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MASTER THESIS

FISKALINĖ POLITIKA IR FINANSŲ STABILUMAS: AR POLITINĖ IDEOLOGIJA TURI ĮTAKOS? VIŠEGRADO ŠALIŲ ANALIZĖ	**FISCAL POLICY AND FINANCIAL STABILITY: DOES POLITICAL IDEOLOGY MATTER? THE EVIDENCE FROM VISEGRAD GROUP**

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CONTENT

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

Since the early works of Milton Friedman and John Maynard Keynes, there was intense debate between fiscal and monetary policy instruments' effectiveness ensuring financial stability. The beginning of XXI century changed perspective with more attention to fiscal policy. The tipping point became global financial crisis where governments' unpreparedness, thoughtless and lavish social policies deepened crises and rigid tightening fiscal policies had to be implemented in some countries to keep afloat, maintain solvency. After the 2008 financial crisis the relevance of fiscal policy, especially in Eurozone countries increased and still increasing nowadays since European Central Bank (ECB) can't adjust its policies in favor for each individual country.

Even though there is lack of research on fiscal policy effect to financial stability, a few scientific works show undeniable results. Government in most countries is the largest and main actor in the economy. It is the biggest investor, huge borrower in domestic economy, its revenue and expenditure decisions have the biggest impact on aggregate demand, tax policies affect incentives and help to create financial buffers for economic downturns. For these reasons, one cannot ignore the impact of government decisions on the stability of the financial system.[1]

The arsenal of fiscal policy instruments most of the time are not self-propelled. They are implemented by politicians and political parties. "Partisan Theory" and empirical works show, that political parties choose to represent different voters and their needs, therefore various economic policies are the outcome of different parties.[2] For instance, the conventional view is that economically left leaning parties supports higher taxes on the rich, government regulation on business. Since attribute of the socialist is welfare state, higher public spending noticed among left-wing governments. Meanwhile economically right leaning parties support a *laissez-faire* approach, they offer lower taxes on business, implements stricter fiscal policy, and run lower budget deficits.

While different fiscal policies may have different effect on financial stability there is almost none of the scientific research investigating political ideology effect on economic soundness. Mirna Dumičić, European Central Bank, Committee on the Global Financial System, Milutin Ješić and Hervé Hannou analyzes channels through which fiscal policy can affect financial stability and what impact certain policies (taxation, debt management, expenditure policy) have. Meanwhile Douglas A. Hibbs, Seymour Martin Lipset, Alberto Alesina, Paul A. Samuelson,

[1] Hervé Hannou, "Towards a global financial stability framework", in 45th SEACEN Governors' Conference, 2010, 21 pp. Available at [http://www.bis.org/speeches/sp100303.pdf]

[2] Otto Swank, "Popularity Functions Based on the Partisan Theory." Public Choice, vol. 75, no. 4, Springer, 1993, pp. 339, at: [http://www.jstor.org/stable/30025677], accessed 6 Nov. 2021.

Andrew Cowart, Fredrik Carlsen and other scholars investigate the main attributes of left and right wing political parties fiscal policies. However, it is hard to find works connecting all components together: political ideology → fiscal policy → financial stability. Accordingly, the main motivation in this work is to fill up vacuum in this field.

Relevance of the topic and the necessity for analyzes of which political ideology party copes better with country finances is detrimental not only because of a lack of research in this field, but also due to colossal financial challenges ahead. COVID-19 increased countries' indebtedness to unprecedented levels. While the levels of debt growing, aging society, especially in European Union, will put extra pressure on social security budgets.[3] In addition to that, ECB unwillingness and lack of instruments to implement "fits for all" monetary policy exposes governments to extraordinary prerogative maintain financial stability.

The Practical and theoretical value of this work is to broaden voter's horizons on political preferences that might have effect on their lives and well-being of society. Inter alia, conclusions and findings of this work augment scarcity in political economy field on ideology effect to financial stability.

To find political ideology effect on financial stability Visegrad countries (Poland, Slovakia, Hungary and Czech Republic) are investigated during 1995-2019 period. Visegrad group was chosen because all of the countries share similar political system and historical background. They all had transitional periods from social to liberal market economy marked by many reforms and different fiscal policies implemented by various political parties. This heterogeneity of ideologies helps for better comparison.

The literature list used in this work ranges from 1900-2020. For theoretical background the early works of John Maynard Keynes, Milton Friedman, Anthony Downs, Bruno Frey, Étienne Sadi Kirschen, Douglas A. Hibbs are used. OECD, ECB, IMF, World Bank, European Commission working papers and resolutions analyzed. Inter alia, more than 30 empirical research on fiscal policy, financial stability and political ideology presented. The main limitation in this work is research framework which was constructed based on to some extent similar but not the same research. Also, the score prescribed to ideology variable is from analyzing political party's agenda but not the real policy party implemented. Therefore, the real political ideology might differ.

[3] European parliament, Long-term sustainability of public finances for a recovering economy, European Parliament resolution, 2010, May, at [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52010IP0190&from=LT].

Research problem: does political ideology affects financial stability?

The goal of the research: the main goal of this research is to find whether political ideology has effect on financial stability. Also, to investigate through which channels political ideology affects financial soundness.

Work aims and tasks:

1. To analyze and present scientific literature on fiscal policy, financial stability and political ideology;
2. Present the main channels through which and how fiscal policy affects financial stability;
3. Using technique presented in other works construct proxy variable for financial stability;
4. Construct proper methodology for evaluation;
5. Examine results of the research and share recommendations for further works.

Research hypothesis: Economically left leaning parties will implement fiscal policy that would be more harmful to financial stability than economically right leaning parties' policies.

Research methods: In order to evaluate whether financial stability is related with political ideology, in this work the quantitative analysis method will be used. First, descriptive statistic models will be made to see whether ideologically left leaning governments accumulate higher deficit and debt levels. Latter, fixed effect regression model constructed to investigate relation between financial stability score, political ideology and other controlled variables. Finally, variables that had effect on financial stability channeled with political ideology through regression model.

Work structure: in the literature review the main concepts of financial stability and the role of fiscal policy providing better economic environmnet presented. Latter, the main channels to financial stability discused and certain ideologies connected with certain fiscal policies. In the methodology statistic model elaborated, main indepented and depented variables, financial stability index and research obsticles discussed. Finnaly, results of the reaserch are presented.

1. THEORETICAL ASPECTS OF FISCAL POLICY ROLE ENSURING FINANCIAL STABILITY

Literature review part will be structured as follow. 1. First, financial stability and fiscal policy is presented and discussed. Also, theoretical and empirical background about fiscal policy and financial stability, relation and importance between them analyzed. 2. Second, the main channels (taxes, debt and deficit management, public expenditure) of fiscal policy transmission elaborated. Then, one will look closer to the taxation, debt and public expenditure role ensuring financial stability and present the pivotal scientific works in the field. 3. In the third part of literature review theory and findings whether different political ideology parties implement different fiscal policy presented. Upon learning that parties indeed implement different fiscal policy, political parties are matched with certain fiscal policies.

1.1 Financial stability definitions and different understating

Up until financial crisis at the end of the 90s the relevance and the analysis on financial system and stability in the scientific literature wasn't abundant. However, the true importance and definition of financial stability was understood and strengthen only after 2008 financial crisis.[4] During pandemic years, the relevance and importance of financial soundness is even more colossal.

Analyzing the works of what financial stability is, one can be noticed that it is hard to find among the scholars and international institutions widely accepted or confirmed concept of financial stability.[5] Therefore, financial stability definitions various from a very narrow ones to explicit (Table 1). A great many of these definitions view financial stability through the prism of financial crises.[6] Some interpret financial stability even more narrowly, when financial stability is

[4]Magyar nemzeti bank, Defining Financial Stability, at: [https://www.mnb.hu/en/financial-stability/defining-financial-stability], Accessed 6 Nov. 2021.
[5]Sander Oosterloo and Jakob de Haan, A Survey of Institutional Frameworks for Financial Stability, *Occasional Studies*, 2003, Vol. 1, No. 4, De Nederlandsche Bank, Amsterdam.
[6]Douglas D. Evanoff and George G. Kaufman, *Systemic Financial Crises: Resolving Large Bank Insolvencies*, World Scientific, 2005, Singapore 83 pp.

absent of a large-scale unanticipated collapses of the banking system which reduces the stock of money.[7]

World Bank	Financial stability is economic state, which absent of system-wide episodes in which the financial system fails to function.
European Central bank	Financial stability can be defined as a condition in which the financial system is capable of withstanding shocks and the unravelling of financial imbalances
International monetary fund	Financial stability occurs when financial system is able efficiently allocates resources between activities and across time, assesses and manages financial risks, absorb economic shocks.
Bank of Lithuania	Financial system is the state of the financial market in which its participants are able to perform the function of financial intermediation effectively and withstand shocks.
Bundesbank describe	Financial stability is a state in which the financial system can perform its key economic functions smoothly at all times.
John Chant (Bank of Canada)[8]	Financial instability refers to conditions in financial markets that harm, or threaten to harm, an economy's performance through their impact on the working of the financial system.
Milton Friedman and Anna J. Schwartz	Financial stability is absent of a large-scale unanticipated collapses of the banking system.
Frederick Mishkin[9]	Financial instability occurs when financial system can no longer do its job of channeling funds to those with productive investment opportunities.
Garry J. Schinasi[10]	Financial stability is ability to help the economic system allocate resources, manage risks, and absorb shocks.
Andrew Crockett[11]	Financial instability occurs when economic performance is impaired by fluctuations in the price of financial assets or by an inability of financial institutions to meet their contractual obligations.
Andrew Large [12]	Financial stability exists when it is possible to maintaining confidence in the financial system.

Table 1. Financial (in)stability concepts
Source: various authors

[7]Milton Friedman and Anna Jacobson Schwartz, *A Monetary History of the United States*, Princeton University Press, New Jersey, 1963.
[8]John Chant et al, "Essays on Financial Stability, Bank of Canada Technical Report.", No. 95,1-87 pp., at [https://www.banqueducanada.ca/wp-content/uploads/2010/01/tr95.pdf], accessed 6 Nov. 2021.
[9] Frederic S. Mishkin, "Global Financial Instability: Framework, Events, Issues", Journal of Economic Perspectives, 1999, Vol. 13, No. 4. 3-20 pp.
[10] Houben et al, pp 4-26.
[11] Andrew Crockett, 'The Theory and Practice of Financial Stability', GEI Newsletter Issue, 1997, No. 6, 1-4 pp., Cambridge (UK).
[12] Andrew Large, "Financial stability: maintaining confidence in a complex world.", Financial Stability Review, 2003 pp. 170-174, Bank of England, London.

The most commonly used definitions in research are borrowed from the international financial organizations. For instance, the World Bank describes financial stability as economic state, which absent of system-wide episodes in which the financial system fails to function. For the World Bank a country has health and sustainable financial system if it is capable to allocate resources, maintain employment levels close to the economy's natural rate, are able to solve financial imbalances that arise endogenously or as a result of significant adverse and unforeseen events. Also, international financial institution differently from other definitions emphasize that growth of the country's economy could be another sign of financial stability.[13]

The European Central Bank points out that financial stability can be defined as a condition in which the financial system – which comprises financial intermediaries, markets and market infrastructures – is capable of withstanding shocks and the unravelling of financial imbalances.[14] Some ECB economists elaborates that financial stability can be defined in accordance to the period. For instance, in the short run stable public finances can be characterized as the government's ability to service all upcoming obligations while in the long run, fiscal sustainability refers to the fulfilment of the government's present value budget constraint, requiring that the present value of liabilities is not greater than the present value of assets.[15]

International Monetary Fund financial stability defines through the financial system ability efficiently allocates resources between activities and across time, assesses and manages financial risks. Also, as for ECB and World Bank, financial stability for IMF is defined through ability to absorb shocks.[16] In order to evaluate financial stability IMF also developed dozens of indicators such as capital adequacy, asset quality, earnings and profitability, liquidity, sensitivity to market risk, deposit takers and etc.[17]

For the Bank of Lithuania the stability of financial system is defined as the state of the financial market in which its participants (banks, other financial institutions, market infrastructure) are able to perform the function of financial intermediation effectively and withstand shocks substantially without compromising the efficient redistribution of financial resources.[18] Deutsche Bundesbank describes financial stability as a state in which the financial system can perform its key economic functions smoothly at all times, particularly in times of stress

[13]The World Bank, Financial stability, at: [https://www.worldbank.org/en/publication/gfdr/gfdr-2016/background/financial-stability], Accessed 6 Nov. 2021.
[14]European Central Bank, Financial stability and macroprudential policy, at: [https://www.ecb.europa.eu/ecb/tasks/stability/html/index.en.html], Accessed 6 Nov. 2021.
[15]Nicola Giammariol et al, Assessing fiscal soundness: theory and practice, 2007, 5 pp., at: [https://www.ecb.europa.eu/pub/pdf/scpops/ecbocp56.pdf], Accessed 6 Nov. 2021.
[16]Aerdt Houben et al, Toward a Framework for Safeguarding Financial Stability, 2004, at: [https://www.imf.org/external/pubs/ft/wp/2004/wp04101.pdf], Accessed 6 Nov. 2021.
[17]International Monetary Fund, Financial soundness indicators compilation guide, 2019, 2-3 pp.
[18]Lietuvos bankas, Finansinio stabilumo apžvalga, 2013, 4 pp. at: [https://www.lb.lt/uploads/publications/docs/fsa_2013_06_11_new.pdf], accessed 6 Nov. 2021.

and structural upheaval.[19]

Some authors in order to evaluate financial stability uses aggregate index.[20] They are constructed aggregating financial indicators, for instance the effective exchange rate, interest rates, real estate and stock prices, the solvency of financial institutions and volatility of the stock index of financial institutions.[21] Despite certain limitations, the aggregate index covering a set of financial indicators enables to evaluate the financial system as a whole. Moreover, aggregate index is easier to compare at the international level.[22]

The broader financial stability explanation is elaborated by Garry J. Schinasi. According to him, financial stable system must have several key elements. First of all, according to the author, financial stability is a broad concept, encompassing the different dimensions of the financial system—the financial infrastructure, financial institutions and financial markets. Second, that the concept of financial stability encompasses the (normative) property that the process of finance functions well enough to perform successfully its main facilitative purposes. Third, that financial stability is not only transforming maturities, allocating resources, mobilizing savings and diversifying risks, but also that within financial system money can adequately fulfill its role as a means for transactions, a unit of account and a store of value. Fourth, that stability means not only absence of financial crises, but also to the ability of the financial system to solve imbalances before they appear. Finally, that financial stability is ultimately couched in terms of the potential consequences for the real economy. Thus, disturbances in financial markets or at individual financial institutions need not be considered threats to financial stability if they are not expected to damage economic activity at large.[23]

Also, Garry J. Schinasi elaborated endogenous and exogenous sources of risk for the financial stability. Some of those risk (Table 2.), can occur from fiscal policies (institutions- based and infrastructure-based).[24]

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[19]Deutsche Bundesbank, Financial and monetary stability, 2016, at: [https://www.bundesbank.de/en/tasks/financial-and-monetary-system/financial-and-monetary-stability], Accessed 6 Nov. 2021.

[20]Adam Geršl and Jaroslav Heřmánek, Financial stability indicators: advantages and disadvantages of their use in the assessment of financial system stability, 69-78 pp., at: [https://www.cnb.cz/export/sites/cnb/en/financial-stability/.galleries/fs_reports/fsr_2006/FSR_2006_article_2.pdf], Accessed 6 Nov. 2021. Also William R. Nelson and Roberto Perli, Selected Indicators of Financial Stability, 1-22 pp., at: [https://www.ecb.europa.eu/events/pdf/conferences/jcbrconf4/Perli.pdf], accessed 6 Nov. 2021. Also, Mark Illing and Ying Liu, An Index of Financial Stress for Canada, 2003, 1-28 pp. at: [https://www.bankofcanada.ca/wp-content/uploads/2010/02/wp03-14.pdf], accessed 6 Nov. 2021.

[21]Jan Willem End, Indicator and boundaries of financial stability, 2006, at: [https://www.dnb.nl/binaries/Working%20Paper%2097_tcm46-146754.pdf], accessed 6 Nov. 2021.

[22]Greta Keliuotytė-Staniulėnienė, Fiscal sustainability and its impact on financial stability in Lithuania and other new member states of the European Union, EKONOMIKA 2015 Vol. 94(2), 30 pp.

[23]Florin Oprea, Fiscal and financial stability in Romania – an overview, *Transylvanian Review of Administrative Sciences*, No. 40 E/2013, 161 pp.

[24] Aerdt Houben et al, Toward a Framework for Safeguarding Financial Stability, IMF Working paper, 2004 June, 19 pp., 19 at [https://www.imf.org/external/pubs/ft/wp/2004/wp04101.pdf], Accessed 6 Nov. 2021.

Endogenous	**Exogenous**
Institutions-based: • Financial risks - Credit - Market - Liquidity - Interest rate - Currency • Operational risk • Information technology weaknesses • Legal/integrity risk • Reputation risk • Business strategy risk • Concentration risk • Capital adequacy risk *Market-based:* • Counterparty risk • Asset price misalignment • Run on markets - Credit - Liquidity • Contagion *Infrastructure-based:* • Clearance, payment and settlement system risk • Infrastructure fragilities - Legal - Regulatory - Accounting - Supervisory • Collapse of confidence leading to runs • Domino effects	*Macroeconomic disturbances:* • Economic-environment risk • Policy imbalances *Event risk:* • Natural disaster • Political events • Large business failures

Table 2. Sources of Risk to Financial Stability[25]
Source: International Monetary Fund

To sum up, various definitions in this section about financial stability were given. One can see that financial stability definition comprises different agents – labor and financial market, financial and other institutions. However, one connecting variable can be discovered in all most of definitions, that financial stability is country's ability to absorb external shocks to the economy.

[25] Houben et al, pp 20.

1.2 The importance of fiscal policy and theoretical approach

There is two ways for institutions to make influence on the economy – fiscal and monetary policy. The monetary policy is implemented by central banks who tries to achieve macroeconomic objectives, for instance; inflation, consumption, growth and liquidity through the management of money supply and interest rate. Another way to implement economic goals and reach financial stability is through the fiscal policy. Fiscal policy is implemented by governments that influence economy by its spending and taxation policies.

A Simple example of how governments could influence economy is through the basic formula of gross domestic product (the value of all final goods and services):

$$GDP = C + I + G + NX$$

On the right side of the equation sources of aggregate spending or demand are presented: private consumption (C), private investment (I), purchases of goods and services by the government (G), and exports minus imports (net exports, NX). Equation shows that governments affect economic activity directly through the government spending (G) and not directly influencing C, I, and NX, through changes in taxes, transfers, and spending. Fiscal policy that increases aggregate demand directly through an increase in government spending is called expansionary or "loose." On the contrary, fiscal policy is often considered contractionary or "tight" if it reduces demand via lower spending.[26]

Depending on the period, purposes of the fiscal policy can differ. For instance, in short term government use fiscal policy to reach macroeconomic stability. When economy activity is decreasing, governments might cut taxes, increase spending, and increase taxes or reduces spending if economy is overheating and inflation is growing.[27] While in the long run fiscal policy provides sustainable growth,[28] reduces inequality and poverty.[29]

It is worth to mention that up until 1930 fiscal policy as an instrument to correct economic deviations didn't exist. It was believed that government spending and taxation had no influence on the aggregate levels of spending and employment in the economy and government only can redirect resources form the private to the public sector. Also, it was claimed that in a full-

[26] Mark Horton and Asmaa El-Ganainy, "Fiscal Policy: Taking and Giving Away.", at [https://www.imf.org/external/pubs/ft/fandd/basics/fiscpol.htm], accessed 6 Nov. 2021.
[27]Sagiri Kitao, "Short-Run Fiscal Policy: Welfare, Redistribution, and Aggregate Effects in the Short and Long Run." Federal Reserve Bank of New York, Staff Report no. 442, April 2010, at: [https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr442.pdf], accessed 6 Nov. 2021.
[28]Vito Tanzi and Howell H. Zee, "Fiscal Policy and Long-Run Growth." Staff Papers (International Monetary Fund), vol. 44, no. 2, Palgrave Macmillan Journals, 1997, pp. 179–209, at: [https://doi.org/10.2307/3867542], accessed 6 Nov. 2021.
[29]United Nations University, "Fiscal Policy for Poverty Reduction, Reconstruction, and Growth." Policy brief, no 5, 2006, 1-7 pp., at [https://www.wider.unu.edu/sites/default/files/PB2006-005.pdf], accessed 6 Nov. 2021.

employment each dollar of additional government spending can only "crowd out" exactly one dollar of private spending.[30] With an advent of Great Depression attitude changed. John Maynard Keynes during 1930s in an attempt to understand the Great Depression claimed that *laissez-faire* approach doesn't work and even cause financial discrepancies.[31] Therefore the new approach needs to be applied. He elaborated his own theory saying the government should increase demand to boost growth. According to J. M. Keynes aggregate demand can be derived only from present consumption or from present provision for future consumption.[32] Therefore, he advocated for increased government expenditures and lower taxes to stimulate demand and pull the global economy out of the depression.

Up until now in modern literature there is debate, which fiscal or monetary policy has more influence in maintaining financial stability. For instance, after the First world war monetary policy even lost its relevance since it was believed that in times of heavy unemployment interest rates cannot be lowered by monetary measures to increase spending. Even if it could, it would do nothing to the economy since there are no investment opportunities and investors are not willing to engage. The only way to achieve finance stability and sustainability was believed through fiscal policy, that government spending could make up for insufficient private investment and tax reductions could change investors opinions.[33] However, this view also changed after the Second world war when Milton Friedman developed Monetarist theory, where he criticized fiscal policy and claimed expansion or contraction of the money supply is a much more effective tool for influencing the economy than fiscal policy. Monetarists claimed that an increase in the money supply will lead to overall price increases in the economy.[34]

$$\boldsymbol{M \times V = P \times Q}$$

Where (M) is the money supply (V) is the velocity of money (number of times per year the average dollar is spent), (P) is price of good and (Q) is the total quantity of goods and services produced. Monetarists assumed that money velocity was constant, therefore when money supply is increased, either P, Q, or both P and Q rise.

Even though the dichotomy between fiscal and monetary policy persist, it is agreed that the best result for the macroeconomic stabilization can be achieved only through

[30]Alan S. Blinder and Rober M. Solow, "Does fiscal policy matter." Econometrics Research Program, Research Memorandum No. 144, August 1972, 1-20 pp., at: [https://www.princeton.edu/~erp/ERParchives/archivepdfs/M144.pdf], accessed 6 Nov. 2021.
[31] John Maynard Keynes, Activities 1922-1929, parts I and II, The collected writings of John Maynard Keynes, vol. 19, New York, The Macmillan Press, 1981, 229 pp.
[32] John Maynard Keynes, *1883-1946. The General Theory of Employment, Interest and Money.* London: Macmillan, 1936, 70.
[33]Milton Friedman, "The role of monetary policy." *The American Economic Review,* Vol LVIII, March 1968, No 1, 2 pp., at: [https://www.aeaweb.org/aer/top20/58.1.1-17.pdf], accessed 6 Nov. 2021.
[34]Keith M. Coulson, "Monetary and Fiseal Actions in Macroeconomic Models." Federal Reserve Bank of st. Louis, January 1974, 8-17 pp., at [https://files.stlouisfed.org/files/htdocs/publications/review/74/01/Macroeconomic_Jan1974.pdf], accessed 6 Nov. 2021.

coordination of fiscal and monetary policies. This view is supported by international financial institutions and various economist: “When monetary and fiscal policies are consistent so that their impact on aggregate demand is cumulative, and not offsetting, the overall impact is higher than it would otherwise be.”.[35]

1.3 Channels from fiscal policy to financial (in)stability

In the previous two parts theoretical works of what financial stability is and whether fiscal policy has effect on financial stability were disscused. However, in order to understand how fiscal policy influences financial stability, it is detrimental to analyze the channels through which fiscal policy is transferred. Therefore, in this part the main channels of how fiscal policy can affect financial stability will be presented. Also, since taxes, expenditure policy, public debt and budget management are the main instruments of governments to implements fiscal policy, in the later part analysis of how these variables create or reduce financial instability presented.

Mirna Dumičić in his work analyzes the channels, through which fiscal policy effects financial stability. He emphasizes those channels: 1. public debt and budget deficit, 2. fiscal performance and price for borrowing, 3. tax policies.

Firstly, he claims that through public debt and budget deficit management governments should seek long-term sustainability of public debt. According to him this reduces the need for classical macroprudential measures by simultaneously minimazing systemic risks and increasing the resilience of economy to potential shocks. Second, M. Dumičić explains that government fiscal performance sets the cost for borrowing. Usually, funding cost for country also determines the price for private sector borrowing. If government fiscal performance is poor, this could hinder private sector ability to find funding sources which would eventually spread throughout the whole financial and economic system and result in financial instability. The third channel, of how fiscal policy can affect financial stability is through tax policies. According to author, tax strategy should be clear as well as tax changes incremental and slow. M. Dumičić finds that this increases trust and credibility of a tax policy. Also, government should wisely use pro or countercyclical tax policies to stimulating or smothering economy.[36]

European Central Bank emphasizes six direct and indirect channels through which

[35]Philip Arestis, “Fiscal policy: a strong macroeconomic role.” Review of Keynesian Economics, 2012, vol. 1, issue 1, Autumn 2012, 93-108 pp.
[36]Dumičić, 97-109.

fiscal policy influence public finance and stability (Figure 1.). The direct channels to some extant overlaps with those that are mentioned by M. Dumičić. The first direct channel to finance stability is through public debt management. ECB emphasize that parameters alike (changes to) sovereign credit ratings, the amount and maturity of public debt held by financial institutions, the proportion of government debt insured via the credit default swap markets and the share of intrabank lending covered by government securities as collateral can affect financial stability.[37] The second channel is tax policy where government by implementing different tax policies can foster or impede incentives for market to spend money. The third channel is governments ability to directly intervene in the financial system through institutions, that are subject to government. Fourth, government can intervene in the financial markets as borrower and investor. A good example of this intervention could be Lithuania, where during pandemic Finance ministry created State Investment Management Agency with a few hundred million euro reserve to maintains business liquidity for business that suffered the most from global pandemic.[38]

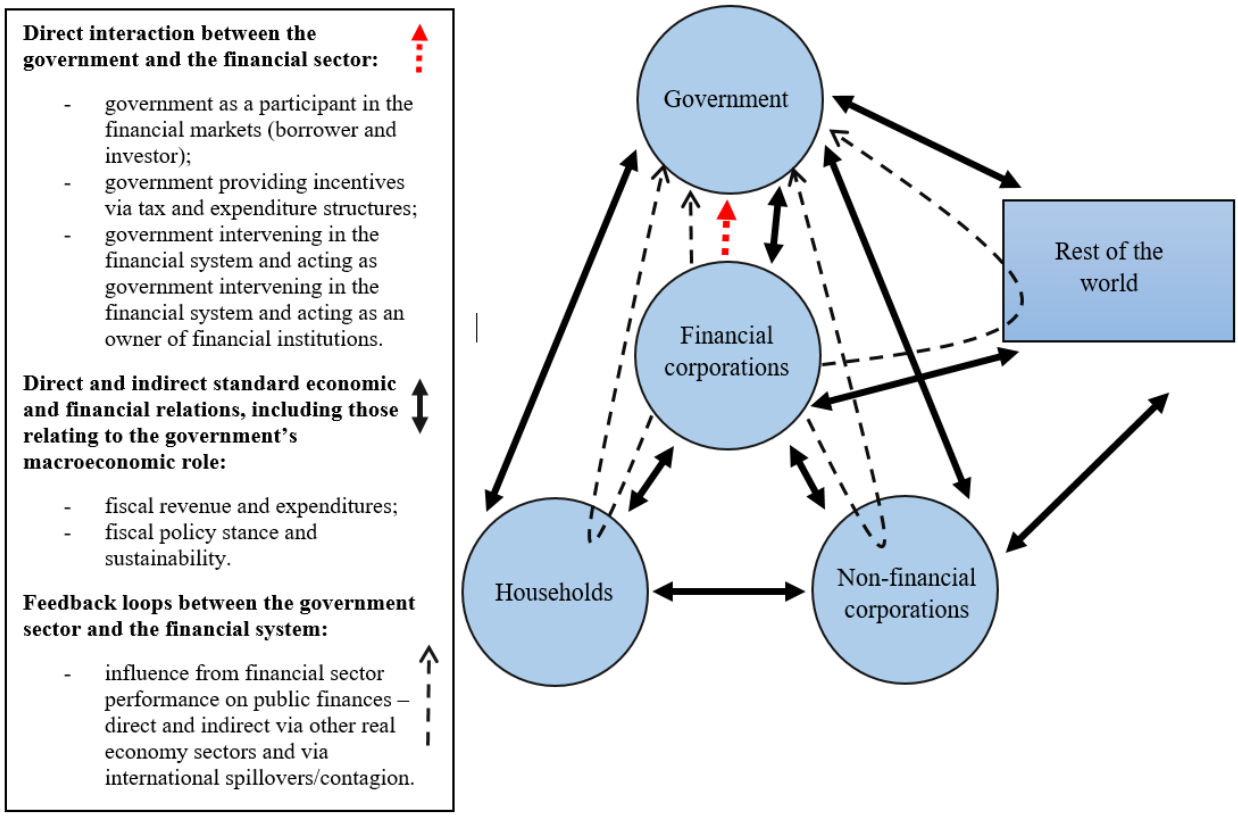

Figure 1. Relationship between fiscal policies and the financial system[39]
Source: European Central Bank

[37] European Central Bank, Financial stability review, 2010 June, 68-69 pp., at [https://www.ecb.europa.eu/pub/pdf/fsr/financialstabilityreview201006en.pdf], accessed 6 Nov. 2021.
38Lietuvos Respublikos finansų ministerija, Veiklą pradėjo Pagalbos verslui fondas, [https://finmin.lrv.lt/lt/naujienos/veikla-pradejo-pagalbos-verslui-fondas], accessed 6 Dec. 2021.
[39] Houben et al, pp 20.

In terms of indirect channels, ECB points out that transmission here is implemented via non-financial corporations or households and may have even stronger effect for financial stability than direct links. Even though ECB does not extensively elaborate indirect channels, it mentions two - fiscal policy stance and sustainability, also fiscal revenue and expenditure. Fiscal policy stance and sustainability means market perception of government ability to implement clear and vise policies. If market agents trust government fiscal policy, it could provide better business environment and thus financial stability. Through the second channel (fiscal revenue and expenditure) government can affect household, financial and non-financial institutions.[40]

A group of scholars from Committee on the Global Financial System (CGFS) apply different approach and analyze through which channels irresponsible government fiscal policy can negatively affect banking sector and distinguishes 4 main channels. First of all, if country's banks own government debt, the solvency risk can weaken banks' balance sheets. This could increase riskiness scare away investors which could make funding costlier and difficult to obtain. Also, it is noticed that in advanced economies banks often have sizeable amount of sovereign debt.[41]Second channel of how government risks can transfer to banking sector is through collateral/liquidity channel. Scholars point out that sovereign securities are used largely by banks as collateral to secure wholesale funding from central banks, private repo markets and issuance of covered bonds, and to back over the-counter (OTC) derivative positions. If government performs irresponsible fiscal policy, it diminishes the availability to use collateral and hence banks' funding capacity. It is even noticed that downgraded government securities can even exclude a government's bonds from the pool of collateral eligible for specific operations or accepted by specific investors.[42]Third channel is through credit rating. If country's credit rating is downgraded it has direct negative impact on the cost of banks' debt and equity funding. Also, one can notice a strong relation between sovereign credit rating and domestic bank rating where sovereign downgrades often lead to downgrades of domestic banks.[43] For instance, Rabah Arezki and other IMF economist found that sovereign rating downgrades have statistically and economically significant negative effect on country's banks and have spillover effect on financial sector across the borders. Therefore rating agencies announcements could spur financial instability.[44] Also,

[40]European Central Bank, Financial stability review, 2010 June, 68-69 pp., at [https://www.ecb.europa.eu/pub/pdf/fsr/financialstabilityreview201006en.pdf], accessed 6 Nov. 2021.
[41] Bank for international settlements, "The impact of sovereign credit risk on bank funding conditions.", CGFS Papers No 43, July 2011, pp. 14, at [https://www.bis.org/publ/cgfs43.pdf], accessed 6 Nov. 2021.
[42] Bank for international settlements, "The impact of sovereign credit risk on bank funding conditions.", CGFS Papers No 43, July 2011, pp. 17-19, at [https://www.bis.org/publ/cgfs43.pdf], accessed 6 Nov. 2021.
[43] Bank for international settlements, "The impact of sovereign credit risk on bank funding conditions.", CGFS Papers No 43, July 2011, pp. 20 pp., at [https://www.bis.org/publ/cgfs43.pdf], accessed 6 Nov. 2021.
[44] Rabah Arezki, Bertrand Candelon and Amadou N. R. Sy, "Sovereign Rating News and Financial Markets Spillovers: Evidence from the European Debt Crisis." IMF working paper, March 2011, pp. 2-20. Bank for international settlements, "The impact of

Ricardo Correa came upon that during 1995-2011, sovereign credit rating downgrades in advanced countries and emerging economies have a large negative impact on bank stock returns: on average, a one-notch downgrade reduced bank equity returns by 2 percentage points in advanced countries, and by 1 percentage point in emerging economies.[45] Downgraded banks' rating cause it to pay higher spreads on their bond funding, and may also reduce market access. The fourth channel of how weak fiscal policy can affect financial stability is through the loss of explicit and implicit benefits for banks from government. A group of economists from CGFS claims that banks have implicit and explicit government guarantee which lowers the cost of debt funding. This support became vivid after financial crisis in 2008 where banks were held too big to fail and governments dragged them from bankrupts. It is estimated that since 2008 up until 2010, more than 200 banks in 16 advanced economies had issued close to 1 trillion of euro equivalent of guaranteed bonds that helped them retain access to wholesale funding.[46] Therefore, markets have believes that in advanced economies governments will provide safety net for financial institutions if needed. However, due to poor fiscal policy markets can lose this believe and banks be left without benefits.

Milutin Ješić relies on Committee on the Global Financial System work and adds another two channels of fiscal policy transmission to financial instability through banking sector. First - adverse macroeconomic conditions and second - atypical measures of fiscal policy. Elaborating first channel M. Ješić claims, that irresponsible fiscal policy creates various negative macroeconomic consequences among which high unemployment can occur. Unemployed people and business, author argues, struggle to meet bank payment obligations due to decline in savings. The amount of non–performing loans increases in banks and thus threatens banking sector. The second channel which occurs through atypical measures of fiscal policy shows that even announcement of inappropriate fiscal measures can cause the panic and nudge banking sector to crisis. A good example could be Cyprus government legislation in 2013 to tax deposits in banks that are over 100 thousand euro. The announcement of this measure caused the panic among the bank deponents, which provoked the authorities to put in force other measures like day limitations of deposit withdrawals and banks were closed for a few days. Later, the government abandoned the original decision.[47]

Hervé Hannou in his work presents 3 objectives that fiscal policy should try to achieve. The first is regulation of public demand. This objective can be achieved through three channels – setting up prudent tax policy, creating automatic stabilizers and implementing

sovereign credit risk on bank funding conditions.", CGFS Papers No 43, July 2011, pp. 22, at [https://www.bis.org/publ/cgfs43.pdf], accessed 6 Nov. 2021.

[45] Ricardo Correa et al. "Sovereign Credit Risk, Banks' Government Support, and Bank Stock Returns around the World." Journal of Money, Credit and Banking, vol. 46, Wiley, 2014, pp. 93–121, at [http://www.jstor.org/stable/42920109], accessed 6 Dec. 2021

[46] Aviram Levy and Andrea Zaghini, "The pricing of government-guaranteed bank bonds", Bank of Italy Working Papers, no 753, March 2010, pp. 5-22.

[47] Ješić, pp. 124-133.

countercyclical policy. The second objective to maintain financial stability is to create fiscal buffers in good times. This goal is achievable through debt reducing channels and implementing taxes or levies on financial sector. The third goal is to provide financial sector support in times of stress. In order to accomplish this task sovereign should implement capital injections, deposit and debt guarantees, to run bank rescue packages and give discretionary stimulus.[48]

Egidijus Bikas and Sandra Žaltauskaite in their work constructs Lithuania's financial stability index and analyzes fiscal policy instrument that have the most impact on financial stability. Econometrics modeling methods reveals that the biggest impacts on the financial system of Lithuania have tax tariffs, minimal monthly wage and government debt. These are the main three channels to effect financial stability. Scholars found that increase in minimal wage increases financial stability since it reduces black market and foster people to work. Then, huge government debt has a big negative impact on financial stability since growing government debt burden leads to a tax increase, which in turn triggers a higher inflation and uncertainty of the policy. Lastly, increase of certain taxes decreases financial stability. For instance, increase in corporate taxes, VAT taxes, have negative impact for financial stability since it creates unfavorable tax environment for business. This could lead to negative externalities such as corporate bankruptcies, decline in efficiency, lower corporate income and competition, decline in investments in private and public capital, slower economy growth and GDP decrease. Contrary, lower taxes stimulate foreign investments, willingness to work, reduces black economy and increase economic growth and thus financial stability.

At this point one can add another channel of how political parties might influence financial stability not necessarily through fiscal policy decision. As mentioned by IMF, financial stability also faces institutional risks. Relatively close path of policy transmission is observed by ECB pointing out that government can act as an owner of certain institutions. For instance, certain political powers might be unwilling to change ineffective state apparatus, institutions or their board members, CEO, avoid public sector reforms. This could reduce countries competitiveness, hinder necessary reforms, reduce trust of the government and thus hold up investments. Therefore, effective governance could be another channel to avoid financial instabilities.

[48] Hervé Hannou, "Towards a global financial stability framework", in 45th SEACEN Governors' Conference, 2010, 23 pp., 21-25 pp., available at [http://www.bis.org/speeches/sp100303.pdf]

Author	Fiscal policy instrument/Channel	Description/Result
Mirna Dumičić	Public debt	Long-term sustainability of public debt creates resilience of economy to potential shocks
	Fiscal policy performance	Poor fiscal policy restrain private sector ability to find funding sources which spreads throughout the whole financial and economic system
	Taxes	Clear tax strategy and slow changes in tax system increases trust and credibility of a tax policy and thus financial stability
European Central Bank	Debt management	The ECB recommends to evaluate amount and maturity of public debt held by financial institutions in order to evaluate financial stability
	Taxes	Different tax policies can foster or impede incentives for market to spend money
	Direct intervention	Government can influence financial stability through the direct to institutions, that are subject to government
	Borrower and investor function	Government can intervene in the financial markets as borrower and investor
	Fiscal policy stance and sustainability	Market perception of government ability to implement clear and vise policies
	Fiscal revenue and expenditure	Can affect household, financial and non-financial institutions
Committee on the Global Financial System	Asset holdings	If country's banks own government debt, the solvency risk can weaken banks' balance sheets. This could increase riskiness scare away investors which could make funding costlier and difficult to obtain.
	The collateral/liquidity channel	Irresponsible fiscal policy diminishes the availability to use government securities as collateral and reduces banks' funding capacity
	Sovereign ratings and bank ratings	Reduced country's credit rating is downgraded has direct negative impact on the cost of banks' debt and equity funding.
	Government guarantees on bank funding	A poor fiscal policy can reduce implicit and explicit government guarantees to banking sector which would increase price of borrowing
Milutin Ješić	Adverse macroeconomic conditions (unemployment)	Dull fiscal policy increases unemployment. Due to this the amount of non–performing loans rises and threatens banking sector.
	Atypical fiscal policy measures	Certain public policies can create panic which would force people to withdraw their

		money from the banks leading to instability of banking system
Hervé Hannou	1.Taxes, 2.automatic stabilizers, 3.countercyclical (discretionary) approach	Regulation of public demand
	1.Reduce debt levels, 2.introduce taxes/levies on financial sector	Build fiscal buffers in good times
	1.Capital injections, 2. deposit and debt guarantees, 3. bank rescue packages, 4. discretionary stimulus	Provide financial sector support in times of stress
Egidijus Bikas and Sandra Žaltauskaite	Public debt	Growing government debt burden leads to a tax increase, which in turn triggers a higher inflation and uncertainty of the policy
	Minimum wage	Increase in minimal wage decrease shadow economy, increase incentives to work and thus promotes financial stability
	Lower taxes	VAT and corporate taxes negatively affect financial stability. Contrary, lower taxes stimulate foreign investments, willingness to work, reduces shadow economy and increase economic growth and thus financial stability.
Jonas Deveikis	Governing efficiency	Low governing efficiency can increase financial instability since country my lack necessary reforms, transformation of inefficient public sector

Table 3. Financial stability channels
Source: various authors

1.4 Public debt and budget deficit effect on financial stability

1.4.1 Theoretical approach of the debt

In the previous part the main channels through which fiscal policy can be transferred and what effect different variables have on financial stability were mentioned. Most of the authors emphasized public debt and budgetary policy to be one the most important variables implementing financial stability. Therefore, in this part it will elaborate whether debt and deficit is harmful to the economy. Also, the closer look at the scientific background and relevance of tax and expenditure policies will be given to see what impact it has on financial stability.

To begin with public debt, it is worth to mention that in theory there is no consensus of public debt positive or negative effect for the economy and financial stability. Therefore, the assumptions of the two different perspectives – Monetarist school and Modern Monetary Theory view are presented. Then, one will review empirical results of public debt and budget deficit effect for financial stability.

Classical school of thought criticized national debt and believed in has negative effect for economic growth and financial stability. As early as XVIII century David Hume claimed that public debt would have negative social and political consequences: "either the nation must destroy public credit or public credit will destroy the nation."[49] A huge supporter and proponent of balanced budget was Adam Smith, who claimed that governments would borrow from industry and commerce and thus deprive a capital-poor society of revenue which could be productively reinvested.[50] He also added, that interest payments on debt might increase taxes and therefore capital flow out of the country. And, finally, there is a long-run danger in the debt. Once accumulated to a certain degree it leads inevitably to national bankruptcy:[51] "The progress of the enormous debts which at present oppress, and will in the long-run probably ruin, all the great nations of Europe, has been pretty uniform", - he claimed.[52]

David Ricardo antipathy to public debt was even bigger than that of A. Smith. He claimed that taxes for debt service would "harm the efficient allocation of resources in the production process because the especially heavy reliance on indirect taxation or a tax on profits of only some out of all producers, would distort relative prices."[53] He also believed that absent of public debt would be beneficial for private capital accumulation and thereby for economic growth and the welfare of the population. The benefits would of a free of debt state would be especially beneficial for working class who would receive higher real wages resulting from the decrease in indirect taxation and from increased labor demand that would follow from higher investment as a result of tax remission on land rents and profits. Otherwise, if public debt occurs, tax burden would drive capital abroad and hinder foreign capital imports. This would result in (1) lower domestic economic growth and (2) higher welfare of immobile production factors, land owners, and non-emigrating workers.[54]

However, Carl Dietzel was the first one to criticize classical economist view to the

[49]Maria Pia Paganelli, "David Hume on public credit." History of Economic Ideas, vol. 20, no. 1, Accademia Editoriale, 2012, pp. 31, at [http://www.jstor.org/stable/23723604], accessed 6 Nov. 2021.
[50]Adam Smith, *The Wealth of Nations*, Cannan edition (London: Methuen & Co., Ltd., 1930), II, 409-11.
[51]Burkhead, Jesse. "The Balanced Budget." *The Quarterly Journal of Economics*, vol. 68, no. 2, Oxford University Press, 1954, pp. 194, at: [https://doi.org/10.2307/1884446].

[52] Carl-Ludwig Holtfrerich, "Government debt in economic thought of the long 19th century.", Diskussionsbeiträge, No. 2013/4, Freie Universität Berlin, 3 pp., available at [http://hdl.handle.net/10419/73682], accessed 6 Nov. 2021.
[53]Holtfrerich, 6 pp.
[54]Holtfrerich, 6 pp.

national debt. C. Dietzel claimed that issuing of government bonds increase private consumption and demand for labor through investments in infrastructure, immaterial capital like education, administrative reform and etc. This would generate additional national income that would create additional savings.[55]

Lorenz von Stein extended findings of Carl Dietzel and added three rules, when public debt can occur: 1) Increasing overall economic productivity, and fiscal revenue sufficient to the full service of the additional debt; (2) Integration and the assurance function of public debt, which would make people identify themselves with the state; (3) Sharing of intergenerational tasks, anticipating the modern pay-as-you-use principle.[56] Lorenz von Stein attitude towards public debt also illustrates his famous phrase: "A state without public debt either cares too little for his future or he demands too much from his present."[57]

The classical thought about budget deficit was turned 180 degree in 1936 with the advent of by John Maynard Keynes publication "The General Theory of Employment, Interest and Money". According to Keynsian's doctrine, public debt for some periods in the economy are justifiable especially during economic downturns. The budget deficit should give an incentive to an economy to rapidly exit the recession period of business cycle.[58] However, it is worth to mention that Keynes didn't talk about indefinite growth of debt ant pointed, that it should be balanced over time as budget deficits intended to moderate recessions would be offset by budget surpluses used to restrain economic exuberance.[59]

Modern Monetary Theory (MMT) goes even further and claims that countries, that borrow in a fiat currency that they fully control, shouldn't worry about increasing national debt because they can print as much money as they need. According to the theory, national debt is nothing more than the dollars spent by the government that haven't yet been used to pay taxes and remain outstanding as 'net savings' in the economy until used to pay taxes.[60] Also, it is believed that small budget deficit or surplus could be harmful to the economy, because deficit spending is what builds people's savings.[61]

However, there is a lot of criticisms to MMT[62] as well as claims, that even Keynesian policy might lead to financial irresponsibility because of the excessive spending trap probability

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[55]Carl Dietzel, *Das System der Staatsanleihen im Zusammenhang der Volkswirthschaft betrachtet*, Kessinger Publishing, LLC, September 10, 2010, 198 pp.
[56]Gheorghe Săvoiu et al, „A classical German view of public debt and investment in Romania and other ex-socialist economies." Economic Research-Ekonomska Istraživanja, 27 Oct 2015, 910 pp., available at [https://www.tandfonline.com/doi/full/10.1080/1331677X.2015.1083877], accessed 6 Nov. 2021.
[57]Holtfrerich, 18 pp.
[58]Ješić, 111-138 pp.
[59]Dwight R. Lee, "The Keynesian Path to Fiscal Irresponsibility." Cato Journal, Vol. 32, No. 3, 2012, 473 pp.
[60]Phil Armstrong, "Heterodox Views of Money and Modern Monetary Theory." York College, 2015, 10 pp., at [http://moslereconomics.com/wp-content/uploads/2007/12/Money-and-MMT.pdf], accessed 6 Nov. 2021.
[61]Armstrong, 13 pp.
[62]James Juniper et al., "Modern monetary theory: contributions and critic." Journal of Post Keynesian Economics Volume 37, 2014, Issue 2, 281-307 pp.

that can lead to chronic budget deficits. Also, Keynesian policy main concern is to stimulate economic activity in the short run while it reduces the growth of economic productivity in the long run.[63]

1.4.2 Empirical research of debt effect to financial stability

Even though in theoretical background there is no agreement of debt effect to financial stability, most of the empirical works show the dangerous of debt and budget deficit growth to sustaining viable financial system.

Researcher Mario Coccia investigating European countries national debts claims, that high rate of country's national debt may hinder implement counter-cycle fiscal policy. He claims that in phases of economic recession, high debt countries may face delay and rigidity in the application of necessary and relevant counter-cycle interventions to stimulate the economy when it is in a downturn.[64]A good example of Mario Coccia finding was recent financial crisis where some of the European Union Countries had to implement belt-tightening fiscal policy since there was no financial buffer.

Xavier Debrun follows Mario Coccia logic and adds that public debt exposes countries finances to adverse shocks. For instance - loss of access to financing.[65] Carmen M. Reinhart warns that, high debt levels a dangerous during banking crisis and finds that public debt grow rapidly in the wake of a banking crisis worsening the situation.[66] In addition to that, Philip R. Lane finds, that the 2008 financial crisis has had the biggest adverse output effect in countries running large current account deficits and experiencing higher debt levels during the pre-crisis years.[67]

High public debt and budget deficit negative effects financial stability through slower economic growth, private investments. Carmen M. Reinhart and Kenneth Rogoff in their work examines 44 countries over 200 years period and observes that countries who have higher than 90% public debt of the GDP, median growth rates fall by 1%.[68] Markus Eberhardt and Andrea F. Presbitero in a similar work to Carmen M. Reinhart investigates 118 developing, emerging and advanced economies over the period 1960 to 2012 of how public debt levels effect economic

[63]Lee, 474 pp.
[64]Mario Coccia, "National debts and government deficits within European Monetary Union: Statistical evidence of economic issues.", Working paper, no 34, 2018, 2-27 pp., at [https://arxiv.org/ftp/arxiv/papers/1806/1806.07830.pdf], accessed 22 Jun. 2021.
[65]Xavier Debrun, "Safe Public Debt: Towards an Operational Definition." Romanian Journal of Fiscal Policy (RJFP), Vol. 6, Iss. 1, pp. 1-16, at: [https://www.econstor.eu/bitstream/10419/168626/1/863293611.pdf], accessed 13 May. 2021.
[66]Carmen M. Reinhart and Kenneth Rogoff, *This Time is Different: Eight Centuries of Financial Folly*. Princeton University Press, 2009.
[67]Gian Maria Milesi-Ferretti and Philip R. Lane, „The Cross-Country Incidence of the Global Crisis.", IMF Economic Review, 2011.
[68] Carmen M. Reinhart and Kenneth S. Rogoff, Debt and growth revisited." MPRA Paper 24376, University Library of Munich, Germany (2010), 1-14 pp.

growth. They find causality that countries with higher debt-to-GDP levels have poor performance on economy growth in a future. The explanation for this phenomenon is that the reduction of debt will be followed by future reduction in public spending or distortionary taxation, with negative effects on growth.[69]

ECB economist in one of the working paper's finds, that a higher public debt-to-GDP ratio is associated, on average, with lower long-term growth rates at debt levels above the range of 90-100% of GDP.[70] Cristina Checherita and Philipp Rother emphasize, that the main channels through which public debt is likely to have an impact on economic growth rate is private saving, public investment, total factor productivity, and sovereign long-term nominal and real interest rates. Also, ECB economists warns, that high pubic debt threatens fiscal sustainability.[71] Moreover, Vladimir K. Teles and Caio César Mussolini using an econometric model finds that high public debt limits the effectiveness of productive public expenditure.[72] Thomas Laubach point out that increasing debt and deficit reduces private investment.[73]

A work of Willem Hendrik Buiter shows that public debt can be detrimental for three factors. First, Willem H. Buiter claims that long-term budget deficits cause higher inflation. Second, budget deficits may well produce negative multipliers and so are unreliable from a stabilization viewpoint. Third, higher debt author relates with intensive public spending. This could create either higher deficits which are ultimately inflationary or higher taxes with supply-side damage.[74]

IMF finds that high debt can negatively affect the government's balance sheet. As Willem H. Buiter, IMF notice that high levels of debt can trigger policies for mitigating possible higher inflation rates and, in some extreme cases, deriving restructuring schemes. For example, if debt is too high, the sovereign's credibility becomes less ensured in the eyes of international investors, which could result in higher volatility caused by difficulties in refinancing government debt, which in turn could trigger wider financial instability.[75] In addition to that, in 2010 European parliament announced a resolution "Long-term sustainability of public finances for a recovering economy" where concern of high deficit and debt levels was raised. Also it was point pointed out

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[69] Markus Eberhardt and Andrea F. Presbitero, "Public debt and growth: Heterogeneity and non-linearity." Journal of International Economics, vol. 97, 2015, pp. 45-48.

[70] Cristina Checherita and Philipp Rother, "The impact of high and growing government debt on economic growth" Eurpoean central bank Working paper, no. 1237, 2010.

[71] Cristina Checherita and Philipp Rother, „The Impact Of High And Growing Government Debt On Economic Growth." ECB Working paper, No. 1237, August, 2010, 4-22.

[72] Vladimir K. Teles and Caio César Mussolini, "Public debt and the limits of fiscal policy to increase economic growth." European Economic Review 66, January 2013, pp. 1-16.

[73] Thomas Laubach, "New Evidence on the Interest Rate Effects of Budget Deficits and Debt." Journal of the European Economic Association 7, no. 4 (2009): 858–85 pp., at: [http://www.jstor.org/stable/40282791].

[74]Willem H. Buiteret al. "A Guide to Public Sector Debt and Deficits." Economic Policy, vol. 1, no. 1, [Center for Economic Studies, Maison des Sciences de l'Homme, Centre for Economic Policy Research, Wiley], 1985, 68 pp., at: [https://doi.org/10.2307/1344612], accessed 6 Nov. 2021.

[75]Udaibir S. Das et al., "Managing Public Debt and Its Financial Stability Implications", IMF working paper, July 1, 2010, 1-64 pp.

that indebtedness is especially warning in the light of population ageing, and whereas the effect of ageing on the sustainability gap is calculated in most Member States to be five to 20 times higher than the effects of the 2008 economic crisis. Due to aging society, the cost of pension and healthcare system will add extra pressure for budget and thus financial sustainability.[76]

Carlos Mulas-Granados emphasize that fiscal policy in EU is one of the most important tool in political economy since countries cannot freely implement monetary policy. Therefore, scholar claims that budget formation and debt management is a key to financial stability. He emphasizes that reduction of debt diminishes tax burden, increase disposable income and thus consumption and investment rises. Also, the prolonged periods of deficit budget formation could create structural deficit from which is hard to escape. This phenomenon could lead to default on the debt. In addition to that authors argue for cutting expenses for public employment. This could increase the competitiveness of the tradable sector, thus increasing exports and expanding growth.[77]

Peter Praet emphasizes that public debt is commonly held as a low-risk asset by financial institutions and it is also used as collateral in refinancing operations. Therefore, when financial markets doubt the sustainability of public debt, the liquidity and even the solvency of financial institutions can deteriorate, in turn potentially destabilizing the financial sector.[78]

Ricardo Hausmann and Ugo Panizza argues, if the country has high debt level denominated in foreign currency, it might face financial instabilities during economic downturn since the burden of debt increases. It could be relevant for our research countries since three of them owns national currency (Poland, Hungary and Czech Republic).[79]

Davide Furceri and Aleksandra Zdzienicka analyzes how financial crisis effect public debt. Results showed that crises are associated with a significant and long-lasting increase in the government debt-to-GDP ratio. Also, scholars found that countries, that already had higher debt levels, during crisis time increased debt to GDP ratio higher than those who ran lower debts.[80] Thus, higher debt might create debt traps where it is difficult to achieve consolidation. Justas Minkevičius points out that high levels of debt and deficit reduces ability to use fiscal policy instrument, increase interest rates and decrease private investments.[81]

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[76] European parliament, Long-term sustainability of public finances for a recovering economy, European Parliament resolution, 2010, May, at [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52010IP0190&from=LT].

[77] Carlos Mulas-Granados, "The Political and Economic Determinants of Budgetary Consolidation in Europe", Vol. 1, No. 1 (Spring 2003), pp. 23.

[78]Peter Praet, "Economic, financial and monetary stability in Europe: reinforcing our policy instruments." BIS Paper No 59, 21-23 pp.

[79] Ricardo Hausmann and Ugo Panizza, "Redemption or Abstinence? Original Sin, Currency Mismatches and Counter-Cyclical Policies in the New Millenium." CID Working Paper No. 194 February 2010, pp. 1-30.

[80] Davide Furceri and Aleksandra Zdzienicka, "The Consequences of Banking Crises for Public Debt." International finance, Vol. 15, Issue 3, 2012, pp. 289-307.

[81] Justas Minkevičius, "Implementation of Stability and Growth Pact", Lithuanian bank working paper, 1999, at [http://elibrary.lt/resursai/DB/LB/LB_intergracija_ES/LB_integracija_ES_1999_03_5.pdf].

Ceyhun Elgin and Burak R. Usabcd find that debt levels are especially dangerous for countries with higher shadow economy levels since it is very difficult to reduce debt levels implementing various fiscal policies. For instance, changes in tax policies could be irrelevant because part of the economy is outside sovereign sight.[82]

Milutin Ješić points out that when public debt rises, loan conditions become more unfavorable. "Interest rates rise, the maturity of loans and bonds is lower; the tendency of the currency structure worsens etc. These movements have great implications not only on current generations, but on future generations as well because this policy de facto reallocates the resources at the future generations` expense."[83] Also, he adds that high debt might cause crowding–out effect when private sector would be discouraged from making capital investments.

As it was mentioned by Milutin Ješić earlier, national debt influence to financial stability is through the impact that domestic banks have often become significant holders of the countries domestic debt directly linking the soundness of the banking system to the countries financial health. Moreover, in some countries banks are a major holder of government bonds. According Philip Richard Lane, if countries debt bonds are held in the „trading book", declines in the market value of sovereign bonds generate mark-to-market losses for banks: "Even if bonds are held in the „bank book" on the premise that the bonds will be held to maturity, banks are exposed to default risk. Accordingly, bank capital is threatened by prospective losses on holdings of sovereign debt. This risk is elevated if banks do not hold a diversified portfolio of sovereign debt but rather over-weight the sovereign of their home government".[84]

Another vulnerability to banking system which arises from nation debt is national repression measures. Carmen M. Reinhart documents that governments have often turned to national repression to fund fiscal positions during periods of sovereign distress. Increases in asset taxes or new regulations that direct banks to increase holdings of sovereign debt will induce extra banking losses or increase the risk profile of financial sector balance sheets.[85]

To maintain stable public debt level and reduce spending will become detrimental for EU countries since society is aging and extra pressure will be put on social and healthcare systems. If system won't be able to withstand pressure of old-age public expenditures, it will be funded through borrowing or higher taxes implementation. If none of these options are available, cuts on expenditures had to be implemented which can negatively affect prosperity, economic

[82]Ceyhun Elgin and Burak R. Usabcd, "Public debt, sovereign default risk and shadow economy." Journal of Financial Stability, Vol. 9, Issue 4, December, 2013, pp. 628-640
[83]Ješić, pp. 115.
[84]Philip R. Lane, "Fiscal Policy and Financial Stability.", 2011, at [https://www.bok.or.kr/conference/pdf/2011/session4/13.pdf], accessed 8 May, 2021.
[85]Belen Sbrancia and Carmen M. Reinhart, "The Liquidation of Government Debt." NBER Working Paper No. 16893, 2011, 1-44 pp., at [https://www.imf.org/external/np/seminars/eng/2011/res2/pdf/crbs.pdf], accessed 20 Jun. 2021

growth and fiscal sustainability.[86] At this point it is worth to mention that all four Visegrad countries have pay-as-you-go pension system. This means that with the higher population of older people in a future, more and more financial burden of social expenditures (social policies, pensions, health care) will be put on a budget. Therefore, to consolidate debt levels should be one of the main priority in Visegrad countries.

While various research shows negative effect of debt and deficit to financial stability, it is important to overlook at what levels debt and deficit starts to destabilize economy. Even though international institutions or unions set desirable rates of debt to GDP, there is no single standard of fiscal safety for all economies.[87] Advanced economies can tolerate higher levels of debt while developing countries might face solvency problems having a very low debt levels. For instance, before crisis in 2008 Ukrain's debt to debt-to-GDP ratio was falling and in 2007 marked 12,3 % mark. However, despite that country suffered from economic downturn.

Marek Dabrowski elaborates 14 indicators that could increase or reduce risk of solvency having certain levels of debt. Some of them are debt dynamics, outstanding debt maturity, the share of non-residents among creditors, government openness and transparency of the public debt management system, country's financial reputation, political stability and political ability of taking decisions necessary for fiscal consolidation, predictability of country's economic policy, tax potential of the country, availability of non-tax sources of revenue, including rent revenue related to natural resources, level of financial market development and its liquidity.[88] According to IMF, a country's debt-carrying capacity depends on several factors. Among them the quality of institutions and debt management capacity, policies, and macroeconomic fundamentals. A country's capacity to carry debt can change over time, as it is also influenced by the global economic environment.[89]

Martin Weale in his research finds that during normal economic times countries should maintain budget surplus close to 1% of GDP. This would help to sustain economic stability during financial downturn.[90] Economist John Stanton Flemming also points out necessity of having surplus budget during good times but do not elaborate exact numbers.[91]

The Maastricht Treaty require EU governments to keep budget deficits below 3% of

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[86] Svend Erik Hougaard Jensen and Søren Bo Nielsen. "Population Ageing, Public Debt and Sustainable Fiscal Policy." Fiscal Studies 16, no. 2 (1995): 2 pp., at: [http://www.jstor.org/stable/24437888], accessed 20 Sep. 2021

[87]Marek Dabrowski, "Factors Determining a 'Safe' Level of Public Debt." Conference: XV April International Academic Conference on Economic and Social Development of the Higher School of EconomicsAt: National Research University Higher School of Economics, Moscow, April 2014, 8-20 pp.

[88]Dabrowski, 8-30 pp.

[89]Dalia Hakura, "What Is Debt Sustainability." IMF paper, September, 2020, 60-61 pp., at: [https://www.imf.org/external/pubs/ft/fandd/2020/09/what-is-debt-sustainability-basics.htm], accessed 6 Nov. 2021.

[90] Martin Weale, "FISCAL POLICY AND THE FISCAL POSITION." National Institute Economic Review, no. 208 (2009): pp., at: [4–8. http://www.jstor.org/stable/23880751], accessed 20 Dec. 2021.

[91] John Stanton Fleming, "Debt and taxes." Scottish journal of Political Economy, 35, pp. 305-317.

GDP and public debt below 60% of GDP to safeguard the stability of the common euro currency.[92] IMF in 2002 set the 40% benchmark,[93] while other scholars point out that some countries faces the risk when debt level rises above 15% of the GDP.[94] A famous economist Arthur Cecil Pigo believed that for healthy and well-functioning economy debt level should not exceed 40% of the GDP.[95] A study by Enrique G. Mendoza and Jonathan D. Ostry found that that countries should be attentive of allowing public debt ratios to rise above the 50-60% since the rise above this level could cause insolvency.[96]

To sum up, one can notice that scholars and institutions recommend to maintain debt level 40-60% of GDP and to keep very low budget deficit or have it positive. However, exact numbers can be different while developed and economically strong countries may have higher debt levels and budget deficits maintaining financial stability while less developed countries may face insolvency with lower debt levels.

1.5 Taxation role ensuring financial stability

Another channel to achieve financial stability is through prudent tax policy which can affect disposable income, consumption and investment. Also, taxes can help to create financial buffers for crisis. Therefore, in this part the role of the tax policy in achieving financial stability is presented.

Jacob Braude emphasize that tax policies usually are not the main determinant of financial crisis. However, flaw tax policies can intensify the crisis and might play a greater role in future crises. Contrary, properly designed tax policies are good instrument of macroprudential policy.[97] Michael Keen and other economist in their research analyzes channels, through which tax policy can create financial instability. As Jacob Braude, a research team finds, that there is no evidence that tax distortions could trigger sudden crisis. However, tax distortions, according to them, can make crisis more painful, leading to higher debt levels. Also, authors emphasize the main channels, through which tax distortions can affect financial stability. First, taxes that favor debt finance, increase financial instability. Second, the threat for financial stability could be through favorable tax policies of house owners. This usually inflates real estate prices and risky

[92]European Union Publications Office, "Excessive deficit procedure." At: [https://eur-lex.europa.eu/summary/glossary/excessive_deficit_procedure.html], accessed 6 Nov. 2021.
[93]Carlos Díaz Alvarado et al., "Fiscal Sustainability in Emerging Market Countries with an Application to Ecuador.", nter-American Development Bank, Working Paper 511, August, 2004, 15 pp., at: [https://publications.iadb.org/en/publication/fiscal-sustainability-emerging-market-countries-application-ecuador], accessed 6 Nov. 2021.
[94]Carmen Reinhart et al., "Debt Intolerance." Brookings Papers on Economic Activity No 1, 2003, 1-74.
[95] Arthur Cecil Pigo, *The economics of welfare.* Macmillan and co, limited St. Matin's street, London 1932, 4th ed.
[96] Enrique G. Mendoza and Jonathan D. Ostry, INTERNATIONAL EVIDENCE ON FISCAL SOLVENCY: IS FISCAL POLICY "RESPONSIBLE"? NBER working paper series, Nr. 12947, 2007, 1-28.
[97] Jacob Braude, Zvi Eckstein, Stanley Fischer, and Karnit Flug, eds. The Great Recession: Lessons for Central Bankers. The MIT Press, 2013. http://www.jstor.org/stable/j.ctt5hhk81.

loans. Third, dull tax policy for business enforce tax arbitrage where country ends up with lower tax collection.[98]

As it was observed by Milutin Ješić earlier, certain taxes indeed can destabilize financial stability as it happened in Cyprus, where government declared a new tax on deposit in banks that are over 100 thousand euro which caused panic and forced people to withdraw money from banks.[99]

Ross Levine emphasize that tax affects growth and financial stability directly by altering investment incentives and indirectly by changing the incentives underlying financial contracts.[100] Some taxes can bring financial stability by protecting the financial markets from overheating. The good example could be Tobin's tax. According to James Tobin, tax on financial operations would reduce exchange-rate volatility and currency speculation, raise revenue for international organizations and make national economic policies less vulnerable to external shocks.[101] J. M. Keynes had already in 1936 drawn attention to the possible role of transaction taxes in favoring long-term investment over short-term speculation saving the market form speculations.[102] Hervé Hannou points out the necessity to have one-off taxes or levies on the financial sector that could be used to repay the taxpayer money used in bank bailouts during financial crisis.[103]

A research done by Fabrizio Mattesini and Lorenza Rossi highlighting a positive aspect of progressive taxation. It showed that progressive taxation is a better automatic stabilizer than flat taxes.[104] According to them, recessions move taxpayers into lower income brackets and reduce their average tax rate, while expansions have the opposite effect. Since flat tax rate is constant and during business cycles politicians are unwilling to change it, flat tax systems won't self-adjust. Contrary, progressive tax systems adjust for business cycles. During economic downturn people earn less and therefore pay less while during economic upheaval people earn more and pay more. This built-in adjustment to economic conditions leads that disposable income is more stable, thus consumption and investment are less volatile. These effects should lead to a more stable GDP under a progressive tax system.[105]

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[98] Michael Keen, Alexander Klemm, and Victoria Perry. "Tax and the Crisis." Fiscal Studies 31, no. 1 (2010): 43–79. http://www.jstor.org/stable/24440106.

[99] Ješić, pp. 124-133.

[100] Ross Levine, "Stock Markets, Growth, and Tax Policy.", The journal of finance, Vol. 46, Issue 4, September 1991, 1445-1465 pp.

[101] James Tobin, *The New Economics One Decade Older*. Princeton University Press, 1974, at: [www.jstor.org/stable/j.ctt13x1cdj], accessed 12 Mar. 2021.

[102] Ben Patterson and Mickal Galliano, "The feasibility of an international Tobin tax.", European Parliament working paper, 1998, 8 pp., at: [http://www.europarl.europa.eu/workingpapers/econ/pdf/107_en.pdf], accessed 12 Mar. 2021.

[103] Hervé Hannou, "Towards a global financial stability framework", in 45th SEACEN Governors' Conference, 2010, 23 pp., available at [http://www.bis.org/speeches/sp100303.pdf]

[104] Fabrizio Mattesini and Lorenza Rossi, "Monetary policy and automatic stabilizers: The role of progressive taxation. Journal of Money, Credit and Banking 44 (5), 2012.

[105] Diana Alessandrini, "Progressive taxation and economic stability." The Scandinavian Journal of Economics, Volume 123, Issue 2, April 2021, 1-36 pp.

Optimal tax theory tells that tax policy should be designed such that it raises a maximum amount of revenue with a minimum amount of distortion to the decisions of economic agents.[106] However, if implemented wrongly, the cases of tax evasion may occur. Tax evasion can reduce the tax revenue available to governments to manage the economy and weaken the government's ability to promote stability in financial systems,[107] prolong initial disruptions in financial systems since tax evasion leaves governments with little resources to intervene, pressuring them to rely on debt. Tax evasion can also affect government's ability to intervene how it see fit to restore the financial/economic system. [108]

Ignazio Angeloni in his work analyzes the most economic friendly ways of debt consolidation. He finds that increase in labor taxes have adverse effect on financial stability since it opens a wedge between gross and net wages and alters, at the margin, the return from using labor vs capital in production. The marginal cost of a unit of output increases, and in presence of price stickiness so does inflation. Increase in consumption taxes have even more negative effect on financial stability since it has contractionary role on output, but its effect on inflation is less pronounced. The best way to consolidate that debt, according to research is through the reduction of spending since it has a moderate effect on output and inflation.[109]

Overlooking the recent works on tax effect for financial stability, Michalis Nikiforos finds that business friendly taxation can boost GDP but increase debt levels. For instance, he finds that USA tax reform in 2017, where tax rates for businesses and individuals were reduced, will have a small positive effect on GDP. It is estimated that the tax cuts will lead to a cumulative increase in GDP of around 1% over a period of four years, compared to the baseline projections of unchanged tax policy. However, this increase in GDP growth should produce a permanent increase in the government deficit of around 0.9% of GDP or 1.5 trillion USA dollars in ten years from 2018.[110] In addition, Egidijus Bikas and Sandra Žaltauskaite finds inverse relationship between corporate tax tariff and financial stability. According to them, tax tariff increase by 1% leads to a 0.03569 points decrease in financial stability index. Also, it was found that increase of VAT tax negatively effects financial stability. In addition, authors claim that lower taxes have positive impact on financial stability since it speed up economic growth by increasing willingness to work, invest and produce by private and public sector. [111]

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[106]Reint Gropp, "Taxes, banks and financial stability." White Paper Series No. 6, at: [https://safe-frankfurt.de/uploads/media/Gropp_Taxes_banks_and_financial_stability.pdf.], accessed 12 Jan. 2021.
[107]Peterson Kitakogelu Ozili, "Tax Evasion and Financial Instability." MPRA Paper No. 94087, 11 August 2019, 2-8 pp., at: [https://mpra.ub.uni-muenchen.de/94087/1/MPRA_paper_94087.pdf], accessed 12 Jan. 2021.
[108] Ozili, 2019.
[109] Ignazio Angeloni, Ester Faia and Roland Winkler, "Debt Consolidation and Financial Stability." Revue économique, vol. 62, no. 6, 2011, pp. 1067-1079.
[110] Michalis Nikiforos and Gennaro Zezza, "America first", fiscal policy, and financial stability.", Levy Economics Institute of Bard College, April 2018, pp. 2, available at: [https://www.levyinstitute.org/pubs/sa_apr_18.pdf], accessed 3 Dec. 2021.
[111] Egidijus Bikas and Sandra Žaltauskaitė, "The Role Of Fiscal Policy In Ensuring Financial Stability In Lithuania", The 8th International Scientific Conference "Business and Management 2014", 2014, January.

The last aspect of tax policy effect on financial stability is through its cyclicality. It is worth to mention that most of the works emphasize that countercyclical fiscal policy provides financial stability rather than procyclical policy. A work by Oana Elena Meseaa showed that among EU countries during 1995-2011 procyclical fiscal policy was used more often. Also, procyclical fiscal policy was more often used in less developed EU countries rather than advanced economies. Author finds that countries should implement countercyclical fiscal policy that would create sufficient maneuver space, so needed in the recession period.[112] Hervé Hannou emphasize that fiscal policy can contribute to global financial stability by responding in a countercyclical and symmetric fashion to pre-empt boom and bust cycles.[113] Luis Serven criticize procyclical fiscal policy and claims it damages economic stability and welfare. He adds that procyclical fiscal policy increase macroeconomic volatility, hinders investment in real and human capital, obstruct growth, and harm the poor.[114] Moreover, if expansionary fiscal policies in good times are not fully offset in bad times, they may also produce a large deficit bias and lead to debt unsustainability and eventual default.[115]

To sum up, even though it is noticed that tax distortions are not the main determinant of sudden crisis, it definitely adds to financial stability. While it is hard to gasp of which taxes are the best for financial stability, two observations can be made. First, that business friendly taxation might positively affect financial stability. Second, that government should implement countercyclical fiscal policy which helps to save economy from overheating or increase economic activity during downturn.

1.6 Political ideology analysis and connection with certain fiscal policies

1.6.1 Partisan theory vs political business cycles

In the previous chapters one was analyzed whether fiscal policy has effect on financial stability. Latter, channels through which fiscal policy can affect financial stability were discussed and the role of public debt and taxation in providing financial stability elaborated.

The last component in fiscal policy and financial stability is political ideology. Since

[112] Oana ElenaMesea, "The Analysis on the Cyclical Behaviour of Fiscal Policy in the EU Member States" Procedia Economics and Finance, Volume 6, 2013, pp. 645-653.
[113] Hervé Hannou, "Towards a global financial stability framework", in 45th SEACEN Governors' Conference, 2010, Available at [http://www.bis.org/speeches/sp100303.pdf]
[114]Luis Serven, "Macroeconomic Uncertainty and Private Investment in LDCs: an Empirical Investigation," Working Paper No. 2035, 1998, Washington: World Bank.
[115]Paolo Manasse, "Procyclical Fiscal Policy: Shocks, Rules, and Institutions—A View From MARS". IMF working paper, 2006, at https://www.imf.org/external/pubs/ft/wp/2006/wp0627.pdf. Accessed 10 Jan. 2020.

fiscal policy decisions effect finance environment, in this part one will go through the theory and empirical works whether different ideologies representing political parties implement different fiscal policy. Then, one will try to channel certain political ideologies with fiscal policies. Finally, a few empirical examples of right and left political parties fiscal policies will be presented.

To begin with, political parties according to their ideologies could be depicted on two axes: economic (left–right) and social (authoritarian–libertarian). Usually, *X* axe depicts economic preferences. If party is on the left side, it choses economically interventionistic model, supports higher taxes, market regulation, set prices for certain products, supports larger public sector. If party is one the right side – it supports free market economy, lower taxes, less regulation, smaller public sector. Also, party can be divided on *Y* axe (social preferences). If party is on the top of *Y* axe, it assumed to represent cultural leftist ideas and decentralized system. If party is on the bottom of *Y* axe, it assumed to represent cultural right and support of traditional order.[116] In this work the mainly focus is to *X* axe – party's economic preferences.

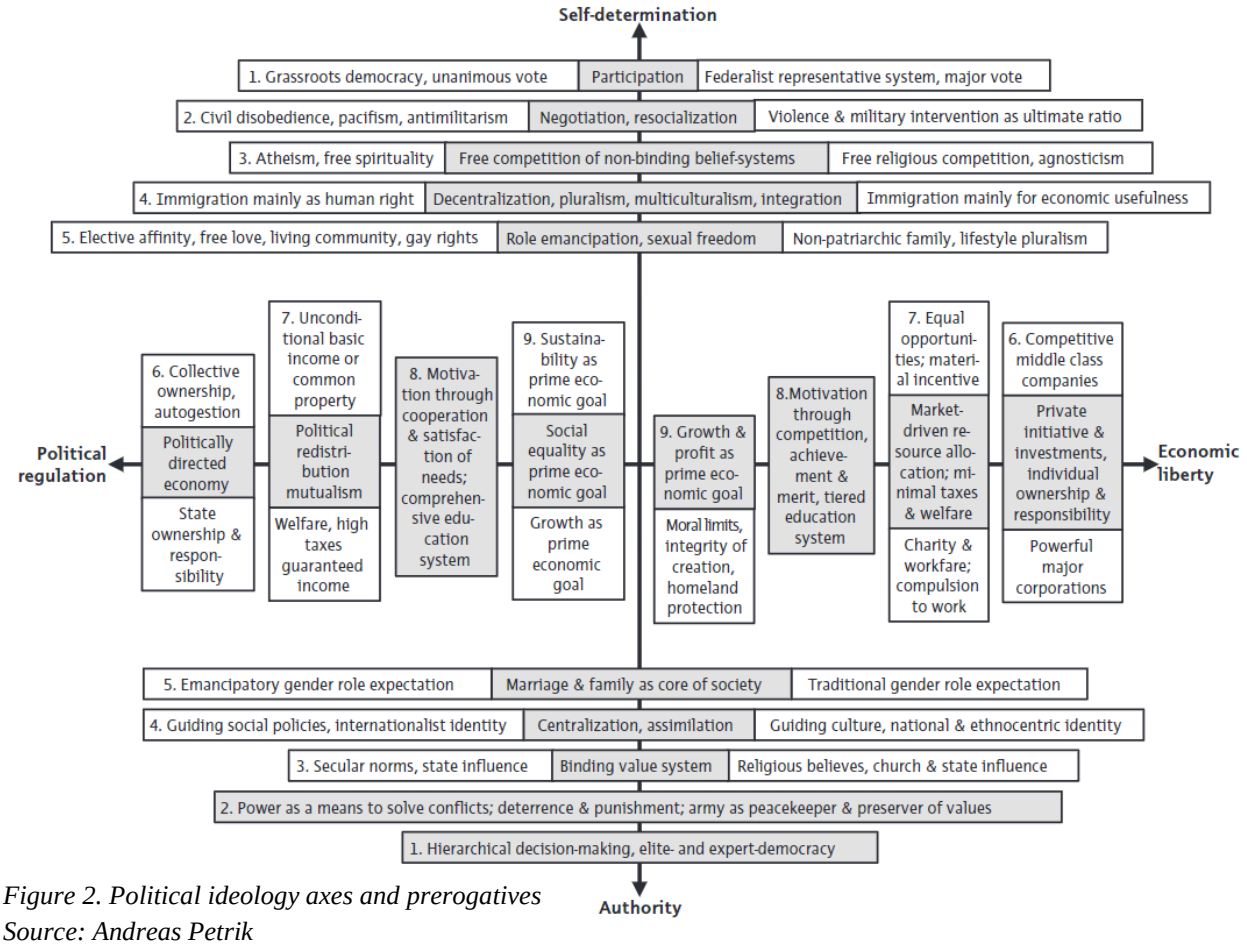

Figure 2. Political ideology axes and prerogatives
Source: Andreas Petrik

[116] Andreas Petrik, "Core Concept "Political Compass" Journal of Social Science Education, Volume 9, Number 4, 2010, pp. 45–62.

Political parties choose to represent different voters and their needs, therefore various economic policies are the outcome of different parties. For instance, the conventional view is that economically left leaning parties supports higher taxes on the rich, government regulation on business. Since attribute of the socialist is welfare state, higher public spending could be noticed. Meanwhile economically right leaning parties support a laissez-faire approach to the economy, offers lower taxes on business, implements stricter fiscal policy, and run lower budget deficits. This conventional view is supported by "Partisan Theory" which claims that political parties differ in their objectives because they serve the interest of different social groups.[117] "Parties care about the inherent effects of their policies and thus have different objectives and incentives", - claims Alberto Alesina.[118]

Etienne Sadi Kirschen in his book analysis preferences of political parties in advanced industrial societies regarding various economic goals. Author finds, that for the economically left leaning parties the main priority is full employment. The second most important task is equalization of income distribution. Then comes economic expansion, price stability, ant the least important is balance of payments equilibrium. For the economic right leaning parties, the main goal is price stability. The second most important task is balance of payments equilibrium. Then comes economic expansion, full employment, and the least important is equalization of income distribution.[119] Corresponding to the goals according economic policies are implemented.

However, some of the works show that sole objective of political parties is not to implement ideological policies, but to remain in office. Following this logic political parties do not care about the effects of their policies on the economy, unless it does influence voter's choice. Anthony Downs propose assumption, that in a two party system both parties propose the same policies if they govern.[120] Bruno Frey claims that parties do really seek their political ideologies. However, they seek ideology purposes as long as they are satisfied with their popularity, since the main goal of political parties is to maximize the probability to win the next election, therefore parties will seek better economic indicator performance.[121] Anthony Downs and Bruno Frey insights are supported by the Political business cycle theory which claims that incumbent political parties election year might seek favorable economic conditions therefore political decisions can

[117]Otto Swank, "Popularity Functions Based on the Partisan Theory." Public Choice, vol. 75, no. 4, Springer, 1993, pp. 339, at: [http://www.jstor.org/stable/30025677], accessed 6 Nov. 2021.
[118]Alberto Alesina, "Macroeconomic Policy in a Two-Party System as a Repeated Game." The Quarterly Journal of Economics, Oxford University Press, vol. 102(3), 1987, 651-652 pp.
[119]Etienne Sadi Kirschen, *Economic Policy in Our Time*, North-Holland Publishing Company, 1964, Netherlands.
[120]Anthony Downs, "An Economic Theory of Political Action in a Democracy." Journal of Political Economy, vol. 65, no. 2, University of Chicago Press, 1957, pp. 135–50, at: [http://www.jstor.org/stable/1827369], accessed 6 Nov. 2021.
[121]Bruno S. Frey, "Politico-economic models and cycle." Diskussionsbeiträge, No. 83, Universität Konstanz, Fachbereich Wirtschaftswissenschaften, Konstanz, August 1976, 2-37 pp., at [https://www.econstor.eu/bitstream/10419/78195/1/690263295.pdf], accessed 6 Nov. 2021.

be different from ideological logic. This means left or right economic policies can be similar.[122] Moreover, some recent research show that it is getting more difficult to portray what leftwing and rightwing policies mean.[123] In addition to that, some find that due to interdependency of the economies and globalization, ideology economic preferences by politics diminishing.[124]

There is no general agreement, which theory, "Partisan theory" or "Political business cycles" have better arguments and the use of theories in scientific literature and countries various. For instance, "Political business cycle" theory didn't get much support in USA[125] while partisan view of macroeconomic policies received support in USA and other industrialized countries.[126] The conclusion from this part can be drawn that the role of political party and its ideology towards economy depends on the time period, political parties, region and others factor. Bellow, some empirical works showing differences between left and right parties policies presented.

1.6.2 Attributes of left and right fiscal policies

The early researches of Douglas A. Hibbs, Etienne Sadi Kirschen and Seymour Martin Lipset shows that fiscal policy differs depending on the ruling party's ideology.[127] They claim that "government dominated by leftist parties are more willing to intervene in the economy, to mitigate the effects of business cycles, and to redistribute wealth to the less well off. Conversely, rightist governments are considered to reduce the extent of government intervention, to heighten the disciplining effects of market mechanisms, and to decrease the width and depth of the welfare net".[128]

In another work Douglas A. Hibbs argues that different political parties implementing fiscal policy always chose either to reduce inflation or reduce unemployment since both tasks are unachievable. Conclusion from his work can be drawn that political parties

[122]William Dawbney Nordhaus, "The Political Business Cycle." The Review of Economic Studies, vol. 42, no. 2, [Oxford University Press, Review of Economic Studies, Ltd.], 1975, pp. 169–90, at: [https://doi.org/10.2307/2296528], accessed 6 Nov. 2021.
[123]Niklas Potrafke, "Government Ideology and Economic Policy-Making in the United States." Public Choice 174, 2018, 145–207 pp., at: [https://link.springer.com/article/10.1007/s11127-017-0491-3], accessed 6 Nov. 2021.
[124]Garrett, Geoffrey, and Peter Lange. "Political Responses to Interdependence: What's 'Left' for the Left?" International Organization, vol. 45, no. 4, [MIT Press, University of Wisconsin Press, Cambridge University Press, International Organization Foundation], 1991, pp. 539–64, at: [http://www.jstor.org/stable/2706947].
[125]Nordhaus, 169–90 pp.
[126]Alesina, 652 pp.
[127]Douglas A. Hibbs, "Political Parties and Macroeconomic Policy." *The American Political Science Review*, vol. 71, no. 4, [American Political Science Association, Cambridge University Press], 1977, pp. 1467–87, at: [https://doi.org/10.2307/1961490]. Also, Etienne Sadi Kirschen, *Economic Policy in Our Time*, Amsterdam: North Holland, 1964, and Seymour Martin Lipset, *Political Man: The Social Bases of Politics*, Garden City, N.Y.: Doubleday, 1963.
[128]Geoffrey Garrett and Peter Lange. "Political Responses to Interdependence: What's 'Left' for the Left?" International Organization, vol. 45, no. 4, [MIT Press, University of Wisconsin Press, Cambridge University Press, International Organization Foundation], 1991, pp. 539, at [http://www.jstor.org/stable/2706947].

implements macroeconomic policies regarding objective economic interests and subjective preferences of their class-defined core political constituencies. Therefore, left-wing governments prefers low unemployment at the expense of high rates of inflation, while right-wing chooses low inflation and high unemployment.[129] Alberto Alesina adds that leftist parties in Europe were more tolerate of high inflation and less of high unemployment.[130]

Paul A. Samuelson points out that Democrats in USA represents voters, who dispose median incomes or below, therefore Democrats are ready to tolerate higher inflation levels to have lower unemployment while Republicans represent upper class, who have savings, therefore Republicans do not tolerate inflation.[131]

Andrew Cowart in one of the earliest systematic empirical studies of fiscal policy found no evidence for the assumption that in Western European countries governments of the right are especially sensitive to the goal of price stability whereas governments of the left are prepared to sacrifice price stability in defense to the other goals. However, A. Cowart found that socialist governments are more sensitive to unemployment rates more than conservatives. In addition, the research showed that governments of the left more often and dramatic responded to domestic economic changes - whether for the purposes of maximizing employment or minimizing inflation while economically right leaning parties were more muted. In his other research author finds that during governance of the left parties interest rates were higher that during right parties governance despite macroeconomic conditions. The argumentation of this result was that socialist governments have often seen low interest rates as beneficial to those in the upper class who are able to obtain large loans from private banking sources. As A. Cowart points out, these generalizations can't be seen complete, since political parties and their policies differ in various countries.[132]

The differences between political ideologies fiscal policies are found not only in managing unemployment and inflation but also in planning budget and expenditures, taxation policies. For instance, Fredrik Carlsen finds an important insight towards fiscal stability that structural deficit is significantly higher under left-wing governments when unemployment is high or rising while the ideology of the government party has no significant impact on the structural deficit when unemployment is low or falling. Inter alia, F. Carlen claims that political parties on the left will follow a countercyclical policy when demand slackens and tightening it when demand

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[129] Hibbs, 1467–87 pp.

[130] Alesina, 652 pp.

[131] Paul A. Samuelson and Jeannette Hopkins. "Some Dilemmas of Economic Policy." *Challenge*, vol. 20, no. 1, Taylor & Francis, Ltd., 1977, pp. 30–31, at [http://www.jstor.org/stable/40719506].

[132] Andrew T. Cowart, "The Economic Policies of European Governments, Part II: Fiscal Policy." British Journal of Political Science, vol. 8, no. 4, Cambridge University Press, 1978, pp. 425–39, at: [http://www.jstor.org/stable/193634].

surges. Simultaneously, parties on the right are seen as engaging in procyclical policies and are particularly prone to engage in tightening fiscal policy as demand slackens and unemployment rises.[133]

Saeid Mahdavi shows that fiscal deficits tend to be larger when left-wing politicians are in control of the government and smaller when right-wing politicians are in the government.[134] Dimitris N. Chorafas in his book emphasized the episodes where leftist legislators in USA were in favor of abandoning the debt ceiling "because it works against seniors (for their entitlements) and juniors (for their education)". [135]

Alberto Alesina conducted cross-national analysis of the fiscal policies of a large number of Organization for Economic Cooperation and Development (OECD) countries of how fiscal policies differ between left and right leaning parties. The results showed, that left leaning governments have one-half a percent higher real fiscal deficits of GDP per year in office than right wing parties.[136] Andre Blais, Donald Blake and Stephane Dion in their analysis covers 15 liberal democracies over a period of 28 years, from 1960 to 1987. The analysis shows that parties on the left spend a little more than parties of the right. The difference in spending, however, emerges only for majority governments whose party composition remains unchanged over a number of years, an indication that it takes time for parties to affect total spending[137]. Other regression analysis on 19 western countries in 1960-1979 showed that in countries under the left leaning parties in government increased government spending by nearly one percentage point of GDP.[138]

While part of the works show correlation between higher budget deficits and left leaning governments, other scholars didn't find relation. For instance, Sung Deuk Hahm in pooled cross-sectional time-series analysis of deficits in nine OECD countries didn't find systematic influence of the ruling party's political ideology on deficits. "The ideology of a nation's ruling party may affect the level of government spending or the level of certain types of government spending, but it does not appear to influence the deficit."[139] No evidence that budget deficits are higher under social governance rather that conservative governance were found in Andrew Cowart

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[133]Fredrik Carlsen, "Counterfiscal policies and partisan politics: evidence from industrialized countries.", Applied Economics Volume 29, 1997 - Issue 2, 145-151 pp.

[134] Saeid Mahdavi. "Bohn's Test of Fiscal Sustainability of the American State Governments." Southern Economic Journal 80, no. 4 (2014): 1028–54. http://www.jstor.org/stable/23807682.

[135] Dimitris N.Chorafas, *Public Debt Dynamics of Europe and the U.S.*, Elsevier, 1st edition, 2014, pp. 241-265.

[136]Alberto Alesina, "Electoral business cycles in industrial democracies." European Journal of Political Economy, 9, 1993, 1-23 pp.

[137]Andre Blais et al. "Do Parties Make a Difference? Parties and the Size of Government in Liberal Democracies." American Journal of Political Science, vol. 37, no. 1, [Midwest Political Science Association, Wiley], 1993, pp. 40–62, at: [https://doi.org/10.2307/2111523].

[138]David R. Cameron, "On the Limits of the Public Economy." The Annals of the American Academy of Political and Social Science, vol. 459, [Sage Publications, Inc., American Academy of Political and Social Science], 1982, pp. 49–50, at: [http://www.jstor.org/stable/1043673].

[139]Sung Deuk Hahm et al., "The political economy of deficit spending in nine industrialized parliamentary democracies: The role of fiscal institutions." Comparative Political Studies, 29(1), 1996, pp. 52-77.

reaserch.[140] Jakob de Haan and Jan-Egbert Sturm in their study of fiscal policy within the members of the European community found no relation with government political ideology and different growth of public debt. [141] Thomas R. Cusack in his cross section time series analysis of OECD countries also find no evidence that the left behaved in a fiscally irresponsible way by persistently and recklessly running deficits. Inter alia, governments on the left have conducted more conservative fiscal policies under conditions of full or near-full employment than those on the right. [142]

While sample of research find relation with higher deficit accumulation during left parties incumbency, one noticed few works where economically right leaning parties a prone to higher budget deficits. David Cameron finds that the nations in which government was usually controlled by leftist parties are usually less likely to incur large budget deficits than those in which government was controlled by centrist, Christian Democratic, or conservative parties—in spite of the fact that leftist-dominated parties were much more likely to increase government spending to high levels.[143] Torsten Persson and Lars E. O. Svensson also finds that conservative government may borrow more and have higher deficits when it knows that it will be succeeded by a more expansionary government, than when it knows that it will remain in power in the future. The same logic of action was missing in left leaning economic parties.[144] Other scholar do not channel political ideology with spending and finds that higher spending, budget deficits and debt usually appears in countries where government is formed with large coalitions. Higher spending occurs since all collation partners try to implement their agendas.[145]

Different political parties might have not only different preferences over debt management bus also on spending. For instance, Carlos Mulas-Granados investigates composition of fiscal consolidations in the European Union during 1970-2001. Author claims that due to different preferences for right and left wing political parties, they implement different fiscal policy. For instance, left-wing political parties prefers redistribution, equality, more social benefits to the unemployed. Therefore, socialists are noticed to intervene more in the economy. Carlos Mulas-Granados using regression analysis finds that socialist governments prefer to spend more and have

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[140] Cowart, 425–439 pp

[141]Jakob de Haan and Jan-Egbert Sturm, "Political and institutional determinants of fiscal policy in the European Community." Public Choice, 80, 1994, 157-172 pp.

[142]Thomas R. Cusack, "Partisan politics and fiscal policy.", WZB Discussion Paper, No. FS I, 1997, 97-306 pp. ar: [https://www.econstor.eu/handle/10419/44077].

[143]David Cameron, "Does government cause inflation? Taxes, spending, and deficits." In Leon N. Lindberg&Charles S. Maier (Eds.), *The politics of inflation and economic stagnation*. Washington, DC: Brookings Institution, 259 pp.

[144]Torsten Persson and Lars E. O. Svensson, "Why a Stubborn Conservative Would Run a Deficit: Policy with Time- Inconsistent Preferences." The Quarterly Journal of Economics, vol. 104, no. 2, Oxford University Press, 1989, pp. 325–45, at: [https://doi.org/10.2307/2937850].

[145] Jürgen von Hagen, Andrew Hughes Hallett and Rolf Strauch "Budgetary Consolidation in EMU", Economics Papers, 148, Brussels, European Commission. Also in Barry R. Weingast , Kenneth A. Shepsle , Christopher Johnsen "The Political Economy of Benefits and Costs: A Neoclassical Approach to Redistributive Politics", Journal of Political Economy, 89, 1981 pp. 642-664.

bigger budgets in terms of the size that public revenues and expenditures represent as a share of GDP. However, it is also noticed that left collects more, thus have higher taxes. Therefore, left-wing governments do not necessarily generate larger deficits than right-wing. Also, Author finds that left-wing governments more often use tax revenues to balance budget or to finance spending policies, maintain public employment. Contrary, economically right leaning governments are noticed to run smaller and more balanced budgets. They do so to reduce state intervention in the economy and let free market ensure stability and economic growth. As a result, right-wing governments tax less and spend less than socialist governments. Author claims that lower levels of expenditures to GDP require lower levels of public revenues, and ideally less distortionary taxes that harm market mechanisms and private incentives.[146]

To better illustrate differences between right and left policies a short cases analysis of conventional party fiscal policy will be given from Lithuania and Germany.

Before 2008 financial crisis ruling majority in Lithuania parliament belonged to economically left leaning parties, Lithuania social democrats and Labor party (2004-2008). Both parties, according to "Manifesto Project" data, were on the left side of economic policy.[147] In "Parliamentary study on local and regional factors and characteristics of the circumstances due to the crisis in Lithuania in 2009–2010 and the state of public finances, including public sector debt and management costs of this debt" several reasons, what caused financial crisis and its depth in Lithuania are mentioned. Some of them are directly related with lavish public policies that ruling Social Democrats party implemented.

Firstly, it is pointed out that parliament before crisis implemented procyclical fiscal policy while economic activity was very high. Thus increased economic temperature even more and worsen financial crisis. It is calculated that inappropriate fiscal policy in 2008 had -8,9% impact on the 2009 budget deficit. Second, during economic upheaval ruling government didn't built reserves that could absorb economic shock. Third, accepting 2008 budget fiscal discipline law was violated. Fourth, Ministry of Social Security and Labor from Social democrat party Vilija Blinkevičiūtė right before financial crisis forced the idea to increase pensions which was implemented. This reduced The State Social Insurance Fund Board („Sodra") budget that before consisted 1,3 % of GDP. This reduced confidence in the sustainability of government finances and contributed to the wider financial crisis in Lithuania.[148] Also. during crisis years "Sodra" had to borrow money to pay pensions since reserve was depleted.

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[146] Carlos Mulas-Granados, "The Political and Economic Determinants of Budgetary Consolidation in Europe", Vol. 1, No. 1 (Spring 2003), pp. 23.

[147] Andrea Volkens et al., "The Manifesto Data Collection. Manifesto Project." (MRG / CMP / MARPOR). Version 2017b. Berlin: Wissenschaftszentrum Berlin für Sozialforschung (WZB). https://doi.org/10.25522/manifesto.mpds.2017b

[148] Seimo Biudžeto ir finansų komitetas, „Lietuvos Respublikos Seimo Biudžeto ir finansų komiteto atlikto parlamentinio tyrimo dėl vietinių ir regioninių veiksnių ir aplinkybių, lėmusių 2009–2010 metų krizės Lietuvoje reiškinius ir viešųjų finansų būklę, įskaitant viešojo sektoriaus skolos dydį ir šios skolos valdymo sąnaudas, išvada." 9-13 pp.

Another example of conventional ideological policy comes from Germany, where center right leaning Christian Democratic Union of Germany (CDU) steered country since 2005. During the financial crisis in 2009 politics agreed to change Germany's constitutional law setting a debt brake policy, which strictly limits structural deficits to 0.35 % of GDP for the federal government and 0 % for state governments adding stipulation that only in case of an emergency an exception clause permits borrowing beyond the usual limits.[149] Latter, permanent over-compliance with deficit requirements were called of "Schwarze null," or "Black zero" policy that became a fiscal role model for all European countries. This policy led that since 2012 until 2014 budget deficit was zero and from 2014 Germany's budget surplus was growing up until global pandemic in 2020. Also, since 2014 Germany experienced a strong decline in its public debt to GDP.

While some economist were suspicious about "Black zero" fiscal policy, others argued that "black zero" policy enhances country's credibility on the financial markets, leading to lower risk premiums and, hence, easier public sector financing.[150] During "Black zero" period Germany didn't face major expenditure cuts or discretionary tax increases, maintained steady positive GDP growth, increase in employment and decrease in interest expansion. Also balanced budget policy created ability to counteract a severe crisis.[151]

From a given research and empirical evidence one can notice that right and left indeed chooses to implement different fiscal policies. However, the relation between policies and different ideologies is not always clear. In a field of unemployment and inflation one can see that left leaning parties are more willing to increase employment and higher taxes, are more tolerable with higher inflation. In a field of budget planning, which is one of the most important instrument for financial stability, different results are noticed. The greater share of research show that economically right leaning parties due to less intervention policies support moderate budgets therefore budget deficit under their governance are lower than under the leftist. One also found some empirical evidences showing no relation between spending and political ideology and a few works where right-wing governments tend to spend more (mostly related with belief of not being reelected therefor trying to undermine successor party).

It is hard to answer which, right or left economic policies are more successful to the economic and financial stability. The field of political economy does not provide clear evidence. Empirical research of government ideology effect on financial stability is also lacking. Scholar

[149]Katja Rietzler and Achim Truger, "Is the debt brake behind Germany's successful fiscal consolidation?", Working Paper, No. 105/2018, 2-24 pp., at: [https://www.econstor.eu/bitstream/10419/182514/1/1024496422.pdf].
[150]Achim Truger et al., "The German "debt brake": a shining example for European fiscal policy?", Revue de l'OFCE, vol. 127, no. 1, 2013, pp. 153-188.
[151]Lars P. Feld and Wolf Heinrich Reuter, "The German "debt brake": Success factors and challenges.", Freiburger Diskussionspapiere zur Ordnungsökonomik, No. 21/10, 1-17 pp., at: [https://www.econstor.eu/handle/10419/235568].

Andrew Cowart believes that long run success of the economy and financial stability depends on accuracy of fiscal policy, willingness of political elites to allocate resources, partisan and ideological controversies and other policy goals which often conflict. [152] Economist Lars Feld adds that much of the success of fiscal rules depends on the public and political acceptance of the fiscal rules.[153]

Christian Bjørnskov analyzing under left or right governance country's economy grows faster, points out that economic left policies might be harmful to the economy, since voters may demand inefficient levels of redistribution and government intervention, and they may care too little for aspects that really matter for the economy.[154] This argument is especially important these days, when during pandemic aggregated government debt in the 19 countries sharing the euro jumped by 1.24 trillion euros to 11.1 trillion or 98% of its gross domestic product last year from 83.9% in 2019 as the deficit went to 7.2% of GDP from 0.6%. Considering social challenges in a future, aging society that puts more burden on social care system, to have stable finance and decreasing level of debt is imperative. Especially in Visegrád countries that have less ability to sustain higher debt and refinance it cheaply.

Another argument for ideology right leaning governments in providing more financial stability is less intervention in the economy. Since left-wing governments implement lavish social policy, tax collection is extremely important to finance it. Therefore, higher taxes are more common under left. However, as it was shown in some research, lower business taxes guarantee more financial stability. Also, higher taxes may force to move to shadow economy and thus reduce tax collection. In addition to that, for socialist to maintain low unemployment is priority, therefore public sector apparatus is higher which may lead to inefficiency. Also, it is noticed that expansionary fiscal policies are not beneficial to the economy in the long run.[155] Since left leaning parties are inseparable from higher spending, this stands as another argument that ideologically right leaning parties create better assumption for financial stability.

To sum up the whole paragraph one can notice that despite theoretical disputes, fiscal policy indeed has effect on financial stability. Scientific literature shows expenditure, tax debt and deficit management policies are the main variables that effect financial stability through various agents, as banks, financial markets, households. Since fiscal policy is implemented by political parties, one found that theoretically and empirically left and right-wing political parties indeed implement different fiscal policies. Bearing that fiscal policy variables were connected

[152]Andrew T Cowart, "The Economic Policies of European Governments, Part II: Fiscal Policy." British Journal of Political Science, vol. 8, no. 4, Cambridge University Press, 1978, pp. 425–39, at: [http://www.jstor.org/stable/193634].
[153]Feld, 1-17 pp.
[154]Christian Bjørnskov, "Does Political Ideology Affect Economic Growth?" Public Choice, vol. 123, no. 1/2, Springer, 2005, pp. 133,, at: [http://www.jstor.org/stable/30026794].
[155]Kalle Kukk, "Fiscal Policy Effects on Economic Growth: Short Run vs Long Run." Working Papers 167, Tallinn School of Economics and Business Administration, Tallinn University of Technology, 2007, 77-96 pp.

with political ideologies making assumption, that due to interventionistic policy, higher taxes, higher deficit, spending and debt accumulation, economically left-wing governments should provide less financial stability than right-wing.

2. REASERCH FRAMEWORK FOR EVALUATION OF FINANCIAL STABILITY AND POLITICAL IDEOLOGY

2.1 Research countries and period

In order to evaluate whether financial stability is related with political ideology, in this work quantitative analysis method is used. First, some correlations and other descriptive statistic models made to see whether ideologically left leaning governments spend more than ideologically right leaning governments. Latter, fixed effect regression model constructed to see relation between financial stability score and political ideology, also other independent variables that might have effect on economic stability. After, in order to find how certain variables, that had effect on financial stability, are related with political ideology, fixed effect regression model used once again. Inter alia, for better data visualization and differences that can occur between countries, Pearson's correlations in each country was applied. The fixed effect regression model was chosen since one have cross-section time series data – data from four locations at a period 1995-2019. Fixed effect model helps to account for individual heterogeneity in each country and remove the effect of time-invariant characteristics so one can assess the net effect of the predictors on the outcome variable. Also, it is worth to mention that there is no research evaluating ideology effect for financial stability, therefore the fixed effect regression model was borrowed from other research. For instance, Christian Bjørnskov evaluation of political ideology effect to economic growth,[156] Ken Hung uses fixed effects as one of the model calculating determinant of sovereign credit rating,[157] Manh Hung Pham uses fixed effect, random effect and OLS models investigating the impact of financial inclusion on financial stability in Asian. He finds that random effect model

[156] Christian Bjørnskov, "Does Political Ideology Affect Economic Growth?" Public Choice, vol. 123, no. 1/2, Springer, 2005, pp. 133,, at: [http://www.jstor.org/stable/30026794].

[157] Ken Hung, "Factors that affect credit rating: an application of ordered probit models" Romanian Journal of Economic Forecasting –XVI (4) 2013, 94-104 pp.

is not suitable due to multicollinearity and heteroscedasticity thus he prefers results of fixed effect and OLS[158] Since fixed effect model is used in this work the following model will be applied:

$$\boldsymbol{Y_{it} = \beta_0 + \beta_1 IDE_{it} + \beta_2 DEF_{it} + \beta_3 GDP_{it} + \beta_4 UNE_{it} + \beta_5 INF_{it} + \beta_6 EFF_{it} + \beta_7 TAX_{it} + \beta_8 SPE_{it} + \beta_9 CRE_{it} + \gamma_2 D2_i + \gamma_3 D3_i + \gamma_4 D4_i + u_{it}}$$

where Y_{it} is dependent variable credit rating score, i - number of countries, t - time period, β_0 regression constant, $\beta_1 - \beta_9$ independent variables, $D2_i - D4_i$ dummy variables

Research countries comprise Visegrad group - 4 Central Europe countries: Slovakia, Poland, Hungary and Czech Republic. These countries were selected since all of them share the same geographical region, political regime. Also, all of them started their transition to the market economy in 1990s and up until now have had different political parties in the government. The homogeneity of the countries will help us for better comparison.

In research period from 1995 to 2019 is used, since first years of countries' transition to market economy were chaotic. Also, data availability, credibility and comparability of the period prior 1995 is lacking. Year 2020 are excluded from analysis due to global pandemic that caused colossal increase in deficit and debt levels regardless of ruling party. Year 2021 are not included because some data are still lacking. From research years 2009 and 2010 excluded because of the financial crisis. During those two years regardless of government ideology all of the countries suffered economic downturn.

2.2 Independent variables selection and measure of political ideology

The main independent variable in this work will be political ideology. It is important to mention that political ideology has cultural and economic axes. For instance, on the economic axe party might be on the left side, while its cultural policy is on the right side and vice versa. Therefore, in order to capture only economic political ideology effect on financial stability, party's

[158] Manh Hung Pham and Thi Phuong Linh Doan, "The Impact of Financial Inclusion on Financial Stability in Asian Countries", Journal of Asian Finance, Economics and Business Vol 7 No 6 (2020) pp. 47-59

ideology is measured according to its economic but not cultural aspirations.

For the political ideology evaluation "The Manifesto Project" data is used which provides the scientific community with parties' policy positions derived from a content analysis of parties' electoral manifestos. "The Manifesto Project" covers over 1000 parties from 1945 until today in over 50 countries on five continents.[159] Political ideology evaluated with the score ranging from -100 to 100. The highest negative score means that the whole manifesto only covers statements that are categorized as left statements (and 100 would mean right statements only). In reality most manifestos do contain a mixture of left, right and neutral sentences, that is why the empirical range of the variable is much smaller than the theoretical from -100 to +100. The score of the party's right-left economic ideology is constructed using Michael Laver and Ian Budge method.[160] Regarding other researcher,[161] the score of a ruling party in the parliament is used since it has the most power to establish agenda.

In regression model other independent variables are used to see whether they have effect on financial stability. Certain variables and motivation of using them is presented below. Also, one can point out that that most of the variables that cause financials (in)stability are presented in a work of Blaise Gadanecz and Kaushik Jayaram.[162] In general, they point out 28 variables of financial stability and 8 of them are used in this work. The data for variables are used fromEurostat, Data World Bank, S&P, Moody's and Fitch data, countries' national institutions data. In order to avoid autocorrelation, correlations between all independent variables were made (see Table 1. in Annex 1.).

Independent variable number 1 – **budget deficit**. High deficit values relative to GDP can mean unsustainable government indebtedness and vulnerability of the debt holder, who can be financial institutions in sovereign's country. Also, higher deficit increase tax burden, reduces disposable income thus consumption decreases.[163]

Independent variable number 2 – **inflation rate**. High levels of inflation would signal structural weakness in the economy and increased levels of indebtedness, potentially leading to a tightening of monetary conditions. Also, high inflation may cause dissatisfaction in society that could lead

[159]Andrea Volkens et al., "The Manifesto Data Collection. Manifesto Project." (MRG / CMP / MARPOR). Version 2017b. Berlin: Wissenschaftszentrum Berlin für Sozialforschung (WZB). https://doi.org/10.25522/manifesto.mpds.2017b

[160] Michael Laver and Ian Budge, *Party Policy and Government Coalitions, Houndmills, Basingstoke*, Hampshire: The MacMillan Press 1992.

[161]Thorsten Beck et al., "New Tools in Comparative Political Economy: The Database of Political Institutions." The World Bank economic review, vol. 15, no. 1, 165–176 pp. at: [https://openknowledge.worldbank.org/bitstream/handle/10986/17216/773490JRN020010Tools0in0Comparative.pdf?sequence=1&isAllowed=y].

[162] Blaise Gadanecz and Kaushik Jayaram, "Measures of financial stability – a review", 2005, pp. 365-378, available at: [https://www.bis.org/ifc/publ/ifcb31ab.pdf].

[163] Carlos Mulas-Granados, "The Political and Economic Determinants of Budgetary Consolidation in Europe", Vol. 1, No. 1 (Spring 2003).

to political instabilities and spillover to financial sector. Conversely, low levels of inflation could potentially increase the risk appetite in the financial markets. Asli Demirgüç-Kunt and Enrica Detragiache found high inflation causing financial stress.[164]

Independent variable number 3 – **unemployment rate**. High unemployment rate might have negative effect on long-run economic growth. Unemployment wastes resources, generates redistributive pressures and distortions, increases poverty, limits labor mobility, and promotes social unrest and conflict. Also, according to World bank, employment levels close to the economy's natural rate is financial stability attribute. Most of the financial stability indexes include unemployment as one of the most variable. For instance, the work of Miguel A. Morales and Dairo Estrada who also found that higher unemployment increases a non-performing loans and rises financial stress.[165]

Independent variable number 4 – **governance efficiency rate**.[166] World Bank index on government effectiveness shows perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. The higher governance efficiency rate might have positive effect on financial stability. Governing efficiency (weak institutions) was found to have effect on stability in Asli Demirgüç-Kunt and Enrica Detragiache multivariate Logit approach analysis.[167]

Independent variable number 5 – **GDP growth**. Negative or low positive values would indicate a slowdown and excessively high values may show unsustainable growth. Also, ECB points that slow GPD growth could negatively affect financial sustainability, since aging society in Europe will put more and more pressure on countries' budget.[168] Franco Bassanini and Edoarado Reviglio emphasize that financial stability and growth are interconnected therefore economic growth is necessary for stability.[169] The World Bank claims that Financial stability is paramount for economic growth[170], therefore the better GDP growth might indicate countries ability to have a

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[164] Asli Demirgüç-Kunt and Enrica Detragiache, "Cross-Country Empirical Studies of Systemic Bank Distress" World Bank Policy Research Working Paper 3719, September 2005, pp. 1-28.
[165] Miguel A. Morales and Dairo Estrada, "A financial stability index for Colombia", Ann Finance 6, 2010, pp. 555–581.
[166] The World Bank, at: [https://govdata360.worldbank.org/indicators/h580f9aa5?country=POL&indicator=388&countries=CZE,SVN,SVK,HUN&viz=line_chart&years=1996,2020].
[167] Asli Demirgüç-Kunt and Enrica Detragiache, "Cross-Country Empirical Studies of Systemic Bank Distress" World Bank Policy Research Working Paper 3719, September 2005, pp. 1-28.
[168] Nicola Giammarioli, "Assessing fiscal soundness. Theory and practice.", European Central Bank, Occasional paper series no 56, march 2007.
[169] Franco Bassanini and Edoarado Reviglio, "Financial Stability, Fiscal Consolidation and Long-Term Investment after the Crisis", OECD Journal Financial Market, 2011, Issue pp. 1-38. [https://www.oecd.org/finance/financial-markets/48609330.pdf].
[170] The World Bank, Financial stability, at: [https://www.worldbank.org/en/publication/gfdr/gfdr-2016/background/financial-stability], Accessed 6 Nov. 2021.

better and more stable financial environment. Asli Demirgüç-Kunt and Enrica Detragiache finds negative growth as determinant of financial crisis.[171]

Independent variable number 6 – **taxes on corporate income**. The higher taxes on business can reduce financial stability by reducing investments, cutting down business profits and increasing tax evasion. Egidijus Bikas and Sandra Žaltauskaite finds corporate tax to have negative effect on financial stability.[172]

Independent variable number 7 – **government spending % of the GDP**. There is no agreement of government spending effect to financial stability. In economic downturn government spending can stabilize economy. However, public money directed to inefficient sectors increases budget deficit and debt levels which have negative effect for financial stability.

Variable	Description	Minimum	Maximum	Mean	Std. Deviation	Data Source
Ideology (IDE)	Governing party's economic ideology according to agenda. Values might range from -100 (very left) to 100 (very right)	-26,28	48,66	3,9563	17,598	Party manifesto project data
Deficit (DEF)	Government budget deficit to GDP	-12,60	1,50	-3,7065	2,430	World Bank Open data/Eurostat
GDP_growth (GDP)	Annual GDP growth rate	-1,38	10,83	3,6901	2,173	World Bank Open data/Eurostat
Unemployment (UNE)	Unemployment rate	2,01	19,89	9,3384	4,642	World Bank Open data/Eurostat
Inflation (INF)	Inflation rate	-0,87	28,31	5,2775	5,702	World Bank Open data/Eurostat
Gov_Effect (EFF)	The government effectiveness index is an index elaborated by the World Bank Group which measures the quality of public services, civil service, policy formulation, policy implementation and credibility of a government's commitment to raise these qualities or keeping them high.	0,37	1,10	0,7292	0,183	World Bank

[171] Asli Demirgüç-Kunt and Enrica Detragiache, "Cross-Country Empirical Studies of Systemic Bank Distress" World Bank Policy Research Working Paper 3719, September 2005, pp. 1-28.
[172] Egidijus BikasSandra and Sandra Žaltauskaitė, "The Role Of Fiscal Policy In Ensuring Financial Stability In Lithuania", The 8th International Scientific Conference "Business and Management 2014", 2014, January.

Corporate_tax (TAX)	Taxes on corporate income	9	41	23,5141	7,915	Poland's Ministry of Finance, Slovakia's Tax Directorate, National Tax and Customs Administration of Hungary, Financial Administration of the Czech Republic
Gov_spending (SPE)	Government spending % of the GDP	36,4	55,2	44,8609	4,059	Eurostat
Credit rating (CRE)	Credit rating variable comprises 3 credit rating agencies (S&P, Moody's, Fitch score mean). Higher credit rating shows better public finances and lower indicates financial instability.	25,00	42,00	35,0143	4,05781	(S&P, Moody's and Fitch data)

Table 4. Descriptive analysis of variables
Source: authors' made

2.3 Financial stability evaluation

Financial stability has neither an established definition nor an aggregate indicator. Academic researchers have focused on a number of quantitative measures in order to assess financial stability. International Monetary Fund for this purpose developed set of Financial Soundness Indicators[173]. ECB with other national central banks also developed macroprudential indicators to monitor banking sector financial stability.[174] Other set of variables to assess financial stability was presented by John Hawkins and Marc Klau (2000)[175], while William R. Nelson and Roberto Perli[176], and Dale F. Gray[177] focused on market pressures, external vulnerability and banking system vulnerability.

Since one indicator doesn't represent the whole financial situation, some countries or authors construct aggregate index. For instance, Netherlands central bank uses stability condition index constructed of interest rates, the effective exchange rate, real estate and stock

[173]International Monetary Fund, "Financial Soundness Indicators: Compilation Guide." International Monetary Fund March, 2006.
[174]European Central Bnak, "EU Banking Sector Stability." European Central Bank, November 2006, 4-45 pp.
[175]John Hawkins and Marc Klau "Measuring potential vulnerabilities in emerging market economies." BIS Working Papers, no 91, October, 2-46 pp., at: [https://www.bis.org/publ/work91.pdf].
[176]William R. Nelson and Roberto Perli, "Selected indicators of financial stability.", 4th Joint Central Bank Research Conference on "Risk Measurement and Systemic Risk", 2005, ECB Frankfurt am Main, November, 1-22 pp., at: [https://www.ecb.europa.eu/pub/conferences/shared/pdf/jcbrconf4/Perli.pdf].
[177]Dale F. Gray et al., "New framework for measuring and managing macrofinancial risk and financial stability", NBER Working Paper no 13607, November, 2007.

prices, the solvency of financial institutions and volatility of the stock index of financial institutions.[178] US Federal Reserve System experts developed financial fragility indicator using daily data from the financial markets,[179] a similar index (financial stress index) also constructed by Canadian central bank, where stress is defined as the force exerted on economic agents by uncertainty and changing expectations of loss in financial markets and institutions.[180]

However most of the aggregated financial stability indexes suitable and constructed for a specific country. Needless to say that financial systems are very diverse comprising different financials and institutional actors interactions which makes is almost impossible to construct one financial stability index for all countries.[181] The same observation is made by Adam Geršl and Jaroslav Heřmánek who claims that creating a single aggregate measure of financial stability is difficult task given the complex nature of the financial system and the existence of complex links between various sectors.[182]Therefore, in order to evaluate fiscal policy influence to the financial stability, for economic soundness the proxy variable – sovereign credit rating will be used.

A credit rating in general is a quantified assessment of the creditworthiness of a borrower in general terms or with respect to a particular debt or financial obligation. A high credit rating indicates a high possibility of paying back the loan in its entirety without any issues; a poor credit rating suggests that the borrower has had trouble paying back loans in the past and might follow the same pattern in the future.[183]

Researches show that models used by the credit institutions reflects the macroeconomic responsibility level of the ruling governments.[184] Also, credit rating in most of the cases show sovereign risk.[185] One can claim that rating reflects factors such as country's economic status, transparency in the capital markets, levels of public and private investment flows, foreign direct investment, foreign currency reserves, political stability, or the ability for a country's economy to remain stable despite political change.[186] Richard Cantor and Frank Packer points out that per-capita income, inflation, external debt, economic development and default history

[178]Jan Willem End, Indicator and boundaries of financial stability, 2006, at: [https://www.dnb.nl/binaries/Working%20Paper%2097_tcm46-146754.pdf], accessed 6 Nov. 2021.
[179]Nelson, 1-22 pp.
[180]Mark Illing and Ying Liu, "An Index of Financial Stress for Canada ." Staff Working Papers from Bank of Canada, 2003, 2-63 pp., at: [https://econpapers.repec.org/paper/bcabocawp/03-14.htm].
[181]Eduardas Freitakas ir Tomas Mendelsonas, "Šalies finansinio stabilumo matavimo metodai." TILTAI, 2016, 3, 69 pp., at: [https://core.ac.uk/download/pdf/233179523.pdf].
[182] Adam Gersl and Jaroslav Heřmánek "Financial Stability Indicators: advantages and disadvantages of their use in the assessment of the financial system stability", Czech National Bank Financial Stability Review, 2006.
[183]US Scurities and Exchange Commission, "Updated Investor Bulletin: The ABCs of Credit Ratings." At: [https://www.sec.gov/oiea/investor-alerts-and-bulletins/ib_creditratings].
[184]Eda Balikcioglu and Hakan Yilmaz, "How Fiscal Policies Affect Credit Rates: Probit Analysis of Three Main Credit Rating Agencies' Sovereign Credit Notes." Transylvanian Review of Administrative Sciences 56, Febraury, 2019, 5-22 pp.
[185] Norbert J. Gaillard, "Fitch, Moody's and S&P's Sovereign Ratings and EMBI Global Spreads: Lessons from 1993-2007" International Research Journal of Finance and Economics 1(26), 2009, pp. 2-9.
[186]Ashok Vir Bhatia, "Sovereign Credit Ratings Methodology: An Evaluation." IMF working paper, WP/02/170, October, 2002, 3-50 pp., at: [https://www.imf.org/external/pubs/ft/wp/2002/wp02170.pdf].

contribute significantly to explaining ratings levels by both Moody's and Standard & Poor's.[187]

The agencies assess governments in terms of their ability to manage debt and resolve macroeconomic problems. Investment credit ratings indicate the ability to face the shocks of an upcoming crisis scenario which shows the readiness of economic policies against potential threats. Credit ratings are the compass of economic policy-makers which shows the necessity to reduce imbalances and debts in order to take the necessary precautions, credit notes also show the availability and productive utilization of a government's policy options.[188] ECB adds that credit ratings reflect not only quantitative but also qualitative information on issues such as political stability and the effectiveness of the administration. Governments politically or structurally fragile and internally/externally under stress are rated lower by the agencies than those who have strong political and structural stance.[189]

In its structure, a sovereign credit rating has various components. Researches focusing on the factors affecting credit ratings indicated that growth, per capita income, inflation, foreign debt, economic development level and default history of the country are the most prominent factors in determining the credit ratings.[190] For instance, American credit rating agency "S&P Global Ratings" uses 10 indicators to evaluate country's rating. Among them, political stability, government net debt to GDP, nominal GDP per capita, government fiscal balance, core inflation and others variables are considered. While some of these variables directly represent financial stability, the sovereign credit rating can be used as a proxy variable to assess financial stability.

However, it is worth to mentions that sovereign credit ratings have flaws. After 2008 financial crisis the questions about effectiveness and capacity about credit rating agencies as early warning mechanisms for the sustainability of financial systems were rised. In addition to that credit rating agencies' calculation methods and approaches begun to be criticized.[191] Despite its criticism, a credit rating remains one of the most accurate proxy to evaluate financial stability.

Various credit ranking agencies will be used since different countries were evaluated by different agencies. However, although there are some methodological differences among the biggest credit agencies (Fitch, Moody's, S&P, DBRS) their ratings do track each other very closely.[192]

Since credit ratings are in alphanumeric ratings, the values were transformed to

[187]Richard Cantor and Frank Packer, "Determinants and Impact of Sovereign Credit Ratings.", Economic Policy Review, Federal Reserve Bank of New York, 1996, pp. 37-53.
[188]Balikcioglu, 5-22 pp.
[189]Nye, 192-200 pp.
[190]Cantor, 37-53 pp., also Antonio Afonso, "Understanding the Determinants of Government Debt Ratings: Evidence for the Two Leading Agencies." Department of Economics and Research Center on the Portuguese Economy (CISEP), Lisbon, 2002.
[191]Balikcioglu, 5-22 pp.
[192]John Kiff, "The Uses and Abuses of Sovereign Credit Ratings." Global Financial Stability Report, 2010, 113 pp.

numeric. This method is applied in other works who uses credit rating as variable. For instance, Giovanni Ferri for Moody and S&P uses numeric values from 5 to 100.[193] Norbert J. Gaillard transforms credit ratings from 0 to 23,[194], while Flávia Cruz de Souza Murcia prescribes values form 0 to 7.[195] Keeping in mind that there is no single accepted method of transforming alphanumeric ratings to numeric values, in this research for every credit ranking score ranging from 1 to 49 (Table 1. and Table 2. in Annex 2.) is prescribed. The highest score (49) given to the "prime positive" credit ranking, "prime stable" score is one point lower (48) and "prime negative" 2 points lower (47). This logic applied for every grade. If at the exact year different credit agencies gave different credit ranking, the average score id calculated.

3. DYNAMIC ANALYSIS OF MODEL VARIABLES

First of all, in this part results of constructed financial stability score are presented. Then, descriptive statistics of right and left-wing governments' debt and deficit accumulation are shown. Later, fixed effect regression model applied to check whether left ideology parties tend to generate more financial instability than right. Finally, variables that had effect on financial stability analyzed and channeled with political ideologies.

3.1 Government credit score changes over time

In order to evaluate financial stability, one constructed financial stability score for every Visegrád country for a period 1995-2019. As it was mentioned before, for every credit rating one prescribed score ranging from 1 (lowest financial stability) to 48 (highest financial stability).

[193] Giovanni Ferri, Li-Gang Liu, Giovanni Majnoni, "How the Proposed Basel Guidelines on Rating-Agency Assessments Would Affect Developing Countries" RePEc, July 2000.
[194] Norbert J. Gaillard, "Fitch, Moody's and S&P's Sovereign Ratings and EMBI Global Spreads: Lessons from 1993-2007" International Research Journal of Finance and Economics 1(26), 2009, pp. 2-9.
[195] Flávia Cruz de Souza Murcia, "The Determinants of Credit Rating: Brazilian Evidence", Brazilian Administration Review, vol. 11 (2), 2014. 188-209 pp.

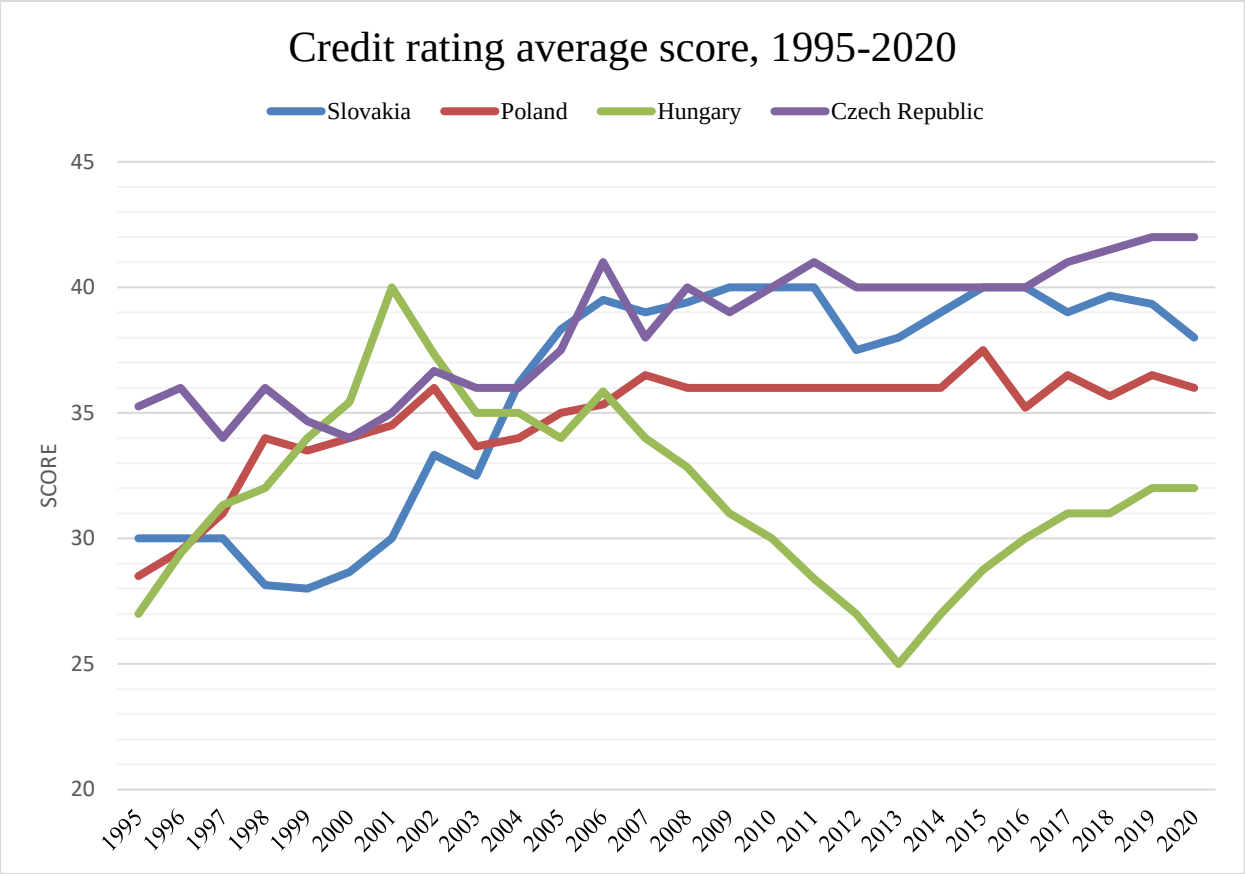

Figure. 3. Visegrad group credit rating average score, 1995-2020
Source: authors' made

From the Figure 3. one can see that although all of the countries started their economic transition at the same time, the risks of countries' finances were evaluated differently. Poland, Hungary and Slovakia started with the lower scores of credit rating where Czech Republic begun way higher. This related with relative low levels of debt since Czech Republic debt level in 1995 was only 13,6 % of the GDP (Poland – 47,6 %, Hungary – 84,1 % and Slovakia – 21,6 %)

Also, one can notice that Poland, Slovakia and Czech Republic up until now took relatively similar path in terms of financial stability. From 1995 up until 2008 financial crisis countries increased their credit score and since then up until 2019 maintained rather similar level of financial stability. The only Hungary took different path reaching its highest financial stability level in 2002 – 37,33 %. The period of increasing financial stability is related with government debt reduction policy where from 1995 to 2002 country managed to reduce it from 84% to 52% of the GDP. Since then credit score was going down where in 2013 in bounced back and started to climb up.

3.2 Debt and deficit accumulation under left and right governance

From the Figure 4 one can see that Visegrad countries managed their debt levels differently (red and blue collars illustrate which economic ideology was dominant in the

parliament. Red collar shows that governing party supported left leaning economic policies while blue collar illustrates support for right economic policies).

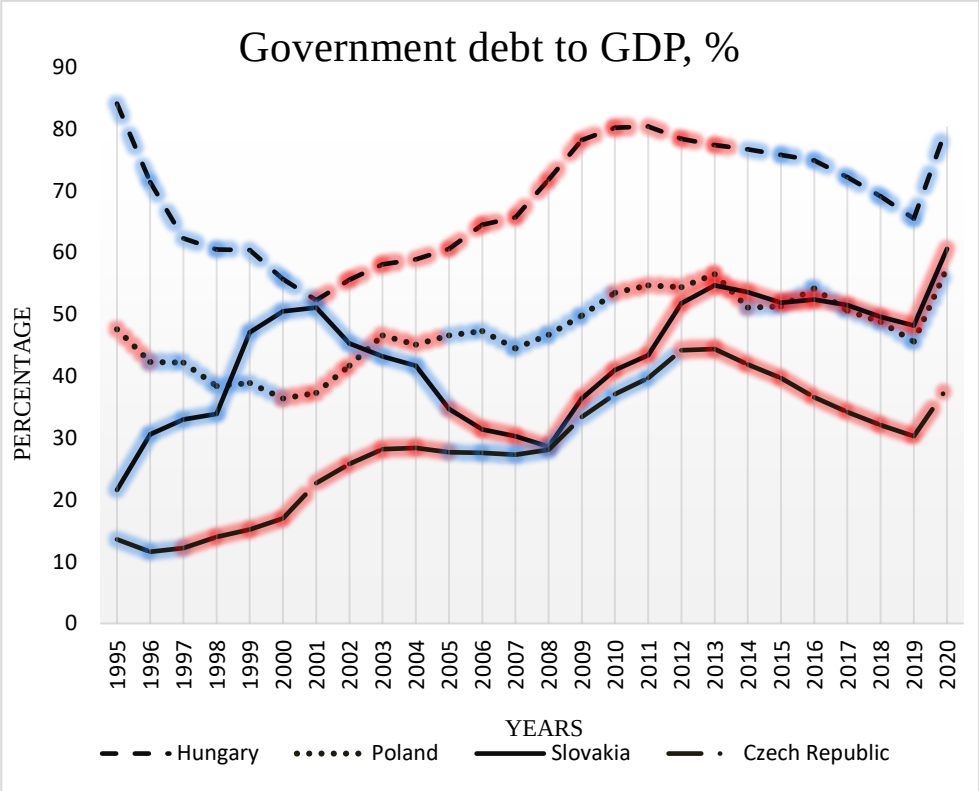

Figure. 4. Government debt to GDP
Source: authors' made, Eurostat and World Bank data

One can notice that Hungary from 1995 up until 2001 managed to reduce government debt. In 2001 Hungary reduced its debt level to the lowest point in the last 25 years where debt level reached 52,3% of the GDP. During that time major parties in parliament were Fidesz and Hungarian Socialist Party. Both of them according to their political agendas were in favor of liberal economic policies and supported debt consolidation. Since 2001 Hungary constantly increased its debt levels where it reached 80,4 % of the GDP in 2011. This period was dominant by left-wing governments. Up until 2020 Hungary consolidated its debt and in 2019 marked 65,5% levels of the GDP. The case of Hungary illustrates that right leaning economic policies were related with budget consolidation while left leaning policies with expansion of debt.

Poland reached its lowest level of debt in 2000 when it was 36,4% of the GDP. Up until then the majority in the parliament belonged to Solidarity Electoral Action which propagated right economic ideas. Since then Poland increased its national debt levels where in year 2013 it reached 56,5%. During that time three different parties had majority in the

parliament Democratic Left Alliance, Civic Platform, Law and Justice, that had diverse economic policies. From 2015 parliament was dominated by Law and Justice that at that time supported liberal economic policy and managed to reduce debt levels to 45,6 % of the GDP in 2019.

A different path from Hungary and Poland took Slovakia's government. Since 1995 country's debt level sharply increased and reached highest point in 2001 – 51,1% of the GDP. Then country started consolidation period where by 2008 debt level reached 28,6% of the GDP. Consolidation period was mostly led by right wing governments (Slovak Democratic Coalition, Slovak Democratic and Christian Union parties). However, debt reduction is mostly related with transaction period adopting euro currency in 2009. After financial crisis debt levels reached highest point in 2013 – 54,7% of the GDP. Since then up until COVID-19 outbreak in 2020 debt levels were decreasing. During post crisis period government belonged to left leaning political party Direction-Social Democracy, which, even though implemented lavish social policies (payment of a 13th month's allowance to pensioners which cost 442 million euros, doubled allowance paid to families with children from 24.5 to 50 euro with total cost for this measure of 300 million euro), managed to decrease debt.

Finally, Check Republic took the most consistent way and since 1995 up until 2013 constantly increased national debt where in 2013 debt reached 44,4% of the GDP. During that time both, right and left policies were in the government's agenda. After 2013 up until 2020 national debt levels were decreasing. During that time two left leaning parties Czech Social Democratic Party and ANO implemented fiscal policies.

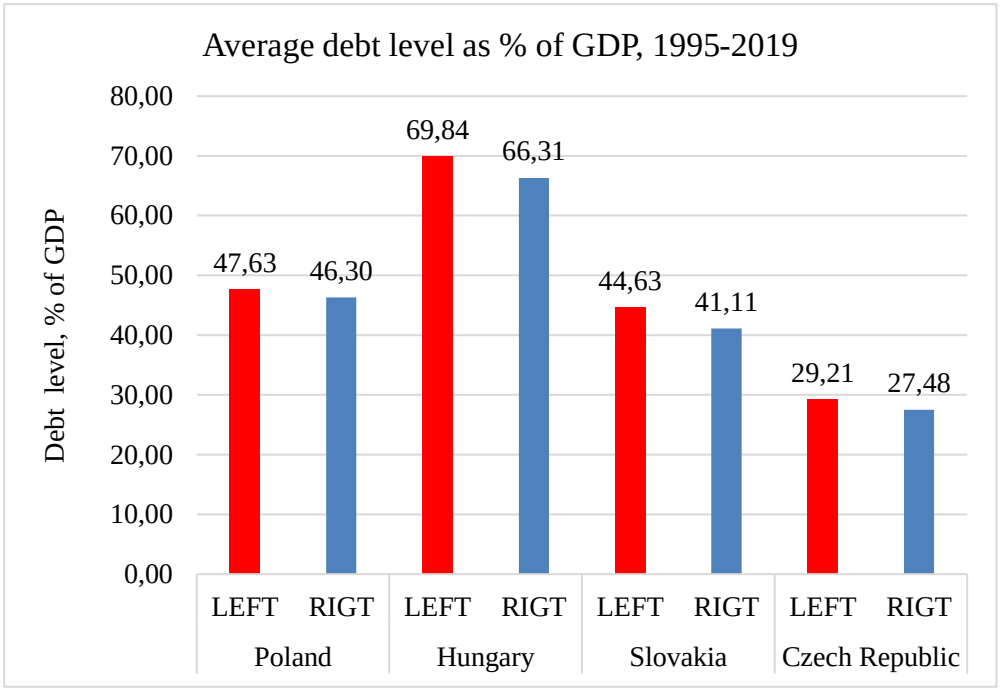

Figure. 5. Government debt to GDP
Source: authors' made, Eurostat and World Bank data

Figure 5 shows that from 1995 to 2019 during right leaning parties governing debt levels were lower in all four countries. Even though it correspond with scientific literature, it does not show full picture of which government increased debt levels more since higher debt could be inherited from previous governing. Taking this into account one investigated how political ideology is related with governments' deficit.

A short analysis of government's budget deficit shows that since 1995 up until 2019 left leaning governments in 3 out of 4 countries maintained lower levels of budget deficit. This observation corresponds with the works of Fredrik Carlsen, Saeid Mahdavi, Alberto Alesina, and Andre Blais who found that left-wing governments run higher deficit than right. This could be the result of lavish social policies that left leaning political parties implement.

In Poland during the left governing average budget deficit was 4,53% of the GDP while during right 2,63% of the GDP. In Hungary ideologically left leaning governments accumulated 5,57% government debt while right leaning governments 3,29%. In Czech Republic difference between right and left deficit was incremental, left - 2,4% and 2,31% for right. The only country where right sustained significantly higher budget deficit was Slovakia. While being in the government economically right leaning parties averaged 6,22% of government's debt, during left governing it was only 2,58%. It is worth to mention that the highest rate of deficit (8,8%) was reached in 1998-2002 during governance of Slovak Democratic Coalition which was economically right leaning party. However, ruling coalition was formed out of 4 parties including Party of the Democratic Left (left ideology, -6,254 score), Party of the Hungarian Coalition (left ideology, -7.176 score) and Party of Civic Understanding (left ideology -6.393). Therefore, lavish spending could be related with the whole coalition being more left leaning, even though winning party Slovak Democratic Coalition was right-wing. Also, the higher deficit could be related with Jürgen von Hagen, Andrew Hughes Hallett, Rolf Strauch and Fredrik Carlsen finding that higher spending, budget deficits and debt appears in countries where government is formed with large coalitions since all parties try to achieve their agenda and redistribute for their voters.

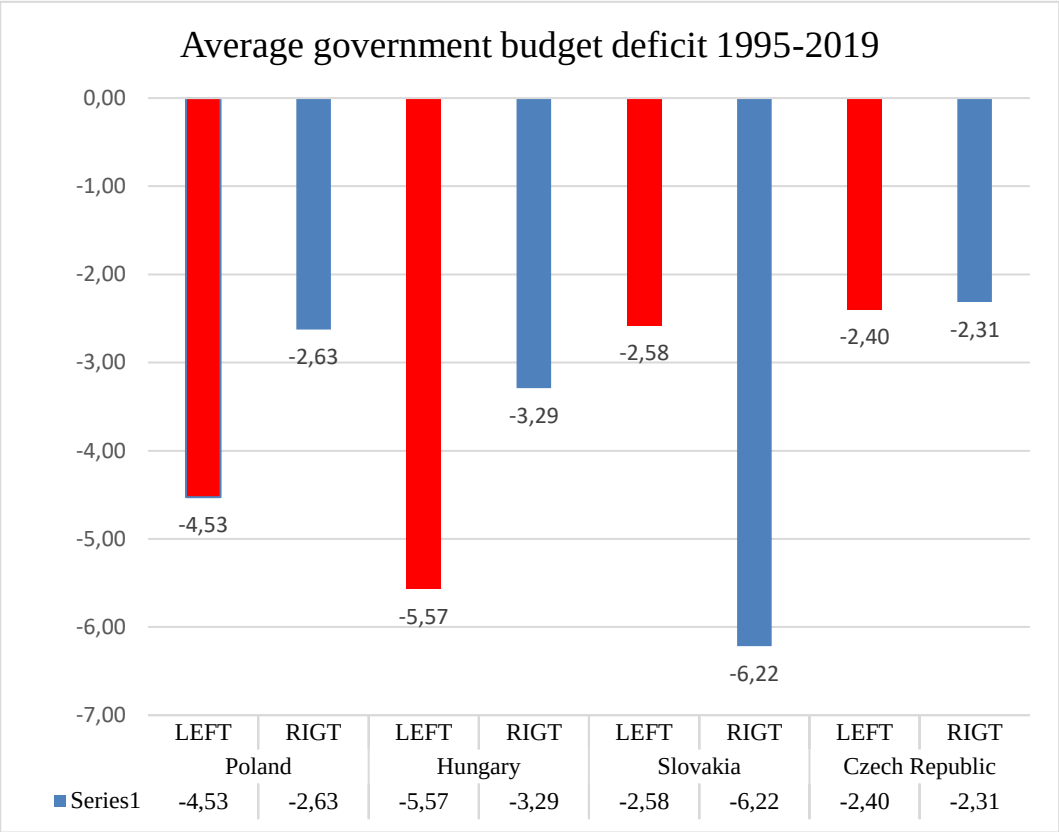

Figure 6. Average government budget deficit 1995-2019
Source: authors' made, Eurostat and World Bank data

3.3 Political ideology effect on financial stability

In order to evaluate whether political ideology has effect on financial stability, a fixed effect regression model was constructed where dependent variable was credit score. ANOVA test and model summary (Table 1. and 2. in Annex 3.) showed that constructed model is statistically significant ($F<0{,}001$).

Results showed (Table 5.) that even though one was expected that right-wing governments will produce more financial stability, one got different outcome. Negative coefficient value indicates that under economically left leaning governing financial stability should be higher. However, results were statistically insignificant.

Despite that political ideology showed insignificant to financial stability, one was found that other independent variables used in model have negative or positive impact to financial stability and are statistically significant. First, one was found that higher unemployment has negative effect on financial stability. This corresponds to Milutin Ješić finding that higher unemployment creates extra pressure on banking sector because households suffer from income reduction and may face insolvency. Also, it proves the argument that higher unemployment puts extra pressure on public finance, forces governments to increase corporate taxes that could force

business to relocate. Second, model shows strong significant relationship between government effectiveness and financial stability where higher effectiveness causes better economic environment. This corresponds to Michael Bergman research that fiscal rules and government efficiency are institutional substitutes in terms of promoting fiscal sustainability.[196] Inter alia, European Central Bank emphasizes the quality of governing and institutions to be indirect determinant of financial stability. Third, model showed statistically significant results that higher inflation negatively affects financial stability. This corresponds to Central banks' main purpose to maintain stable prices to have healthy economy.[197] Fourth, as it was elaborated in literature review, that higher corporate taxes might have negative effect on financial stability[198] the same result was found in this work. One can emphasize that lower corporate tax increase foreign investments and produce better business environments. Foreign business establishments are especially important for small economies in Europe not only for economic, but also geopolitical reasons. Fifth, the higher government spending was also found to be significant showing that higher public spending is associated with lower financial stability. Theoretical approach for public spending effect on the economy differs. For Keynesian view public spending is extremely important for economy stimulus during crisis, however Neoclassical view and corresponding works show it as depress for the economy because government expenditure crowds out private investment and consumption.

In this work the negative role of debt and budget deficit to financial stability emphasized. Even though the model coefficient shows that lower deficit is related with more financial soundness, the significance is low. GDP growth also find to have positive coefficient but no generalizations can be made since variable is statistically insignificant.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	34,646	,721		48,086	<,001
	State_code=2.0	-2,762	1,019	-,296	-2,711	,008
	State_code=3.0	,812	1,019	,087	,797	,428
	State_code=4.0	3,423	1,019	,367	3,359	,001

[196]Michael Bergman, et al., "Promoting sustainable public finances in the European Union: The role of fiscal rules and government efficiency." European Journal of Political Economy, May, 2016, Vol. 44, 1-19 pp.
[197]Geoffrey Wood, *Money, Prices and the Real Economy*, Edward Elgar Publishing, First Edition, 1999, 34-48 pp.
[198] Egidijus Bikas and Sandra Žaltauskaitė, "The Role Of Fiscal Policy In Ensuring Financial Stability In Lithuania", The 8th International Scientific Conference "Business and Management 2014", 2014, January.

2	(Constant)	43,350	4,305		10,069	<,001
	State_code=2.0	-5,200	1,005	-,558	-5,176	<,001
	State_code=3.0	,189	,621	,020	,304	,762
	State_code=4.0	-,743	,904	-,080	-,822	,414
	Ideology	-,011	,014	-,047	-,802	,425
	Deficit	-,117	,124	-,070	-,944	,348
	Gov_Effect	9,873	1,680	,447	5,876	<,001
	Unemployment	-,239	,068	-,273	-3,532	<,001
	Inflation	-,118	,048	-,166	-2,430	,017
	Gov_spending	-,189	,099	-,189	-1,916	,059
	GDP_growth	,014	,103	,008	,140	,889
	Corporate_tax	-,137	,047	-,266	-2,930	,004
a. Dependent Variable: Credit_rating						

Table 5. Regression model no. 1(depended variable credit score).
Source: author's made

3.4 Policy transmission channels through which stability is achieved

In the previous part one was found that 5 independent variables (inflation, governing efficiency, unemployment, government expenditure and corporate tax rate) have statistically significant effect on financial stability in Visegrad countries. To evaluate whether these variables are connected with political ideology, one ran another regression model where this time dependent variable was political ideology. Also, in the model deficit variable was included since it was analyzed in descriptive statistics.

ANOVA test and model summary (Table 3. and 4 in Annex 3.) shows constructed model is statistically significant. From the regression one can notice that the more liberal party is in the government, the less deficit it generates. However, the significance is very low. Unemployment, inflation, corporate tax, and government spending were found to be insignificant. Therefore, one could not capture theoretical approach and some of the empirical research results where left leaning political parties were found to maintain lower unemployment, higher inflation, higher corporate tax rates and spending.

Governing efficiency was the only variable that showed statistically significant in model. It shows that left-wing political parties in Visegrad countries are associated with more governing efficiency. Since high governing efficiency is strongly related with financial stability, this could be the channels through which left governments can provide financial stability.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,879	3,532		1,098	,275
	State_code=2.0	9,070	4,995	,224	1,816	,073
	State_code=3.0	-2,517	4,995	-,062	-,504	,616
	State_code=4.0	-6,245	4,995	-,155	-1,250	,215
2	(Constant)	64,751	34,735		1,864	,066
	State_code=2.0	23,668	7,814	,586	3,029	,003
	State_code=3.0	,849	5,162	,021	,164	,870
	State_code=4.0	5,535	7,106	,137	,779	,438
	Corporate_tax	,105	,384	,047	,273	,785
	Deficit	,773	1,031	,107	,750	,456
	Gov_Effect	-40,483	12,987	-,423	-3,117	,003
	Inflation	,369	,401	,120	,920	,360
	Unemployment	,421	,548	,111	,769	,444
	Gov_spending	-,987	,811	-,228	-1,217	,227
a. Dependent Variable: Ideology						

Table 6. Regression model no. 2 (depended variable credit score).
Source: author's made

To see how inflation, governing efficiency, unemployment, government expenditure and corporate tax rate correlates with political ideology one run 5 correlations for better data visualization and differences that might occur among the countries.

Correlations between governing efficiency and political ideology (Table 5. in Annex

3.) shows that in Poland and Slovakia there is no difference between left or right-wing political parties and governing efficiency. However, in Hungary and Czech Republic there is steep negative slope showing of left-wing politicians being more effective. Pearson's correlation showed strong and statistically significant correlation in Hungary (Pearson Correlation -0,559**). One can notice that responsibility for right-wing low governance efficiency should take Fidesz – Hungarian Civic Alliance political party who was the major wining party since 2011 and whose efficiency rating since then was decreasing.

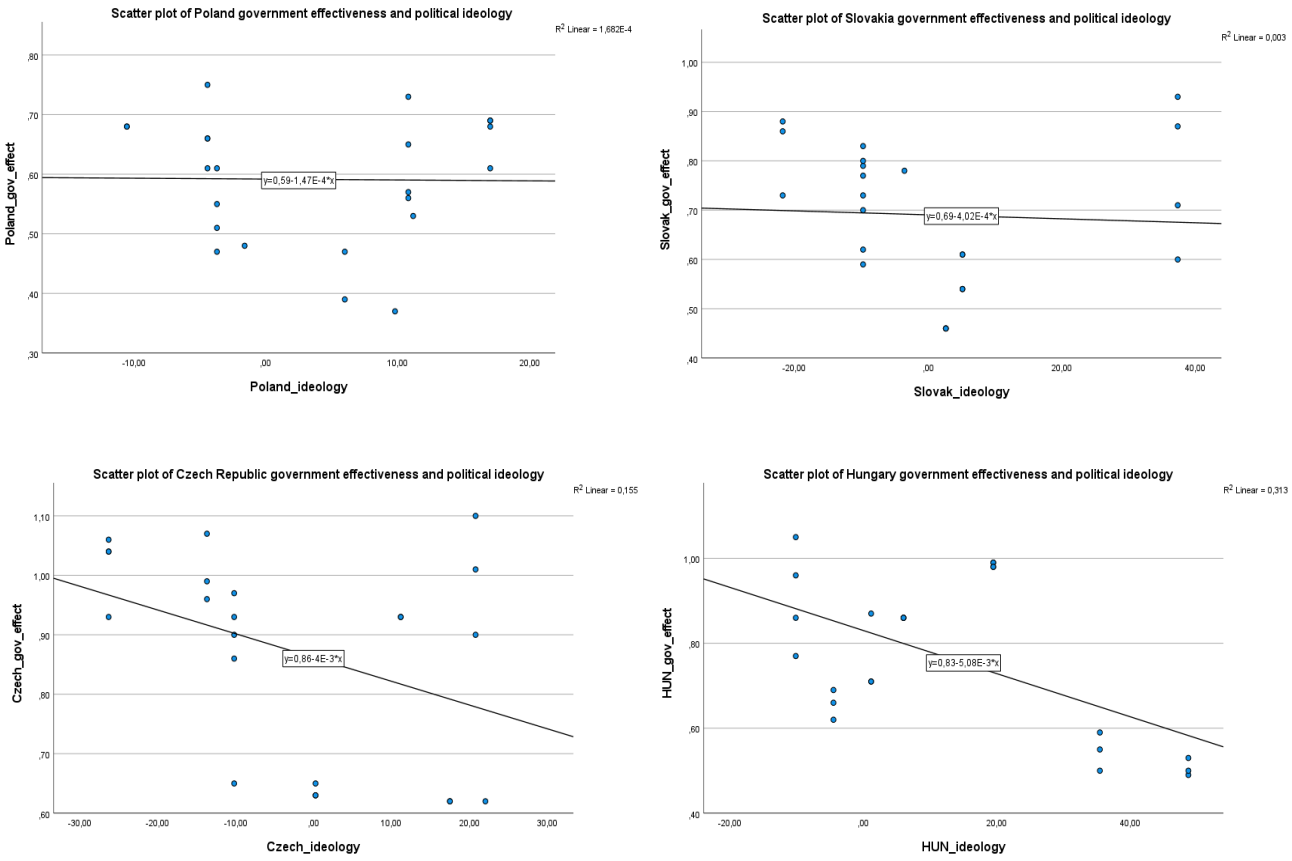

Figure 7. Scatter plot of government effectiveness and political ideology
Source: author's made

Correlations between inflation and political ideology showed different results among the countries (Table 6. in Annex 3.). In Hungary and Poland, the more right-wing party governed, the lower inflation was. However, Pearson's correlation showed results are insignificant. In Slovakia and Czech Republic tendencies were different presenting that under left-wing governments inflations was lower, but results showed also insignificant.

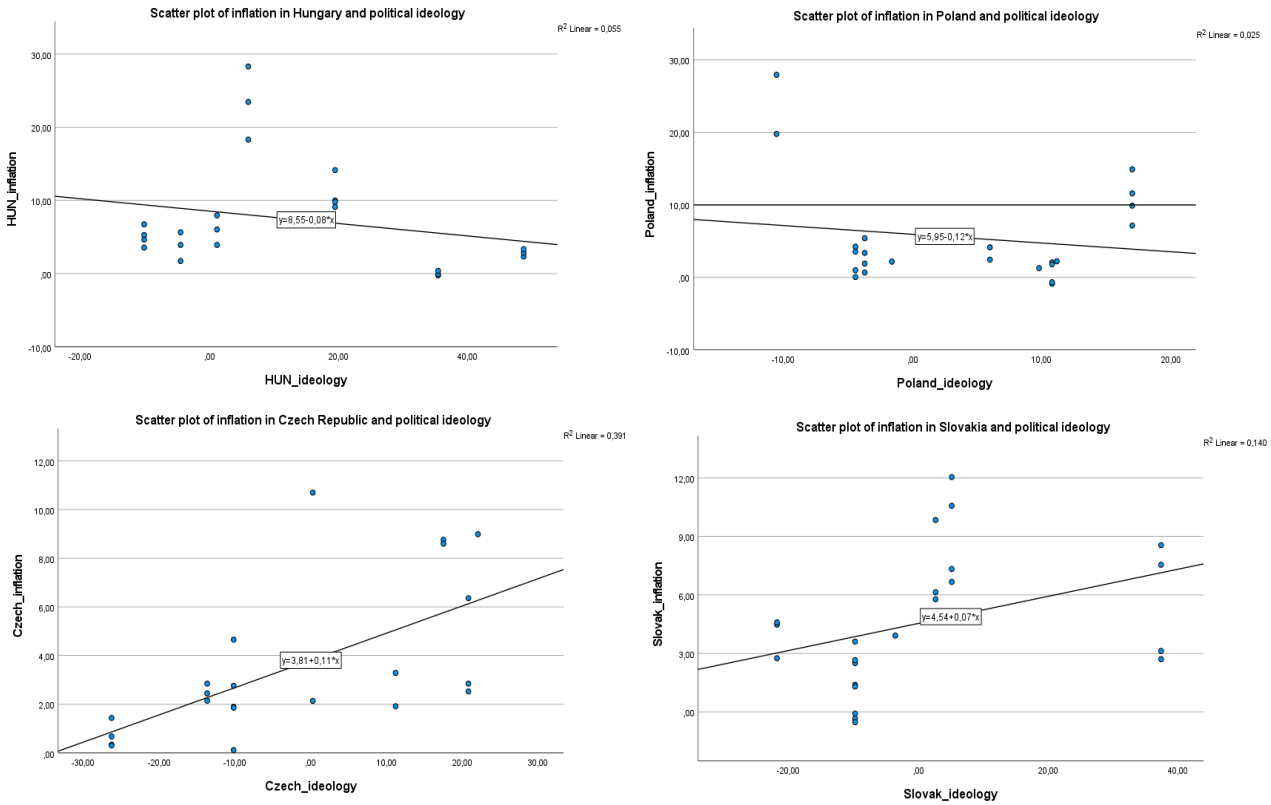

Figure 8. Scatter plot inflation and political ideology
Source: author's made

Unemployment in Hungary, Poland and Czech Republic was found to be lower under right governing while in Slovakia during right-wing governing unemployment found to be a lot higher. Pearson's correlation showed (Table 7. in Annex 3.) statistically significant results in Hungary (Pearson Correlation -0,563**) and even higher significance in Slovakia (Pearson Correlation 0,664**).

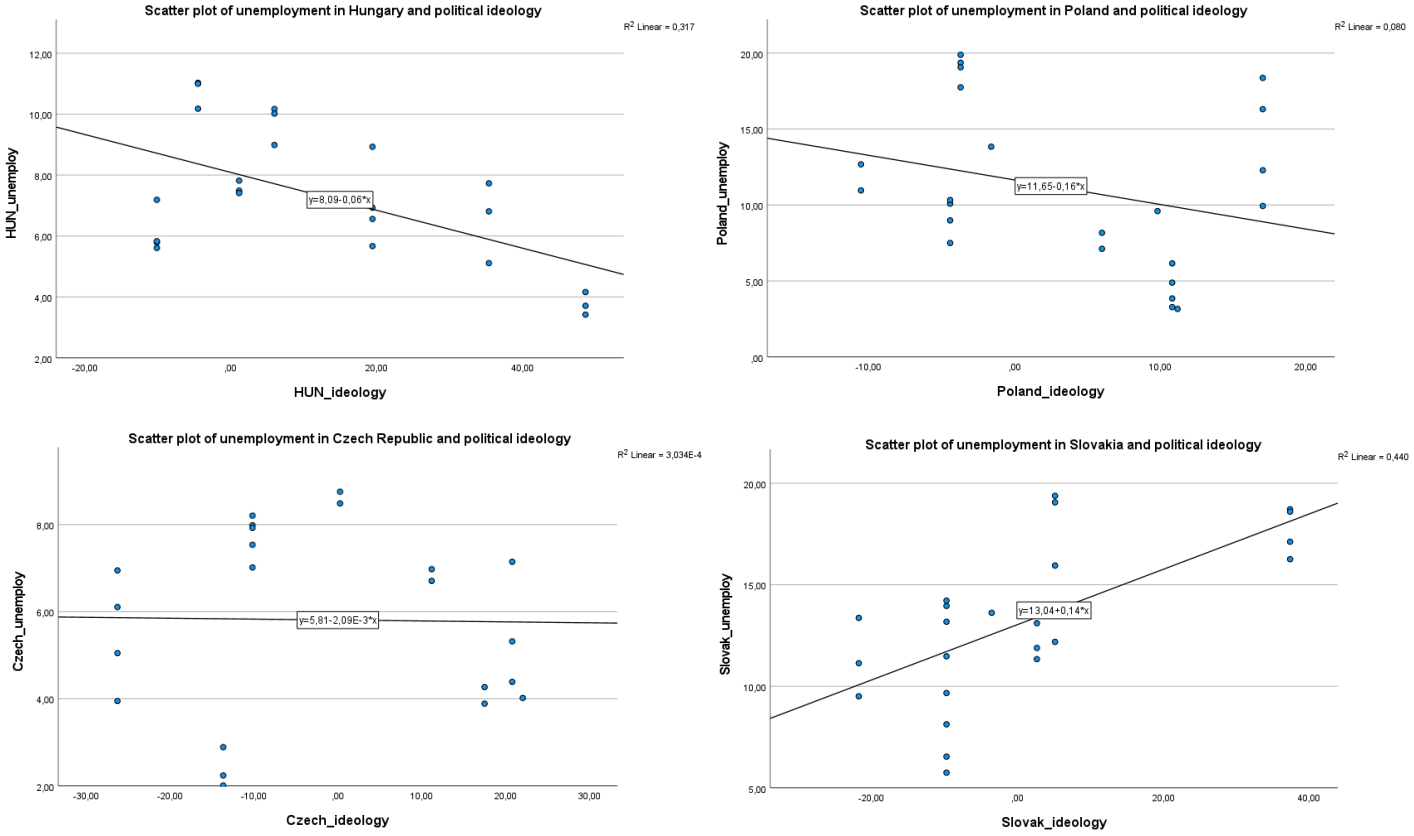

Figure 9. Scatter plot of unemployment and political ideology
Source: author's made

Correlations between corporate tax rate and ideology shows contrasting results (Table 8. in Annex 3.). In Hungary, as it was found in some research, right-wing governments established lower corporate tax rates (Pearson Correlation -0,600**). Meantime, in Czech Republic statistically significant higher corporate taxes were noticed under right-wing governments (Pearson Correlation 0,488**). It is worth to mention that even one found correlation in two countries between corporate tax rate and ideology, there might be no causality. One can notice that for the past 30 years corporate tax rates were decreasing in whole Europe causing phenomenon as "race to the bottom". Therefore, results could be affected by this tendency despite ruling party's ideology.

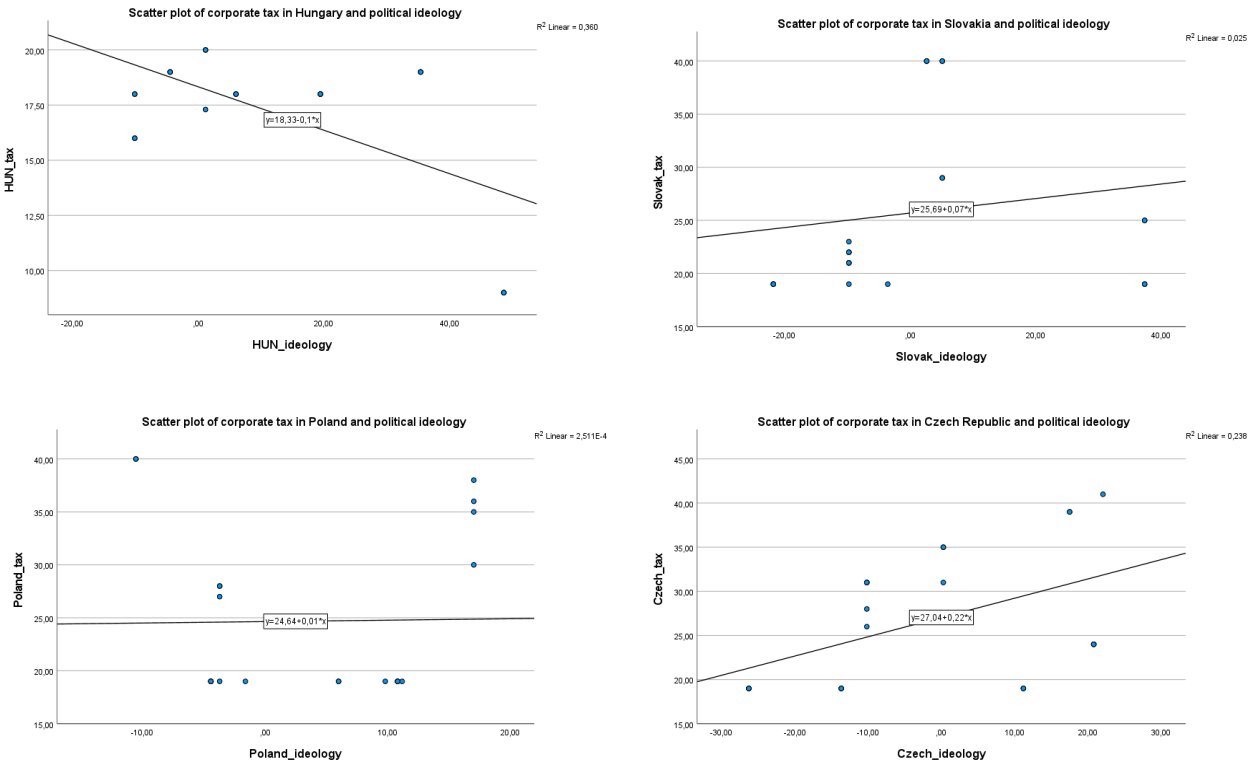

Figure 10. Scatter plot of corporate tax rate and political ideology
Source: author's made

Finally, correlations showed two statistically significant results for government spending (Table 9. in Annex 3.). As it was written in theory and empirical research, right-wing governments spent less than left-wing in Hungary (Pearson Correlation -0,528**) and in Poland (Pearson Correlation -0,448**). We did not capture statistically significant results neither in Slovakia, nor in Czech Republic.

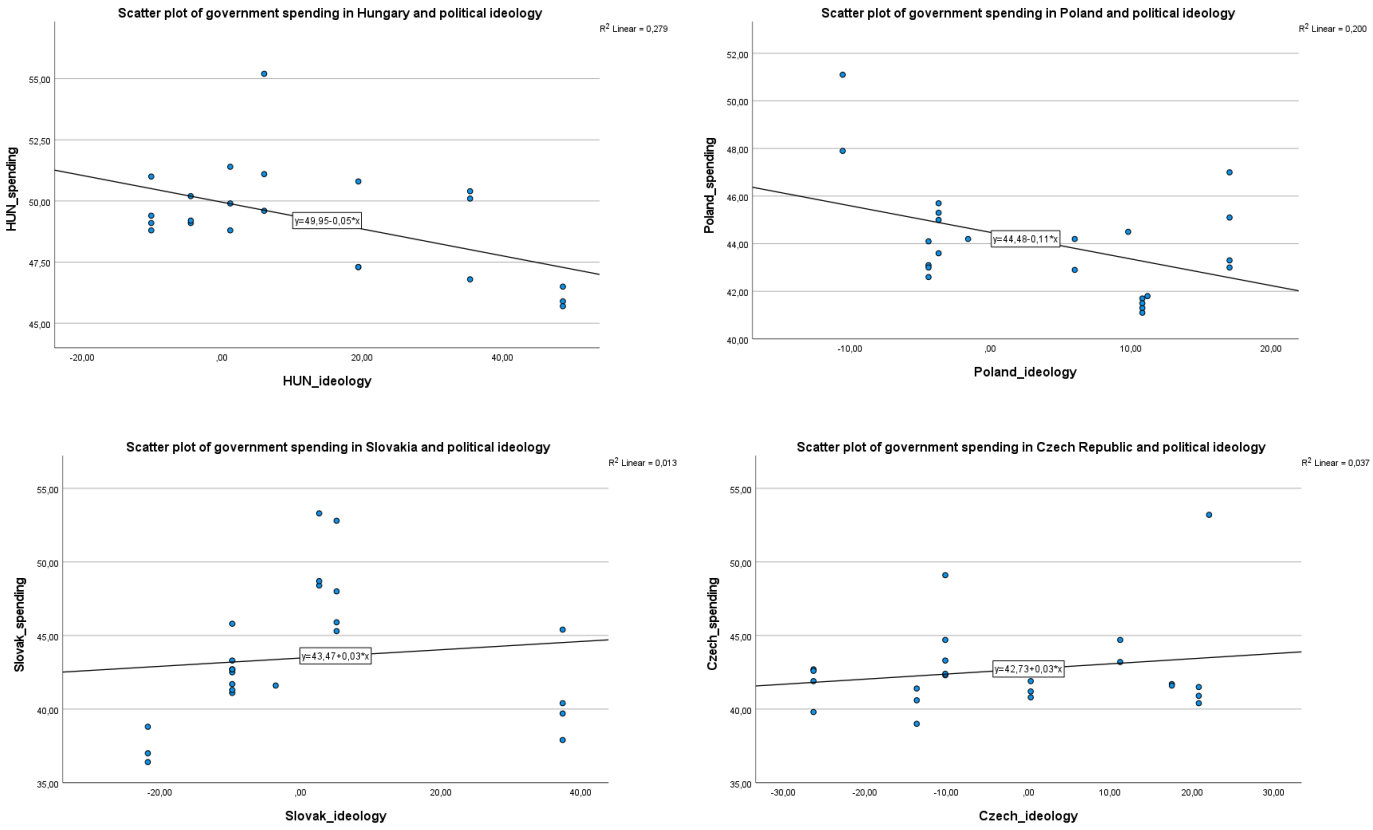

Figure 11. Scatter plot of government spending and political ideology
Source: author's made

To sum up, in this part one investigated how five variables that had effect on financial stability (inflation, unemployment, governing effectiveness, corporate tax rate and government spending) are related with political ideology. Regression showed all variable to be insignificant with political ideology except governing efficiency. Results showed that left-wing governments were more efficient and thus through this channel provided more financial stability in Visegrad countries.

In addition to that, with all five variables correlations were ran to see whether differences exist between countries. These statistically significant results were captured. 1. (Governing efficiency) - in Hungary left-wing governments were more efficient than right. 2. (Inflation) – no statistically significant result captured. 3. (Unemployment) - in Slovakia unemployment was way higher under right-wing governments while in Hungary unemployment was higher under left-wing governments. 4. (Corporate tax) - in Czech Republic statistically significant higher corporate taxes were noticed under right-wing governments while in Hungary right-wing governments established lower corporate tax rates. 5. (Government spending) - right-wing governments spent less than left-wing in Hungary and in Poland.

4. Conclusion

The importance of fiscal policy to financial stability, especially after 2008 financial crisis drew more attention since it was realized that rigid and clear fiscal rules, prudent public policies, budget management, effective governance and wise tax policies maintain financial stability.

Since fiscal policies are implement by political parties, based on scientific and theoretical background one was assumed, that different political ideologies representing political parties implement different fiscal policy. For instance, economically left leaning political parties implement fiscal policy that leads to higher budget deficit, higher taxes, increase in government expanses and larger public sector. Meantime, economically right leaning political parties implement lower taxes, run lower budget deficits, have more effective governance.

In this work the main aim was to find whether political ideology and other variables have effect on financial stability. Also, to find through which channels political ideology transfers soundness to the finance. The following results were found.

First, fixed effect regression model showed that five variables have statistically significant effect on financial stability; higher government spending, corporate taxes, unemployment and inflation were found to have negative effect on financial stability. Also, higher governing effectiveness were found to have positive effect on economy. These results were no surprise since the same pattern was observed in majority of research. Even though it was expected to find left-wing government negative effect on financial stability, the regression showed statistically insignificant results. Therefore, reaserch hypothesis is declined (*Economically left leaning parties will implement fiscal policy that would be more harmful to financial stability than economically right leaning parties' policies).*

Second, in order to find whether above mentioned five variables are related with political ideology, another regression model was implemented. Results showed government effectiveness to be statistical significant with negative coefficient. This indicates that left-leaning governments are more efficient and thus through this channel ensures better financial environment.

Third, correlations with each individual country and variables, that had effect on financial stability were made to see the differences between countries. These statistically significant results were found. (Governing efficiency) - higher governing efficiency was found in Hungary during left-wing governments. (Inflation) - no significant effect was found between

inflation and political ideology. (Unemployment) - in Hungary unemployment was lower under right-wing governing and in Slovakia under left-wing government. (Corporate tax) – in Hungary taxes on business were lower ruling right-wing political parties. Meantime, in Czech Republic statistically significant higher corporate taxes were noticed under right-wing governments. (Government spending) - as it was written in theory and empirical research, right-wing governments spent less than left-wing in Hungary and in Poland. Finally, even though regression model didn't show statistically significant deficit effect on financial stability, descriptive statistics displayed that in all four Visegrad countries right-wing governments accumulated less debt between 1995-2019 and three countries (Poland, Hungary, Czech Republic) during the same period accumulated less deficit.

In conclusion, to capture political ideology pure effect on financial stability is difficult since this variable correlates with others. Political ideology itself doesn't cause (in)stability (unless market agents have certain prejudices) but rather policies that politicians impellent. Inter alia, even though political parties' ideologies are measured on the same axe, in reality they differ as differ their policies from the ones written on their agenda. Therefore, evaluating political ideology only on the parties' agenda doesn't show implemented policies. Accordingly, the best way to evaluate political ideology effect on financial stability is the case study, where more thorough analysis can be made.

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FISKALINĖ POLITIKA IR FINANSŲ STABILUMAS: AR POLITINĖ IDEOLOGIJA TURI ĮTAKOS? VIŠEGRADO ŠALIŲ ANALIZĖ

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SANTRAUKA

87 puslapiai, 6 lentelės, 11 paveikslėlių, 124 išnašos.

Magistro baigiamajame darbe keliamas tikslas išsiaiškinti, ar politinė ideologija bei kiti kontroliniai kintamieji turi įtakos finansų stabilumui Višegrado šalyse. Taip pat, rasti kintamuosius, kurie priklauso nuo politinės ideologijos bei daro įtaką šalies finansų stabilumui.

Darbe keliami šie uždaviniai. Pirma, pristatyti mokslinę literatūrą, kuri nagrinėja fiskalinės politikos, finansų stabilumo ir politinės ideologijos temas bei pristatyti kanalus, per kurios politinės partijos gali paveikti finansų stabilumą. Antra, sukurti kintamąjį finansų stabilumui visose Višegrado šalyse matuoti. Trečia, sukonstruoti fiksuoti efektų modelį darbo rezultatams gauti bei aptarti gautus rezultatus.

Tyrimas apima keturias Višegrado šalis, o stebimas laikotarpis 1995-2019 metus. Šalys pasirinktos dėl jų homogeniškumo, panašios istorinės praeities pereinant nuo reguliuojamos prie rinkos ekonomikos. Panašumai tarp šalių leidžia lengviau palyginti duomenis. Darbe naudojami skerspjūvio laiko eilučių duomenys, o jų analizei, remiantis panašiais darbais, pasirinktas fiksuotų efektų regresijos modelis, koreliacijos. Taip pat, naudojama aprašomoji statistika.

Tyrimo rezultatai parodė, kad nėra tiesioginio ryšio tarp finansų stabilumo ir politinės ideologijos. Tačiau rasti penki kintamieji, kurie daro įtaką stabilumui. Aukšta infliacija, mokesčiai, nedarbo lygis bei valdžios sektoriaus išlaidos daro neigiamą poveikį finansų stabilumui, o aukštas valdymo efektyvumas – teigiamą. Taip pat nustatyta, kad ekonomiškai kairiosios partijos pasižymi didesniu valdymo efektyvumo, todėl tai galėtų būti kanalas, per kurį pasiekiamas finansų stabilumas.

ANNEXES

Annex 1. Credit score ratings

Description	S&P	Moody's	Fitch	DBRS	Score (stable)	Score (positive)	Score (negative)
Prime	AAA	Aaa	AAA	AAA	48	49	47
High Medium Grade	AA+	Aa1	AA+	AA(high)	46	47	45
	AA	Aa2	AA	AA	44	45	43
	AA-	Aa3	AA-	AA(low)	42	43	41
Upper Medium Grade	A+	A1	A+	A(high)	40	41	39
	A	A2	A	A	38	39	37
	A-	A3	A-	A(low)	36	37	35
Lower Medium Grade	BBB+	Baa1	BBB+	BBB(high)	34	35	33
	BBB	Baa2	BBB	BBB	32	33	31
	BBB-	Baa3	BBB-	BBB(low)	30	31	29
Speculative	BB+	Ba1	BB+	BB(high)	28	29	27
	BB	Ba2	BB	BB	26	27	25
	BB-	Ba3	BB-	BB(low)	24	25	23
Highly Speculative	BB+	Ba1	BB+	BB(high)	22	23	21
	BB	Ba2	BB	BB	20	21	19
	BB-	Ba3	BB-	BB(low)	18	19	17
Substantial Risk	CCC+	Caa1	CCC+	CCC(high)	16	17	15
	CCC	Caa2	CCC	CCC	14	15	13
	CCC-	Caa3	CCC-	CCC(low)	12	13	11
Extremely Speculative	CC	Ca	CC	CC	10	11	9
	C	Ca	C	C	8	9	7
In Default	RD	C	RD	RD	6	7	5
	SD	/	SD	SD	4	5	3
	D	/	D	D	2	3	1

Table 1. Credit score values
Source: authors' made, Fitch, Moody's, S&P, DBRS data

Year	Slovakia	Poland	Hungary	Czech Republic
	Stability score	Stability score	Stability score	Stability score
2020	38	36	32	42
2019	39,33	36,5	32	42
2018	39,67	35,67	31	41,5
2017	39	36,5	31	41
2016	40	35,2	30	40
2015	40	37,5	28,75	40
2014	39	36	27	40
2013	38	36	25	40
2012	37,5	36	27	40
2011	40	36	28,4	41
2010	40	36	30	40
2009	40	36	31	39
2008	39,4	36	32,83	40
2007	39	36,5	34	38
2006	39,5	35,33	35,86	41
2005	38,33	35	34	37,5
2004	36,17	34	35	36
2003	32,5	33,66	35	36
2002	33,33	36	37,33	36,67
2001	30	34,5	40	35
2000	28,67	34	35,43	34
1999	28	33,5	34	34,67
1998	28,14	34	32	36
1997	30	31	31,33	34
1996	30	29,5	29,4	36
1995	30	28,5	27	35,25

Table 2. Credit score values for each country
Source: authors' made, Fitch, Moody's, S&P, DBRS data

Annex 2. Correlations between variables

Variables	Ideology	Deficit	GDP_growth	Unemployment	Inflation	Gov_Effect	Credit_rating	Corporate_tax	Gov_spending
Ideology	1								
Deficit	0,01	1							
GDP_growth	0,116	0,096	1						
Unemployment	0,004	-0,455	0,009	1					
Inflation	0,109	-0,289	-0,008	0,191	1				
Gov_Effect	-0,292	0,119	-0,049	-0,28	0,037	1			
Credit_rating	-0,36	0,419	0,097	-0,3	-0,477	0,519	1		
Corporate_tax	-0,67	-0,249	0,059	0,297	0,347	-0,261	-0,274	1	
Gov_spending	0,160	-0,582	-0,169	0,059	0,465	-0,146	-0,677	-0,127	1

Table 1. Correlations between variables
Source: authors' made

Annex 3. Regression model summary, ANOVA, and Pearson correlations

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,547[a]	,299	,275	3,45543	,299	12,498	3	88	<,001
2	,894[b]	,799	,771	1,94097	,500	24,862	8	80	<,001
a. Predictors: (Constant), State_code=4.0, State_code=3.0, State_code=2.0									
b. Predictors: (Constant), State_code=4.0, State_code=3.0, State_code=2.0, Inflation, GDP_growth, Ideology, Deficit, Gov_Effect, Unemployment, Corporte_tax, Gov_spending									

Table 1. Regression model no 1. summary
Source: authors' made

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	447,672	3	149,224	12,498	<,001[b]
	Residual	1050,720	88	11,940		
	Total	1498,391	91			
2	Regression	1197,002	11	108,818	28,884	<,001[c]
	Residual	301,390	80	3,767		
	Total	1498,391	91			
a. Dependent Variable: Credit_rating						
b. Predictors: (Constant), State_code=4.0, State_code=3.0, State_code=2.0						
c. Predictors: (Constant), State_code=4.0, State_code=3.0, State_code=2.0, Inflation, GDP_growth, Ideology, Deficit, Gov_Effect, Unemployment, Corporte_tax, Gov_spending						

Table 2. Regression model no 1. ANOVA
Source: authors' made

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,323[a]	,104	,074	16,93873	,104	3,409	3	88	,021
2	,492[b]	,242	,159	16,14216	,138	2,483	6	82	,029
a. Predictors: (Constant), State_code=4.0, State_code=3.0, State_code=2.0									
b. Predictors: (Constant), State_code=4.0, State_code=3.0, State_code=2.0, Inflation, Deficit, Gov_Effect, Unemployment, Corporate_tax, Gov_spending									

Table 3. Regression model no 2. summary
Source: authors' made

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2934,104	3	978,035	3,409	,021[b]
	Residual	25249,013	88	286,921		
	Total	28183,117	91			
2	Regression	6816,439	9	757,382	2,907	,005[c]
	Residual	21366,678	82	260,569		
	Total	28183,117	91			
a. Dependent Variable: Ideology						
b. Predictors: (Constant), State_code=4.0, State_code=3.0, State_code=2.0						
c. Predictors: (Constant), State_code=4.0, State_code=3.0, State_code=2.0, Inflation, Deficit, Gov_Effect, Unemployment, Corporate_tax, Gov_spending						

Table 4. Regression model no 2. ANOVA
Source: authors' made

Poland

		Poland_gov_effect	Poland_ideology
Poland_gov_effect	Pearson Correlation	1	-,013
	Sig. (2-tailed)		,953
	N	23	23
Poland_ideology	Pearson Correlation	-,013	1
	Sig. (2-tailed)	,953	
	N	23	23

Hungary

		HUN_gov_effect	HUN_ideology
HUN_gov_effect	Pearson Correlation	1	-,559**
	Sig. (2-tailed)		,006
	N	23	23
HUN_ideology	Pearson Correlation	-,559**	1
	Sig. (2-tailed)	,006	
	N	23	23

**. Correlation is significant at the 0.01 level (2-tailed).

Slovakia

		Slovak_gov_effect	Slovak_ideology
Slovak_gov_effect	Pearson Correlation	1	-,053
	Sig. (2-tailed)		,810
	N	23	23
Slovak_ideology	Pearson Correlation	-,053	1
	Sig. (2-tailed)	,810	
	N	23	23

Czech Republic

		Czech_ideology	Czech_gov_effect
Czech_ideology	Pearson Correlation	1	-,394
	Sig. (2-tailed)		,063
	N	23	23
Czech_gov_effect	Pearson Correlation	-,394	1
	Sig. (2-tailed)	,063	
	N	23	23

Table 5. Pearson Correlations between governing efficiency and political ideology
Source: authors' made

Hungary

		HUN_ideology	HUN_inflation
HUN_ideology	Pearson Correlation	1	-,235
	Sig. (2-tailed)		,281
	N	23	23
HUN_inflation	Pearson Correlation	-,235	1
	Sig. (2-tailed)	,281	
	N	23	23

Poland

		Poland_inflation	Poland_ideology
Poland_inflation	Pearson Correlation	1	-,159
	Sig. (2-tailed)		,468
	N	23	23
Poland_ideology	Pearson Correlation	-,159	1
	Sig. (2-tailed)	,468	
	N	23	23

Czech Republic

		Czech_inflation	Poland_ideology
Czech_inflation	Pearson Correlation	1	,048
	Sig. (2-tailed)		,828
	N	23	23
Poland_ideology	Pearson Correlation	,048	1
	Sig. (2-tailed)	,828	
	N	23	23

Slovakia

		Slovak_inflation	Slovak_ideology
Slovak_inflation	Pearson Correlation	1	,375
	Sig. (2-tailed)		,078
	N	23	23
Slovak_ideology	Pearson Correlation	,375	1
	Sig. (2-tailed)	,078	
	N	23	23

Table 6. Pearson Correlations between inflation and political ideology
Source: authors' made

Hungary

		HUN_ideology	HUN_unemploy
HUN_ideology	Pearson Correlation	1	-,563**
	Sig. (2-tailed)		,005
	N	23	23
HUN_unemploy	Pearson Correlation	-,563**	1
	Sig. (2-tailed)	,005	
	N	23	23

**. Correlation is significant at the 0.01 level (2-tailed).

Slovakia

		Slovak_ideology	Slovak_unemploy
Slovak_ideology	Pearson Correlation	1	,664**
	Sig. (2-tailed)		<,001
	N	23	23
Slovak_unemploy	Pearson Correlation	,664**	1
	Sig. (2-tailed)	<,001	
	N	23	23

**. Correlation is significant at the 0.01 level (2-tailed).

Poland

		Poland_unemploy	Poland_ideology
Poland_unemploy	Pearson Correlation	1	-,283
	Sig. (2-tailed)		,191
	N	23	23
Poland_ideology	Pearson Correlation	-,283	1
	Sig. (2-tailed)	,191	
	N	23	23

Czech Republic

		Czech_ideology	Czech_unemploy
Czech_ideology	Pearson Correlation	1	-,017
	Sig. (2-tailed)		,937
	N	23	23
Czech_unemploy	Pearson Correlation	-,017	1
	Sig. (2-tailed)	,937	
	N	23	23

Table 7. Pearson Correlations unemployment and political ideology
Source: authors' made

Hungary

		HUN_tax	HUN_ideology
HUN_tax	Pearson Correlation	1	-,600**
	Sig. (2-tailed)		,002
	N	23	23
HUN_ideology	Pearson Correlation	-,600**	1
	Sig. (2-tailed)	,002	
	N	23	23

**. Correlation is significant at the 0.01 level (2-tailed).

Slovakia

		Slovak_tax	Slovak_ideology
Slovak_tax	Pearson Correlation	1	,158
	Sig. (2-tailed)		,472
	N	23	23
Slovak_ideology	Pearson Correlation	,158	1
	Sig. (2-tailed)	,472	
	N	23	23

Poland

		Poland_tax	Poland_ideology
Poland_tax	Pearson Correlation	1	,016
	Sig. (2-tailed)		,943
	N	23	23
Poland_ideology	Pearson Correlation	,016	1
	Sig. (2-tailed)	,943	
	N	23	23

Czech Republic

		Czech_tax	Czech_ideology
Czech_tax	Pearson Correlation	1	,488*
	Sig. (2-tailed)		,018
	N	23	23
Czech_ideology	Pearson Correlation	,488*	1
	Sig. (2-tailed)	,018	
	N	23	23

*. Correlation is significant at the 0.05 level (2-tailed).

Table 8. Pearson Correlations corporate tax and political ideology
Source: authors' made

Hungary

		HUN_ideology	HUN_spending
HUN_ideology	Pearson Correlation	1	-,528**
	Sig. (2-tailed)		,010
	N	23	23
HUN_spending	Pearson Correlation	-,528**	1
	Sig. (2-tailed)	,010	
	N	23	23

**. Correlation is significant at the 0.01 level (2-tailed).

Slovakia

		Slovak_ideology	Slovak_spending
Slovak_ideology	Pearson Correlation	1	,116
	Sig. (2-tailed)		,598
	N	23	23
Slovak_spending	Pearson Correlation	,116	1
	Sig. (2-tailed)	,598	
	N	23	23

Poland

		Poland_ideology	Poland_spending
Poland_ideology	Pearson Correlation	1	-,448*
	Sig. (2-tailed)		,032
	N	23	23
Poland_spending	Pearson Correlation	-,448*	1
	Sig. (2-tailed)	,032	
	N	23	23

*. Correlation is significant at the 0.05 level (2-tailed).

Czech Republic

		Czech_ideology	Czech_spending
Czech_ideology	Pearson Correlation	1	,192
	Sig. (2-tailed)		,379
	N	23	23
Czech_spending	Pearson Correlation	,192	1
	Sig. (2-tailed)	,379	
	N	23	23

Table 9. Pearson Correlations government spending and political ideology
Source: authors' made

Annex 4. Evaluation of political party

Year	Country	Party	Ideology	Year	Country	Party	Ideology
1995	Poland	Democratic Left Alliance	-10,526	1995	Slovakia	Movement for a Democratic Slovakia	2,658
1996	Poland	Democratic Left Alliance	-10,526	1996	Slovakia	Movement for a Democratic Slovakia	2,658
1997	Poland	Solidarity Electoral Action	17,021	1997	Slovakia	Movement for a Democratic Slovakia(HDZS)	2,658
1998	Poland	Solidarity Electoral Action	17,021	1998	Slovakia	Slovak Democratic Coalition	5,145
1999	Poland	Solidarity Electoral Action	17,021	1999	Slovakia	Slovak Democratic Coalition	5,145
2000	Poland	Solidarity Electoral Action	17,021	2000	Slovakia	Slovak Democratic Coalition	5,145
2001	Poland	Democratic Left Alliance	-3,696	2001	Slovakia	Slovak Democratic Coalition	5,145
2002	Poland	Democratic Left Alliance	-3,696	2002	Slovakia	Slovak Democratic and Christian Union	37,363
2003	Poland	Democratic Left Alliance	-3,696	2003	Slovakia	Slovak Democratic and Christian Union	37,363
2004	Poland	Democratic Left Alliance	-3,696	2004	Slovakia	Slovak Democratic and Christian Union	37,363
2005	Poland	Law and Justice	-1,597	2005	Slovakia	Slovak Democratic and Christian Union	37,363
2006	Poland	Law and Justice	9,804	2006	Slovakia	Direction-Social Democracy	-21,758
2007	Poland	Civic Platform	5,997	2007	Slovakia	Direction-Social Democracy	-21,758
2008	Poland	Civic Platform	5,997	2008	Slovakia	Direction-Social Democracy	-21,758
2009	Poland	Civic Platform	5,997	2009	Slovakia	Direction-Social Democracy	-21,758
2010	Poland	Civic Platform	5,997	2010	Slovakia	Slovak Democratic and Christian Union - Democartic Party	-3,54

2011	Poland	Civic Platform	-4,413	2011	Slovakia	Slovak Democratic and Christian Union - Democartic Party	-3,54
2012	Poland	Civic Platform	-4,413	2012	Slovakia	Direction-Social Democracy	-9,731
2013	Poland	Civic Platform	-4,413	2013	Slovakia	Direction-Social Democracy	-9,731
2014	Poland	Civic Platform	-4,413	2014	Slovakia	Direction-Social Democracy	-9,731
2015	Poland	Law and Justice	10,812	2015	Slovakia	Direction-Social Democracy	-9,731
2016	Poland	Law and Justice	10,812	2016	Slovakia	Direction-Social Democracy	-9,731
2017	Poland	Law and Justice	10,812	2017	Slovakia	Direction-Social Democracy	-9,731
2018	Poland	Law and Justice	10,812	2018	Slovakia	Direction-Social Democracy	-9,731
2019	Poland	Law and Justice	11,179	2019	Slovakia	Direction-Social Democracy	-9,731
2020	Poland	Law and Justice	11,179	2020	Slovakia	Ordinary People and Independent Personalities	-2,538
1995	Hungary	Hungarian Socialist Party	6,02	1995	Czech	Civic Democratic Party - Christian Democratic Party (laimėjo rinkimus) Christian Democratic Part	22,051
1996	Hungary	Hungarian Socialist Party	6,02	1996	Czech	Civic Democratic Party	17,498
1997	Hungary	Hungarian Socialist Party	6,02	1997	Czech	Civic Democratic Party	17,498
1998	Hungary	Fidesz	19,458	1998	Czech	Czech Social Democratic Party	0,263
1999	Hungary	Fidesz	19,458	1999	Czech	Czech Social Democratic Party	0,263
2000	Hungary	Fidesz	19,458	2000	Czech	Czech Social Democratic Party	0,263
2001	Hungary	Fidesz	19,458	2001	Czech	Czech Social Democratic Party	-10,177
2002	Hungary	Hungarian Socialist Party	-10,101	2002	Czech	Czech Social Democratic Party	-10,177
2003	Hungary	Hungarian Socialist Party	-10,101	2003	Czech	Czech Social Democratic Party	-10,177
2004	Hungary	Hungarian Socialist Party	-10,101	2004	Czech	Czech Social Democratic Party	-10,177

2005	Hungary	Hungarian Socialist Party	-10,101	2005	Czech	Czech Social Democratic Party	-10,177
2006	Hungary	Hungarian Socialist Party	1,175	2006	Czech	Civic Democratic Party	20,791
2007	Hungary	Hungarian Socialist Party	1,175	2007	Czech	Civic Democratic Party	20,791
2008	Hungary	Hungarian Socialist Party	1,175	2008	Czech	Civic Democratic Party	20,791
2009	Hungary	Hungarian Socialist Party	1,175	2009	Czech	Civic Democratic Party	20,791
2010	Hungary	Fidesz-Christian Democratic People's Party	-4,462	2010	Czech	Civic Democratic Party	11,19
2011	Hungary	Fidesz-Christian Democratic People's Party	-4,462	2011	Czech	Civic Democratic Party	11,19
2012	Hungary	Fidesz-Christian Democratic People's Party	-4,462	2012	Czech	Civic Democratic Party	11,19
2013	Hungary	Fidesz-Christian Democratic People's Party	-4,462	2013	Czech	Czech Social Democratic Party	-26,279
2014	Hungary	Fidesz–KDNP alliance	35,411	2014	Czech	Czech Social Democratic Party	-26,279
2015	Hungary	Fidesz–KDNP alliance	35,411	2015	Czech	Czech Social Democratic Party	-26,279
2016	Hungary	Fidesz–KDNP alliance	35,411	2016	Czech	Czech Social Democratic Party	-26,279
2017	Hungary	Fidesz–KDNP alliance	48,655	2017	Czech	ANO	-13,668
2018	Hungary	Fidesz–KDNP alliance	48,655	2018	Czech	ANO	-13.668

2019	Hungary	Fidesz–KDNP alliance	48,655	2019	Czech	ANO	-13.668
2020	Hungary	Fidesz–KDNP alliance	48,655	2020	Czech	ANO	-13.668

Table 1. Evaluation of political parties and ideologies
Source: Manifesto project data