

FISCAL POLICY AS AN INSTRUMENT FOR REDUCING INCOME INEQUALITY: CASE OF LATVIA

Edgars Vitols, University of Latvia

Sandra Jekabsone, University of Latvia

Abstract. With the help of fiscal policy, government may influence both overall demand and the disposable income of the population, as well as solve social equality challenges in the society by allocating income among different groups of population. Income inequality in Latvia, which is expressed by the Gini index of disposable income, is the third highest in the European Union, so the question about the most effective instruments for reducing income inequality is pressing. Inequality results in reduced efficiency of social capital and economic distribution, worsening of population health indicators, rising social tension, increased crime and rising poverty, which can have a negative impact on long-term economic growth. The objective of the research is to evaluate how fiscal policy has influenced income inequality in Latvia by using the Gini index based on disposable income and the Gini index based on market income.

Results of the research indicate that the Basic Guidelines of the State Tax policy 2018-2021 have not been an effective instrument of fiscal policy to reduce income inequality; according to actual data income inequality in Latvia in 2018 has increased by 3.2% compared to 2017. Thus, to reduce income inequality the use of benefits policy is required, including Means-Tested benefits, which are only granted to people with the lowest income.

Keywords: *fiscal policy, income inequality, tax reform.*

JEL code: E62, O15

Introduction

Income inequality is a widely discussed social problem in scientific literature. Although there are mixed conclusions in the scientific literature on the short-term impact of income inequality on economic growth, there is some consensus on the long-term negative impact on the potential output of the economy. One of the most widely used indicators of income inequality among the population is the Gini index. Income inequality is a major challenge in the economy of Latvia. In 2018 Latvia had the third highest Gini index of disposable income in the European Union, exceeded only by Bulgaria and Lithuania. In order to maintain high potential output for Latvia in the future, the government needs to pursue appropriate fiscal policy to reduce income inequality.

The aim of the research is to evaluate how fiscal policy has influenced income inequality in Latvia by using the Gini index based on disposable income and the Gini index based on market income (salary, self-employed income, property income and other income after income taxes and social contributions, but before pensions and social benefits).

To achieve the aim of the research the following tasks were determined: analyse the dynamics of inequality in Latvia and compare it to average indicators in euro area countries, evaluate the impact of fiscal policy on income inequality in Latvia, assess whether the Basic Guidelines of the State Tax policy 2018-2021 contributed towards a reduction of income inequality, and based on population income distribution determine the optimum fiscal policy instrument for the reduction of population income inequality.

Scientific methods used in the research: analysis of scientific literature on income inequality and the impact of fiscal policy on the reduction of income inequality, empirical analysis, grouping, comparison and decomposition of data.

The novelty of the study is the assessment of the impact of fiscal policy on reducing inequality using Gini index comparisons, as well as the evaluation of the impact of the Basic Guidelines of the State Tax policy 2018-2021 on income inequality according to actual data for 2018 is carried out.

Research restrictions: Data on the Gini index in Latvia are only available for the period from 2005 to 2018.

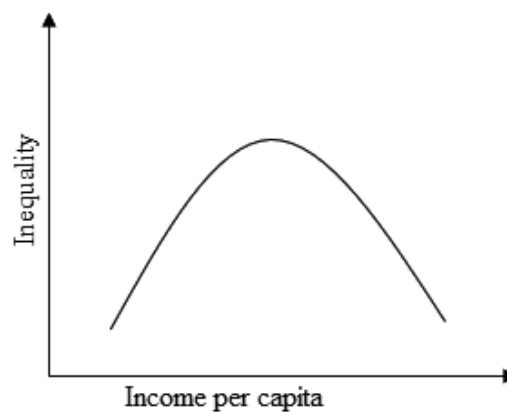
Theoretical and methodological basis of the study is specialised economic literature, foreign scientific research papers, including studies by economists of IMF and European Commission, Cabinet of Ministers of the Republic of Latvia regulations, as well as EUROSTAT and EUROMOD statistical data.

Theoretical background

Income inequality is a widely researched issue in scientific literature - its causes and consequences, impact on the development of the national economy and well-being of the population, as well as the impact of fiscal policy on the reduction of income inequality. Income inequality is characterised by an unequal distribution of income within society. One of the most widely used indicators of income inequality among the population is the Gini index. If the value of the Gini index is zero, then all members of the society have equal income, but if the value of the Gini index is one - all income in the society is earned by one individual. Scientific literature describes that the value of Gini index is increasing over time, resulting in an increasing income gap between the richest and poorest deciles of the population (Cingano, 2014). In the EU and OECD countries, the value of the Gini index has increased from 0.228 to 0.373 over the last 30 years, with fluctuations ranging from 0.2 to 0.33 at the beginning of the observations (Toth, 2013). However, the increase of the Gini index in developed countries has not been equal, for example, Gini index has not significantly increased in the EU countries such as Austria and Belgium, but it has increased considerably in Latvia, Lithuania, Estonia (Toth, 2013). A similar situation is also observed in developing countries where the income inequality has significantly increased in the last thirty years (Simson, 2018).

Scientific literature mentions various factors for income inequality, including, the development of technology, labour market demand, globalisation, availability of education, etc. (Dabla-Norris, et al., 2015). According to the author, these factors are not separable and operating through a complex system has a significant impact on income inequality. Due to the development of technology, the paradigm of the labour market has considerably changed. The requirement for more qualified (more educated) employees increases, thus the income also increases, while the income of less qualified workers remains the same or decreases, and the overall demand for less qualified employees decreases (Acemoglu, 1998 and OECD, 2011). Globalisation, similar to technology development, also increases the income gap between qualified employees and less qualified employees, leading to a higher income inequality (Gozgor and Ranjan, 2015). Access to education also plays a significant role. Through education, the individual also obtains skills required for the labour market and increases its productivity, while productivity closely correlates with income (Stiglitz, 1973). Improving the access to education could help to decrease income inequality (Coady and Dizioli, 2018).

Scientific literature does not provide an unequivocal answer as to whether income inequality is hampering economic growth. There are studies, where a negative correlation between income inequality and economic growth has been established (Vo, et al., 2018 and Panizza, 2002), while other studies have mixed results (Bahmai-Oskooee, 2008), as well as there are studies, which have found that the increase of income inequality has a positive impact on economic growth (Li, et al., 1998 and Kuznets 1955). For example, Kuznets emphasises in his work that initially only the wealthy are capable of saving and investing, thus increasing their wealth and the gap between themselves and poor population. As economic growth in the country continues, and considering political, economic and social factors, the income of the poorest in the form of wages or social benefits also increases. Such economic growth in scientific literature is called the Kuznets curve (see Fig. 1).



Source: Kuznets, 1955

Fig. 1. **Kuznets curve**

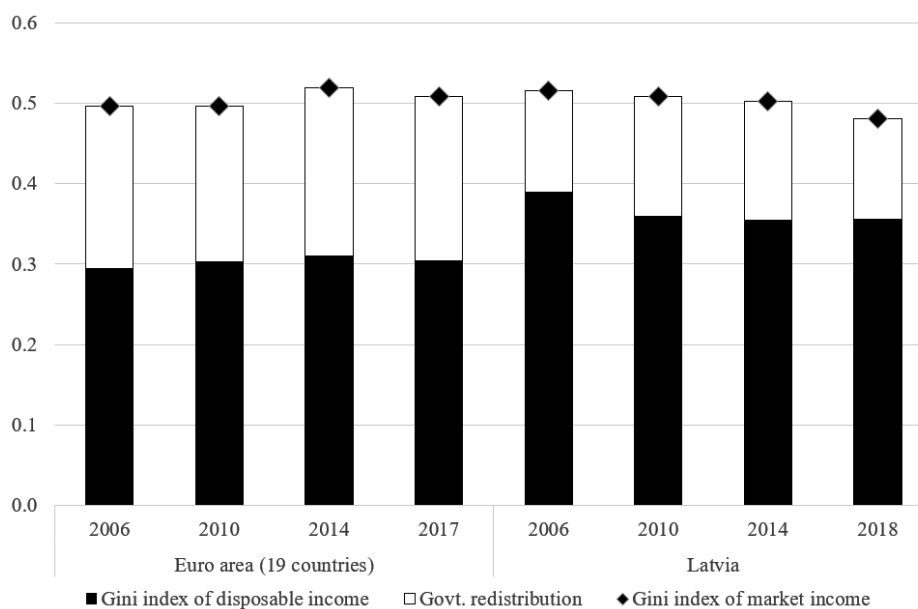
The Kuznets curve hypothesis assumes that initially national economic growth increases social inequality, but once it reaches a certain level, social inequality begins to decrease. One of the opponents of Kuznets theory was Piketty, who insists in his work that economic growth by itself does not necessarily ensure the decrease of income inequality. If the income of the wealthier population increases, so does their economic and political impact, resulting in political and economic decisions which are beneficial for the wealthier (Piketty, 2014). Since studies have different results, the authors agree to the conclusions of the Dominicis study, that the difference in the results of studies can be explained by various methods, data quality and individual characteristics of countries (Dominicis et al., 2008). Although there is no unambiguous answer about the impact of income inequality on economic growth, most scientists point out the negative impact of income inequality on rising crime rates, low health level, decreasing education level (Wildman, 2003, Fajnzylber, et al., 2002, Campbell, et al. 2005). Taking into account that education and health levels increase the value of human capital, thus they increase the amount of potential output in the future. The authors agree with the studies, which confirm that in the long term, income inequality affects the amount of economic growth. To reduce the income inequality, the government must apply fiscal policy (e.g. Piketty, 2014, Lyubimov, 2017 and Dabla-Norris et al., 2015).

Although scientific literature states that there is no one unambiguous recipe on how to fight income inequality, three channels are pointed out on how fiscal policy can reduce income inequality: 1) tax progressivity; 2) social benefits and transfers; 3) government expenditures for education and healthcare (Dabla-Norris et al., 2015, IMF 2017, IMF 2014). Application of tax progressivity results in higher income being taxed at higher rates. In its studies, the IMF stresses the importance of the progressiveness of personal income tax and corporate income tax in fighting income inequality (IMF, 2017). However, other studies have found that excessive progressivity can encourage entrepreneurs towards a tax avoidance, thereby reducing the amount of redistributive resources (Slemrod, 2006), and in some cases, tax progressivity can increase income inequality, especially in countries with a high proportion of shadow economy and low force of law (Duncan et al., 2008). State social benefits and transfers play a key role in reducing income inequality. Distribution of funds within fiscal policy must be compatible with sustainability of fiscal policy. Firstly, optimum fund allocation is not equal in all countries, and depends on priorities set forth by the government - to fight income inequality or poverty. Secondly, benefits from the distribution of funds must be comparable with benefits from increasing expenditures in other fields, for example, in public infrastructure to support sustainable growth (IMF, 2014). It is also important to note that by allocating government expenditures towards income inequality reduction and by introducing tax progressiveness, a compromise between efficiency and equity must be established (Munielo-Gallo, et al., 2013). Thirdly, fiscal policy must be consistent with fiscal sustainability,

contributing to economic growth and the ability to provide the necessary funds for fiscal redistribution in the long term (IMF, 2014).

Impact of fiscal policy on reducing income inequality

Income inequality in Latvia is significant - the Gini index of disposable income in 2018 was the third highest in the European Union (0.356), exceeded only by Bulgaria (0.396) and Lithuania (0.369). The Gini index of disposable income in Latvia in 2018 was higher than the average in member states of the euro area (30.4) (see Fig. 2.). Similar trends can also be observed historically. According to Fig. 2, for all years the Gini index of disposable income in Latvia was higher than in euro area countries. However, a different situation can be observed if the Gini index is based on market income. If the Gini index in 2006 and 2010 was higher in Latvia, then in 2014 and 2018 the Gini index of market income was higher in euro area countries. The difference between the Gini index for disposable income and the Gini index for market income is made up of social transfers¹, which is a direct, quantitative result of fiscal policy in the reduction of income inequality (IMF, 2014). According to Fig. 2, fiscal policy in euro area countries for reporting years reduced the Gini index of market income by 0.193-0.209, while in Latvia only by 0.125-0.15. The author concludes that fiscal policy through benefits and pensions in euro area countries reduces income inequality more than in Latvia.



Source: author's construction based on Eurostat database

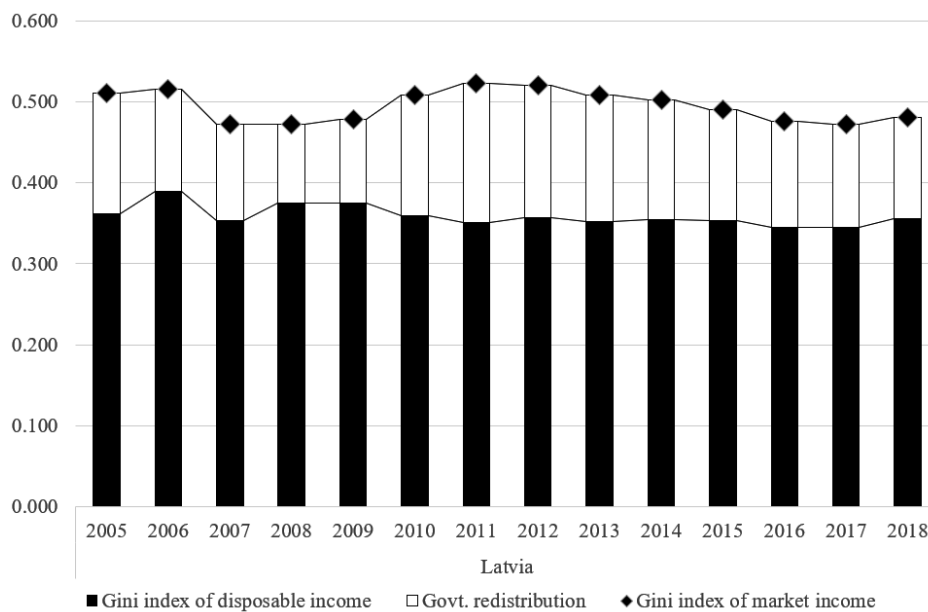
Fig. 2. Gini index based on disposable and market income in Euro area² and Latvia

Since 2005 the Gini index of disposable income has been higher than 0.345, reaching the lowest value in 2016 and 2017 (see Fig. 3.). The Gini index of market income also reached its lower value in 2017 (0.472), which was equal to the Gini index of market income in 2007. The highest value of the Gini index of market income was reached after the financial crisis in 2009 (0.523 in 2011). Whereas, the Gini index of disposable income after the financial crisis in 2009 remained relatively unchanged until 2015 - from 0.351 to 357. After the financial crisis in 2009, the Gini index of disposable income remained relatively stable due to government social transfers, which in 2008 was 0.097 of the Gini index of market income, while after the financial crisis period in 2011 it reached 0.172 of the Gini index of market income. The authors conclude that social transfers in the period from 2005 to 2018 reduced income inequality

¹ 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.

² Data about Gini index based on disposable and market income in Euro area for 2018 is not available.

determined by the Gini index of market income on average by 25.9%, except after the 2009 financial crisis (2010-2013), when social transfer reduced income inequality by more than 30%.



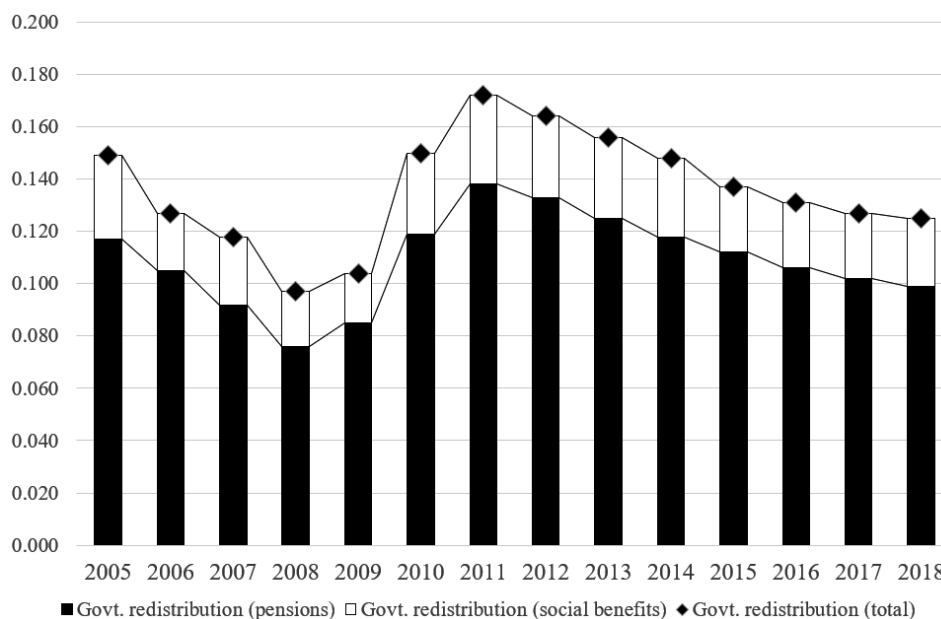
Source: author's construction based on Eurostat database

Fig. 3. Gini index of disposable and market income, and government redistribution in Latvia from 2005 till 2018

Reducing inequality was one of the tasks of the previous government's Declaration of Intentions (Cabinet of Ministers, 2016). Inequality reduction was also one of the main objectives in the Basic Guidelines of the State Tax policy 2018-2021 (Cabinet of Ministers, 2017). To reduce income inequality, the Basic Guidelines of the State Tax policy 2018-2021 introduced progressive personal income tax which, according to the scientific literature, is an appropriate fiscal policy mechanism to reduce personal income inequality. According to the Basic Guidelines of the State Tax policy 2018-2021 it was planned that the Gini index of market income would decrease from 0.4774 to 0.477, but according to actual information the Gini index of market income in 2018 increased up to 0.481 or by 0.009 compared to 0.472 in 2017. Gini index for disposable income also increased from 0.345 in 2017 to 0.356 in 2018. Compared to 2017, government social transfers in 2018 reduced the Gini index of market income by 0.002 less than in 2017 (in 2017 social transfers reduced the Gini index of market income by 0.127, while in 2018 by 0.125). The Basic Guidelines of the State Tax policy 2018-2021 have not been an efficient fiscal policy instrument for the reduction of income inequality. Similar forecasts were made by the European Commission, which predicted that the implementation of tax policy guidelines would increase income for all population groups, but would be costly to the general government budget and would have an insignificant impact on poverty and inequality (European Commission, 2018). A study by the Ombudsman of the Republic of Latvia and the University of Latvia (2019) also concludes that the Basic Guidelines of the State Tax policy 2018 -2021 did not reduce income inequality in 2018.

In the period 2005-2018 approximately 20% of social transfers consisted of social benefits, the rest was provided by pensions (see Fig. 4.) The amount of social transfers decreased after joining the European Union, while it increased considerably after the financial crisis in 2009. The increase of social transfers is explained by the automatic fiscal stabilisers (unemployment benefit) and the people's choice to retire, rather than by the discretionary fiscal policy pursued by the government. While the unemployment rate increased to 19.5% of the economically active population in 2010 (CSB, 2019), the number of unemployment benefits in the period from January 2008 to January 2010 increased by 52.8 thousand reaching 82.1 thousand (SSIA, 2019). Whereas the residents entitled to state pension actively used the opportunity to retire, as a result of which the number of recipients of retirement pensions increased

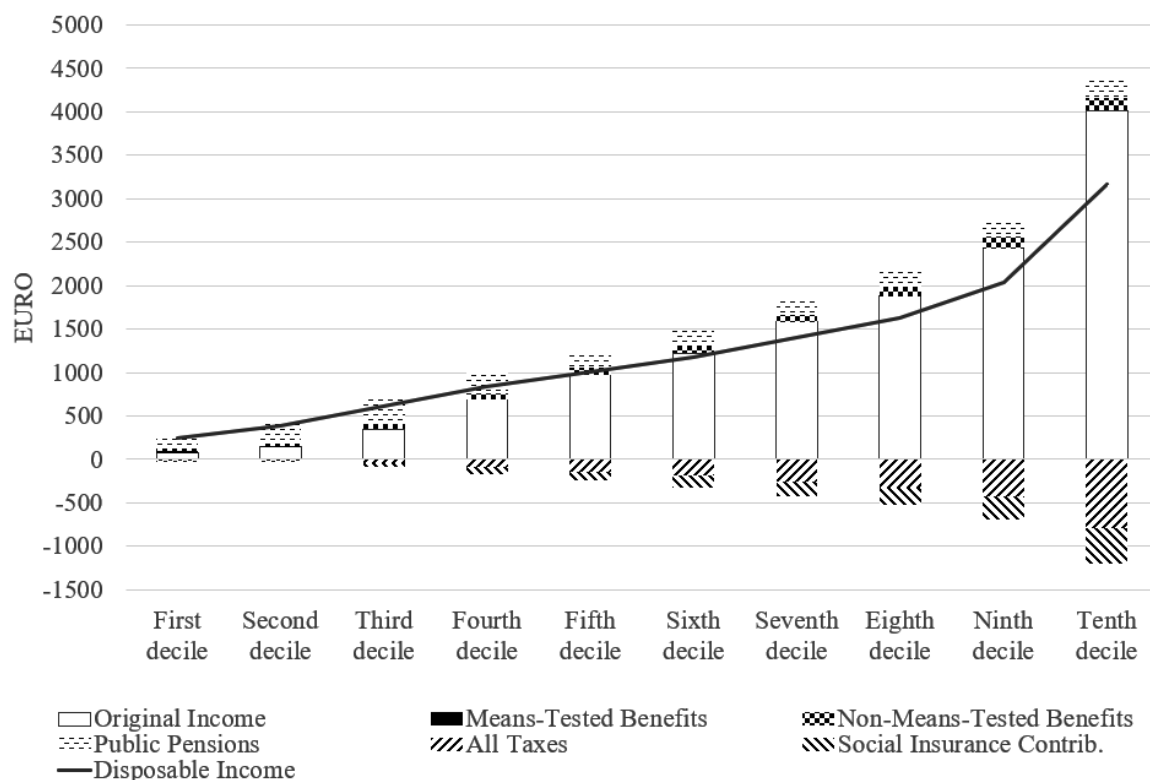
by 16.9 thousand from the end of 2007 to the end of 2012. The overall amount of social transfers has been steadily declining since the higher point in 2011, reaching 0.125 in 2018, mainly due to a decline in the number of retirement pension recipients.



Source: author's construction based on Eurostat database

Fig. 4. Government redistribution in pension and social benefits in Latvia from 2005 till 2018

Analysing income inequality by deciles of personal income, it is possible to conclude why the Basic Guidelines of the State Tax policy 2018-2021 has not been an effective instrument to reduce income inequality. According to the available results of simulations of EUROMOD about 2018 in Latvia, the personal income of the population from the market (salary, self-employed income, property income and other) is below the minimum monthly salary in the first three deciles (see Fig. 5.). In the first decile, resident income from the market is only 74.1 euros, supplemented by Means-Tested benefits (GMI and housing benefits), other benefits and pensions, as a result the disposable income increases to 242.1 euros. Considering the fact that personal income in the first decile is very low, changes in the tax policy actually do not affect these residents, for example, differentiated non-taxable minimum in 2018 was set at 200 euros, which significantly exceeds the amount of resident income from the market in the first decile. Based on the available information, the authors conclude that, in order to efficiently reduce income inequality, changes must be made not only in the tax policy, but also in the benefits policy, including Means-Tested benefits. According to EUROMOD simulations, Means-Tested benefits are received by the population with the lowest income, thus changes in these benefits would be the most effective way to promote the reduction of income inequality.



Source: author's construction based on EUROMOD simulations

Fig. 5. Income deciles in Latvia in 2018

The Gini index of disposable income indicates the distribution of income among the population, but does not indicate the difference in the level of income between different groups of the population. According to Fig. 5. in 2018, the disposable income of residents in the tenth decile of income was 13.1 times higher than the disposable income for residents in the first decile, which is the second worst figure in European Union. The difference in income levels in 2018 was greater only in Lithuania, where the disposable income of the tenth decile was 13.4 times higher than income of the first decile (EUROMOD, 2019).

Conclusions

1. Scientific literature does not provide an unambiguous answer as to whether income inequality in the short term has a negative impact on economic growth, because different results are obtained due to various methods and specific characteristics of countries, however, there is a consensus on the long-term negative impact of income inequality on potential output through channels that hamper human capital development - increasing crime rates, low health level and reducing education levels.
2. Income inequality in Latvia, which is expressed by the Gini index based on disposable income, is the third highest in the European Union.
3. Fiscal policy through benefits and pensions in euro area countries reduces income inequality more than in Latvia.
4. With the help of social transfers in the period from 2005 to 2018, income inequality determined by the Gini index of market income was reduced by 25.9% on average, except for after the 2009 financial crisis (2010-2013), when social transfers reduced income inequality by more than 30%.
5. The increase of social transfers after the crisis is explained by the automatic fiscal stabilisers (unemployment benefit) and the people's choice to retire, rather than by the discretionary fiscal policy pursued by the government.
6. The Basic Guidelines of the State Tax policy 2018-2021 have not proved to be an effective instrument of fiscal policy to reduce income inequality - according to actual data, the income inequality determined by the Gini index of disposable income in 2018 increased by 3.2 percent compared to 2017.

2. The population with the lowest income is basically not affected by changes in tax policy, thus, to reduce income inequality, the use of a benefits policy, including Means-Tested benefits, which are granted to lower-income individuals only, is required.

Bibliography

- Acemoglu D., 1998. Why Do New Technologies Complement Skills? Directed Technical Change and Wage Inequality. *Quarterly Journal of Economics*, 113(4), 1055-89.
- Bahmani-Oskooee M., Hegerty W., Wilmeth H., 2008. Short-Run and Long-Run Determinants of Income Inequality: Evidence from 16 Countries. *Journal of Post Keynesian Economics*, 30(3) 463-484.
- Campbell M.E., Haveman R., Sanderuf G., Wolfe B.L., 2005. Economic inequality and educational attainment across a generation. *Focus*, 23(3), 11-25.
- Central Statistical Bureau of Republic of Latvia, 2019. *Statistic Database*. [Online] Available at: <https://www.csb.gov.lv/lv/statistika/db> [Accessed 20 October 2019].
- Cingano F., 2014. *Trends in Income Inequality and its Impact on Economic Growth*, OECD Social, Employment and Migration Working Papers No.163, OECD Publishing.
- Coady D., Dizioli A., 2018. Income inequality and education revisited: persistence, endogeneity and heterogeneity. *Applied Economics*, 50(25), 2747-2761.
- Dabla-Norris E., Kochar K., Suphaphiphat N., Ricka F., Tsounta E., 2015. *Causes and Consequences of Income Inequality: A Global Perspective*. IMF Staff Discussion Note, June, 2015, [Online] Available at: <https://www.imf.org/external/pubs/ft/sdn/2015/sdn1513.pdf> [Accessed 11 October 2019].
- Dominicis L., Florax R.J.G.M., de Groot H.L.F., 2008. A Meta-Analysis on the Relationship between Income Inequality and Economic Growth. *Scottish Journal of Political Economy*, 55(5), 654-682.
- Duncan D., Peter K.S., 2008. *Tax progressivity and income inequality*. Andrew Young School of Policy Studies, Research Paper Series, Working Paper, pp 8-26.
- EUROMOD, 2019. *Statistics on Distribution and Decomposition of Disposable Income*. Using EUROMOD version no. 11.0+. [Online] Available at <http://www.euromod.ac.uk/using-euromod/statistics> [Accessed 20 October 2019].
- European Commission, 2018. *The Effect of Taxes and Benefits Reforms on Poverty and Inequality in Latvia*. Economic Brief 039, October 2018, [Online] Available at: https://ec.europa.eu/info/publications/economy-finance/effect-taxes-and-benefits-reforms-poverty-and-inequality-latvia_en [Accessed 18 October 2019].
- Eurostat, 2019. *Statistic Database*. [Online] Available at: <https://ec.europa.eu/eurostat/data/database> [Accessed 15 October 2019].
- Fajnzylber P., Lederman D., Loayza N., 2002. Inequality and Violent Crime. *Journal of Law and Economics*, 45(1), 1-40.
- Gozgor G., Ranjan P., 2015. *Globalization, Inequality, and Redistribution: Theory and Evidence*. CESifo Working Paper No. 5522, Center for Economic Studies and Ifo Institute, Munich, [Online] Available at: <https://ssrn.com/abstract=2675996> [Accessed 11 October 2019].
- IMF, 2014. *Fiscal Policy and Income Inequality*. IMF Policy Paper, January, 2014, [Online] Available at: <https://www.imf.org/external/np/pp/eng/2014/012314.pdf> [Accessed 11 October 2019].
- IMF, 2017. *IMF Fiscal Monitor: Tackling Inequality*. October, 2017, [Online] Available at: <https://www.imf.org/en/Publications/FM/Issues/2017/10/05/fiscal-monitor-october-2017> [Accessed 11 October 2019].
- Kuznets S., 1955. Economic Growth and Income Inequality. *The American Economic Review*, 45(1), 1-28.
- Latvijas Republikas tiesībsargs (The Ombudsman of the Republic of Latvia), Latvijas Universitāte (University of Latvia), 2019. *Nodokļu reforma neapliekamā minimuma, atvieglojumu un attaisnoto izdevumu piemērošanas problēmu, efektivitātes un risinājumu izvērtējumā (Tax reform's evaluation of non-taxable minimum, allowances and eligibility of expenditure problems, effectiveness and solutions)*. [Online] Available at: <http://www.tiesibsargs.lv/lv/pages/petijumi-un-publikacijas/petijumi> [Accessed 24 October 2019].
- Li H., Zou H., 1998. Income inequality is not Harmful for Growth: Theory and Evidence. *Review of Development Economics*, 2(3), 318-334.
- Lyubimov I., 2017. Income inequality revisited 60 years later Piketty vs Kuznets. *Russian Journal of Economics*, 3, 42-53.

- Ministru Kabinets (Cabinet of Ministers of Republic of Latvia), 2016. Deklarācija par Māra Kučinska vadītā Ministru kabineta iecerēto darbu (Declaration of the Intended Activities of the Cabinet of Ministers headed by Māris Kučinskis). [Online] Available at: https://www.mk.gov.lv/sites/default/files/editor/20160210_mkucinskis_vald_prior_gala_vers_0.pdf [Accessed 16 October 2019].
- Ministru Kabinets (Cabinet of Ministers of Republic of Latvia), 2017. Par Valsts nodokļu politikas pamatnostādņēm 2018. 2021. gadam (Basic Guidelines of the State Tax policy 2018-2021). Regulation Nr.245, accepted 24.05.2017.
- Munielo-Gallo L., Roca-Sagales O., 2013. Joint determinants of fiscal policy, income inequality and economic growth. *Economic Modelling*, 30, 814-824.
- Organisation for Economic Co-operation and Development (OECD), 2011. *Divided We Stand: Why Inequality Keeps Rising*. Paris: OECD Publishing, [Online] Available at: <https://www.oecd.org/els/soc/49170768.pdf> [Accessed 8 October 2019].
- Panizza U., 2002. Income Inequality and Economic Growth: Evidence from American Data. *Journal of Economic Growth*, 7, 25-41.
- Piketty, T., 2014. *Capital in the 21st Century*. Cambridge, MA: Harvard University Press,
- Simson R., 2018. *Mapping recent inequality trends in developing countries*. LSE International Inequalities Institute Working Paper 24, May, 2018.
- Slemrod J., 2006. The Consequences of Taxation. *Social Philosophy and Policy*, 23(2), 73-87.
- Stiglitz J.E., 1973. Education and Inequality. *The Annals of the American Academy of Political and Social Science*, 409, Income Inequality, 135-145.
- The State Social Insurance Agency, 2019. Statistic Database [Online] Available at: <https://www.vsaa.gov.lv/budzets-un-statistika/statistika/> [Accessed 20 October 2019].
- Toth I.G., 2013. *Time series and cross-country variation of income inequalities in Europe on the medium run: are inequality structures converging in the past three decades?* GINI Policy Paper 3, September 2013.
- Vo, D.H., Nguyen, T.C., Tran, N.P., Vo, A.T., 2019, What Factors Affect Income Inequality and Economic Growth in Middle-Income Countries? *Journal of Risk and Financial Management*, 12(40), 1-12.
- Wildman J., 2003. Modelling health, income and income inequality: the impact of income inequality on health and health inequality. *Journal of Health Economics*, 22(4), 521-538.