Union

Source: Eurostat – EU-SILC

The highest income inequality within the EU is in Lithuania, Romania and Bulgaria, where the Gini coefficient values in 2015 for these three countries were almost identical – 37.9; 37.4 and 37. Even more disturbing is the fact that for the period 2006 - 2015, Bulgaria recorded the largest increase of the Gini coefficient (by 5.8 percentage points), while in Lithuania there was a smaller increase (by 2.7 percentage points), and in Romania it even decreased (by 0.9 percentage points).

The countries with the lowest income inequality are: Slovakia, Slovenia, the Czech Republic, Sweden, Finland, Belgium and the Netherlands, where the Gini coefficient is within 25 and 26. Three countries from Central and Eastern Europe also fall into this group that has passed through a transition to market economy after 1990, however, they managed to keep income inequality to a very low level.

In Bulgaria, the Gini coefficient in 2015 was by 13.3 percentage points, or with 56% higher than the one in Slovakia (the country with the lowest inequality). Inequality in Bulgaria is by 6 percentage points, or with 19.4% higher than the average values of this indicator within the EU.

The analysis shows that income inequality in Bulgaria grew considerably in the period 1990-2015. Therefore, defining the key determinants for the formation and dynamics of income inequality, as well as the direction and mechanisms of their impact, are issues of particular importance, the answers of which could be used for the choice of policies and tools to achieve optimal income differentiation and increase household well-being.

3. Determinants of income inequality

There are many studies in the economic literature concerning the determinants of income inequality, however, most of them are focused on one or several determinants. When bringing forward the major macroeconomic determinants, the present research is based on the specific characteristics of the country's economic development over the last 25 years. That has been a period of economic transformation for Bulgaria, related to a transition from a centrally planned economy to a market economy, as well as of a political transformation from a totalitarian to a democratic type of government. Therefore, in selecting the determinants it is important to review the existing empirical studies dedicated to the countries in transition from Central and Eastern Europe, which after 1990 have had a similar way of development not only in respect to establishing market principles for the functioning of their economies, but also with regard to their membership in the European Union.

The growing income inequality in the transition economies is the subject of a great scientific interest over the last two decades. The majority of the empirical studies in that area are focused exactly on defining the factors, which determine the processes of enhanced income differentiation. Examples for such studies are those of Ferreira (1997), Milanovic (1999), Ivaschenko (2002), Giammatteo (2006), Ivanova (2007), Mitra and Yemtsov (2006), Milanovic and Ersado (2008), Bandelj and Mahutga (2010). These studies are related mostly to factors that are typical for the transition to a market economy, such as privatization, restructuring of the companies and of the structure of the economy, price liberalization and

other types of economic reforms, government policies related to social transfers and tax redistribution.

The following major determinants of income inequality in the transition economies can be outlined on the basis of those studies: asset transfer and private sector growth; widening the wage differences; restructuring and unemployment; decline in manufacturing during the first years of the transition; changes in government expenditure and taxation; price liberalization and inflation; globalization and change in technologies.

The transition from centrally-planned to market economy is connected with *asset transfer and private sector growth*. The processes of economic liberalization in the early 1990s led to the emergence and gradual growth of the private sector, as well as to a diminishing importance of the government sector enterprises, which were the only form of ownership before the changes. One of the main features of the transition has been related to the large-scale transferring of state-owned assets to private ownership through privatization. This has led to income restructuring and the emergence of new sources of income, whose share in the total income has been gradually growing and results in deepening of income inequality. Privatization is also related to the concentration of income in a smaller number of people, which also increases the income inequality in the CEE countries. Empirical studies typically yield a significant positive association between inequality and privatization (Ferreira, 1997; Bandelj and Mahutga, 2010; Grimalda, Barlow and Meschi, 2010; Rose and Viju, 2014).

Another key feature of the transition is *raising wage differences*. The changes in the ownership structure, and hence, in employment and the establishment of market principles lead to substantial changes in the method of salary formation. Until 1989, in transition countries there were a centralized system for salary formation, which guaranteed low levels of income inequality in the country. With the start of the transition, it was replaced by a decentralized system, where salaries were determined on a company level and payment was largely related to the skills, education and work efficiency of the workers and employees. That has led to a more differentiated payment in the private sector, as well as to an increase in inequality in income distribution, as far as the role of salaries is determining for the formation and dynamics of the general income inequality. Milanovic (1999) examines the changes in inequality in 6 transition countries (Bulgaria, Hungary, Latvia, Poland, Russia and Slovenia)

over the period 1987-1995 and finds that the most important factor driving overall inequality upwards was increased inequality of wage distribution.

Growing income inequality in the transition economies is also associated with the process of restructuring and rising unemployment (Mitra and Yemtsov, 2006). The economic liberalization in the beginning of the transition led also to some profound changes in the sectoral structure of the economies. There is a clear trend observed in the CEE countries for shrinking the manufacturing sector, as well as the agricultural sector at the expense of the increasing service sector. The ongoing deindustrialization processes are among the factors, which have the potential to increase income inequality, since they are related to the relocation of workforce to tertiary sector activities, which involve bigger differences in payment, such as the financial sector and the sector of high technologies, for example. Furthermore, releasing workforce from the primary and secondary sectors leads to increasing the unemployed people mostly in the low-income groups of the population, who have lower education and qualification. This holds a potential for further aggravating income inequality not only through increasing the share of the unemployed, but also due to the relocation of labour resources to sectors with bigger differences in payment, such as the service sector. The prevailing opinion is that the low-income groups of the population, women, young people and those with lower level of education face the highest risk of being affected by the growth in unemployment.

The first years of the transition are connected with *sharp decline in manufacturing*. The market reforms carried out in the CEE economies led to bankruptcies of enterprises and closing some traditional types of production (Mitra and Yemtsov, 2006). As a result of that, the GDP in the transition countries shrank considerably, which made the recovery of their economies difficult and lengthy in time. Some of the transition countries like the Czech Republic, Hungary and Slovenia coped with the situation quickly enough, while in Bulgaria that process lasted longer. It was only in 2004, that Bulgaria managed to reach the levels of the actual GDP from the beginning of the transition, where the growth of the actual GDP in total for the entire period 1990-2015 was 31.8%.

The government expenditure is one of the major fiscal policy instruments whereby the government can influence income inequality towards decreasing it. The state had a decisive role in the years of the centrally governed economy in respect to the income of households,

healthcare and education. Over that period, one of the major functions of the state was to guarantee employment, equality and well-being for all of its citizens. In a research by M. Ivanova (2007), dedicated to the countries in transition, the author maintains the thesis that among the main factors for the substantial increase in income inequality in CEE in the first years of the transition was the sudden withdrawal of the state from the social functions that it had been previously performing.

In spite of the general trend for limiting the redistribution functions of the CEE countries, there are differences between the separate countries in the extent of preserving that function, which largely explains also their different levels of income inequality. The redistribution effect of transfer payments in Hungary and the Czech Republic had the most significant contribution for decreasing income inequality. That was due to the broad coverage of the social protection and assistance systems and the widely used active labour market policies. The redistribution role of the transfer was much weaker in the Baltic countries, as well as in Bulgaria and Romania, which explains the higher level of income inequality in those countries.

The tax policy reform also affects income inequality in CEE countries. The transition to a market economy induced a dramatic shift in the composition and incidence of taxes, such as the introduction of value added tax, while witnessing declining tax compliance. A number of Central and Eastern European countries (including Bulgaria) have adopted a flat tax on individual or corporate income. Most of the empirical studies show that the flat tax has a negative effect on income inequality. Vionea and Mihaescu (2009) examine the impact of the flat tax on inequality in Romania and find out that the higher the gross wage is, the higher the flat tax gains are. Caprirolo (2006) tests various scenarios for the introduction of a revenue-neutral 20% flat tax rate in Slovenia. The analysis reveals that the net wage of low skilled workers would decrease and the net wage of high skilled workers would increase, therefore increasing inequality.

The transition to a market economy is involved with *price liberalization*, which leads to a considerable growth in price levels. It is a well-known fact that high inflation has a powerful redistribution effect, where most affected are the individuals with fixed income: predominantly civil servants, pensioners and social benefit recipients. This factor is mostly valid for Bulgaria, where inflation in 1996 and 1997 reached three-figure values. Empirical

studies on the determinants of income inequality in the transition countries show that inflation contributed to rising income disparity in the 1990s (for example Ivaschenko, 2002; Milanovic and Ersado, 2008).

The globalization processes, some of which are related to a growing influx of foreign direct investment into the economies in transition, and the changes in technologies prompted by that, are among the income inequality determinants, since they influence the demand for a certain type of labour, and, respectively, its price. The prevailing opinion (for example Bandelj and Mahutga, 2010; Grimalda, Barlow and Meschi, 2010) is that the effect on income inequality is towards its increasing, because the demand for qualified labour grows at the expense of the non-qualified labour, which leads to a greater differentiation in payment. Therefore, the sectorial focus of the foreign direct investment (FDI) is of critical importance.

When reporting the results from studies of the income inequality determinants in the CEE countries, it is necessary to take into account the fact that they use panel data for several countries, and therefore, studying the determinants for one specific country (as in this case for Bulgaria) may give different results, since, in spite of the existing common features of the transition economies, each separate country has also its own specific characteristics in its economic development. The way in which the separate determinants influence income inequality depends both on the initial conditions, and on the choice made in respect to the economic policy of the particular country.

4. Empirical model

In the econometric study of the macroeconomic determinants of income inequality in Bulgaria there has been an analysis made of the dynamic series for the period 1990-2015. The econometric study was carried out using the statistical software product STATA. The selected time series and the restricted number of observations narrow the possibilities for applying more complex econometric techniques, and therefore the study uses the simple OLS regression. The short time series creates restrictions also in the number of the independent variables, which can be included in the model. As a result of that, the selected multiple regression model in the current study looks as follows:

 $GINI_t = \beta_0 + \beta_1(lnGDP)_t + \beta_2(Serv)_t + \beta_3(FDI)_t + \beta_4(Infl)_t + \beta_5(ExpSP)_t + \beta_6(Edu)_t + e_t$

Where the dependent variable is the Gini coefficient – GINI, β_0 is a free parameter, e_t is an error term, and the independent variables are: LnGDP – natural logarithm of GDP per capita; Serv – a share of the service sector in gross added value; FDI – a relative share of the reserve of foreign direct investment in the GDP; Infl – inflation rate; ExpSP – a share of the government expenditure for social protection in the GDP and Edu – gross enrollment ratio in secondary education.

GDP per capita is an indicator, which is traditionally present in the empirical studies concerning the determinants of income inequality. Referring to Kuznets hypothesis about the reverse U-shaped curve, which reflects the dynamics of income inequality, and having in mind the fact that GDP per capita in Bulgaria (as well as in the other countries from Central and Eastern Europe, which have passed the transition from a centrally planned to market economy) is lower than the GDP in the western countries, it can be assumed that the growth in the level of economic development will lead to increasing the income inequality in the country. Therefore, the expected result from the regression analysis is for a positive coefficient before LnGDP.

The inclusion of the share of the service sector in gross added value (Serv) among the independent variables in the model is aimed at reflecting the impact of the structural changes on Bulgarian economy in the transition period and after that, which are related to a significant growth of the tertiary sector on the income inequality dynamics. Since payment in the service sector is more differentiated than the one in the manufacturing sector, the expected results are associated with a positive sign of the regression coefficient before that variable.

FDI is one of the variables, which takes into account the role of globalization for the changes in income inequality. The stock of FDI has been chosen as an independent factor in the present empirical study, and not the incoming FDI flow. The reason for this is that the FDI stock reflects the long-term effect from FDI, while the annual FDI flows refer only to the temporary influx of foreign capital. Most of the studies dedicated to the relation between FDI and income inequality for the economies in transition show the existence of direct correlation between those two values, and, therefore, the expectations are for a positive regression coefficient before FDI. Inflation is a factor, which has a great influence on income distribution. Its greatest impact is on the people with fixed income, who are also the poorer part of the population (pensioners, people from socially disadvantaged groups, etc.), and has strong redistribution effects. Most of the studies bring forward a direct correlation between the inflation rates and income inequality (for example, Cornia and Kiiski, 2001; Blejer and Guerrero, 1990; Edwards, 1997; Xu and Zou, 2000; Thalassinos, Ugurlu and Muratoglu, 2012), which provides grounds for the assumption that the regression coefficient before that independent variable will be with a positive sign.

The share of the government expenditure for social protection in the GDP (ExpSP) is an indicator, which reflects the redistribution role of the government in respect to household income, and the studies focused on income inequality determinants show that the increase in the government expenditure for social protection leads to decreasing income inequality (for example, Dabla-Norris et al, 2015; Mihaylova and Bratoeva-Manoleva, 2017). In that sense, it is expected that the regression coefficient will be with a negative sign.

The last independent variable included in the model is gross enrollment ratio in secondary education (Edu). This is one of the indicators for the human capital level, and from this perspective it has been included in the models as one of the independent variables. In the research works dedicated to the relation education–income inequality, the dominant opinion is that the accumulation of human capital facilitates the decrease in income differentiation (for example Hoeller, Joumard and Koske, 2014). The effect of reducing income inequality is explained with the fact that the higher level of education increases the offer of qualified labour, which decreases the differences in payment. In that sense, the expected results from the regression analysis are for a negative sign before the gross enrollment ratio in secondary education.

The sources of statistical information for the variables included in the model are: the National Statistical Institute (for the Gini coefficient, the GDP per capita, the share of the service sector in the gross added value, the inflation rate and the share of government expenditure in the GDP for social protection), and the World Bank (for the gross enrollment ratio in secondary education), and UNCTAD (for the relative share of the FDI reserve in the GDP).

5. Empirical results

Building a model, which should have as a result most adequate and high-quality evaluations of the interrelations between the selected independent variables and the dependent variable, requires following a certain logical structure of econometric modeling.

The first step in the econometric analysis is related to conducting tests for the stationarity of the variables, included in the model. The necessity for these tests results from the fact that a major part of the macroeconomic variables are integrated at their levels and their use leads to a higher determination coefficient - R^2 (Granger and Newbold, 1974). At the same time, the remaining elements in the model are very likely to demonstrate positive autocorrelation, expressed in the low value of the Durbin-Watson statistics. Such a situation would lead to the so-called false regression, where the determination coefficient is bigger than the DW statistics. In order to avoid such an undesired result, all the variables in the model are subjected to tests for stationarity. The Augmented Dickey-Fuller Test has been used for the purposes of the present analysis. The test results show that the Gini coefficient, the share of the service sector in the gross added value and inflation are stationary at a level, while the logarithm of the GDP per capita, FDI, the expenditure for social protection and education are stationary at the first difference. It is necessary to clarify at this point that the first difference of the logarithmic values of GDP per capita actually represents the rate of change of that value. The variables included in the model are not integrated from one and the same order, and, therefore it is not necessary to conduct the Johansson co-integration test for establishing long-term correlation between them. This shows that the choice of the method of the smallest squares for the current model is correct.

The main results from the conducted regression analysis are presented in table 1. It is evident from table 1 that the F-statistics shows good general results for the established regression model, since F=7.84. The value of p for the entire model is 0.0004, i.e. the probability of an error is less than 1%. The determination coefficient is high (R Square = 0.7344) and it shows that 73.44% of the change in Gini coefficient during the period 1990-2015 can be explained with the changes in the independent variables included in the model.

Dependent variable: GINI	
Independent variables :	
GDP	5.38508 (0.007)***
Serv	0.187883 (0.006)***
FDI	-0.0701104 (0.156)
Infl	0.0026584 (0.131)
ExpSP	-0.5785306 (0.049)**
Edu	0.0646461 (0.658)
Number of observations	24
F-statstics	7.84
P-value	0.0004
R ²	0.7344

Table 1. Regression results

Note: *** p<0.01; ** p<0.05; * p<0.1

The results from the regression analysis in respect to the separate variables show that GDP per capita is a statistically significant variable with 1% probability of an error. During the period 1990-2015, there was a direct correlation between that variable and income inequality, since the sign of the regression coefficient β_1 is positive. It can be concluded on the basis of the value of β_1 that the growth of GDP per capita by 1% would lead to an increase in income inequality by $0.054\%^3$. That means that the benefits from the economic development of Bulgaria during that period were not distributed evenly among the population, which is evident not only from the enhanced income differentiation, but also from the increasing share of population living in a risk of poverty and social exclusion⁴. The obtained positive regression coefficient shows that the impact of the GDP dynamics on the income inequality in Bulgaria depends on the level of economic development of the country.

³ The interpretation of the regression coefficient, when the independent variable (GDP) is logarithmic, and the dependent one (GINI) is within its natural values, is the following - 1% change in the independent variable would lead to $(\beta_1/100)$ % change in the dependent variable.

⁴ In 2015, 22% of the population lived in poverty, while 41,3% of the population lived in a risk of poverty and social exclusion, and this ranked Bulgaria on the very top within the EU.

The second factor variable, which is included in the model, is the share of the service sector in the gross added value. It is also statistically significant with 1% probability of an error. The regression coefficient β_2 before it is positive and it shows that the increase of the share of the service sector by 1% would lead to a growth of the Gini coefficient by 0.19%. The results confirm the earlier examined effect of the deindustrialization on income inequality. The changes, which have occurred in Bulgarian economy after 1990 have led to an increase in the share of the service sector, as well as to reduction of the industry sector in the total production, while payment in the first sector is much more differentiated than in the second one, which increases income inequality.

The regression analysis shows that FDI is a statistically insignificant variable, since the value of p is higher than 0.1. Probably, those results are due to the chosen period of analysis, namely 1990-2015. During the first 10 years of the transition, which were characterized by a substantial growth of income inequality, the presence of FDI in this country was very modest. Probably, the relation FDI-income inequality should be tested for the period 2000-2015, since those were the years of an increased influx of FDI into the country.

The next factor variable, which is included in the model, is inflation. It is evident from table 1 that it is a statistically insignificant factor for explaining income inequality during the period 1990-2015, and that is due to the price instability in this country since 1998. The results from the regression analysis do not confirm the expectations for direct correlation between the inflation and the income inequality in Bulgaria during the analyzed period of 25 years, yet, it can be claimed with certainty that the price growth over the first years of transition was among the factors for increasing income differentiation during that period.

The share of the expenditure for social protection in the GDP is a statistically significant variable with 5% probability for an error. As it could have been expected, the sign of the regression coefficient $\beta_{\rm B}$ is negative, which means that the expenditure for social protection facilitates the decrease of income inequality in Bulgaria. The coefficient value shows that increasing the transfer payments by 1% would lead to reducing the Gini coefficient by 0.58%.

The last independent variable, included in the model, is the gross enrollment ratio in secondary education. Nevertheless, theory and the majority of empirical studies show that

education is a factor, which should reduce income inequality, in the present research it is statistically insignificant (p=0.66). The growing gross enrollment ratio in secondary education in Bulgaria during the analyzed period did not have the expected impact on income differentiation. The explanation for this could be found in the weak involvement of payment with the level of education, which is one of the major problems on the labour market.

6. Conclusions and policy recommendations

The conducted analysis of the main macroeconomic determinants of income inequality in Bulgaria does not claim to be comprehensive, but is aimed at bringing forward the key factors for the period 1990-2015 on the basis of which income differentiation was formed and was subsequently growing. The results from the econometric study show that the GDP per capita and the share of the service sector in the gross added value are among the statistically significant variables, whose increase leads to a bigger income differentiation. The government expenditure for social payments is also statistically significant, however it has a reverse effect on income inequality. The other three variables in the model, namely – inflation, FDI and education are statistically insignificant.

The results suggest that the long-term GDP growth is of essential importance for income inequality in Bulgaria but that is not a sufficient condition for improving the well-being of all the income groups. The benefits from the achieved economic growth should reach out to the entire population, and not only to a small part of it, which is at the top of the income distribution. It is also necessary to undertake measures for encouraging the development of manufacturing sector, since the latter employs more low-qualified labor. The effect from attracting investment to the industrial sector would be increasing the wages of the low-qualified workers and decreasing income differentiation.

The empirical study has shown that in Bulgaria education is not among the factors, which influence the level and dynamics of income inequality. In view of being capable to perform its role that it should have in respect to income distribution, it is necessary to undertake measures related to improving the scope and quality of education. That will increase the level of human capital, so the offer of qualified labor will grow, which would lead to decreasing the differentiation in payment. The final result will be reducing income inequality.

Concerning the role of the state, it should perform its redistribution functions in a way, which would guarantee the well-being of the citizens in the country, while not leaving a large part of the population on or under the threshold of poverty. This is where the active measures on the labour market will have a role to play, rather than the social transfers themselves. At the same time, the social payment system should be structured in such a way that it should not create incentives for the poorer part of the population to stay outside the labor market, and remain in the "trap of poverty". The state has a very important role in ensuring the income of the population in retirement age. It is the main source of income for the pensioners, and therefore, there is a need for a new pension policy, which should increase pensioners' income, taking into account the unfavorable demographic trends in this country and the aging of the population, and thus facilitate the decrease of income inequality.

The increase of the income with the poorer part of the population should be expected not that much from the redistribution measures on the part of the government, but rather from enhancing education, qualification and productivity of the workforce. It is necessary that the government should focus its efforts on elaborating and implementing policies, which would have their impact on the sources of poverty, and not only reduce its severity through the various redistribution mechanisms. From this perspective, the implemented active policies on the labour market related to education, requalification and ensuring employment are steps in the right direction, however, it is necessary to improve their efficiency by overcoming their formality in many cases and looking for a long-term effect from those programs. The aforementioned active measures on the labor market will decrease income inequality and poverty without distorting the market principles of distribution, which is of a critical importance for a well-functioning market economy.

It can be concluded that conducting appropriate macroeconomic policies is essentially important for encouraging the so-called shared prosperity, where the benefits from the achieved economic growth reach out to all the members of the society, while not affecting the incentives for working and entrepreneurship, or restricting the potential for a future growth of the economy, but just the opposite – facilitating its sustainable development.

References:

Bandelj, N. and Mahutga, M. (2010). "How Socio-Economic Change Shapes Income Inequality in Post-Socialist Europe" *Social Forces*, Vol. 88, Issue 5, 2133–2161.

Blejer, M. and Guerrero, I. (1990). "The Impact of Macroeconomic Policies on Income Distribution: An Empirical Study of the Philippines" *The Review of Economics and Statistics* Vol.72, No.3, 414-423.

Caprirolo, G. (2006). "Proportional (flat) personal income tax rate and competitiveness in Slovenia: Towards understanding the policy issues and policy implications" paper presented at *The International Academic Forum on Flat Tax Rate*, organized by the Center of Excellence in Finance, Bled, Slovenia, <u>https://www.yumpu.com/user/cef.see.org</u>

Cornia, G. A. and Kiiski, S. (2001). "Trends in Income Distribution in the Post-World War II Period" *UNU/WIDER Discussion Paper* No. 2001/89.

Dabla-Norris, E. et al (2015). "Causes and Consequences of Income Inequality: A Global Perspective" *IMF Staff Discussion Note* SDN/15/13.

Edwards, S. (1997). "Trade Policy, Growth and Income Distribution" *American Economic Review* Vol.49, No.1, 77-88.

Eurostat. Eurostat database, http://ec.europa.eu/eurostat.

Ferreira, F. (1997). "Economic Transition and the Distributions of Income and Wealth", *The World Bank Policy Research Working Paper* No. 1808.

Giammatteo, M. (2006). "Inequality in Transition Countries: The Contributions of Markets and Government Taxes and Transfers" *Luxembourg Income Study Working Paper* No. 443.

Granger, C. W. J. and Newbold, P. (1974). "Spurious Regressions in Econometrics" *Journal* of *Econometrics* №2, 111-120.

Grimalda, G., Barlow, D. and Meschi, E. (2010). "Varieties of capitalisms and varieties of performances: Accounting for inequality in post-Soviet Union transition economies" *International Review of Applied Economics* Vol. 24, Issue 3.

Hoeller, P., Joumard, I. and Koske, I. (2014). "Reducing Income Inequality While Boosting Economic Growth: Can It Be Done? Evidence From OECD Countries" *The Singapore Economic Review* 59, 1450001.

Ivanova, M. (2007). "Inequality and Government Policies in Central and Eastern Europe" *East European Quarterly* 41(2), 167-204.

Ivaschenko, O. (2002). "Growth and inequality: evidence from transitional economies" *CESifo Working Paper* No. 746.

Mihaylova, S. and Bratoeva-Manoleva, S. (2017). "Social Transfers and Income Inequality in Bulgaria" *South East European Journal of Economics and Business* Vol. 12 (1), 38-49.

Milanovic, B. (1999). "Explaining the Increase in Inequality during Transition" *Economics of Transition* 7 (2), 299–341.

Milanovic, B. and Ersado, L. (2008). "Reform and Inequality during the Transition: An Analysis Using Panel Household Survey Data, 1990-2005" *The World Bank Policy Research Working Paper* No. 4780.

Mitra, P. and Yemtsov, R. (2006). "Increasing Inequality in Transition Economies: Is There More to Come?" *The World Bank Policy Research Working Paper* No. 4007, 11-16.

National Statistical Institute. NSI database, http://nsi.bg.

Rose, S. and Viju, C. (2014). "Income inequality in post-communist Central and Eastern European countries" *Eastern Journal of European Studies* Vol. 5, Issue 1, 5-19

Thalassinos, E., Ugurlu, E. and Muratoglu, Y. (2012). "Income Inequality and Inflation in the EU" *European Research Studies* Vol. XV, Issue (1).

Tsanov, V. et al (2012). *Labour Market and Social Protection in the Context of the Bulgarian Economic Development (1990-2011)*. Bulgarian Academy of Sciences, Prof. Marin Drinov Academic Publishing House, in Bulgarian.

Vionea, L. and Mihaescu, F. (2009)."The Impact of the Flat Tax Reform on Inequality - the Case of Romania" *Romanian Journal of Economic Forecasting* Vol.12, Issue 4, 19-41

Xu, L. and Zou, H. (2000). "Explaining the Changes of Income Distribution in China" *China Economic Review* Vol.11, No.2, 149-170.