FISCAL POLICIES AND POST-CRISIS RECOVERY IN CENTRAL AND EASTERN EUROPEAN COUNTREIS OF THE EUROPEAN UNION

Dimitar Chobanov[1]

Abstract:: *Fiscal policy is one of the most significant instruments to impact economies, address income inequality and stimulate economic activity during recessions or downturns. Using an indicator approach the fiscal policies of CEE countries which are EU members in 2003-2023 are studied. There are thresholds beyond which higher budget expenditures to GDP ratios lead to higher deficits and higher public debts to GDP which could affect negatively economic performance. Therefore, fiscal discipline is crucial for sustainable public finances and important factor for economic growth.*

Keywords: *Fiscal policy, prudent fiscal policy, budget deficit, public debt, CEE countries.*
JEL: *H62, H63, O52, O57*

1. Introduction

The role of fiscal policy in shaping economic outcomes has long been a subject of intense debate and research among economists and policymakers. Fiscal policy, which encompasses government spending, taxation, and public debt management, can have significant implications for economic growth, employment, inflation, and overall macroeconomic stability. Understanding the complex relationship between fiscal policy instruments and economic performance is crucial for the formulation of effective economic policies.

This paper aims to contribute to the ongoing discourse on the relationship between fiscal policy and economic performance by inserting specific objectives and research questions. The analysis will insert methodological approach to insert key focus areas, e.g., examine the non-linear effects of public debt on growth, investigate the role of fiscal rules and institutions, or analyze the differential impacts of domestic and external debt. The findings of this study will provide valuable insights for policymakers in insert relevant context, e.g., developing countries, transition economies, or a specific region as they navigate the complex landscape of fiscal policy and its implications for sustainable economic development.

2. Literature Review

[1] *Dimitar Chobanov, Institute for Economics and Politics, University of National and World Economy, Bulgaria, +359889214412, chobanov@gmail.com , https://www.unwe.bg/en/structure/render/599*

The optimal size of government is a subject of extensive debate among economists and policymakers, with various models and empirical studies attempting to identify the balance between government expenditure and economic growth. The concept often refers to the level of government spending that maximizes economic growth without leading to inefficiencies or excessive taxation.

Several papers exploring the relationship between government expenditure and economic growth suggest an optimal size of government around 30% of GDP. One of the foundational theories in this area is the Armey Curve, which posits that there is a non-linear relationship between government size and economic growth. According to this hypothesis[2], government spending can stimulate economic growth up to a certain point, after which additional spending may lead to diminishing returns or even negative effects on growth. This result has also been suggested in the analyses of Barro and Sala-i-Martin (1992), Glomm and Ravikumar (1994), Lau (1995), and Devarajan et al. (1996) among others.

Empirical studies have sought to quantify the optimal size of government in various contexts. Afonso and Schuknecht (2019) argue for a pragmatic approach to determining government size by analyzing efficient public expenditure across several advanced countries, emphasizing that the optimal size should be linked to the specific economic context of each country. They find that government expenditure in a range of 30-35% of GDP is still an optimal size for advanced countries.

Mittnik & Neumann (2003) highlight that an optimal, growth-maximizing government size exists, suggesting that public spending increases growth when below this optimum but decreases it when above. This nonlinearity is critical for understanding how government size impacts economic performance. Jain and Sinha Jain & Sinha (2022) estimate the optimal government size for India to be approximately 11.89% of GDP.

One notable example is the work by Chekouri et al. (2022) applying the threshold analysis for Algeria. It suggests that the optimal government size that maximizes economic growth is around 30.4% of GDP. Similarly, Adepoh (2019) identifies an optimal threshold for public expenditure at approximately 34.5% of GDP in Côte d'Ivoire. While above the 30% mark, this finding supports the notion that there exists a specific range of government expenditure that can positively influence economic growth before diminishing returns set in (Adepoh, 2019).

In the context of developing countries, Asogwa et al. (2019) explores the relationship between government size and economic growth in Nigeria and Ghana. Although they do not specify an exact percentage, their analysis contributes to the understanding of how government size impacts economic performance. The research by Alam et al. (2022) discusses the implications of reallocating government spending to optimize economic growth in Saudi Arabia. While it does not provide a specific percentage, it emphasizes the importance of maintaining government expenditure within a range that fosters growth, which aligns with the broader findings of optimal government size around 30% of GDP (Alam et al., 2022).

Asimakopoulos & Karavias (2016) employ a threshold analysis to examine the relationship between government size and economic growth, identifying that the optimal level of government size varies significantly across different countries and economic conditions. Their findings suggest that while a larger government can facilitate growth in some contexts, it may

[2] Also known as the nonlinearity hypothesis.

hinder it in others, reinforcing the idea that there is no one-size-fits-all solution to determining optimal government size.

The debate is further complicated by considerations of fiscal competition and the efficiency of public service delivery. Hoang (2022) discusses how fiscal competition among states can influence government size, suggesting that the optimal size may also depend on the ability of governments to attract residents and businesses through efficient service delivery and competitive taxation. The optimum size might be affected by population but also by a state's main industry, zoning policies, and financial resources that the government can draw on to support its provision of public goods and other amenities (Hoang, 2022).

In addition to economic growth, the composition of government spending plays a crucial role in determining its optimal size. Martins and Veiga Martins & Veiga (2014) emphasize that the relationship between government size and economic development is nuanced, as different types of public expenditure (e.g., on education, infrastructure, or welfare) can have varying impacts on growth. This highlights the importance of not only the size of government but also the effectiveness and efficiency of its spending.

Furthermore, the optimal size of government can be influenced by external factors such as demographic changes, technological advancements, and global economic conditions. Ullah et al. Ullah et al. (2021) examine how regional integration and socioeconomic determinants affect government size in the context of the Belt and Road Initiative, suggesting that optimal government size may need to adapt to changing global dynamics.

Various theoretical frameworks and empirical studies have explored how government expenditure impacts budgetary outcomes, including deficits and surpluses. This relationship is often influenced by factors such as fiscal rules, economic conditions, and political dynamics.

The concept of balanced budget requirements (BBRs) mandates that governments do not spend more than their revenues. Smith and Hou (2013) highlights that BBRs are a defining feature of state and local government budgeting, emphasizing that government budgets ought to be balanced. Their study indicates that BBRs can constrain government spending, thereby influencing the overall budget balance. When governments are required to balance their budgets, they may be less inclined to engage in deficit spending, which can lead to more prudent fiscal policies.

Ghosh and Mourmouras (2004) discusses the implications of different budgetary regimes on government spending and economic growth. They argue that when access to debt markets is available allowing public borrowing, governments may be more inclined to increase spending, potentially leading to budget deficits. Hence, the structure of fiscal rules plays a crucial role in determining the relationship between government spending and budget balance. When fiscal discipline is enforced, it can lead to a more stable budgetary environment, whereas lax rules may encourage excessive spending and deficits.

The role of political institutions in shaping budgetary outcomes is also significant. Haan et al. (2012) examines how budgetary institutions affect government budget deficits in EU member states. Their findings indicate that stronger budgetary institutions can mitigate the common pool problem, where multiple stakeholders have access to a shared budget, leading to overspending. This highlights the importance of institutional frameworks in managing the relationship between government spending and budget balance.

Fiscal discipline is also crucial in understanding how government spending impacts budgetary outcomes. Neyaptı and Ozgur (2007) proposes criteria to measure fiscal discipline and demonstrate a significant empirical linkage between fiscal discipline and budgetary outcomes in OECD economies. Their research suggests that maintaining fiscal discipline can help governments achieve better budgetary balance, as it encourages responsible spending practices.

Furthermore, the political dynamics surrounding budgetary decisions can influence spending patterns and budget balance. For example, Jimenez (2018) discusses how excessive spending and debt can lead to budgetary imbalances, particularly when there is no corresponding increase in revenues. This relationship underscores the need for governments to carefully consider their spending decisions in the context of their revenue-generating capabilities.

The relationship between budget deficits and public debt addresses how government borrowing to cover deficits can lead to increased levels of public debt. This relationship is often characterized by a cyclical pattern where persistent budget deficits contribute to rising public debt, which in turn can affect future fiscal sustainability and economic growth.

One of the key findings in the literature is that an increase in the budget deficit typically leads to a corresponding increase in public debt. In Halebić & Moćević (2020) this relationship is confirmed, stating that an increase in the total deficit has a positive effect on total public debt. Their analysis of subnational government levels in Bosnia and Herzegovina illustrates how deficits necessitate borrowing, thereby increasing the overall debt burden.

Similarly, Van et al. (2020) discusses how budget deficits can limit economic productivity and create a crowding-out effect, where government borrowing competes with private sector investment. According to the study persistent budget deficits threaten future economic stability by increasing public and external debt and debt servicing costs, which can further exacerbate the fiscal situation. This highlights the interconnectedness between budget deficits and public debt, where deficits lead to higher debt levels, which in turn can constrain future fiscal policy options.

In the context of developing countries, Nauman (2024) emphasizes the adverse connection between debt servicing and budget deficits. This study indicates that rising inflation can increase budget deficits, which in turn necessitates further borrowing, leading to a cycle of increasing public debt. This relationship is critical for understanding the fiscal dynamics in countries with limited economic resilience.

Khan et al. (2021) provides additional evidence that budget deficits, measured as a percentage of GDP, have a significant positive impact on public debt in the long run. Their analysis of South Asian countries underscores the importance of monitoring budgetary practices to ensure that deficits do not lead to unsustainable levels of debt.

The relationship between the public debt-to-GDP ratio and economic growth provides insights into how different levels of public debt can influence growth trajectories. The consensus in the literature suggests that while moderate levels of public debt can support economic growth, excessive debt can have detrimental effects.

One of the key findings is that there exists a threshold level of public debt beyond which economic growth begins to decline. Alshammary et al. (2020) conducted a panel threshold analysis for 20 MENA countries and found that there is a specific debt-to-GDP threshold that significantly impacts economic growth and when public debt exceeds this threshold, the

negative effects on growth become pronounced, highlighting the importance of maintaining debt levels within sustainable limits.

Munir et al. (2016) identifies a threshold value of approximately 52.66% of GDP in Malaysia, suggesting that public debt levels above this point could hinder economic growth. This finding aligns with the broader literature that suggests a range of 60-90% of GDP as a common threshold where public debt starts to adversely affect economic performance (Asteriou et al., 2020).

The relationship between public debt and economic growth is influenced by various factors, including the structure of the debt, the economic context, and how the borrowed funds are utilized. One of the primary mechanisms through which public debt adversely affects economic growth is the crowding-out effect. As public debt increases, the government may need to raise funds through taxation or borrowing, which can lead to higher interest rates. Higher interest rates can discourage private investment as businesses face increased costs of borrowing. This phenomenon is particularly evident in developing economies, where limited access to capital can exacerbate the negative impact of public debt on growth Musa et al. (2023).

The cost of servicing public debt can divert resources away from productive investments. When a significant portion of government revenue is allocated to interest payments, there is less available for essential services such as education, healthcare, and infrastructure development, which are critical for long-term economic growth. Kadia (2020) emphasizes that while public debt can have a negative effect on economic growth, this impact is contingent upon the cost of the debt and how it is utilized. If debt is used for productive investments, it may not jeopardize the economy; however, if it leads to increased taxes or reduced public spending, the adverse effects become more pronounced.

The empirical evidence also supports the notion that high levels of public debt can lead to lower economic growth rates. For example, Fseifes and Warrad (2020) found that external debt has a negative impact on economic growth in Jordan, while domestic debt can have a positive effect. This suggests that the composition of public debt matters; excessive reliance on external debt can create vulnerabilities that hinder economic performance. Similarly, the work of Alshammary et al. (2020) indicates that chronic fiscal deficits, which contribute to rising public debt, can significantly affect growth prospects in the MENA region.

Additionally, the relationship between public debt and economic growth can exhibit nonlinear characteristics. Research has shown that there is often a threshold level of public debt beyond which growth begins to decline. For instance, studies have indicated that when the debt-to-GDP ratio exceeds 90%, the negative effects on growth become more pronounced (Ogawa et al., 2016; Thakur, 2022). This threshold effect highlights the importance of maintaining public debt at sustainable levels to avoid adverse economic consequences.

Furthermore, the impact of public debt on economic growth can vary across different countries and contexts. For instance, while some studies find that public debt has a negative effect on growth in advanced economies, others suggest that developing countries may experience different dynamics due to their unique economic structures and challenges (Veiga et al., 2015; Sigue & Coulibaly, 2020). The findings of Jiménez-Rodríguez and Rodríguez-López Jiménez-Rodríguez & Rodríguez-López (2015) support this notion, as they found that higher levels of debt-to-GDP ratios negatively impact growth across various European countries.

In contrast, some studies have reported a positive relationship between public debt and economic growth, particularly in developing countries. For example, Priyadarshana (2019) finds that public debt could stimulate growth through investments in infrastructure and social programs, suggesting that the impact of debt on growth can be context-dependent. Fseifes and Warrad (2020) points that, the structure of public debt—whether domestic or external—can also influence growth.

Moreover, the work of Jiménez-Rodríguez and Rodríguez-López (2015) highlights the complexity of the relationship, noting that while high levels of debt (around 90-100% of GDP) are generally associated with lower growth, there are instances where debt can be beneficial if it is directed towards productive investments. This suggests that the impact of public debt on growth is not solely determined by the debt-to-GDP ratio but also by how the borrowed funds are utilized.

The findings of Mensah et al. (2019) further illustrate this complexity, as they report that advanced countries with debt-to-GDP ratios above 90% tend to experience negative growth effects, while developing countries may exhibit different trends. This indicates that the relationship between public debt and economic growth is influenced by a variety of factors, including the economic context, the purpose of the debt, and the overall fiscal environment.

3. Data and methodology

The selected approach in the study consists in tracking the dynamics of selected indicators characterizing fiscal policy and public finances - these are budget balance as a share of gross domestic product (GDP), government debt as a share of GDP, budget expenditures as a share of GDP, budget revenues as a share of GDP. On this basis, average values are calculated for the periods when most of the selected economies are not in recession or financial crisis, as well as for the whole period considered.

Another set of indicators characterise economic development - real GDP growth, real growth in individual household consumption, convergence in terms of purchasing power parity of per capita income relative to the EU average, convergence of per capita household consumption expenditure by purchasing power standard relative to the EU average.

The study covers the European Union (EU) member countries and are located in Central and Eastern Europe. They are Bulgaria, the Czech Republic, Estonia, Greece, Croatia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovenia and Slovakia. The period of the study is from 2003 to 2023. These years are chosen because 2003 is the last year before the majority of the selected countries join the EU, while 2023 is the last year for which statistics data are currently available. The source of the data used is Eurostat and for some indicators additional calculations have been made by the author.

On the basis of the review of theoretical and empirical literature on the topic, numerical criteria are defined for the selected indicators, which allows grouping them in order to assess the fiscal policies implemented during the period and their impact on economic growth and convergence of some indicators.

For some indicators, annual averages have been prepared to allow comparison of individual periods of different lengths. The focus is on post-crisis periods, as stabilisation policies are generally associated with higher expenditure, budget deficits and government debts.

Classification according to the budget balance to GDP indicator is as follows: positive balance, balanced budget, low deficit - up to 1% of GDP, medium deficit is between 1% and 3% of GDP, high deficit is between 3% and 6% of GDP and very high deficit is above 6% of GDP.

Classification according to the budget expenditure-to-GDP indicator is as follows: a low share of expenditure is up to 35% of GDP and according to the literature review, beyond this threshold, any increase contributes to inefficiencies and adversely affects economic growth. A medium expenditure share is between 35% and 40% of GDP, a high expenditure share is between 40% and 45% of GDP and a very high expenditure share is above 45% of GDP.

Suggested classification of government debt to GDP is as follows - low share is up to 40% of GDP, medium share is between 40% and 60% of GDP, high share is between 60% and 90% of GDP, very high share is above 90% of GDP. The 60% of GDP threshold is officially established by the European framework, while the 90% of GDP is based on the results of the literature review. The approach is similar for indicators of changes in the public debt-to-GDP ratio.

Classification according to the indicator of real annual economic growth is as follows: negative growth, low growth rate is between 0% and 1% per annum, moderate growth rate is between 1% and 2.5% per annum, medium growth rate is between 2.5% and 3.5% per annum, high growth rate is between 3.5% and 4.5% per annum and very high is above 4.5% per annum. Similar is the classification according to the real growth rate of individual consumption.

Economies are classified according to speed of convergence indicators in terms of purchasing power of income per capita relative to the EU average and in terms of purchasing power of individual household consumption expenditure per capita relative to the EU average. In this way, it is possible to correlate the assessment of fiscal policy with economic performance.

4. Results

4.1. Period between 2003 and 2008

The first period in the study is 2004-2008. It is characterised by high real growth of GDP, which for the EU averages 2.3% per year. In 2004, the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia and Slovakia became members of the European Union and were later followed by Bulgaria and Romania in 2007, while Greece had already been a member of both the EU and the euro area. Slovenia has been a member of the euro area since 2007 and Cyprus and Malta since 2008.

During this period there were record flows of direct, portfolio and other investment from the EU to CEE countries. These countries also had access to pre-accession instruments and EU funds. All this, together with trade integration in the EU and improved legislative frameworks, gave a strong impetus to increased economic activity in these countries.

The best performers were Bulgaria, the Czech Republic, Estonia, Latvia, Lithuania, Poland, Romania, Slovenia and Slovakia, where the average annual rate was above 5%. Latvia even recorded double-digit growth in 3 consecutive years. However, the global financial crisis affected Estonia and Latvia more rapidly and this lowered their average growth rate. Greece, Hungary and Malta had the lowest but still close to 3% economic growth rates.

According to the selected indicator of convergence, Romania, Estonia, Slovakia, Latvia and Lithuania performed best compared to the EU average, catching up more than 10 percentage

points (p.p.) of their lag according to purchasing power parity. While the worst performers were Malta and Greece, where there was a divergence, and Hungary, which catched up only 1.1 p.p. over the period. Cyprus[3] , Romania, Lithuania, Slovakia, Estonia narrowed their gap by more than 15 p.p. according to the purchasing power of consumption expenditure per household per person, while Hungary and Malta fell further behind and Slovenia narrowed the gap by only 0.7 p.p.

These successes were based on different approaches to fiscal policy. According to one of my hypotheses in the literature review, budget expenditure is a key factor that determines the size of the budget balance. Bulgaria, Estonia, Latvia, Lithuania, Romania and Slovakia had the lowest expenditure-to-GDP ratios. In all other countries these ratios exceeded 40% of GDP, with the highest ratios in Greece, Croatia, Hungary and Slovenia.

The best performers in terms of budget balance indicator were Bulgaria and Estonia, where it was positive in 2004-2008. In Estonia, there was a shift from surplus to deficit in 2008, both because of the impact of the crisis and because of the fiscal policy response, as there was a currency board in place during this period which did not allow for a significant monetary policy response. Only Cyprus had a deficit below 1% of GDP, while it was between 1% and 3% in the Czech Republic, Latvia, Lithuania, Romania, Slovenia and Slovakia. Greece and Hungary had very high deficits in this period of high economic growth, while Poland and Malta had high deficits.

The consequences of implemented fiscal policies in the long run are visible especially in the government debt-to-GDP ratio. Decreases of more than 15 p.p. were observed in Bulgaria, Cyprus and Slovakia, while smaller decreases were observed in Lithuania, Malta, Romania and Slovenia. Increases in the ratio were realized in Greece, Latvia and Hungary.

Overall, Bulgaria, Estonia, Latvia, Lithuania, Romania and Slovakia performed best during this period in terms of economic growth and fiscal discipline indicators. The worst performers were Greece, Hungary and to some extent Malta.

4.2. Central and Eastern European countries in 2009-1010

As early as 2007, signs of impending turmoil began to emerge in the financial markets, but they actually manifested themselves in the fall of 2008, when the Merrill-Lynch bankruptcy occurred. The subprime crisis broke out first in the United States, but quickly spread to Europe due to mutual credit exposures. In addition to financial problems, there had been an overheating of many economies due to fiscal and, above all, monetary expansion over an extended period of time. One of the consequences of this crisis has been a sharp fall in capital flows, which have not recovered since.

The crisis of 2009 has had very different effects on different economies. Poland was undoubtedly doing the best, not only as there was not economic decline, but even real GDP growth was 2.6%. This development allowed the convergence in terms of purchasing power of income vis-à-vis the EU to reach 3.5 p.p. and 2.3% in terms of purchasing power of consumer spending vis-à-vis the EU average. Smaller declines were present in Malta, Cyprus, while in

[3] Actually, with Cyprus it is a question of divergence from the EU average, because this country has previously overtaken the EU on this indicator.

Slovakia the contraction was more severe, but together with the former they managed to recover and even in 2010 they already exceeded the 2008 level of real GDP.

The strongest negative impact was observed in Estonia, Latvia and Lithuania[4], which recorded double-digit declines, and this was probably a sign of unsustainable growth in the previous period. The largest lags in purchasing power parity of incomes relative to the EU average were occurring in Greece, Slovenia, Cyprus, Latvia and Estonia.

The lowest deficits in 2009-2010 were realized in Estonia, but they were clearly not enough to provide a budgetary impulse to the economy and support it by offsetting the decline in private investment. Malta was an example of a good handling of this crisis, as it managed with a relatively small fiscal stimulus during this period to contain the shock and narrow the deficit to below 3% of GDP already in 2010.

The highest deficits were in Greece, where policy was based on very high deficits even before the crisis and the necessary fiscal measures contributed to further policy loosening, which has been unsuccessful in terms of economic performance. Other negative examples were Latvia and Romania, which despite easing failed to prevent a downturn or to adjust more quickly. The measures taken by Poland were also large-scale, but had the desired effect.

Poland also ranked among the best-performing countries in terms of increase in government debt-to-GDP ratio, along with Bulgaria, Malta, the Czech Republic and Hungary. Due to its more cautious budget deficit policy, Estonia was also among the countries with the smallest increase in this ratio, but this proved an unsuccessful policy in this case.

4.3. The period 2011-2018 - economic growth slowdown

The global financial crisis and the Great Recession were the trigger that later launched the eurozone debt crisis. The two countries most affected, which are the subject of this study, were Greece and Cyprus. Of course, there were repercussions in almost all the countries on the list.

Problems in the banking systems have contributed to a significant slowdown in lending, compounded by a decline in financial flows. Previously realized surpluses on the financial accounts shrank considerably along with direct investment. Economic activity slowed, which translated into lower real GDP growth and a slower rate of inflation.

The best performer in terms of average annual real GDP growth over the period was Malta, which stand out sharply from all other countries in the aggregate. One of the reasons for this is the significantly smaller size of the economy and also to some extent its geographical remoteness. Lithuania, Poland, Romania, Estonia and Latvia also performed relatively well.

Only in Greece there was a decline in real GDP in 2019 compared to 2011. The lowest but still positive growth rate was recorded in Cyprus and Croatia. The latter joined the EU in 2013 and had the opportunity to benefit from various instruments, but this did not help it much. It should also benefit from the harmonization of its legislation with that of the EU, which gives certainty to potential investors.

The greatest convergence of purchasing power of per capita income was in Lithuania, Malta, Romania, Latvia and Estonia. A serious lag was observed in Greece, while a slight lag was

[4] Which are small and very open economies.

observed in Slovakia. The reasons for the latter can be found in the conversion rate of the Slovak koruna against the euro, as it took place in a period of appreciation of almost all currencies in the region against the euro, but in the case of the koruna the adjustment was not been able to take place because of euro area participation.

A balanced budget was in place in Estonia during the period, continuing the fiscal discipline that characterized the previous growth period. Bulgaria, the Czech Republic and Malta had low budget deficits. Latvia, Lithuania, Hungary, Poland, Romania and Slovakia had medium deficits. High deficits characterized the remaining countries, with the highest deficit in Greece.

In fact, a number of reforms aimed at fiscal consolidation had been undertaken in Greece since the debt crisis. As a result, even positive budget balances were invariably achieved in the period 2016-2019 until the crisis. However, the social cost of these reforms was too high. Problems were also characteristic of public finances in Romania, where it was even the case that public sector wage payments were delayed in certain months because their growth was too high.

The policy implications for the deficit were reflected in the change in government debt-to-GDP ratios. The fiscal discipline, which were implemented then, together with high economic growth, allowed Malta to achieve the largest debt-to-GDP contraction. This was also the case in Hungary, the Czech Republic, Latvia and Poland. The largest increases in debt were recorded in Cyprus because of the local crisis and in Slovenia, probably because of weak growth and persistent deficits, and these policies have been influenced by euro area membership. The increase in the ratio in Greece was not as large, but in 2018 it reached the then EU and euro area record of 189% of GDP. At the same time, Greece was assisted by the voluntary waiver of part of the payments by some investors on the nominal amount of some bonds as a means of resolving the crisis that the public finances of that country were caught in.

4.4. COVID-19 crisis 2020-2021

In late 2019 and early 2020, the first cases of COVID-19 virus were reported in Europe. EU countries took coordinated countermeasures by restricting cross-border trade and travelling, obligations to wear masks, and mandatory testing, closing certain businesses such as restaurants, etc. This therefore resulted in a severe supply shock as international production and supply chains for raw materials and finished products were disrupted. There was also an effect on demand, which focused on specific products at the expense of consumer durables.

One of the anti-crisis measures that was adopted at EU level was subsidizing employers to maintain the number of employees, which supported inflexible labour markets in most of the countries considered. This measure was generally successful despite insufficient controls, which meant that non-compliant enterprises also received funds.

The highest average economic growth during this crisis period was realized in Malta, Cyprus and Lithuania. Only the economies of the Czech Republic and Greece failed to recover to pre-crisis levels of GDP in 2021, while the others experienced positive average annual growth over the period under review. Only Lithuania's economy did not shrink in real terms in 2020, and Greece was the most hardly hit by the shock due to its dependence on transport and tourism, which were almost entirely blocked.

The biggest catch-up in terms of purchasing power parity of income to the EU average was in Poland, Malta, Lithuania and Bulgaria. Only in Greece the difference was further behind.

During this period, no country was too strict on the budget deficit and there was a derogation from the EU rule. Bulgaria, Estonia, Cyprus and Lithuania had the lowest deficits. The highest deficits were in Greece, Romania, Malta and Hungary. This crisis allowed Greece to return to loose fiscal policies after 4 consecutive years of discipline. In the case of Romania, an excessive deficit procedure has been initiated for non-compliance with fiscal rules, but it has been temporarily suspended due to the general derogation.

The most disciplined in terms of the change in government debt to GDP were Bulgaria and Cyprus, where it rose by only about 4 p.p. The Czech Republic, Greece, Hungary, Malta, Romania and Slovakia tried the largest increases over the 2-year period, with double-digit changes.

The overall performance during the crisis was best in Bulgaria, Estonia, Cyprus, Lithuania and Poland, while in the Czech Republic, Greece, Hungary and Romania the economic growth achieved was not in line with the too large fiscal stimulus through deficits and debts. However, the crisis and the response to it resulted in a significant increase in the ratio of government expenditure to GDP. However, the continuation of this policy after the crisis has been overcome contributed to serious problems.

4.5. The period 2021-2023

This period saw the highest inflation since the euro area had been created. It is a consequence of too much fiscal and monetary stimuli because of the previous crisis. In addition, since the beginning of its mandate, the EU Commission, led by von der Leyen, took measures to accelerate the green transition and to a policy of zero net emissions by 2050. It therefore became necessary to apply subsidies to energy-intensive industries and to invest urgently in infrastructure for liquefied natural gas, which should replace that received through pipelines.

The post-crisis performance was partly affected by the incomplete recovery of some economies, which led to higher-than-average real GDP growth rates in some of them. Croatia, Cyprus, Malta and Greece had the best performance. However, the crisis in Estonia continued and only in this country there was a decline in the level of GDP compared to the base year. Growth was relatively low in the Czech Republic, Latvia, Lithuania, Hungary and Slovakia.

Croatia was a more interesting example because it is the country that was the last to join the euro area and this happened in 2023. However, the preparations for this process boosted economic activity and had an impact on increase of inflation rate, which became the highest in the euro area and among the highest in the EU as a whole.

The narrowing of the gap in the purchasing power of income vis-à-vis the EU was most significant in Poland, Malta, Lithuania and Bulgaria. Greece continued to move away from the EU average over this period. Convergence was slowest in the Czech Republic, Slovenia, Hungary and Latvia.

This period was characterized by a higher redistribution of GDP through the state budget, as expressed by budget expenditure in the EU and the EA as a whole. Croatia, Cyprus, Hungary, Malta and Slovenia registered lower ratios than the average for the period 2003-2023, while all others showed an increasing ratio, with the highest ratios in Bulgaria, Estonia, Latvia, Romania and Slovakia. That is, even countries that in previous periods pursued a policy of austerity succumbed to the desire for fiscal loosening after the latest crisis.

This resulted in budget deficits in all countries in the set. Estonia and Bulgaria had low deficits, while the Czech Republic, Cyprus, Latvia, Lithuania and Malta had medium deficits, but closer to the 3% of GDP limit, In all the others there were high deficits and in Greece it was very high.

High inflation in 2022 and 2023 had a downward impact on the government debt-to-GDP ratio in the EU and the euro area as a whole, as well as in most countries in this study. The largest reduction was realized in Greece due to its high base, and also in Cyprus and Croatia. Estonia, the Czech Republic and Romania failed to benefit because of economic problems in the former two and because of too loose policies in the latter.

The overall performance over the period was best in Cyprus and Croatia, where fiscal stimuli had the expected effect on their economies. In most of the other economies, such as Hungary, Romania, Slovakia and Latvia, the performance did not match the stimulus. In Estonia, the direct impact of the war in Ukraine prevented better results.

Overall, over the period 2003-2023, Bulgaria, Estonia and Malta performed best in terms of the trade-off between fiscal discipline and economic growth. Logically, Greece performed worst, followed by Hungary and Croatia. In terms of longer-term indicators, such as convergence according to purchasing power parity of per capita income and the change in government debt-to-GDP ratios, good performance was observed in Bulgaria, Malta, Lithuania, Poland and Romania, while Greece and Slovenia, which started from the highest base and have been euro area members for the longest time, performed relatively worse.

5. Conclusion

The optimal size of government is a complex and multifaceted issue that cannot be easily defined. It is influenced by a variety of factors, including economic conditions, the nature of public spending, and external pressures. The prevailing consensus among researchers is that there exists an optimal range of government size that can promote economic growth, but this range varies significantly across different contexts and requires careful consideration of local conditions and needs.

Furthermore, the relationship between government spending and budget balance is complex and influenced by various factors, including fiscal rules, political institutions, and economic conditions. Studies indicate that maintaining fiscal discipline and adhering to balanced budget requirements can help governments achieve better budgetary outcomes. Conversely, lax fiscal rules and excessive spending can lead to budget deficits and imbalances, highlighting the importance of prudent fiscal management.

The relationship between budget deficits and public debt is characterized by a cyclical dynamic where increasing deficits lead to higher levels of public debt. This relationship is influenced by various factors, including inflation, economic productivity, and external borrowing costs. The literature consistently highlights the importance of maintaining fiscal discipline to prevent unsustainable debt accumulation, which can have long-term implications for economic stability and growth.

On the other hand, the relationship between public debt and economic growth is complex and multifaceted. While public debt can play a role in financing growth-enhancing investments, excessive levels of debt generally lead to adverse economic outcomes. The crowding-out effect, the diversion of resources to debt servicing, and the existence of threshold levels all contribute

to the negative impact of public debt on economic growth. Policymakers must carefully consider these dynamics to ensure that public debt remains at sustainable levels that support, rather than hinder, economic development.

References (Times New Roman 12, Bold, Before 12 pt, After 12 pt, Justified)

Adepoh, A., 2019, Determination of an Optimal Threshold for Public Expenditure in Côte d'Ivoire, Journal for Economics and Development Studies 7 (3), January 2019.

Ahmed Al Shawabkeh, I., Warrad T., 2024, Effect of Public Debt on the twin deficits using a Threshold time series model: Case Study of Jordan 1980-2020, Migration Letters Vol. 21, No. S1, 2024.

Alam, F., Singh, H., Singh, A., 2022, Economic Growth in Saudi Arabia through Sectoral Reallocation of Government Expenditures, Sage Open, October, 2022.

Ali Khan, A., Iqbal, J., 2021, Evaluating the Determinants and Sustainability of Public Debt for the South Asian Association for Regional Cooperation (SAARC) Countries, Global Economics Review VI (II): 24-40, June 2021.

Alshammary, M., Karim, Z., Khalid, N., 2020, Debt-Growth Nexus in the MENA Region: Evidence from a Panel Threshold Analysis, Economies 8 (4), 102, November, 2020.

Asteriou, D,. Pılbeam, K., Pratiwi, C., 2020, Public debt and economic growth: panel data evidence for Asian countries, Journal of Economics and Finance, Springer; Academy of Economics and Finance, Vol. 45 (2), 270-287, April, 2020.

Asogwa, F., Okwudili, A., Urama, M., 2019, Economic Growth And Public Expenditure: Country Specific Test Of The Armey Curve Hypothesis In Nigeria And Ghana, Advances in Social Sciences Research Journal Vol 6(1), January 2019.

Chekouri, S., Chibi, A., Benbouziane, M., 2022, The impact of government size on economic growth in Algeria: a threshold analysis, Les Cahiers du Cread, Vol 38, No. 03, September 2022.

Awaworyi Churchill, S., Yew, S. Ugur, M., 2015, Does Government Size Affect Per-Capita Income Growth? A Hierarchical Meta-Regression Analysis, ZBW Deutsche Zentralbibliotek fur Wirtschaftswissensschaften, Leibniz-Informationszentrum Wirtschaft, Kiel und Hamburg, 2015.

de Haan, J., Jong-A-Pin, R., Mierau, J., 2012, Do Budgetary Institutions Mitigate the Common Pool Problem? New Empirical Evidence for the EU, KOF Working Papers No. 303, May 2012.

Fseifes, E., Warrad, T., 2020, The Impact of Domestic and External Public Debt on the Economic Growth of Jordan, International Journal of Business and Economics Research, Vol. 9, issue 4, August 2020.

Ghosh, S., Mourmouras, I., 2004, Debt, Growth and Budgetary Regimes, Bulletin of Economic Research Vol. 56 (3), 241-250, July 2004.

Halebić, J, Moćević, A, 2020, Analysis of Public Debt at Subnational Government Levels: Evidence from Cantons in the Federation of Bosnia and Herzegovina, South East European Journal of Economics and Business, Sciendo, vol. 15(2), 109-123, December 2020.

Jimenez, B., 2018, Fiscal Institutional Externalities: The Negative Effects of Local Tax and Expenditure Limits on Municipal Budgetary Solvency, Public Budgeting & Finance, vol. 38(3), 3-31, Fall 2018.

Jiménez-Rodríguez, R., Rodríguez-López, A., 2015, What happens to the relationship between public debt and economic growth in European Countries? , Economics and Business Letters Vol. 4, No. 4, December 2015.

Kadia, A., 2020, Public Debt and Economic Growth in the Balkan Countries, European Journal of Economics and Business Studies 6(3), 98, December 2020.

Maitra, B., Prokash Mondal, S., 2022, Potency of Fiscal Variables in Inf lation Variations in Sri Lanka, The Indian Economic Journal Vol 71(4), December 2022.

Mensah, L., Allotey, D., Sarpong-Kumankoma, E., Coffie, W., 2019, What debt threshold hampers economic growth in Africa?, International Journal of Development Issues, Emerald Group Publishing Limited, vol. 19(1), 25-42, September 2019.

Munir, Q., Kok, S., Abdulnasir, W., 2016, Public Debt Sustainability and Economic Growth in Malaysia: Threshold and Causality Analysis, Proceedings of International Academic Conferences 5306868, International Institute of Social and Economic Sciences.

Nauman, M., Ahmad, R., 2024, Budget Deficits in Pakistan: A Time Series Analysis of The Impact of Economic Political and Institutional Factors, Pakistan. Journal of Humanities and Social Sciences Vol. 12, No. 2, April-June 2024.

Neyaptı, B., Ozgur, S., 2007, The Effects of Fiscal and Monetary Discipline on Budgetary Outcomes, Contemporary Economic Policy Vol. 25(2), 146-155, April 2007.

Priyadarshana, T., 2019, Is Public Debt Harmful Towards Economic Growth? New Evidence from Sri Lanka, Staff Studies Central Bank of Sri Lanka, Vol. 49(1), 51-87, June 2019.

Smith, D., Hou, Y., 2013, Balanced Budget Requirements and State Spending: A Long–Panel Study, Public Budgeting & Finance Vol. 33(2), June 2013.

Van, V. T. T., Ha, N. T. T., Quyen, P. G., Anh, L. T. H., Loi, D. T., 2020, The Relationship Between Public Debt, Budget Deficit, and Sustainable Economic Development in Developing Countries: The Role of Corruption Control, Jurnal Ekonomi &Amp: Studi Pembangunan, Vol. 21(1), 84-104, April 2020.