INCOME INEQUALITY, FISCAL POLICY AND LIFE SATISFACTION IN THE BALTIC STATES

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ABSTRACT
Income inequality has received widespread attention in the scientific literature. Income inequality has a significant impact on the health and education levels of the population, as well as increases social tension and crime rates, however there is less research on the impact of income inequality on people’s overall life satisfaction. In Lithuania and Latvia, income inequality expressed by the Gini index of disposable income is among the highest in the EU, whereas in Estonia, income inequality is slightly higher than the average in the EU. Similar results are also found for the Lithuania and Latvia regarding overall life satisfaction, which is among the lowest in the EU, while overall life satisfaction in Estonia is somewhat lower than the average in the EU. The aim of the research is to assess whether income inequality has a negative impact on people’s overall life satisfaction and to evaluate how fiscal policy has affected income inequality and overall life satisfaction in the Baltic States. The results of the research show that income inequality and life satisfaction are negatively correlated, and that fiscal policy has reduced income inequality in the Baltic States, expressed by the Gini index based on market income, on average by 30%.

KEYWORDS: fiscal policy, income inequality, life satisfaction.

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Introduction
There is growing body of the literature that recognizes that income inequality is an important issue that affects people’s health and education levels, as well as increases social tensions and crime rates. There is some disagreement in the scientific literature about the impact of income inequality on the economic growth, however, in the long run, factors such as population health and educational attainment have a significant impact on the potential output. The impact of income inequality on people’s overall life satisfaction is less studied in the scientific literature. Income inequality is determined by various indicators of which one of the most widely used is the Gini index. In Lithuania and Latvia, income inequality expressed in terms of the Gini index based on disposable income, in 2018, was among the highest in the EU, lagging only behind Bulgaria. In Estonia income inequality was slightly higher than the average in the EU. Similar results are shown by population’s overall satisfaction with life in Lithuania and Latvia, which were among the lowest in the EU, in 2018, while population’s overall satisfaction with life in Estonia was slightly below the EU average.

The aim of the research is to assess whether income inequality has a negative effect on people’s overall life satisfaction and to assess how fiscal policy has affected income inequality and life satisfaction in the Baltic States.

In order to achieve the aim of the research, the following tasks were set:
• to study the dynamics of income inequality in the Baltic States;
• to analyse the impact of fiscal policy on reducing income inequality;
• to assess the composition of income for people that are in the lower income deciles;

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to find out whether fiscal policy has increased population’s overall satisfaction with life.

The scientific methods used in the research: analysis of scientific literature on income inequality, its impact on population’s overall satisfaction with life, as well as analysis of scientific literature on the impact of fiscal policy on income inequality, empirical analysis of data, cross-sectional regression.

In the research, statistical data from EUROSTAT, including The European Union Statistics on Income and Living Conditions (EU-SILC) for the period 2005-2018, and statistical data from EUROMOD for 2019 are used.

1. Theoretical framework

The problem of income inequality is a major issue discussed in scientific literature. Data on personal income is often used for studying inequality, because this type of data is more readily available than data on personal wealth (Verme, 2011: 117). The impact of income inequality on economic growth, education, health, and crime rates has been widely considered, while less attention has been paid to the impact of income inequality on a population’s overall satisfaction with life.

There are various statements made in scientific literature on the impact of income inequality on economic growth. There are studies that emphasize that income inequality contributes to economic growth (Brida, et al., 2020: 107; Li, et al., 1998: 332; Kuznets, 1955: 9) and partly contributes to economic growth (Herwartz, et al., 2020: 157), while other studies have not reached specific results (Bahmai-Oskooee, 2008: 481); in turn, other studies have indicated that inequality of income has a negative impact on economic growth (Persson et. al., 1994: 617; Alesina et. al., 1994: 485; Vo, et al., 2018: 8; Panizza, 2002: 37). In his work, Kuznets (1955: 9) argues that initially only a population with high income has an opportunity to accumulate capital that they can use in the future to make investments, which in turn increases their wealth. Over time, as the economy grows, so does the income of the poor members of society. According to the Kuznets’ theory, income inequality serves as a catalyst for economic growth. Kuznets’ theory is graphically represented in the Kuznets Curve (see Fig. 1).

\[ \text{Figure 1. Kuznets curve} \]

\[ \text{Source: Kuznets, 1955} \]

In his study, Barro (2000: 28) supplemented Kuznets’ theory by stating that inequality promotes economic growth in richer countries, while in poorer countries it has a negative effect on growth (Barro, 2000: 28). Piketty (2014) believes that inequality does not promote economic growth and disagrees with Kuznets, pointing out that economic growth alone is not a sufficient condition for reducing income inequality in society (Piketty, 2014). As the income of the wealthiest part of society increases, so does its political and economic influence, as the result of which the implemented policy provides more and more income to the wealthiest part of the population. Similar conclusions were drawn also by Stiglitz (2012), who argues that excessive political power and market manipulations in the United States have provided the richest 1% of the population with the largest
revenue growth in the last 30 years (Stiglitz, 2012). One of the main reasons why different research results were found is different time periods of analysis, the methods used, and individual characteristics of each country (Dominicis et al., 2008: 675). However, there is some consensus in scientific literature that income inequality negatively affects a population’s health and educational level, as well as increases crime rates (Kawachi et al., 1997; 1495; Wildman, 2003: 535; Fajnzylber, et al., 2002; Campbell, et al., 2005: 21).

Although economic growth is often identified as the main goal of economic policy, it does not always increase people’s overall satisfaction with life or feeling of happiness. In scientific literature, this situation is called the Easterlin Paradox. The paradox establishes that in rich countries, the population is more satisfied with life than in the population in poor countries, but that the feeling of satisfaction does not increase with increasing economic growth (Easterlin, 1974: 120). One of possible explanations for the Easterlin paradox is that the positive effect from economic growth is reduced by the negative effect from the increase in income inequality (Oishi et al., 2015: 1637). Therefore, it is important to look at the impact of income inequality on the population’s satisfaction with life. Several studies claim that income inequality reduces satisfaction with life (Oshio et al., 2010: 1636; Schneider, 2012: 435). In his study, Schröder (2016) examined Germans’ satisfaction with life at high and low income inequality. Germans surveyed during the period of low income inequality were not more satisfied with life than the Germans surveyed during the period of high income inequality. A survey of individuals showed that individual is more satisfied with life when the income inequality is lower than average, while less satisfied with life when the income inequality is higher than average. Thus, income inequality reduces satisfaction with life in the short term, but in the long run this effect is not sustainable – a person gets used to high income inequality. The short-term impact on satisfaction with life can be explained by the media’s excessive focus on income inequality, resulting in public opinion being influenced (Schröder, 2016: 316). A population’s culture is also an important factor (Schneider, 2012: 435). If income inequality is perceived as a proof of social mobility, then inequality has a positive effect on a population’s satisfaction with life, thus including a meritocratic aspect in the discussion of the impact of income inequality on satisfaction with life. Meritocracy is one of the main factors in increasing tolerance for income inequality. In his work, Mijs (2019) argues that in a more unequal society, the population does not object to excessive income inequality, justifying it with a meritocratic process, i.e. the amount of income of the population confirms its knowledge, talents, and hard work (Mijs, 2019).

Given the impact of income inequality on various aspects, including the population’s health, education, and satisfaction with life, it is important for countries to reduce income inequality. Fiscal policy is used as an important tool to reduce inequality (Alesina et al., 1994: 485; Piketty, 2014; Lyubimov, 2017: 52; and Dabla-Norris et al., 2015). Tax progressivity is used to reduce income inequality by setting higher tax rates for the high earners (IMF, 2017). Other authors emphasize that excessive tax progressivity can have a negative effect on income inequality - the population will move its revenue to jurisdictions with a lower tax rate (Slemrod, 2006: 86), and in the conditions of significant shadow economy, tax progressivity will not be a sufficiently effective tool to reduce income inequality (Duncan et al., 2008: 24). Other studies have highlighted that social benefits and the targeting of public spending serve as a more effective fiscal policy tools for reducing income inequality (Engel et al., 1999: 188; IMF, 2014, Kenworthy et al., 2005: 466). For example, significant government spending on the provision of education reduces income inequality (Stiglitz, 1973: 144; Coady et al. 2018: 2756). However, when directing government spending to reduce inequality, fiscal policy must be sustainable, and the benefits of reallocation of funds must be comparable to investment in other areas (IMF, 2014).

The Gini index, determining allocation of income among the population, is widely used to determine income inequality. If the Gini index value is equal to zero, the entire population has the same income, while if the Gini index value is close to 1, all income is concentrated in the hands of one resident. Over the past 30 years, the Gini index value has increased significantly in developed countries, but this increase has not been equal across all countries (Toth, 2013: 1). In his research, the author will use both the Gini index based on disposable income and the Gini index based on market income. The difference between these coefficients is formed by social transfers, which are considered to be a quantitative result of the fiscal policy (IMF, 2014).
2. Empirical evidence from the Baltic States

In the Baltic States, income inequality is a topical problem – according to the Gini index, based on the disposable income in Latvia (0.356) and Lithuania (0.369), income inequality is among the highest in the EU, lagging only behind Bulgaria (0.396). In Estonia (0.306), income inequality is slightly higher than the EU average (0.304).

![Figure 2. Gini index based on disposable and market income in the Baltic States](Image)

Source: Author’s construction based on Eurostat data

By analysing the historical development of income inequality in the Baltic States, a similar situation is observed – historical income inequality in Estonia according to both the Gini index based on disposable income and the Gini index based on market income was lower than in Latvia and Lithuania, and gradually decreasing (see Fig. 2). In Latvia and Lithuania, on the other hand, income inequality, expressed as the Gini index based on disposable income in 2018, is approximately at the same level as in 2005.

The Gini index based on disposable income differs from the Gini index based on market income with social transfers\(^2\), which demonstrate the impact of fiscal policy on income inequality.

Fiscal policy in the period from 2005 to 2018 in the Baltic States reduced income inequality, expressed as the Gini index based on market income, by on average 30%. In Lithuania and Estonia on average by 31%, while in Latvia by 27%. Fiscal policy was most responsible for reducing income inequality after the financial crisis in 2008-2009: in Lithuania, in 2011, income inequality, expressed as the Gini index based on the market income, was reduced by 38.5%, and in Latvia by 32.9%, while in Estonia, in 2010, income inequality was reduced by 34%. Further analysis is needed to determine whether income inequality has been reduced in the post-crisis period through discretionary fiscal policy or the operation of automatic fiscal stabilizers.

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\(^2\) According to the Eurostat Glossary social transfers cover the social help given by central, state or local institutions. They include old-age pensions, unemployment benefits, family related benefits, sickness and invalidity benefits, education-related benefits, housing allowances, social assistance and other benefits.
One of the problems of income inequality is that the population with the lowest levels of income is below the at-risk-of-poverty threshold, i.e. people are unable to meet their primary needs. In the author’s opinion, it is important to analyse income inequality in the Baltic States by studying the income structure of the population in first deciles of income (see Fig. 4).

By analysing the EUROMOD data on income in the first three deciles, the author concludes that in the Baltic States it is very difficult to reduce income inequality (without reducing the income level in the highest deciles) through tax policy. The population in the first two income deciles does not actually pay taxes, so the progressiveness of taxes or the increase in tax rebates for these groups does not have a significant impact on their disposable income. Among the Baltic States, the population in Estonia is provided with the highest disposable income in the first decile; most of the disposable income is provided by pensions. If Latvia and Lithuania wish to reach the income level for population in the first income decile comparable to Estonia, one of the options is to review their pension policies.

In the Figure 5, the relationship between country-level data on income inequality (according to the Gini index based on disposable income) and overall satisfaction with life is showed. The figure shows a negative correlation between income inequality and overall satisfaction with life, i.e. higher income inequality is marked by a lower satisfaction with life. The correlation between income inequality and satisfaction with life (-0.584) is considered to be moderately strong. Performing a cross-sectional regression for the EU countries, where the dependent variable is satisfaction with life and the independent variable is the Gini index based on disposable income, the author concludes that the obtained coefficient is negative and statistically significant ($p < 0.01$). The independent variable explains 34.1% of the variability in the dependent variable. Both in Estonia and Lithuania, in 2018 compared to 2013, the situation is in line with the results of the regression analysis. In Estonia, satisfaction with life has increased as the income inequality has decreased, while in Lithuania, satisfaction with life has decreased as income inequality has increased. Changes in Latvia from 2013 to 2018 do not correspond to the results of the regression analysis – with the increase in income inequality in Latvia, satisfaction with life has also increased, which indicates that other factors also affect satisfaction with life.

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3 According to the Social Insurance Board of the Republic of Estonia the national pension rate is 205.21 euros, starting from 1.04.2019.
Figure 4. First three income deciles in the Baltic States in 2019

Source: Author’s construction based on EUROMOD data

Figure 5. Gini index of disposable income and overall life satisfaction in the EU in 2018

Source: Author’s construction based on Eurostat data
The author also performed cross-sectional regressions on the other EU countries, where the dependent variable was satisfaction with life but the independent variable was social transfers, which is a quantitative indicator of fiscal policy to assess whether fiscal policy aimed at reducing income inequality increases a population’s satisfaction with life. As a result of regression, a positive coefficient with a small explanatory value was obtained (r = 0.28, R² = 0.079) and is statistically insignificant (p > 0.1). The author concludes that the cross-sectional regression of the EU countries does not provide evidence that fiscal policy aimed at reducing income inequality has a significant impact on a population’s satisfaction with life. Such statement, however, should be treated with caution, as such results are obtained by analysing data in the EU in 2018, and if the circumstances change, for example, the amount of social benefits were to increase, other results could be obtained.

Conclusions

As an analysis of theoretical research showed, there are plenty of debates in scientific literature about the impact of income inequality on economic growth, but researchers have not come to an unequivocal conclusion, however, there is a consensus on the negative impact of income inequality on health, education level of a population, and crime rates.

Income inequality in Lithuania and Latvia, expressed by the Gini index based on disposable income, is among the highest in the EU, while in Estonia it is above the average in the EU.

Fiscal policy has reduced income inequality, expressed by the Gini index based on market income, by an average of 30% in the Baltic States between 2005 and 2018, reaching its highest level in the aftermath of the financial crisis of 2008-2009, however, detailed analysis is needed whether discretionary fiscal policy reduced income inequality or operation of automatic fiscal stabilizers.

In the Baltic States, governments cannot increase disposable income of the population in the first and second income deciles using tax policy, as this group makes negligible tax payments. In order to increase the disposable income of this population, social benefits, state pensions, and income-tested benefits must be used.

By using a cross-sectional regression for EU countries, the author concludes that there is statistically significant, negative relationship between income inequality and satisfaction with life among a population, however, statistically significant relationship between fiscal policy and population`s satisfaction with life has not been found. Such statement, however, should be treated with caution, with different circumstances, different results could be obtained.

References


EUROSTAT. (2020). *Statistic Database*. Available at: https://ec.europa.eu/eurostat/data/database [20.03.2020].


PAJAMŲ NELYGYBĖ, FISKALINĖ POLITIKA IR PASITENKINIMAS GYVENIMU BALTIJOS VALSTYBĖSE

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Santrauka


Tyrimo tikslui pasiekti iškelti šie uždaviniai: 1) ištirti pajamų nelygybės dinamiką Baltijos šalyse; 2) išanalizuoti fiskalinės politikos poveikį pajamų nelygybės mažinimui; 3) įvertinti pajamų sudėtį mažesnės pajamos gaunantių gyventojų grupėje; 4) išsiaiškinti, ar fiskalinė politika didina bendrą gyventojų pasitenkinimą gyvenimu.

Tyrimas atliktas taikant šiuos mokslinio tyrimo metodus: mokslinės literatūros apie pajamų nelygybę, jos įtakos gyventojų pasitenkinimui gyvenimu, fiskalinės politikos poveikio pajamų nelygybei ir empirinė duomenų analizė, skerspjūvio regresija.

Atliekant tyrimą remtasi statistiniais EUROSTAT duomenimis, įskaitant Europos Sąjungos statistiką apie pajamas ir gyvenimo sąlygas (EU-SILC) 2005–2018 metais, EUROMOD statistiniais duomenimis.


Baltijos šalyse vyriausybės taikoma mokesčių politika nepadidino pirmojo ir antrojo decilio gyventojų disponuojamosios pajamos, nes šios grupės moka nedidelės mokesčių įmokas. Norint padidinti šių gyventojų disponuojamasios pajamas, būtinos socialinės išmokos, valstybinės pensijos ir nuo pajamų priklausancios išmokos.

Taikant skerspjūvio regresiją ES šalyse, daroma išvada, kad tarp gyventojų pajamų nelygybės ir pasitenkinimo gyvenimu yra statistiškai reikšmingas, neigiamas ryšys, tuo tarpu statistiškai reikšmingas ryšys tarp fiskalinės politikos ir gyventojų pasitenkinimo gyvenimu nenustatytas. Vis dėlto šį teiginį vertinti atsargiai, nes esant skirtingoms aplinkybėms galimi skirtingi rezultatai.

PAGRINDINIAI ŽODŽIAI: fiskalinė politika, pajamų nelygybė, pasitenkinimas gyvenimu.

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