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TESTING KALDOR'S FACT: EMPIRICAL EVIDENCE FROM EUROPEAN COUNTRIES

ТЕСТИРАЊЕ КАЛДОРОВЕ ЧИЊЕНИЦЕ: ЕМПИРИЈСКИ ДОКАЗИ ИЗ ЕВРОПСКИХ ЗЕМАЉА

Summary: *This paper discusses the functional distribution of income, as a consequence of decoupling phenomenon between workers' compensation and labor productivity. This issue has been observed since the mid-1970s in most developed economies, resulting in a trend of decreasing labor income in national income or GDP. Despite conventional economic theory predicting a proportional increase in workers' income with increases in labor productivity, empirical results suggest that this relationship is not being realized. The study analyzes the distribution of labor income and capital income in relation to GDP in European countries, in order to gain insight into the conditions and trends of labor income and to evaluate the functional distribution of income at the level of an individual country. The paper provides a detailed analysis of labor share on the example of all countries in Europe and compares countries to determine the direction and degree of trend of the labor share. The results highlight the need for further research on this topic and provide insight into the factors contributing to the decoupling of productivity from workers' compensation.*

Keywords: *distribution of income, national income, labor productivity, GDP.*
JEL Classification: *D5, D33, E10.*

Резиме: *Овај рад разматра функционалну дистрибуцију дохотка, као последицу феномена раздвајања накнаде радника и продуктивности рада. Ово питање се примећује од средине 1970-их у већини развијених економија, што је резултирало трендом смањења дохотка од рада у националном дохотку или БДП-у. Упркос томе што конвенционална економска теорија предвиђа пропорционално повећање дохотка радника са повећањем продуктивности рада, емпиријски резултати сугеришу да се овај однос не остварује. Студија анализира дистрибуцију прихода од рада и дохотка од капитала у односу на БДП у европским земљама, како би се стекао увид у услове и трендове прихода од рада и проценила функционална расподела дохотка на нивоу поједине земље. У раду је дата детаљна анализа учешћа радне снаге на примеру свих земаља у Европи и упоређивање земаља како би се утврдио правац и степен кретања удела радне снаге. Резултати истичу потребу за даљим истраживањем на ову тему и пружају увид у факторе који доприносе раздвајању продуктивности од накнаде радника.*

Кључне ријечи: *дистрибуција дохотка, национални доходак, продуктивност рада, БДП.*
ЈЕЛ касификација: *Д5, Д33, Е10.*

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1. INTRODUCTION

The phenomenon of decoupling between workers' compensation and labor productivity has been observed since the mid-1970s, with practical results deviating from the notion that a rising tide lifts all boats. The decoupling of productivity from workers' compensation has been noted in most developed economies and has resulted in a trend of decreasing labor income in national income or GDP. Despite the conventional economic theory predicting a proportional increase in workers' income with increases in labor productivity, empirical results in recent decades suggest that this relationship is not being realized. This suggests that the functional distribution of income has undergone significant changes, with a growth in the unequal distribution of income between workers and an increase in the share of capital income in total income. The stability of the labor share of income has been a salient feature of macroeconomic models since the seminal work of Kaldor in 1957. The initial stylized facts to be named as such were those identified by Nicholas Kaldor, which have now become known as the "Kaldor facts" and are widely recognized as significant in the field. This essay will primarily focus on these Kaldor facts, as they hold great methodological interest. However, our framework is comprehensive enough to encompass a wide range of stylized facts, and we will briefly touch upon other notable ones in the conclusion. This characteristic has wide-ranging implications for the configuration of the production function, inequality, and macroeconomic dynamics. The present study provides documentation of a significant decrease in the global labor share since the commencement of the 1980s. Notably, the decline has been widespread, occurring across the vast majority of countries and industries. The purpose of this paper is to analyze the distribution of labor income and capital income in relation to GDP in European countries, in order to gain insight into the conditions and trends of labor income. Specifically, the paper seeks to analyze Kaldor's stylized fact about the stability of the share of labor income in total production. The analysis of this trend and its implications for income distribution in the developed economies provides insight into the factors contributing to the decoupling of productivity from workers' compensation and highlights the need for further research on this topic.

The paper is structured as follows: after the introduction, a brief overview of the methodology used in the paper is made. In the second part, an extensive analysis of Labor Share is given on the example of all countries in Europe. A comparison of countries was made in order to determine the direction and degree of trend of the Labor Share and to evaluate the functional distribution of income at the level of an individual country. The last section concludes.

2. LITERATURE REVIEW

The trend in labor share is largely dependent on the trend of workers' compensation and the trend of labor productivity. It can be stated that when the salary of the workers on average increases to a greater degree in relation to the average increase in labor productivity, there is an increase in the labor share. Conversely, when the growth of the average wage lags behind the growth of labor productivity, it results in a fall in the labor share. Furthermore, such relationships become more complex if the percentage of wages in total compensation changes over time, or if different deflators are used to deflate wages and output per worker (for example, using the CPI as a deflator, and using the GDP deflator can contribute to a significant difference in labor share). This statement about the causal relationship between wages, labor productivity and labor share has been confirmed in practice. Namely, the results show that in a large number of countries where the increase in wages significantly lags behind the increase in labor productivity, there has been a decrease in the labor share (ILO 2014).

There has been a growing gap between gross output and net output in the years since 1973 as an increasing share of GDP goes to replace worn out capital goods. Only net output can raise living standards, since the portion of output that goes to replacing depreciated capital equipment cannot directly affect living standards. A net measure of annual productivity growth is nearly 0.2 percentage points lower than a gross measure for the years from 1973-2006. By contrast, the two measures were nearly identical over the period from 1947 to 1973 as the share of output going to depreciation changed little over this period (Baker 2007).

It the paper of Bentolila and Sain-Paul (2003) analyze the performance of the model empirically, using data on a panel of 13 industries in 12 OECD countries, over the period 1972-93, by estimating the relationship between the labor share and the capital-output ratio, controlling for variables intended to capture some of the factors mentioned above. In the estimation we follow Arellano and Bover's (1995) system estimator for panel data, i.e. a generalized method of moments estimator with instrumental variables which exploits the information contained in the relationship between the variables in both levels and first differences.

In most of the highly developed G20 countries for which data are available, average wage growth has lagged significantly behind average labor productivity growth, resulting in a decline in the labor share in these countries. However, it should be emphasized here that this tendency was not the case in all industries and activities. In fact, in many countries, real wages recorded stronger growth compared to labor productivity growth in a number of industries, that is, this ratio was reversed in industries characterized by below-average productivity growth. Hence, the labor share declined on average within high-productivity industries where productivity increased faster than wages, creating the conditions for a decline in the labor share (OECD 2012).

Since 1973, hourly compensation of the vast majority of American workers has not risen in line with economy-wide productivity. In fact, hourly compensation has almost stopped rising at all. Net productivity grew 72.2 percent between 1973 and 2014. Yet inflation-adjusted hourly compensation of the median worker rose just 8.7 percent, or 0.20 percent annually, over this same period, with essentially all of the growth occurring between 1995 and 2002. Another measure of the pay of the typical worker, real hourly compensation of production, nonsupervisory workers, who make up 80 percent of the workforce, also shows pay stagnation for most of the period since 1973, rising 9.2 percent between 1973 and 2014. Again, the lion's share of this growth occurred between 1995 and 2002 (Bivens and Mishel 2015).

The trend of the labor share is in a direct causal relationship with changes in the level of employment in individual sectors. If we take into account the fact that the labor share in capital-intensive industries is higher compared to the labor share in labor-intensive industries, in that case the transition of workers from labor-intensive sectors to capital-intensive sectors results in a decrease in the labor share in national economies. In this direction, it should be emphasized that when analyzing the trend of trend of labor share, it should be approached extremely carefully. A key question is whether the decline in labor share a consequence of a particular structural shift in employment from is labor-intensive to capital-intensive industries, or whether the decline is the result of a decrease in labor share in each industry. Part of the empirical research done on the case of some of the OECD countries indicates that in 20 of the 26 countries for which data were available, there was a decrease in the labor share in the industry, that is, that the decrease in the labor share is not a consequence of the transition of workers from one in another activity. Furthermore, in some countries, the fall in the labor share can be attributed to the fact that some of the agricultural employees move to industry, which is a direct indicator of structural changes in the economy. It can be concluded that in highly developed economies the downward trend in labor share is a consequence of the general decline of labor share in the economy, while in developing countries the downward

trend can be partly attributed to the transition of workers from agriculture to industry (ILO 2015)

Overall, the results suggest that changes in factor shares are primarily linked to changes in capital/labor ratios. However, measures of globalization (such as capital controls or direct investment flows) also play a role. Exchange rate crises in poor countries lead to declining labor shares, suggesting that labor pays disproportionately the price when there are large swings in exchange rates. Capital controls are associated with an increase in labor's share, suggesting that imposing such controls are beneficial to labor (Harisson 2005). Technological development is directly inversely proportional to labor share, that is, technological development is considered one of the main reasons that contribute to the downward trend of labor share. Part of the research carried out for the period 1990-2007 indicates the fact that the growth of the total factor productivity (TFP) and the increase of capital are the key drivers of economic growth, which simultaneously contribute to 80% of the fall in the labor share, in the case of the countries of OECD (Arapia et all. 2009). Also in the research conducted on the case of OECD member countries (OECD 2012), additional results can be found that confirm the previously mentioned tendencies. First, in the last 30 years, the growth of labor productivity is mostly associated with an increase in the labor share of workers with higher education, also at the same time the growth of labor productivity contributed to contractions in the labor share of workers with an average or lower level of education. . Second, technological progress, especially in ICT, contributes to the reduction of the labor share of workers with a low level of education, while the growth of TFP contributes to the reduction of the labor share of workers with secondary education. From such relationships, it can be concluded that in the analyzed period, technological progress, especially the rise of ICT, had a strong negative impact on workers with low qualifications, thus contributing to the reduction of labor share within this category of employees. At the same time, the development of ICT contributes to the further development of highly qualified workers. With the use of ICT, workers who have a higher education are characterized by a complementary ratio, that is, there is an increase in entrepreneurship, there is an increase in innovations, etc. In this direction, it should be emphasized that according to the theory of economic growth, in the long term, capital and labor as factors of production are characterized by complementarity, while technological changes increase the factor that cannot be accumulated in this case labor (Acemoglu 2002). However, according to the available data, it is not possible to assess whether the negative relationship between technical progress and changes in labor share is valid in the long term, or is a consequence of the rapid growth of ICT in the last few decades.

3. METHODOLOGY

Economists commonly employ the term 'stylized fact' in various contexts, yet the precise definition of the phrase and the rationale behind its adoption remain nebulous. The paper mainly examines the participation of production factors in the Gross Domestic Product, with a focus on Labor Share, on the example of individual European countries. The paper uses the traditional approach by following relevant literature, using research methods and instruments, the method of observation, the method of abstractions, the methods of induction and deduction, the method of comparative analysis and the method of qualitative analysis. The paper uses the approach of descriptive analysis, that is, with the help of a long period, time series for Labor Share at the level of an individual country from Europe are created. Time series data taken from the Penn World Table database at Groningen University, while the maximum time period is 1950-2017, depending on available country-level data. No approach is used to specifically econometrically analyze the effects of changes in Labor Share on other determinants of the labor market. The paper elaborates the concept of Labor Share from a

general point of view, that is, it aims to analyze Kaldor's stylized fact about the stability, that is, the consistency of Labor Share over a long period. The present paper endeavors to offer a comprehensive examination of stylized facts, with a particular focus on Nicholas Kaldor's stylized fact. The primary objective of this analysis is to provide a thorough understanding of the concept's underlying principles, its methodological significance, and its empirical implications. By doing so, we aim to contribute to the ongoing discourse regarding the use of stylized facts in economic research and to enhance the understanding of this vital analytical tool for economists and other interested parties.

Discussion of results - Exploring Kaldor's Fact: A Descriptive Analysis of Income Distribution and Economic Growth in European Countries

The main objective of the analysis of the share of labor income in the gross domestic product (GDP) is to enable a display of labor income in the individual countries that are the subject of analysis in this paper. Given that within the analyzed countries there are no available data on labor income as a relative proportion of the national income (ND), and in order to obtain consistent and compatible results for the case of all the countries that are the subject of analysis, instead national income, GDP is used. In order to confirm this finding, part of the research on this relationship, as a result of the unavailability of information for some countries, consults the participation of labor income in the gross domestic product in their analysis (Karabarbounis and Neiman 2013). National income is the sum of all income available to the residents of a given country in a given year. The division of total income between labor and capital is called the functional distribution of income among the factors of production. The share of income from labor (labor share) is the part of the national income (or of the gross domestic product GDP) intended for the compensation of labor, while the capital share is the part of the national income-income (or of the gross domestic product GDP) that goes in capital. The fall in labor income is usually the result of the increased efficiency of companies thanks to technical-technological progress. Hence, an ever greater part is transferred to capital at the expense of labor income.

The share of labor income in total income has long been considered a stable quantity thus attracting little attention for research and discussion among economists and policy makers around the world. However, in recent years there has been an increasing interest among the academic community and economic policy makers in conducting research and discussions related to the trend of the participation of labor income in the total income (labor share), as well as the distribution of labor income. If the so-called Kaldor's fact that "the stability of the share of workers' income in total income is a basic feature of macroeconomic models, with broad implications for the form of the production function, inequality and macroeconomic dynamics" (Karabarbounis and Neiman 2013), in that case such a finding closes the field for further research and implications of workers' income share in total income. However, the results in practice indicate the fact that starting from the 80s of the 20th century, a large number of countries are facing a declining share of labor income. Accordingly, although in most countries there is an improvement in macroeconomic performance, the decrease in the share of labor income in total income is a result of the fact that the "fruits of the growth of the economic pie" are not transferred into commensurate improvements in the personal incomes of workers and their families. Hence, it can be concluded that it is quite justified to expect that such results will initiate a decrease in private sector consumption, a decrease in investment consumption, a drop in net exports and a decrease in state consumption. It can be concluded that in addition to the economic consequences, the decline in the share of labor income in the total income can also cause a decrease in trust in market-oriented economic policies, as well as in the process of globalization in general.

The trend of labor share as a proportion of GDP on the example of EU member states is shown in Appendix 1 in the Annex. Considering the fact that the EU member states are

characterized by different levels of economic development, but also the specific specificities characteristic of some of the countries, it is considered useful to show the trend of the trend of the share of labor income in the gross domestic product. at the level of the individual economy. It should also be noted that the reasons behind the apparent global trend of falling labor incomes are diverse and different depending on the characteristics of the country, thus revealing the high degree of exposure of national economies to global economic trends.

First of all, from the analysis of the trend of labor income as a relative proportion of the gross domestic product, it can be concluded that in almost all individual cases, in a certain period, this proportion is characterized by stability in its trend. This finding confirms Kaldor's claim that the part of the income intended for workers is constant, that is, the increase in the total product is followed by an increase in the income of the workers, so that the share of labor income in the national income remains the same (Kaldor 1961). On the other hand, if this size is analyzed in the last 3-4 decades, it can be concluded that this assumption of Kaldor no longer corresponds to the empirical results. Practice confirms that in almost all economies that are the subject of analysis in this paper, there are significant changes in the functional distribution of income between labor and capital, leading to a significant reduction of labor income, at the expense of capital income.

In order to obtain a clear and visual representation of the trend of labor income (as a relative proportion of GDP) on the example of the member states of the European Union (EU), a longer period is covered according to the available data of each individual country. According to the results, the countries that are the subject of the analysis can be divided into several groups: first group, countries in which a significant decrease in the part of the gross domestic product intended for workers is observed; second group, countries characterized by an increase in the income of workers; third group, countries in which no significant oscillations are observed in the trend of the share of labor income as a relative proportion of the gross domestic product.

In order to make a clear distinction about the degree of reduction of the share of labor income in GDP, the countries belonging to the first group of countries are segmented into two subgroups. The first subgroup includes countries in which a significant decrease in labor income as a share of GDP is observed. The second subgroup consists of countries where a certain decrease in this proportion is observed, but it is not as pronounced as in the countries segmented in the first subgroup. The first group of countries, in which on average a decrease in the share of labor income is observed, includes the following countries: Austria, Belgium, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Croatia, Italy, Malta, Luxembourg, Hungary, Netherlands, Poland, Portugal, Slovenia, Finland, Sweden. The first subgroup of countries in which a significant decrease in labor income as a share of GDP is observed includes the following countries: the Netherlands, Ireland, Finland, Slovenia, Italy, Estonia, and Luxembourg. The second subgroup of countries in which a certain decrease in the share of labor income in GDP is observed, which is not as pronounced as in the countries segmented in the first subgroup, consists of the countries: Austria, Belgium, Germany, Spain, Hungary, France, Malta, Portugal, Poland, Croatia, Denmark, and Sweden.

In the following, an attempt will be made to give a brief overview of the trend of this time series on the example of some countries. If we look at the case of Austria, it can be concluded that as of 1995, the part intended for workers is characterized by stability in its trend and it moves around 63% of GDP. However, after 1995, a sharp drop in this proportion was observed, so that in 2007 it reached the level of 55% of GDP. After the historically lowest level of 55%, the share of labor income on average recorded an increase to reach 57% at the end of 2017. In the case of Belgium, the trajectory of trend of the share of labor income in GDP can be divided into two periods. First, the time period 1950-1985 when this proportion is characterized by stability and hovers around 65% of GDP. Second, the period from 1986 to 2017, when, although with certain cyclical trends, on average, it is characterized by a decline in the share of labor income in GDP. In 2017, this proportion was 61%, which implies a drop

of 4 percentage points. Furthermore, the trend of labor income in relation to GDP in the case of Germany, as well as in the case of the other countries of this group, is characterized by stability for a certain period (in the period 1950-1991 this proportion is 67%). Starting from 1992, when the share of labor income in GDP was 68%, this proportion recorded a downward trend that reached its lowest value in 2007 (58%), which implies a decrease of 10 percentage points. In the period after 2007, there is a slight increase in the share of labor income in GDP, reaching 61% in 2017.

The trajectory of trend of the share of labor income in the GDP of the case of Spain, shows that the period 1950-1997 this proportion is 64% is characterized by stability in its trend, in the period after 1997 it is characterized by a significant drop in the share of income of labor in GDP. The graph shows the sharp downward trend throughout the entire period from 1998-2017, which reaches 57% of GDP. A decrease of 7 percentage points can be characterized as a significant change in the functional distribution of income between labor and capital on the example of Spain.

The Labor Share of Ireland and Hungary shows a synchronized trend trend. Both countries in a certain period face a constant proportion of labor income in GDP, which reaches 55% in the case of Ireland, 66% in the case of Hungary. On the example of Ireland, starting from 1996 until 2004, there is a decrease in the share of labor income in GDP (as of 2004, this proportion was 44% of GDP). In the period 2005-2009 there is a growth in labor income in relation to GDP, which reaches 51%. The period 2009-2017 is characterized by a negative trend in the trend of this proportion, which at the end of 2017 is 32%, which indicates a drop in labor income in GDP of 14 percentage points. In the case of Hungary, in the period 1996-2017, on average, a decrease in the share of labor in GDP is observed, so this proportion at the end of 2017 reaches 59%, which indicates a drop of 7 percentage points.

The trend of the share of labor income in relation to GDP in the case of France differs from almost all EU countries. Only the trend trajectory of the case of France does not confirm Kaldor's fact about the stability of the share of labor income in the total income within a long period. Namely, on the example of France, significant oscillations are observed in the trend of this proportion. However, the analyzed period can be divided into two sub-periods: the first sub-period 1950-1982 when this proportion on average observes oscillations with a lower intensity, the second sub-period 1983-2017 when larger oscillations and a sharp drop in the share of labor income in GDP are observed. Within this period, the share of labor income in GDP recorded a drop of 6 percentage points, and at the end of 2017 it was 63%.

The next two countries in which a similar trajectory of trend of the share of labor income in GDP is observed are Malta and Portugal. In both cases, a certain period is observed when the share of labor income in GDP is characterized by stability. Within that period, the separate participation amounts to 54% in the case of Malta and 64% in the case of Portugal. The trend of the share of labor income in GDP in the case of Malta, in the period 2007-2017, is characterized by a certain degree of variability. However, it cannot be abstracted from the sharp downward trend that occurs after 2013. In 2013, the share of labor income in GDP was 55%, while at the end of 2017 it was 49%, which means a drop of 6 percentage points in 4 years. Furthermore, in the case of Portugal, in the period 1995-2017, the trend of this proportion is characterized by separate cyclical trends, that is, the assumption of stability of the share of labor income in GDP is abandoned. As in the case of Malta, it can be noted that in the case of Portugal, the decrease in the share of labor income in GDP is also evident. This downward trend ends in 2015 when this proportion reaches 57%. In the following period, as of 2017, this proportion recorded a modest positive growth and reached 58% in 2017.

In the case of Poland and Slovenia, a synchronized trend of Labor Share is also observed. Namely, as in the case of most of the countries that were the subject of analysis above in the text, in this case too, a period can be observed in which the share of labor income in GDP is characterized by stability. On the example of Poland, in the period 1970-1994, this proportion was around 62%. On the other hand, the period in which this proportion is

characterized by stability, for example in Slovenia, is 1970-1994, when this proportion hovered around 73%. In the period after 1994, in both cases, a certain degree of speed in the trend is observed. On the example of Poland, from 1994 to 2001, on average, there was a positive increase in the share of labor income in GDP. After 2001, this trend reaches its peak and is replaced by a sharp decline. In 2017, the share of labor income in GDP was 56%, which represents a drop of 6 percentage points compared to 1994. In the case of Slovenia, also after 1994, the share of labor income in GDP shows a downward trend. Compared to 1994 when this proportion was 73%, in 2017 the share of labor income in GDP was 64%, which means a drop of 9 percentage points.

In the following, a brief review will be given on the trend of the share of labor income in relation to GDP, within the countries belonging to the second subgroup (Croatia, Italy, Estonia, Luxembourg, the Netherlands, Denmark, Sweden and Finland). It should be mentioned here once again that these are countries in which there are certain downward tendencies in the trend of the share of labor income in GDP, which are not expressed to the same extent as in the countries of the first subgroup. In order to get a clear indicative representation of the situation and trend of the incomes of the workers in these countries, they were segmented into two subgroups.

From the trend of Labor Share in the case of Croatia, it can be concluded that, in the period 1970-1997, this proportion is characterized by stability and it is 66% on average. In the period after 1997, and as of 2017, it can be noted that, on average, the share of labor income in GDP is slightly declining. In 2017, this proportion is 60%, which means a drop of 6 percentage points compared to 1995. A similar trend trend is observed in the example of Italy, where the entire period of analysis is 1950-2017, which according to the trend of labor income can be divided into two sub-periods. Within the first sub-period, 1950-1983, the share of labor income in GDP is about 60% and is characterized by stability in its trend. Within the second sub-period, 1984-2017, a certain downward trend is observed in the trend of this variable. The decrease in the income of workers on average is evident throughout the entire period, so that in 2017 this proportion amounts to 52%, which indicates a decrease of 8 percentage points.

Labor Share in Estonia is analyzed for the period from 1970 to 1994. It can be stated that labor income as a share in GDP is characterized by stability and amounts to about 68%. After 1994, a certain downward trend can be observed, which reaches the bottom in 2003 with the share of labor income in GDP of 57%, which indicates a drop of 11 percentage points. However, after 2003, the income of labor shows positive tendencies again, where in 2009 it reaches a peak of 65% participation in GDP. Oscillations continue in the next period so that in 2012 the share of labor income drops to 57%, which again approaches the level of 2003. After 2012, this proportion recorded an upward trend, reaching 60% of GDP in 2017. If compared to the level of the stability period where the share of labor income in GDP is 68%, a drop of 8 percentage points is evident. Labor Share on the example of Luxembourg is analyzed for the period 1950-2017. Within the period from 1950-1995, it can be stated that labor income is characterized by stability in its trend and it amounts to 46% of GDP. Within the period of 1996-2017, it can be concluded that labor income, on average, recorded a decrease in relation to GDP. In 2017, this proportion was 38% of GDP, which means a drop of 8 percentage points compared to 1995.

Furthermore, the Netherlands observes a downward trend in Labor Share as a proportion of GDP. The participation of Labor Share on the example of the Netherlands is analyzed for the period 1950-2017. The results lead to the conclusion that in addition to the period of stability in the trend (1950-1979) when this proportion reaches 73%, there is also a period of declining labor income in relation to GDP. The period when the average decrease in labor income is evident is 1980-2017. In 2017, the share of labor income in GDP was 58%, which means a drop of 15 percentage points compared to 1979. On the example of Denmark, the trend of labor income, in the period 1950-1995, in relation to the GDP of the case of this

country, also confirms Kaldor's fact about the stability and consistency of the participation of labor income in the total income. However, after 1995 certain negative tendencies are observed which reduce the share of labor income. In 2017, labor income was 62% of GDP, compared to 1995, which implies a drop of 2.5 percentage points. A similar trend trend is observed in the case of Sweden. It can be concluded that in addition to the case of France, on the case of Sweden, Kaldor's fact of stability and consistency of the share of labor income in the total income can also not be confirmed. Starting from 1991, on average, labor income recorded a downward trend and in 2017 it was 55% of GDP, which implies a drop of 3 percentage points compared to 1991. The trend of trend of labor income as a relative proportion of GDP in the case of Finland shows that within the period of 1950-1975, the share of labor income in GDP is characterized by stability and consistency in its trend. After 1975, a certain volatility is observed in the trend of labor income, that is, a certain downward trend is evident. In 2017, the share of labor income in GDP was 57%, which means a drop of almost 10 percentage points compared to 1995.

The second group of EU member states, where an increase in the share of labor income in GDP is observed, includes: Bulgaria, Romania, Greece, Cyprus, Slovakia, the Czech Republic, Lithuania and Latvia. In the following, a brief review will be given on the trend of the share of labor income in GDP on the example of individual economies.

The trend of Labor Share in the case of Bulgaria is analyzed for the period 1970-2017. It should be stated here that in a certain period (1970-1995) the share of labor income in GDP is characterized by stability and consistency, and it amounts to 41%. In the time period after 1995, an upward trend in the trend of workers' income is evident, which, with the exception of the period from 2009-2011, is positive on average. In 2017, the share of labor income in GDP in the case of Bulgaria was 53%, which compared to 1996, represents an increase of 12 percentage points.

The trend of labor income in the case of Romania is analyzed for the period 1960-2017. The results show that in the period 1960-1995, Labor Share represents a stable size and moves in value around 50%. Within the period after 1995, there is a slight increase in this proportion, which in 2002 reaches the highest value of about 53%. After 2002, the share of labor income in GDP recorded a negative trend, so that in 2017 it amounted to about 50% of GDP. It can be concluded that in the case of Romania, on average, no more significant oscillations are observed in the relative proportion of labor income in relation to GDP.

Labor Share in the case of Greece, according to the available data, has been analyzed for the period 1951-2017. It can be noted that, in the period 1951-1995, the share of labor income in GDP is characterized by stability and hovers around 49%. However, starting from 1995 until 2010, a positive trend can be observed in the trend of the share of labor income in GDP. In this period, the participation reaches 55%, which, if compared to 1995, indicates an increase of 6 percentage points. In the period 2011-2017, a reverse process is observed, i.e. there is a sharp drop in the share of labor income in GDP, so it is 50% in 2017. Here it can be concluded that with certain oscillations, compared to 1995, the share of labor income in 2017 recorded an increase of about 2.5 percentage points. The trend of labor income in the case of Cyprus is analyzed for the period 1950-2017. The results show that within the period 1950-1995, no significant oscillations are observed, that is, labor income as a relative proportion of GDP is characterized by stability. At the end of 2017, after a period of slight increase in the share of labor income, it was 55%, which, compared to 1995, represents an increase of almost 5 percentage points.

In the case of Slovakia, it can be noted that in the period 1970-1993, Kaldor's fact of stability and consistency in the trend of the share of labor income in GDP is confirmed. However, after 1993, certain oscillations in the trend of this proportion can be observed. In 1994, labor income decreased to 52% of GDP, which also represents the lowest level in the entire period of analysis. In 2017, after a period of growth in this proportion, labor income reaches 59% of GDP, which is an increase of 7 percentage points compared to 1994. Also, in

the case of the Czech Republic, it can be said that a period of stability of the share of labor income in GDP (1970-1992) is observed. Furthermore, after this period, a certain degree of volatility is noticeable in the trend of the share of labor income in GDP. Namely, in the period from 1993-1997, there is an upward trend in the trend, so that in 1997 the share of labor income in GDP reaches 53%. Furthermore, in the period from 1998, a negative tendency can be observed in the trend of this variable, so that in 2007 the share reaches 50% of GDP. In 2017, the share of labor income in GDP in the case of the Czech Republic was 53%, which compared to 1992, indicates an increase of about 2 percentage points.

The trajectory of the trend of labor income in relation to GDP in the case of Lithuania only confirms the general trend that is also evident in other countries. Namely, in a certain period, in the majority of countries, the share of labor income in GDP is characterized by stability, that is, it records significant oscillations. The period from 1970 to 1996 is a period when labor income accounts for about 50% of GDP. In the period after 1996, a slight increase in this proportion is evident, while in the period 2010-2015. certain negative tendencies are observed. In 2017, the share of labor income in GDP was 52%, which means an increase of 2 percentage points compared to 1993. The description of the trend trend of the share of labor income, for example, in the period from 1970 to 1994, there are no significant fluctuations in the share of labor income in GDP, it is around 53%. In the following period, a certain degree of volatility of this proportion is noticeable, in 1996 it reached the highest value of 63%. In addition to the fact that the period after 1995 is characterized by certain cyclical trends of the share of labor income in GDP, on average, a positive growth rate is observed. In 2017, the share of labor income in GDP was 58%, which is 5 percentage points more than the same proportion in the stability period.

The share of labor income in GDP on the example of EU member states for 2017 is presented in Table no. 1. From the Table, it can be concluded that the labor income in individual EU member states does not show significant differences on average. However, it should be emphasized that in some countries, the share of labor income in GDP deviates from the previous finding, that is, it occupies an extremely low proportion. Namely, in the case of Ireland and Luxembourg, the share of labor income in GDP amounts to 33% and 38%, respectively. The share of labor income in the GDP of the case of Ireland is lower by 11 percentage points than the highest share of labor income, ie. participation in Slovenia. Furthermore, it can be concluded that only in the cases of Ireland, Luxembourg and Malta the share of labor income in GDP is below 50%. Even in 18 countries, the share of labor income exceeds 50%, but not more than 59%. Only in Belgium, Germany, Denmark, Estonia, France, the share of labor income in GDP is higher than 60%.

Table 1. Share of labor income in GDP on the example of EU member states in 2017 (in %)

Country	Labor Share in GDP	Country	Labor Share in GDP
Austria	57	**Greece**	50
Bulgaria	53	**Spain**	57
Belgium	61	**France**	63
Czech Republic	53	**Croatia**	59
Denmark	61	**Italy**	52
Germany	62	**Cyprus**	55
Estonia	60	**Latvia**	58
Ireland	33	**Lithuania**	52
Luxembourg	38	**Hungary**	59
Malta	49	**Netherlands**	58
Poland	56	**Portugal**	58
Romania	50	**Slovenia**	64
Slovakia	58	**Finland**	58
Sweden	55		

Source: Authors calculations based on Penn World Table

Discussion of results - Analysis of the relative proportion of labor force participation in gross domestic product - the case of non-EU countries

Given that some of the highly developed countries of Europe are not members of the European Union (EU), it is considered useful to give a brief overview of the trend of the relative proportion of labor income in relation to GDP in the case of these countries. Within the framework of the highly developed countries geographically belonging to the European continent, which are not members of the EU, they include: Great Britain, Switzerland, Norway and Iceland.

In the following, an account is given of the trend of the share of labor income in GDP in the case of Norway. The period under analysis is 1950-2017, so it can be divided into two separate sub-periods. According to the trajectory of trend of the labor income - GDP ratio, the first sub-period falls within 1950-1978. During this time period, the share of labor income in GDP is characterized by stability in its trend and it amounts to about 60%. From here it can be concluded that this period confirms Kaldor's fact about stability in the functional distribution of income between labor and capital. In other words, it can be stated that the growth in GDP is followed in an appropriate proportion with the increase in the income of the workers. The second sub-period falls within the framework of 1979-2017, and it is characterized by a certain degree of volatility in the trend of labor income. However, in addition to cyclical trends in certain periods of time, it can be stated that, on average, the share of labor income in GDP is characterized by a downward trend. In 2017, this proportion was 53%, which means a drop of about 7 percentage points compared to the stability period.

Furthermore, in the case of Switzerland, it can be stated that in the period from 1950-1996, the share of labor income in GDP was 66% and it had a stable character throughout the entire period. In the following period, there will be greater cyclical trends that result in the share of labor income in GDP reaching a value of around 69% in 2002. On the other hand, the negative tendencies stop in 2007, when the share of labor income in relation to GDP decreases to 62%. In 2017, this proportion was 65%, which is a decrease of 1 percentage point compared to 1996. Labor Share on the example of Iceland for the period 1950-2017, it can be stated that a long period (1950-2000) represents a stable size, and it is about 66%. From here it can be concluded that in the entire period the incomes of the workers recorded a proportional increase in relation to the increase in the GDP of Iceland. On the other hand, after the year 2000, certain cyclical trends of this time series can be observed. Namely, the Chart shows that in 2007 the share of labor income in GDP rose to 68%, while in 2009 it decreased to 53%, which means a drop of 15 percentage points in just 2 years. At the end of 2017, labor income accounted for 60% of GDP.

The trajectory of the case of Great Britain shows that only Great Britain is seeing an average increase in the share of labor income in GDP. Namely, after the period of stability in the trend of labor income (1950-1989), there are years of increase in the share of labor income (1990-1993), in which it reaches 58%. In the following period, two major cycles in the share of labor income are evident. Namely, in 1996 it reaches the lowest value of 53%, so that in 2002 the labor income participates in the GDP with a high 60%. In the period from 2000 to 2017, with a certain degree of volatility, a certain degree of reduction of this share is evident, which in 2017 reached 58%. However, analyzed within the entire period, the share of labor income in GDP on the example of Great Britain shows an upward trend. By the same analogy, as in the case of EU member states, in Table no. 2 presents the share of labor income in GDP on the example of European countries that are not members of the EU. It can be concluded from the Table that the share of labor income in all individual cases exceeds 50% of GDP, which is on average at a level higher than the EU member states. Considering the highest participation of labor income in GDP of 65% in Switzerland, it can be stated that Switzerland in 2017 recorded the highest level of participation of labor income in GDP compared to EU member states and highly developed European countries that are not members of the EU.

Table 2. Share of labor income in GDP on the example of non-EU European countries in 2017 (in %)

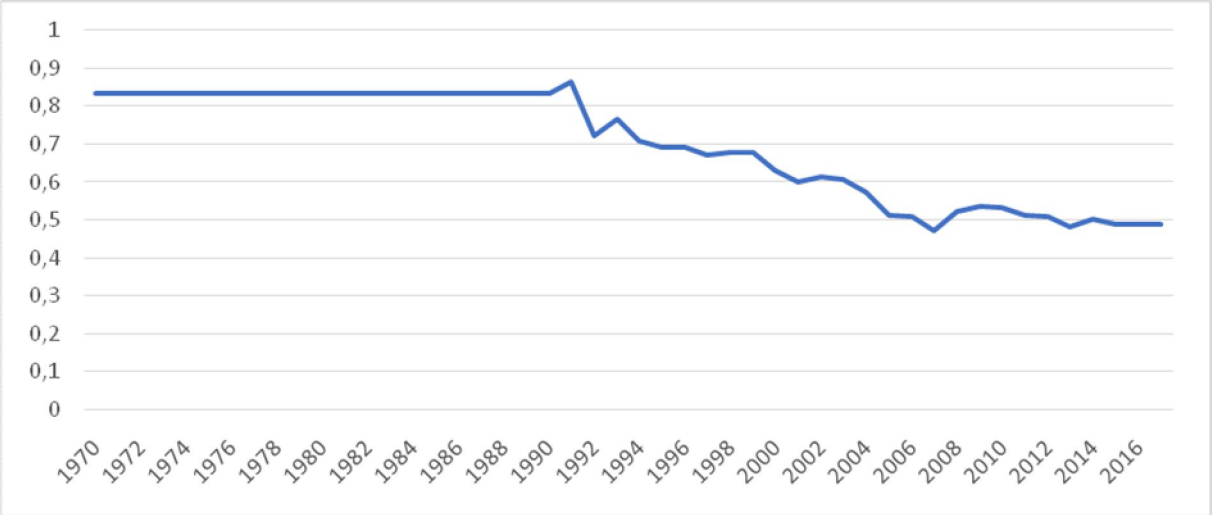
Country	Share of labor income in GDP (in %)
Norway	53
Switzerland	65
Iceland	60
Great Britain	59

Source: Authors calculations based on Penn World Table

Discussion of results - Analysis of the relative proportion of labor force participation in national income - on the case of selected countries from the Western Balkans (Republic of North Macedonia, Bosnia and Herzegovina, Serbia)

The trend of labor income as a share in GDP in the case of the Republic of North Macedonia for the period 1970-2017. First of all, it should be noted that in the period 1970-1991, the Macedonian economy functioned within the SFRY. In the period from the end of 1991 to 2017, the Republic of North Macedonia functions as an independent state, with an economic system based on market principles and postulates. From the data on the trend of the share of labor in GDP, it can be concluded that in the period 1970-1990, stability in the trend is observed, that is, on average, the ratio between the income of labor and GDP remains constant at 83%. Starting from 1991, the graph shows a negative trend in the trend of labor income. On average, there is a decrease in the share of labor income in GDP by 33 percentage points. At the end of 2017, the share of labor income in GDP in the case of the Republic of North Macedonia was 49%.

Figure 1. Labor Share in GDP in North Macedonia 1970-2017

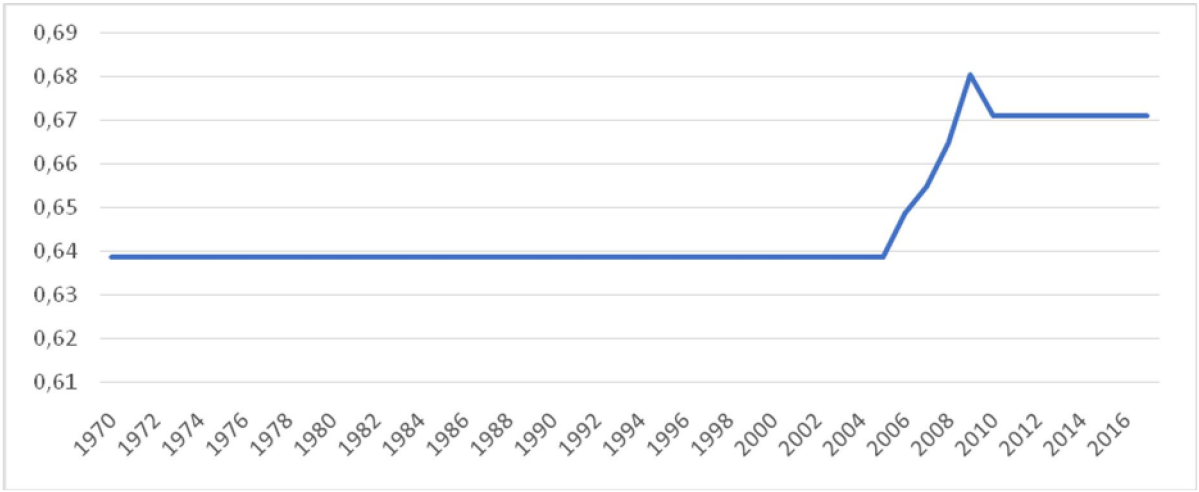


Source: Authors calculations based on Penn World Table

The trend of Labor Share on the example of Bosnia and Herzegovina for the period 1970-2017 is shown on the graph. From the graph it can be concluded that in the period 1970-2005 the share of labor income in GDP is characterized by stability and consistency in its trend. During this period, labor income accounts for 63% of GDP. On the other hand, in the period 2006-2009, this proportion recorded a sharp upward trend, so that in 2009 it reached its highest value of 67%. In the following period, a re-stabilization is observed in the share of labor income, so that in 2017 it amounts to 67% of GDP. For comparison, in this period

(2010-2017) compared to the period from 1970-2005, the share of labor income in GDP grew by 4 percentage points.

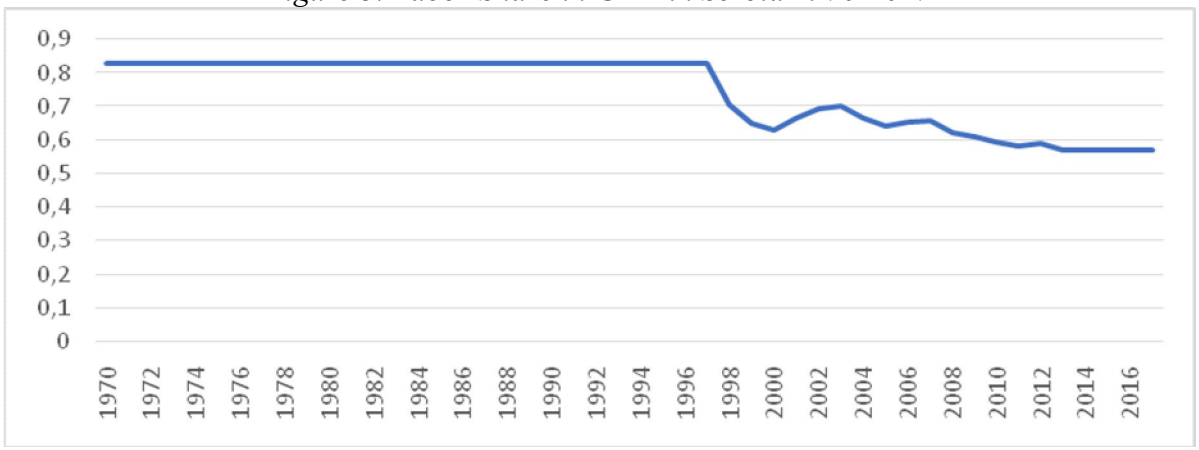
Figure 2. Labor Share in GDP in Bosnia and Herzegovina 1970-2017



Source: Authors calculations based on Penn World Table

The share of labor income in GDP in the case of Serbia for the period 1970-2017 is presented in the following graph. From the Chart it can be observed that the trend of Labor Share is similar as in the case of S. Macedonia. Namely, in the period 1970-1997, the share of labor income in GDP is characterized by stability and consistency in its trend, and it amounts to about 83% of GDP. In the period from 1997 to 2017, it can be seen that, on average, the negative trend is observed throughout the entire period. In 2000, labor income accounted for 63% of GDP, which, compared to the period before 1997, represents a drop of 20 percentage points. In 2017, the share of labor income in GDP was 57%, which, compared to 1997, represents a drop of 23 percentage points.

Figure 3. Labor Share in GDP in Serbia 1970-2017



Source: Authors calculations based on Penn World Table

In Table 4 presents the share of labor income in the gross domestic product for the example of the countries of the Western Balkans (North Macedonia, Serbia and Bosnia and Herzegovina) in 2017. From the Table it can be seen that the highest share of labor income is recorded in Bosnia and Herzegovina (67%), while the lowest share of labor income in GDP is recorded in North Macedonia (49%). On the example of Serbia, it can be stated that the share

of labor income in GDP is 57%, that is, 10 percentage points less compared to the case of Bosnia and Herzegovina.

Table 4. Share of labor income in GDP for the example of the countries of the Western Balkans (North Macedonia, Serbia and Bosnia and Herzegovina) in 2017 (in %)

Country	Labor Share in GDP
North Macedonia	49
Serbia	57
Bosnia and Herzegovina	67

Source: Authors calculations based on Penn World Table

CONCLUSION

In comparison, the growth rate of labor productivity and the growth rate of real labor compensation grew together in the period after the Second World War, until the 1970s. That is, the growth of the real compensation of workers was almost identical to the growth of labor productivity for the period 1948-1973. However, after 1973, the rate of increase in labor productivity became more intense, especially after 1995, while the real compensation of workers stagnated. It should be emphasized that the benefits of the intensive increase in labor productivity are not satisfactorily transferred to the majority of workers, meaning that the economic system does not automatically allow for this transfer. In summary, the increase in the real compensation of workers on average does not correspond to the increase in labor productivity. The main consequence of the low level of real compensation of workers is increased inequality in the distribution of income.

However, empirical results indicate that starting from the 1980s, many countries have experienced a declining share of labor income in total income. Although most countries have improved macroeconomic performance, the decrease in the share of labor income in total income means that the "fruits of the economic pie" are not commensurately transferred to the personal incomes of workers and their families. Hence, it is quite justified to expect that such results will lead to a decrease in private sector consumption, investment consumption, net exports, and state consumption. In addition to the economic consequences, the decline in the share of labor income in total income can also cause a decrease in confidence in market-oriented economic policies and the process of globalization in general.

The first group of countries where a decrease in the share of labor income is observed on average includes Austria, Belgium, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Croatia, Italy, Malta, Luxembourg, Hungary, Netherlands, Poland, Portugal, Slovenia, Finland, and Sweden. The first subgroup of countries in which a significant decrease in labor income as a share of GDP is observed includes Netherlands, Ireland, Finland, Slovenia, Italy, Estonia, Luxembourg, Austria, Belgium, Germany, Spain, France, Ireland, Hungary, Malta, Portugal, Poland, and Slovenia. The second subgroup of countries in which a certain decrease in the share of labor income in GDP is observed, which is not as pronounced as in the first subgroup, consists of Austria, Belgium, Germany, Spain, Hungary, France, Malta, Portugal, Poland, Croatia, Denmark, and Sweden.

The study's findings allow for a conclusion to be made regarding labor income in individual EU member states. The study found that on average, there were no significant differences in labor income across member states. However, some countries, such as Ireland and Luxembourg, had a very low share of labor income in GDP, which deviated from the overall trend. In particular, the study found that the share of labor income in GDP was 33% for Ireland and 38% for Luxembourg. These percentages were significantly lower than the highest share of labor income, which was found in Slovenia. The study also revealed that only

Ireland, Luxembourg, and Malta had a share of labor income in GDP below 50%. However, 18 countries had a share of labor income that exceeded 50%, but not more than 59%.Furthermore, the study indicated that only in a few countries, namely Belgium, Germany, Denmark, Estonia, and France, the share of labor income in GDP was higher than 60%. This means that in most EU member states, labor income does not make up a significant proportion of GDP. These findings have important implications for policymakers in these countries who may need to explore ways to increase labor income and reduce income inequality.

Hence, it can be stated that the share of labor income in all individual cases exceeds 50% of GDP, which is on average at a level higher than EU member states. Considering the highest share of labor income in GDP of 65% in Switzerland, it can be stated that in 2017 Switzerland recorded the highest level of labor income share in GDP compared to EU member states and highly developed European countries that do not are members of the EU.

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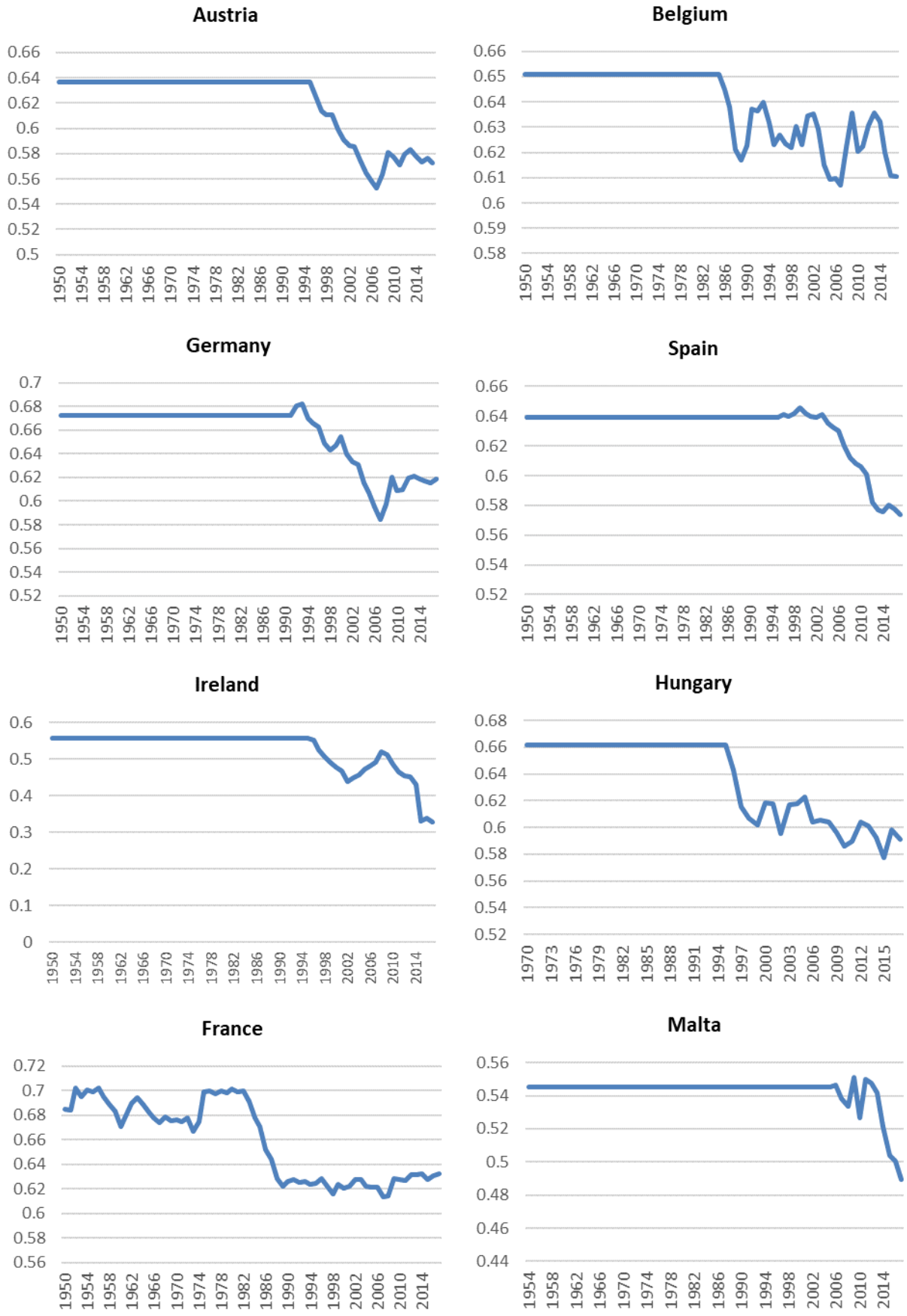
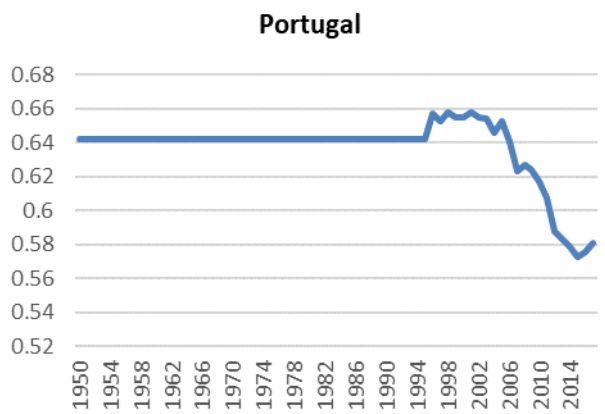
APPENDIX

Figure 1A. EU Countries

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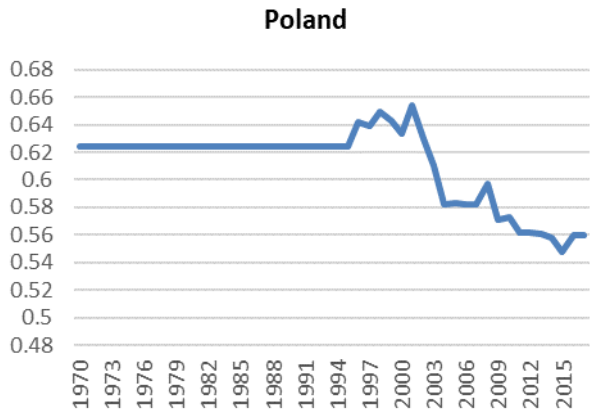
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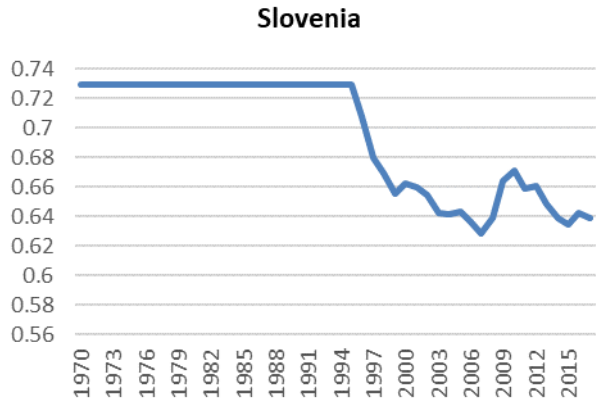
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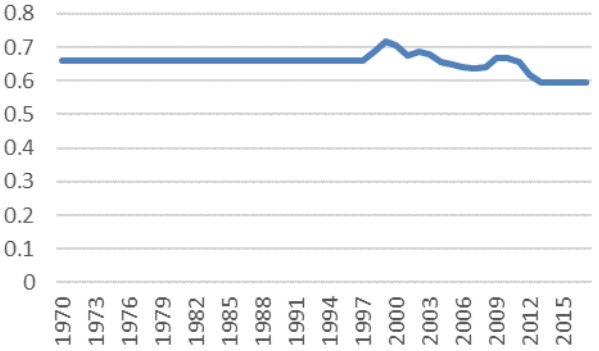
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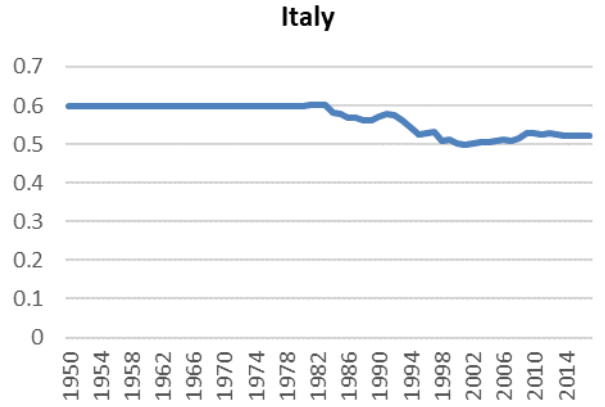
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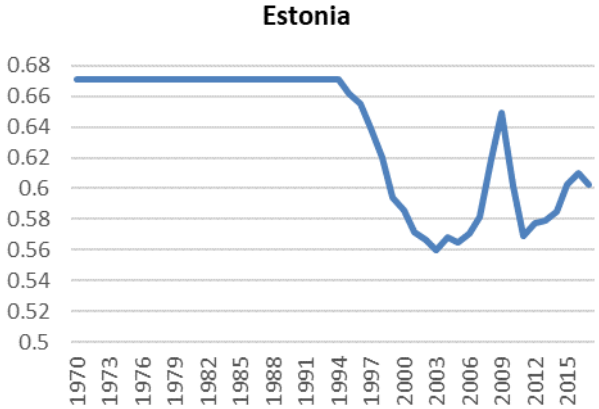
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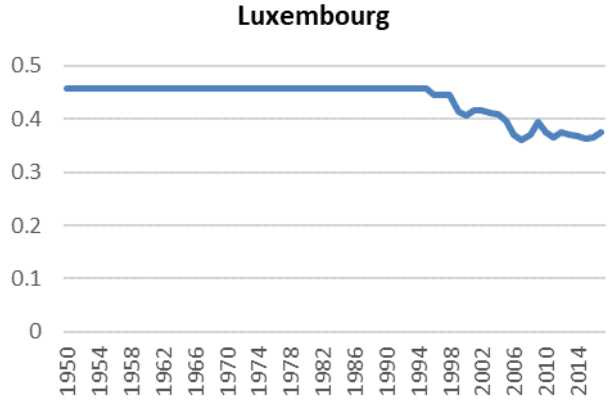
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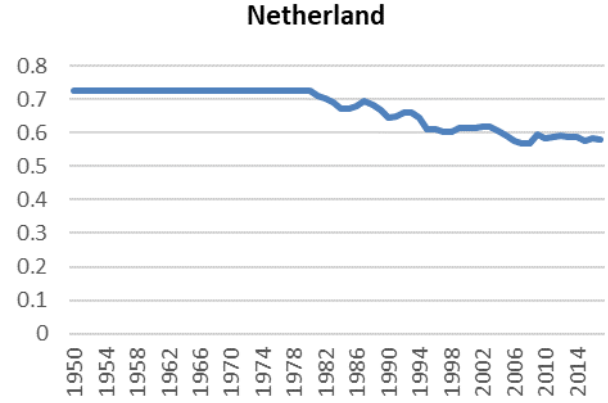
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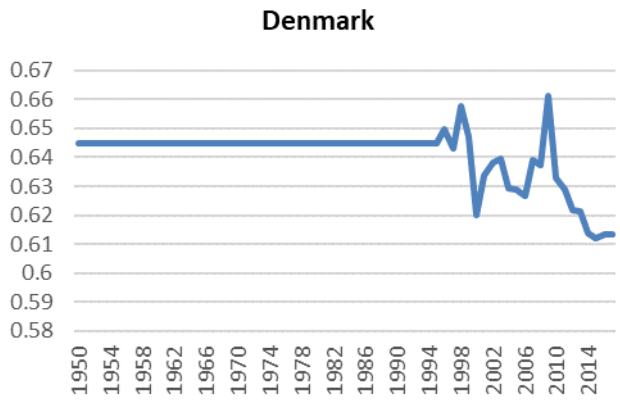
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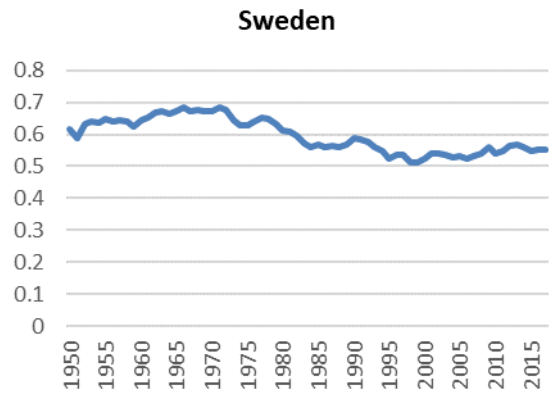
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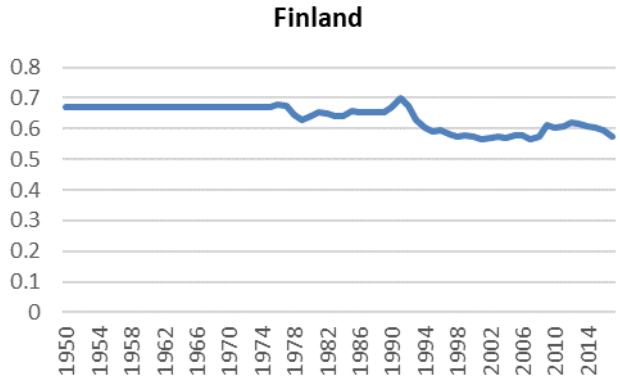
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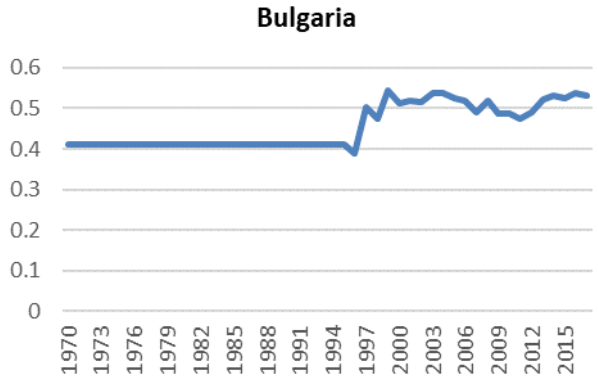
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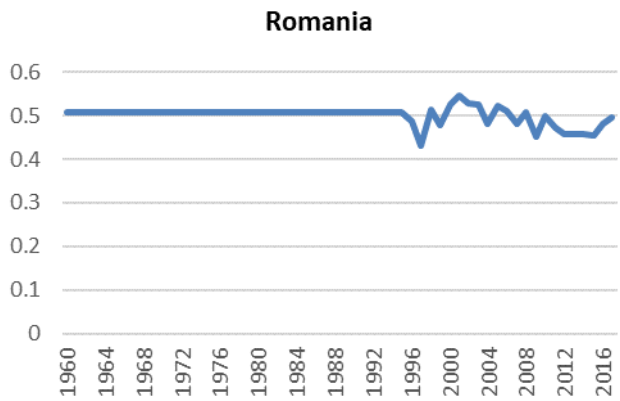
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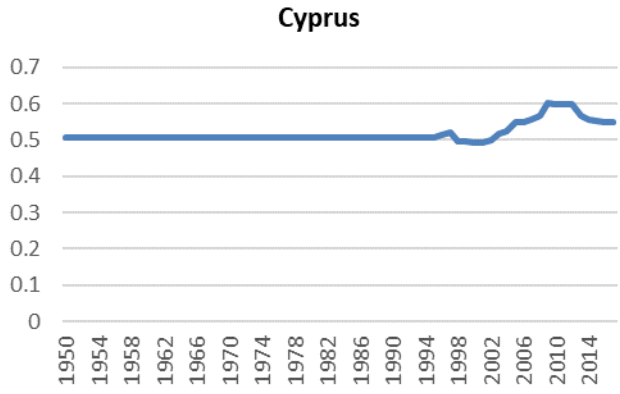
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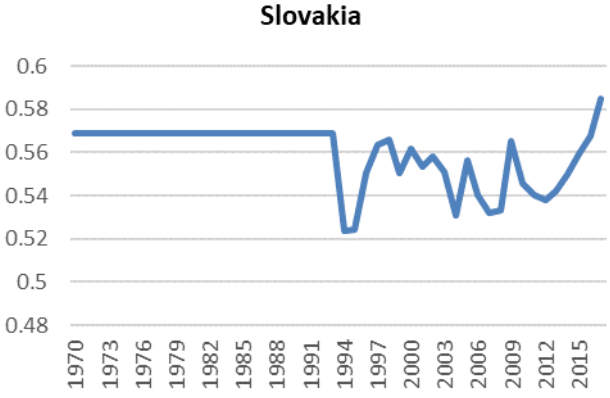
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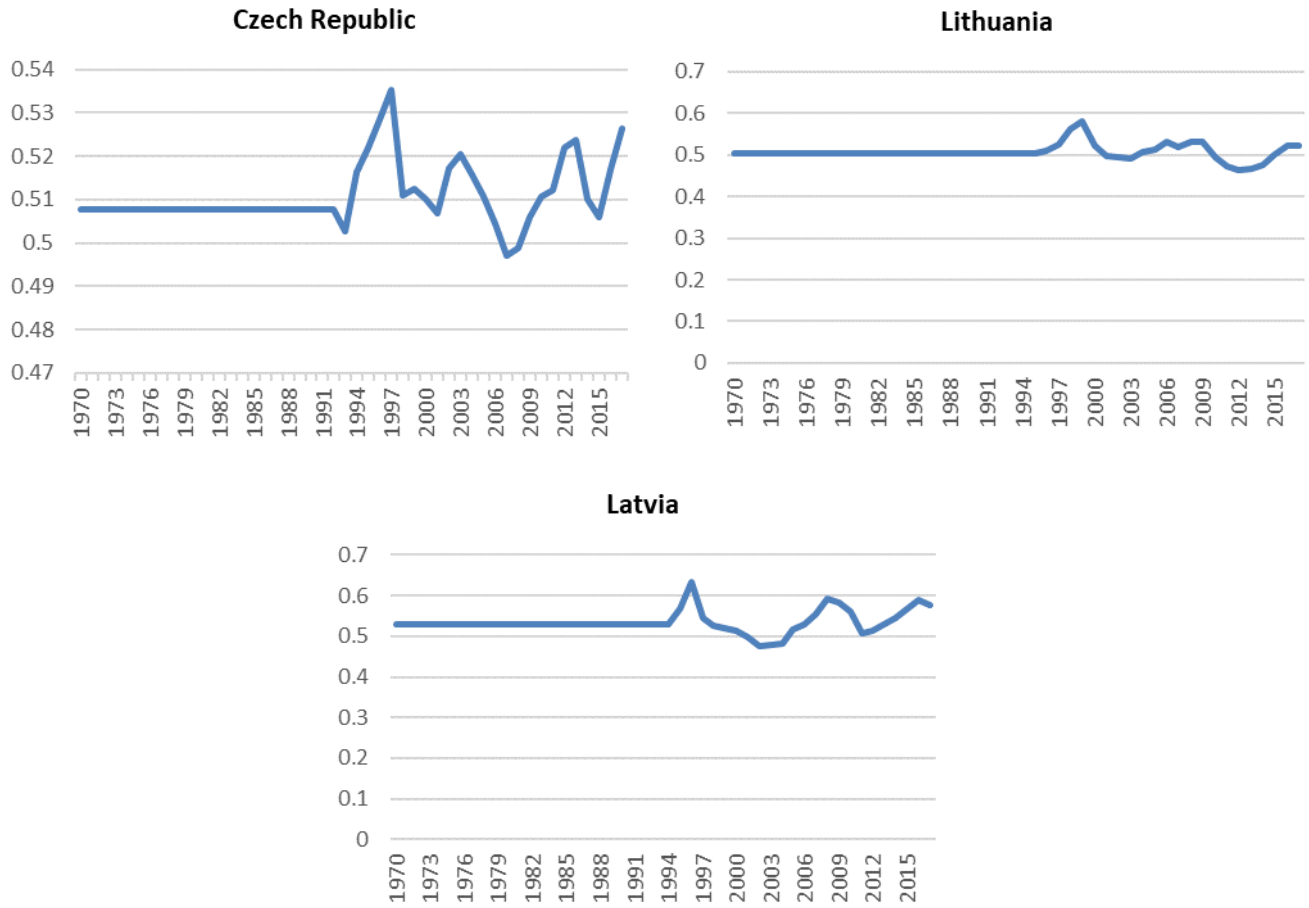
0.52
0.5
0.48
1970 1973 1976 1979 1982 1985 1988 1991 1994 1997 2000 2003 2006 2009 2012 2015



Source: Authors calculations