Comparative Economic Research. Central and Eastern Europe
Volume 28, Number 2, 2025
https://doi.org/10.18778/1508-2008.28.10

The Reform of European Public Debt Regulations – an Opportunity and a Challenge for EU Member States

Marta Postuła https://orcid.org/0000-0001-5502-9722
Prof., University of Warsaw, Faculty of Management, Warsaw, Poland, e-mail: mpostula@wz.uw.edu.pl

Anna Kawarska https://orcid.org/0000-0002-2022-9940
Ph.D., independent expert, Warsaw, Poland, e-mail: an.ka@vp.pl

Wojciech Chmielewski https://orcid.org/0000-0003-4516-5063
Ph.D., University of Warsaw, Faculty of Management, Warsaw, Poland, e-mail: wchmielewski@wz.uw.edu.pl

Abstract

The article examines how the European Commission's proposal to reform the Stability and Growth Pact (SGP) in terms of the pace of public debt reduction may affect basic economic parameters, such as GDP, consumption and investment levels, as well as fiscal parameters like the scale of subsidies and taxation levels of production and goods. This analysis focuses on two groups of EU countries: those with public debt below 60% of GDP (Group 1) and those with public debt above 60% of GDP (Group 2).
In the first stage of the study, using Eurostat data from 1995–2022 and employing a fixed effects model, we show that in Group 1, the impact of public debt on economic growth is statistically significant (unlike in Group 2). In the second stage, we conduct a detailed analysis of the impact of public debt on basic macroeconomic parameters (GDP growth components) and fiscal policy in countries with high levels of public debt. We simulate both moderate and drastic variants for reducing public debt relative to GDP.
The results show that in these countries, debt reduction leads to a decrease in consumer spending, an increase in investments, and an increase in taxes on production and imports. Based on these results, we recommend that the SGP reform should prioritize a gradual reduction of the public debt-to-GDP ratio because implementing drastic solutions would require deep cuts in public spending and tax increases in a short timeframe. We also highlight the need to consider exceptional situations in which the SGP rules may be suspended, as was the case with the COVID-19 pandemic.

Keywords: public debt, economic growth, fiscal rules, correction mechanism Stability and Growth Pact

JEL: E62, H21, H60, O43

Received: 17.04.2024. Verified: 10.11.2024. Accepted: 17.03.2025

Introduction

In 2020, the world experienced a supply and demand shock as a result of the COVID-19 pandemic. In 2022, the war in Ukraine caused by Russian aggression added to this negative trend. These events caused, directly or indirectly, a global recession and also revealed a completely new mechanism for the spread of threats damaging particular economies.

Before 2020, there were many economic studies based on risk scenarios, including the emergence of a supply-demand shock (Berg and Kirschenmann 2015), but they did not predict a complete stop of the global economy. In this context, there is a need to restore the tax system and monetary policy that hedge the functional risk of current and future generations (Raczkowski, Schneider, and Węgrzyn 2020).

The crisis caused by the COVID-19 pandemic, combined with the effects of the war in Ukraine, basically combines three crises: governance, economic, and migration (Bozorgmehr et al. 2020; Raczkowski and Postuła 2022). In response to these challenges, European Union (EU) countries have increased the scale of state intervention, most often financed through public finance sector deficits, which then translates proportionally into the growing public debt among EU members. EU countries were already struggling with public debt and economic insecurity long before the outbreak of the COVID-19 pandemic, which was considered risky, but efforts to reduce it were suppressed by immediate needs (Guiso et al. 2019). The negative consequences in this context are primarily driven by political actions (Battaglini, Nunnari, and Palfrey 2019) and extreme differences in competitiveness (Blundell-Wignall 2012).

The European Commission (EC), recognizing the need to involve Member States in mitigating the effects of crises while also fearing an uncontrolled increase in debt, tried to implement ad hoc decisions. This included suspending the need to adhere to fiscal rules and refraining from imposing fines on countries whose fiscal results – specifically public debt levels and financial sector deficits – exceeded the reference values. However, these measures were intended as temporary solutions and should not be applied permanently. Therefore, in November 2022, the EC proposed a reform of the Stability and Growth Pact (SGP) focusing on fiscal discipline, particularly regarding the pace of public debt reduction.

The article will assess the role of fiscal rules at the European and national levels in times of crisis based on a review of the literature. The aim is to examine how the EC's proposal for SGP reform in terms of the pace of reducing public debt in countries where it exceeds 60% of Gross Domestic Product (GDP) may affect basic economic parameters such as GDP, consumption and investment levels, as well as fiscal parameters like the scale of subsidies and the level of taxation of production and goods in these countries. We propose two possible changes to the SGP regarding excessive debt reduction in countries where it was higher than 60% of GDP and examine the impact of these proposals on selected economic and fiscal parameters.

The research was conducted using econometric models adapted to the input data published by Eurostat from the period 1995–2022, enabling forecasts for 2023–2025 for the categories under analysis. The study includes a review of the literature addressing the importance of including

escape clauses for fiscal rules in emergency situations within the SGP regulations, a topic that has become increasingly relevant in recent years.

Fiscal rules in times of crisis

The COVID-19 pandemic and the energy crisis caused by Russia's aggression against Ukraine, as well as the accompanying high inflation, have caused a serious economic shock that has a significant negative impact on the macroeconomic outlook of the whole world and specifically within the EU. The succession of negative events and the need to react quickly made it necessary to increase the involvement of Member States in the real economy, leading to a significant increase in public debt, which had already exceeded the reference values in many countries before these events. However, in 2022 there was a noticeable return to discussions on debt reduction and reinstatement of fiscal rules that had been suspended at both EU and national levels in many Member States.

Some economists warn that the current fiscal framework could lead to pro-cyclical and thus destabilizing fiscal policies, a problem that Southern European countries faced during the European debt crisis, which had repercussions throughout the EU. Therefore, the question remains whether the most appropriate solution is to return to the provisions of the Stability and Growth Pact introduced in 1997 as a framework for the fiscal policy of the EU, aimed at maintaining economic stability, sound public finances, reducing the budget deficit and public debt, and ensuring macroeconomic stability. Until recently, i.e., until 2023, the SGP was the basis for coordinating Member States' budgetary policies; it also aimed to prevent over-indebtedness and encourage the responsible management of public finances.

The SGP, which was introduced to ensure financial and fiscal stability in the EU, has long been criticized because of its ineffectiveness. There are several main factors that contribute to this failure. First, the SGP relies on limiting Member States' budget deficit to 3% of GDP and keeping public debt below 60% of GDP. However, many critics argue that these targets are arbitrary and do not consider the different economic and fiscal contexts of individual countries. In practice, many countries have not been able to meet these requirements, leading to continued violations of the rules.

Second, enforcement of the SGP regulations was insufficient. While the EC had the power to monitor and enforce these rules, there was often a lack of consistency in taking action against countries that violated the rules. There have been many instances where Member States evaded sanctions, undermining the credibility of the entire system. Third, the SGP focuses mainly on fiscal discipline, neglecting the aspects of economic growth and investment. The focus on reducing the budget deficit and public debt often led to a reduction in public spending, especially on investments, which are crucial for increasing competitiveness and economic development. This reduction in public spending may also have had a negative impact on social public services such as healthcare and education.

The lack of flexibility within the SGP made it unable to respond adequately to crises. During periods when Member States needed financial and fiscal support, the Pact did not provide enough

flexibility and customization. The applied approach did not account for crisis periods or cyclical changes in the economy. In times of recession, reducing public spending could deepen the crisis and hamper economic recovery. The lack of flexibility within the Pact made it impossible to respond appropriately to changing economic conditions.

Finally, the SGP is often criticized for its lack of coherence and coordination between Member States. There have been many instances where one country has implemented fiscal discipline measures while others have adopted a less stringent approach.

A proposal to reform European fiscal rules

Since the beginning of the COVID-19 pandemic and the war in Ukraine, the EU has supported national efforts to respond to these crises and mitigate the effects of the economic downturn. It freed up budgetary resources to fight the virus, activated the general escape clause in the SGP, used the full flexibility of state aid rules, and proposed a new instrument to help people stay in the labor market. In addition to measures taken by the European Central Bank and the European Investment Bank, the EU's response has provided more than half a trillion euros to support workers and businesses. On 27 May 2020, the EC presented a proposal to the European Parliament and the Council to establish a Recovery and Resilience Facility to provide substantial support for reforms and investments to strengthen Member States' economies.

The medium- to long-term effects of the COVID-19 pandemic and the war in Ukraine will significantly depend on how quickly Member States' economies recover, which in turn will be conditioned by the measures they take to mitigate the social and economic impact of the crisis – with the support of the EU. Member States should take advantage of the EU's recovery package to help finance key reforms and investments to increase the growth potential and resilience of the economy. This conclusion is confirmed by the data presented in Chart 1, which clearly indicates that the fiscal rules in force have become ineffective, making compliance difficult to achieve.

As a result, the ineffectiveness of the SGP solutions led to a loss of confidence in the EU's fiscal system and an increase in inequalities and unsustainable economic growth.

In response to major economic challenges such as high public debt, low economic growth, and pro-cyclical fiscal behavior, the EC has proposed a reform of the SGP. On 9 November 2022, it adopted a Communication on the directions of the SGP reform (European Commission 2022). The effect of the reform will be a simpler, more transparent, and effective SGP, with greater involvement of Member States and a realistic, gradual, and sustainable reduction of public debt. This will be accompanied by reforms at the national level and the allocation of public investment expenditures that will favor EU strategic priorities (Buti, Friis, and Torre 2022).

The new rules are intended to enable Member States to manage public debt more effectively, promote investment, and implement reforms that will contribute to a sustainable and gradual reduction of public debt. The reform also plans to strengthen the mechanisms for enforcing the rules of the Pact to ensure greater effectiveness and accountability among Member States. The SGP

reform envisions greater financial responsibility and effective management of public finances, which will be supported by increasing the role of Member States in decision-making.

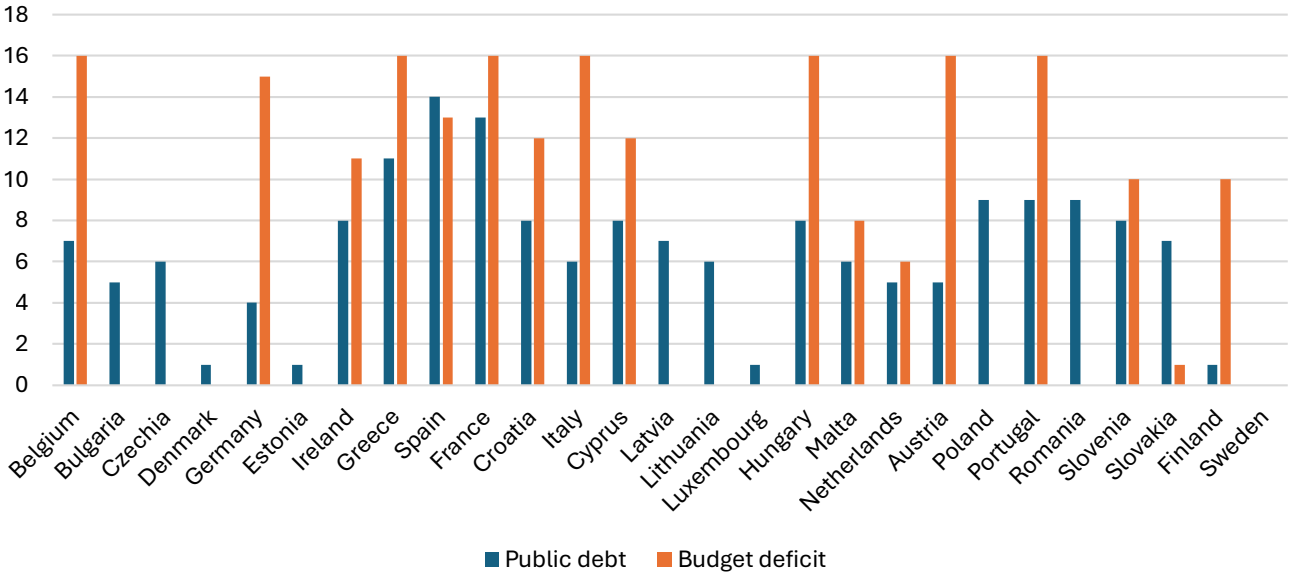

Chart 1. Number of years in which EU Member States' public debt exceeded 60% of GDP and the permissible level of budget deficit of 3% of GDP, 2007–2022

Source: own study based on data published by Eurostat n.d.

In addition, the SGP reform focuses on promoting investments and reforms that address today's challenges, such as transitioning to an ecologically sustainable economy and digital transformation. It is important that Member States' fiscal policy is consistent with the EU's priorities and objectives, ensuring sustainable economic growth.

Faced with the effects of the COVID-19 crisis and Russia's aggression against Ukraine, EU Member States are currently struggling with high levels of public debt and deficits. The revised framework aims to address this situation by simplifying fiscal rules and focusing on fiscal risk, which involves differentiating countries based on public debt challenges. It is important that Member States gradually, realistically and sustainably reduce high public debt-to-GDP ratios to ensure debt sustainability. Therefore, the 1/20 repayment rule per annum for the portion of public debt/GDP above 60% will be abolished. However, it is important to note that tailoring debt relief to the circumstances of individual Member States does not mean easing the regulations; rather, it emphasizes the effective enforcement of these rules.

The reform proposes that indebted Member States agree with the EC on a plan modeled on the Convergence Program. Under this plan, these countries commit to continuing the fiscal adjustment path for four years, or seven years for those countries with high levels of debt. At the same time, individual countries will implement reforms and investments to continue the green and digital transformation processes. The indicator taken into account will be net government spending, i.e., spending less interest on debt. The plan must be approved by the Council of the European Union based on its assessment. The excessive deficit procedure will remain in place, while the debt procedure will be strengthened and triggered when a country with debt exceeding 60% of GDP deviates from the agreed expenditure path.

The EC explained that the reference adjustment path aims to ensure a credible reduction of debt for countries with severe or moderate debt problems while also keeping the deficit below the reference value of 3% of GDP. To increase the effectiveness of the sanctions, the financial penalties will be reduced, while reputational sanctions will be strengthened. In addition, macroeconomic conditionality for the Structural Funds and the Recovery and Resilience Facility (on which the Convergence Programs depend) may result in the suspension of EU funding if Member States have not taken effective action to correct their excessive deficits. Failure to meet reform and investment commitments could lead to a more restrictive adjustment path and financial sanctions for euro area countries.

In April 2023, the EC presented another communication (European Commission 2023) in which it provided the Member States with guidelines for conducting and coordinating fiscal policy for 2024. Overall, fiscal policy in 2024, after the general escape clause is deactivated at the end of 2023, should ensure debt sustainability in the medium term and promote sustainable economic growth in all Member States through reforms and investments.

It is important to note that the existing SGP legal framework remains in effect while discussions about reforming the economic governance framework are ongoing. Therefore, not all elements of this reform were able to be introduced in 2024. Nevertheless, to smoothly start the functioning of the future set of EU fiscal rules and to address post-COVID realities, some elements from the Commission's reform directions can be incorporated now. In line with the Communication issued, all Member States were invited to indicate in their 2023 Stability and Convergence Programs how their budgetary plans would ensure compliance with the 3% of GDP reference value for deficits and achieve a realistic and sustainable reduction or maintenance of debt at a reasonable level in the medium term.

Member States that face significant or moderate public debt challenges are encouraged to set budgetary targets that ensure a credible and continuous debt reduction or maintain debt at a manageable level in the medium term. In addition, all Member States are invited to set budgetary targets that ensure that their deficits do not exceed 3% of GDP or fall below 3% of GDP over the period covered by the Stability or Convergence Program and credibly ensure that the deficit stays below 3% of GDP with unchanged policy in the medium term. Additionally, Member States are also invited to report in their Stability and Convergence Programs planned support measures for the energy sector, including their budgetary impact, when they would be phased out, and underlying assumptions regarding energy price developments.

Finally, Member States are encouraged to discuss in their Stability and Convergence Programs how their reform and investment plans, including those outlined in their Recovery and Resilience Plans, are expected to contribute to fiscal sustainability and sustainable and inclusive growth, in line with the criteria set out in the Commission's reform orientations.

Based on the presented Programs, the EC was ready to provide country-specific fiscal recommendations for 2024, in line with their own targets and assuming that the public debt ratio is on a declining path or remains at a prudent level and the budget deficit remains below the reference level of 3 % of GDP in the medium term. These recommendations were quantitative and provided qualitative guidance on investments and activities related to the energy sector,

in line with the criteria set out in the Commission's reform, while considering the existing provisions on the fiscal framework.

Such actions formed the basis for monitoring budgetary performance in the context of budgetary recommendations, starting with the draft budget plans of the euro area Member States for 2024, which were assessed by the EC in autumn 2023.

All Member States should continue to support nationally funded investments and ensure the effective use of the Recovery and Resilience Facility (RRF) and other EU funds, especially in the context of the green and digital transitions. Fiscal policy should support a double transition aimed at achieving sustainable and inclusive growth. The fiscal adjustment of Member States facing public debt challenges should not constrain investment; instead, they should involve a controlled increase in current nationally financed expenditure in proportion to medium-term growth. Member States should also consider the temporary nature of the non-repayable financial support provided under the RRF. The Commission will consider the need to maintain investments when monitoring budgetary performance in line with its budgetary recommendations.

The Commission's recommendations for individual Member States for 2024 also included guidelines on fiscal energy costs. In theory if wholesale energy prices remain stable and retail energy prices are lower, as projected, governments should gradually withdraw financial support for the energy sector, which will help reduce the budget deficit. Such actions would reduce fiscal costs, encourage energy saving, and enable the economy to adapt gradually and sustainably over time.

In February 2024, a political agreement was reached on new fiscal rules to help EU countries reduce their debt ratios. According to the new rules, the EC will provide specific recommendations to Member States whose public debt exceeds 60% of GDP or where public deficit exceeds 3% of GDP. The recommendations require the country to ensure that, by the end of the four-year fiscal adjustment period, public debt is likely to decline or remain at a reasonable level in the medium term. Countries with budget deficits above 3% will have to take action to reduce it by 0.5 percentage points within a year. Countries with higher deficits will face more stringent requirements. The new rules still require formal approval from the European Parliament and the EU Council.

Research method and presentation of results

In line with the article's objectives set out at the beginning, a detailed statistical analysis was conducted on EU Member States where the public debt-to-GDP ratio exceeded 60% in 2022, i.e., Austria, Belgium, Cyprus, Germany, Greece, Spain, Finland, France, Croatia, Hungary, Italy, Portugal, and Slovenia. The choice of these countries is directly related to the reform of the SGP, which is particularly significant for countries that consistently fail to meet this criterion described in the Maastricht Treaty. Data from the Eurostat database covering the period 1995–2022 were used for the analysis.

As the fiscal parameter covered by the new regulations in the draft SGP is the public debt-to-GDP ratio – already at record levels before the COVID-19 pandemic and further increased in 2022 – its impact on economic growth was first measured by the GDP indicator. Considering the earlier discussions in the article on the impact of public debt on GDP growth, we did not want to overlook this topic; therefore, in the first stage of the analysis, aggregate data for all EU countries were examined. The level of public debt was expressed in million euros, while GDP was expressed in nominal values. This parameter was prioritized due to concerns that high debt levels could threaten future growth prospects.

Our findings reflect the average impact of government debt on economic growth and show the complex relationship between debt spikes and economic growth. To analyze this relationship, a fixed effects model was used for two groups of EU Member States: one group that met the SGP's public debt criterion of less than 60% of GDP and the other group that did not (with public debt exceeding 60% of GDP).

The use of the fixed effects model to verify the impact of public debt on GDP growth is justified due to the characteristics of the study, which involved a panel with a relatively small number of units (EU member states) and a fairly long study period (1995–2022). Given that the fixed effects model assumes that differences between study units can be represented by different values of the constant in the model, it is possible to take into account the impact of all time-invariant specific factors for a specific unit under study.

In Member States where public debt relative to GDP was less than 60%, the study analyzed a panel with 101 observations, while for Member States with public debt above 60% of GDP, there were 115 observations. The results are shown in Tables 1 and 2.

Table 1. Results of research among EU countries with public debt below 60% of GDP and its impact on GDP growth using the fixed effects model

GDP growth	Coef.	Std. Err.	t	P > |t|	[95% Conf. Interval]	
Public debt in millions of euro	0.72	0.14	5.07	0.00	0.44	1.01
_cons	126 799.8	14 694.36	8.63	0.00	97 583.43	156 016.1

Source: own study based on data published by Eurostat n.d.

Table 2. Results of research among EU countries with public debt greater than 60% of GDP and its impact on GDP growth using the fixed effects model

GDP growth	Coef.	Std. Err.	t	P > |t|	[95% Conf. Interval]	
Public debt in millions of euro	0.05	0.05	1.01	0.33	– 0.05	0.15
_cons	610 502.3	34 383.65	17.76	0.00	542 269.1	678 735.6

Source: own study based on data published by Eurostat n.d.

It is widely acknowledged that significant increases in public debt are usually accompanied by weaker economic growth and a persistent decline in output. However, this negative relationship does not always hold. Our results indicate that only in countries meeting the Maastricht criterion, i.e., with a public debt-to-GDP ratio of less than 60%, was the impact of this

parameter on economic growth statistically significant (p-value < 0.05). In countries with a public debt-to-GDP ratio higher than 60%, there was no statistically significant relationship between the increase in public debt and declining economic growth (p-value > 0.05).

Similar studies examining the impact of public debt have been conducted before, as researchers and policymakers were interested in explaining the potential impact of higher public debt-to-GDP ratios on growth (e.g., Reinhart, Reinhart, and Rogoff 2012; Panizza and Presbitero 2013). Reinhart and Rogoff (2010) made a significant contribution to the analysis of public debt to GDP ratio and economic development, basing their findings on an analysis of a long series of historical data. Their finding that a government debt-to-GDP ratio above 90% is clearly associated with a lower rate of economic growth sparked considerable debate, leading to calls from leading policymakers in the US and Europe for immediate fiscal consolidation measures to control public debt (Konzelmann 2014). The data they provided were used by several groups of researchers, who have supplemented their findings with newly constructed econometric tests, thereby expanding the body of research on the impact of public debt levels on economic growth (Kumar and Woo 2010; Herndon, Ash, and Pollin 2014; Pescatori, Sandri, and Simon 2014; Eberhardt and Presbitero 2015; Amann and Middleditch 2020).

Research results on the relationship between the level of public debt and economic growth – including the most cited articles – do not yield clear conclusions. Several studies provide evidence of a negative causal effect of higher public debt-to-GDP ratios on economic growth (Basu and Bundick 2017) and for the (close to) 90% threshold of public debt-to-GDP above which growth tends to decline (Caner, Grennes, and Koehler-Geib 2010; Checherita-Westphal and Rother 2012; Baum, Checherita-Westphal, and Rother 2013). Conversely, other studies confirm a negative relationship between initial levels of public debt and subsequent growth while arguing that the evidence supporting a causal relationship between GDP growth and public debt growth is weak at best (Panizza and Presbitero 2013; Ash, Basu, and Dube 2017).

In addition, several authors point to systematic differences in the (non-linear) effect of government debt on growth across countries, suggesting that there is no evidence of universal debt-to-GDP ratio thresholds above which growth slows down (Pescatori, Sandri, and Simon 2014; Eberhardt and Presbitero 2015; Égert 2015; Ash, Basu, and Dube 2017; Yang and Su 2018; Eberhardt 2019; Bentour 2021).

The two strands of research on the relationship between public debt and GDP growth do not provide a clear answer regarding the nature of their relationship. The first trend, which focuses on the non-linear relationship between public debt and economic growth characterized by an inverted U-shape, shows different impacts depending on the econometric model used. The second strand provides evidence that the impact of public debt on growth may vary depending on country-specific economic variables, such as the level of economic development, the occurrence of debt crises in an earlier period, or financial or institutional variables (Ghosh et al. 2013; Markus and Rainer 2016; Chiu and Lee 2017; Chudik et al. 2017; Gómez-Puig and Sosvilla-Rivero 2017; 2018). It is challenging to find publications that simultaneously examine non-linearity and heterogeneity in the relationship between public debt and economic growth, which makes it difficult to formulate clearer conclusions that account for both aspects affecting the research results.

Taking into account the presented considerations and the evident lack of a clear definition of the negative or positive impact of public debt on GDP, we conducted a more detailed analysis of the impact of public debt on the basic macroeconomic parameters (components of GDP growth) and fiscal policy in countries with high levels of public debt. We demonstrate the potential impact of the different rates of debt reduction mandated by the SGP regulations. We propose two variants for reducing public debt relative to GDP for EU Member States, which could result from the current and future regulations contained in the SGP:

1. Variant I assumes that Member States must reduce public debt relative to GDP by 1/20 of the surplus above 60% for the next four years (from 2022).
2. Variant II assumes that Member States must reduce public debt to GDP by the amount that exceeds 60%, allowing them to reach the 60% threshold over the next four years (starting in 2022).

As discussed earlier, it is important that establishing provisions requiring debt reduction does not lead to economic collapse and the introduction of significant changes in the socio-economic policy pursued so far, which will not be accepted by citizens and may lead to the inability to implement such a defined goal.

The explanatory variables used in the quantitative research were chosen based on a literature review and our expertise. Macroeconomic indicators were selected for the analysis, such as consumption and investment levels, as well as fiscal indicators, such as subsidies and the level of taxation of production and goods. The appropriacy of these variables is confirmed by analyses conducted by researchers such as Codogno et al. (2003), Ardagna, Caselli, and Lane (2007), Kumar and Baldacci (2010), Attinasi, Checherita, and Nickel (2011), von Hagen, Schuknecht, and Wolswijk (2011), Leão (2013), Gómez-Puig and Sosvilla-Rivero (2017).

The study used a linear model with fixed effects for the data from Eurostat databases for the period 1995–2022, although some variables had shorter time ranges. The choice of the model was dictated primarily by the type of data, as it estimated changes over time in characteristics common to selected European countries.

The linear model with fixed effects is expressed by the formula:

$$y_{it} = x_{it}^{'}\beta + \sum_{j=1}^{N}\alpha_j d_{ij} + \varepsilon_{it}, \tag{1}$$

where y_{it} – the endogenous variable, $x_{it}^{'}$ – the vector of exogenous variables, α_j – the intercept for the *j*-th variant of the random effect variable, d_{ij} – a binary variable that takes the value of 1 for $I = j$ (if the unit belongs to the *j*-th group), and 0 otherwise, ε_{it} – is a random quantity. The parameters of the model are estimated using the least squares method adapted for the presence of (artificial) binary variables. This estimator is known as the *least squares dummy variable* (LSDV).

Considering the intercept for each domain of the fixed effect makes it impossible to estimate the constant for the whole equation because the presence of a constant in time for each unit

would lead to strict collinearity with the d_{ij} variables and would make it impossible to identify the model.

The model assumes zero expected value and variance σ_{ε}^{2} for the random quantity, as well as the lack of autocorrelation.

The linear model with fixed effects over other models offers several advantages over other modeling approaches, including:

- control over the base effect (1),
- accounting for differences between units (2), and
- eliminating the influence of factors not considered (3).

The features indicated above mean that the base effect is the hypothetical value of the feature for the null vector of explanatory variables. By utilizing fixed effects, this base effect is different for each country (1).

The use of fixed effects makes it possible to observe and control the heterogeneity constant over time between research units during the analyzed periods. In practice, this means that each country is characterized by a different constant in the time series, which is a deterministic parameter that differs for individual countries (2).

The model is constructed with fixed effects based on the assumption that the heterogeneity arises from unobservable factors influencing the phenomenon being modeled, which are not included in the model. The country effects of these factors are often constant for each country and variable over time. In a fixed-effects model, it can be assumed that the effects of omitted individual factors are insignificant, but their combined effect is significant, as reflected by the constant variable in the model. Therefore, incorporating fixed effects increases the proportion of the explained variance while reducing the standard error.

As a result of conducting separate statistical calculations for each variable – namely, levels of consumption, investment, and taxation of production and goods in the Member States, as well as the scale of subsidies – the results presented in Charts 2–5 were obtained for both tested variants.

The results of our research using Variant 1 and Variant 2 lead to the conclusion that for all countries covered by the study, a decrease in public debt is associated with a decrease in consumption expenditure over time. However, in Variant 2, the decrease in consumption is much more dynamic.

If Variant 1 is implemented, Italy, Greece, and Hungary show the largest percentage reductions in public debt relative to their initial levels. Conversely, Germany and Slovenia experience the smallest impact on consumption reduction in percentage terms.

For Variant 2, the rate of consumption reduction is much faster in the analyzed period, with the greatest percentage effects observed in France, Spain, Belgium, Italy and Portugal.

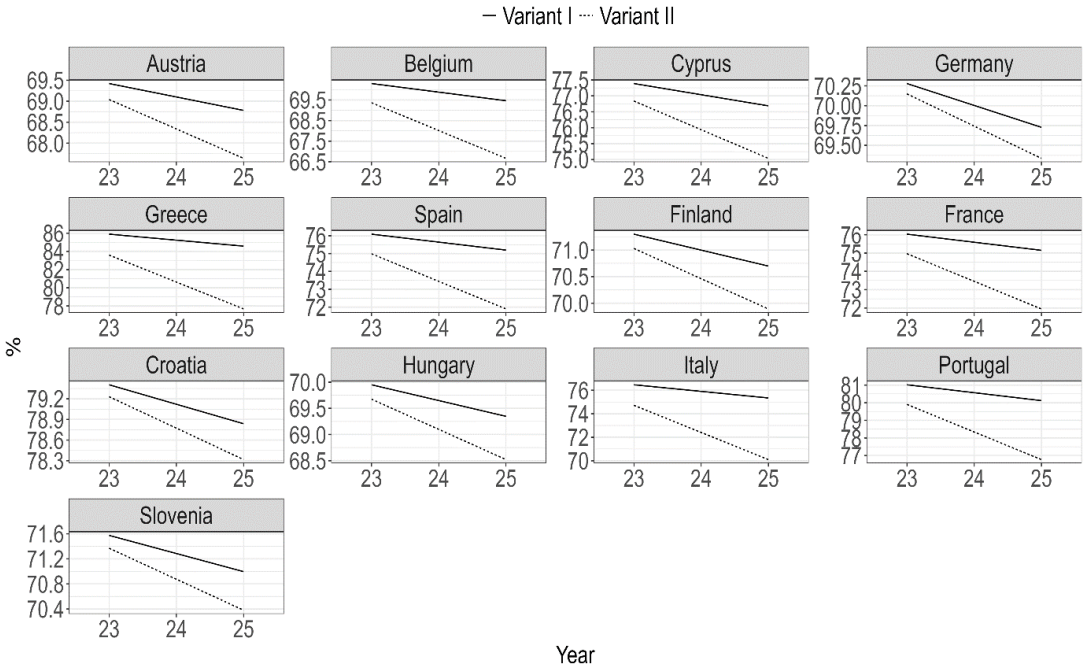

Chart 2. The impact of reducing public debt in Variant 1 and Variant 2 on consumption expenditure

Source: own study based on data published by Eurostat n.d.

The results clearly show that reducing public debt is associated with varying scales of reduction in consumption expenditure among the EU countries covered by the study. This finding is all the more important because previous research on the relationship between public debt and consumption produced ambiguous results. Sutherland (1997) presented a model of how fiscal policy affecting consumption can vary depending on the level of public debt. He noted that current generations of consumers are discounting future taxes because they may be dead when taxes are raised or when a larger population becomes available to pay those taxes. When debt reaches extreme levels, current generations of consumers know that there is a high probability that they will have to pay additional taxes, which may lead to a decrease in public debt.

On the other hand, modern intertemporal macroeconomics suggests that significant changes in net wealth are associated with changes in consumer spending (Lettau and Ludvigson 2001). Another point of view in the literature holds that public debt is irrelevant to private consumption, at least in a closed economy, because government bonds are both an asset for bondholders and a liability for taxpayers (Barro 1974).

More recent empirical research on the relationship between public debt and private consumption has produced mixed results. Peersman and Pozzi (2004) found that the excessive sensitivity of private consumption to current income in the US is positively correlated with public debt. Similarly, Pozzi, Heylen, and Dossche (2004) provided evidence for a panel of OECD countries. Hogan (2004) showed for 18 industrialized countries that if public consumption is reduced in response to a fiscal crisis (defined as high levels of debt), private consumption tends to increase.

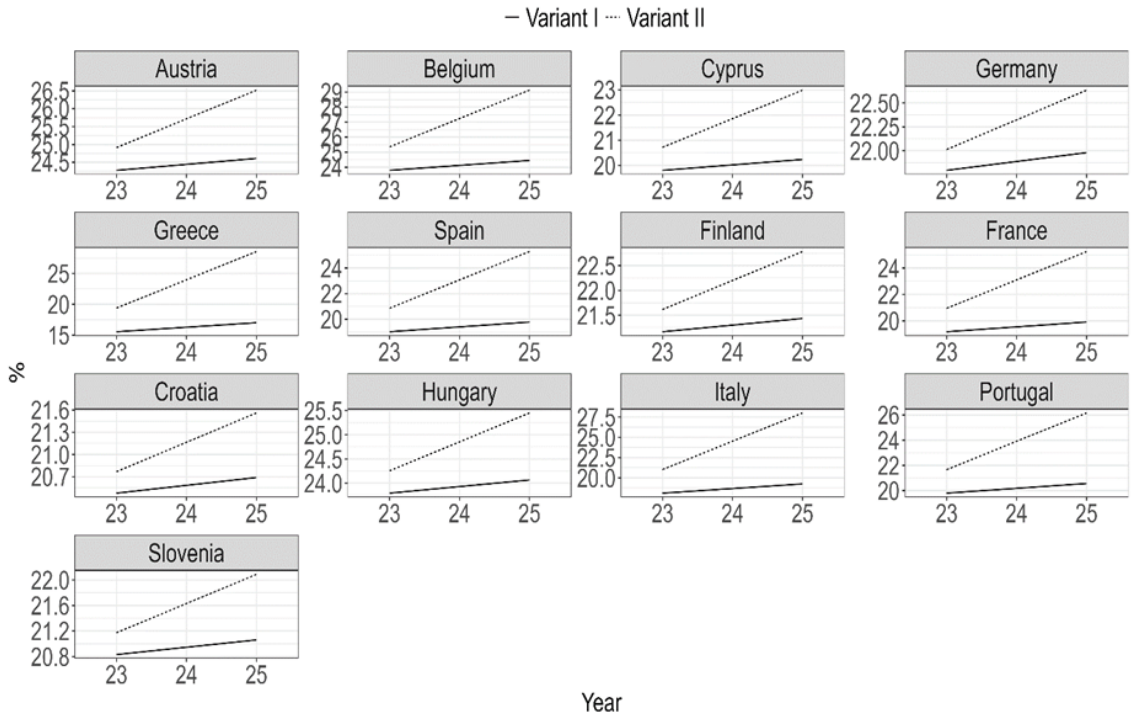

Chart 3. The impact of reducing public debt in Variant 1 and Variant 2 on investment spending

Source: own study based on data published by Eurostat n.d.

While the use of both variants results in an increase in investments in all countries covered by the study, Variant 2 achieves a higher level of investment more dynamically than Variant 1. Additionally, Variant 2 achieves a very large percentage increase in the value of investments in Greece, Belgium, Italy, Spain, France and Portugal, and a smaller effect in terms of growth dynamics for Germany, Finland, Croatia and Slovenia. Meanwhile, in percentage terms, for Variant 1, the greatest impact was found in Greece, while Slovenia saw the smallest impact.

Summing up, the results reveal opposing effects for Variant 1 and Variant 2. Specifically, both show that reducing public debt leads to a reduction in consumption while simultaneously increasing investment.

As Chart 4 shows, both variants brought benefits in the form of an increase in value. As a rule, Variant 2 brings a better effect and its value is similar for all countries. Notably, in Greece, Spain, Italy, and Portugal, the benefits of Variant 2 increase over time compared to Variant 1. In Germany, Finland, Croatia, Hungary and Slovenia, the dynamics of using both variants are similar in subsequent years in the four-year period under consideration, although Variant 2 brings better results in terms of value.

The increase in the amount of taxes in the analyzed period is linked to the correlation between greater investment and the reduction of public debt.

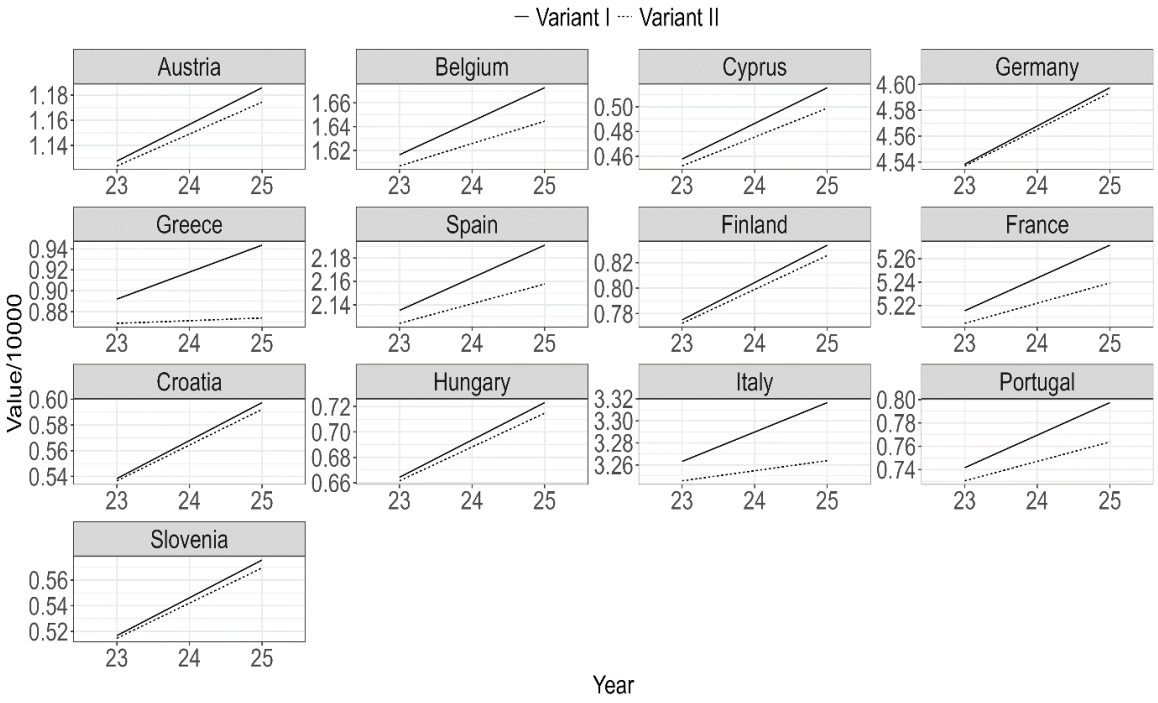

Chart 4. The impact of reducing public debt in Variant 1 and Variant 2 on taxes on production and imports

Source: own study based on data published by Eurostat n.d.

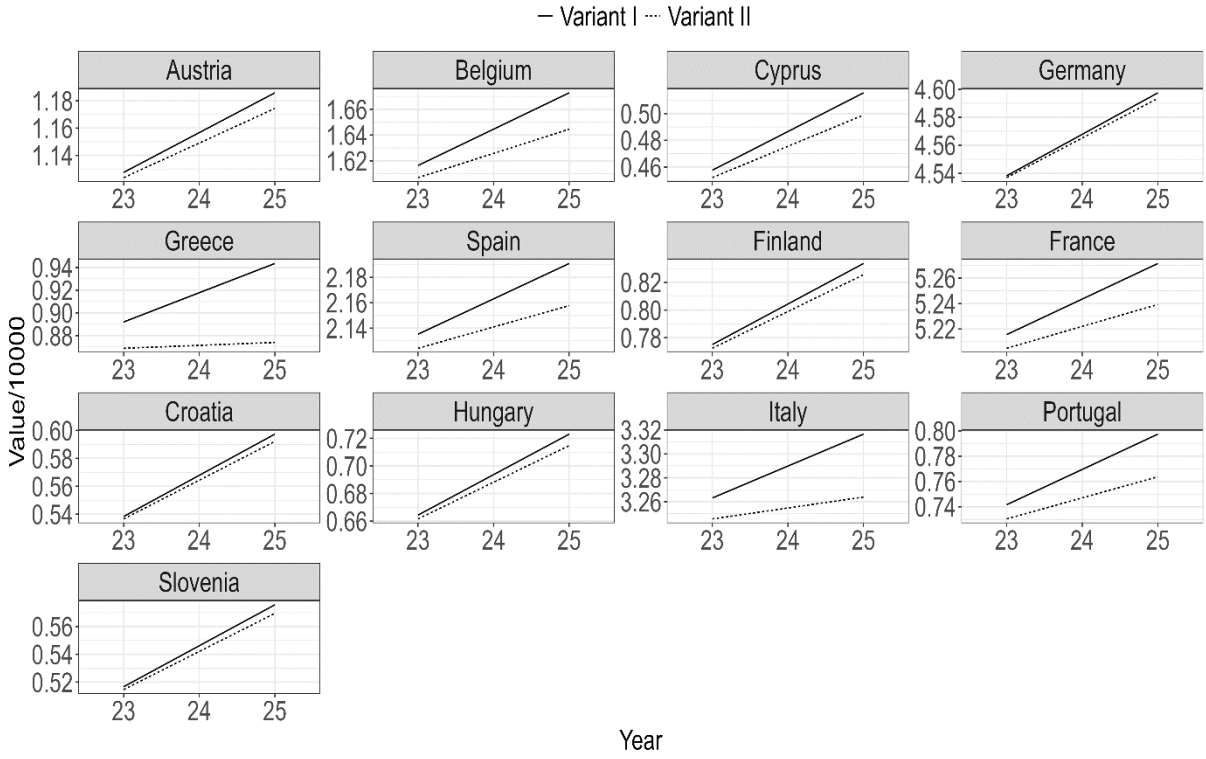

Chart 5. The impact of reducing public debt in Variant 1 and Variant 2 on the level of subsidies

Source: own study based on data published by Eurostat n.d.

As Chart 5 shows, Variant 1 has a greater effect than Variant 2. In Greece, Italy, France, Spain, and Portugal, the beneficial impact of Variant 1 increases over time compared to Variant 2;

however, in terms of value, the differences are not significant. In Germany, Finland, Croatia, Finland, and Slovenia, the impact dynamics are similar over time, with Variant 1 showing a greater impact in terms of value.

The results showed for the first time that Variant 1 had a stronger impact than Variant 2 regarding the relationship between reducing public debt and the level of subsidies. However, the nature of this relationship is not straightforward. On the one hand, a faster pace of public debt reduction in Variant 2 should unlock more funds for subsidies. On the other hand, a slower pace of debt reduction may allow for a more rational allocation of smaller funds and greater liquidity in the grants awarded by Member States. Due to difficulties in interpreting these findings, further in-depth analyses are warranted.

The negative long-term impact of public debt on economic growth may be due to crowding out mechanisms: if public debt increases, budget deficits lead to higher interest rates, which may crowd out private sector investment. Our results confirm this approach because in Variant 2 the investment rate in the economy is more favorable (Chart 3).

Discussion

The SGP reform has elicited reactions highlighting the imperfections and flaws of the proposed solutions. One major concern is the EC's establishment of a time horizon for the debt path based on debt sustainability analysis. This analysis relies on accumulated government budgetary constraints and accounting identifiers to outline the direction of debt evolution. While the EC has indicated a four-year perspective, which may be extended to seven years, the calculations themselves are based on a ten-year perspective.

Since the debt-to-GDP path is influenced by three variables: the real interest rate on debt service, real income growth, and deficit ratios the Commission plans to adopt assumptions for forecasting these three variables as part of the reform. In addition, the EC proposes conducting a cost-benefit analysis to assess the credibility of these assumptions based on historical data. However, questions arise about the credibility of such an analysis because even now, in the current economic climate, it is difficult to make credible projections for the coming years. Historical values of indicators are not fully repeatable, and therefore, they are not reliable indicators for the future. In addition, this approach undermines the declared goal of restoring responsibility to Member States.

Although the four-year perspective is a step forward, critics argue that it is too short and could lead to demands for counter-cyclical budgetary adjustments at an early stage. In practice, this means that if economic growth slows down, Member States will be asked to cut spending. In response to these concerns, the Commission has proposed extending the duration to seven years, but with certain conditions. What is puzzling, however, is that these conditions extend beyond budgetary discipline. They also require supply-side reforms and "good" public investment. The rationale is likely to be that stimulating supply can help reduce the debt ratio. However, the combination of two different objectives – budgetary discipline and quality public performance – dilutes the original purpose of the Pact. For more than two decades, the SGP has failed

to achieve its intended budgetary discipline, and expanding its mission to boost the supply side will not necessarily make the task easier or increase the effectiveness of the Pact.

Once the debt path has been agreed, individual Member States will need to commit to it. The budget constraint that underlies the debt sustainability analysis clearly indicates that the primary budget balance is an appropriate tool. The EC's proposal requires governments to commit to "spending caps," which are essentially a "single operational indicator" designed to be simple and transparent. This ratio is defined as "net primary expenses, i.e., expenses minus any income appropriations and the exclusion of interest expenses and cyclical unemployment expenses." However, in practice, the indicator reflects the cyclically adjusted primary balance – a concept introduced in the previous reform of the SGP to allow automatic stabilizers to work. While it was theoretically a good idea, it did not bring the expected results. The Commission's proposed solution amounts to merely renaming and making minor modifications to this tool. The new ratio is neither simple nor transparent, and its introduction is likely to pose the same difficulties that undermined the use of a cyclically adjusted primary balance. Therefore, simpler solutions should be considered, such as clearly defining a target for reducing public debt relative to GDP to 60%, in accordance with Variant 2.

It is also important to mention independent fiscal institutions. In recent years, many Member States have put considerable effort into establishing these institutions to monitor and evaluate national budgets from preparation to final implementation. While their effectiveness is a separate topic, some have proven to be very effective. Therefore, it is puzzling that the Commission does not acknowledge this trend. EC support for national independent fiscal institutions, by supervising their independence, procedures and technical measures, could result in a new tool to establish budgetary discipline. Perhaps this oversight is lacking because such a solution would reduce the central role the Commission seeks for itself, thereby undermining the responsibility of the Member States.

Finally, we cannot overlook the financial and reputational sanctions that are part of the reform proposal. Law enforcement has been a notable weakness of the SGP. In the two decades of its existence, no sanctions have ever been imposed despite significant increases in public debt in many countries. Nevertheless, the Commission still mentions sanctions but less stringent ones. It remains uncertain whether this will actually result in the imposition of sanctions or merely reinforce the conviction of those in power that sanctions will not be imposed at all; even if they are imposed, they will be symbolic.

Conclusion

The EC has been trying for decades to implement solutions within the SGP and other legal regulations to ensure the stability of finances to ensure financial stability among Member States. Unfortunately, these efforts have not always proven to be effective, especially in light of additional external shocks such as the financial crisis, the COVID-19 pandemic, and the war in Ukraine. While research indicates that the effects of public debt growth can vary – sometimes positively and sometimes negatively – measures should be taken to limit its growth. This

raises the question of how the proposed reform of the SGP will affect selected economic and fiscal parameters in EU countries with high levels of public debt.

Our research did not provide solid evidence of a persistent negative impact of high public debt-to-GDP ratios; however, this does not mean that countries can sustain public debt at any level. Therefore, the EC's activities to reform the SGP are important. However, when formulating these reforms, it is essential to consider the feasibility of the solutions used and their potential for implementation by Member States. It is important that the new rules are followed and any sanctions for excessive debt levels are modified. Member governments may still face country-specific unsustainable levels of debt, particularly when interest payments rise significantly (Eichengreen et al. 2019). However, the meta-regression evidence suggests that, given the continued increase in government debt-to-GDP ratios due to the COVID-19 crisis in most countries, there is no urgent need to lower government debt levels to avoid hampering economic growth.

The analysis of the existing literature and research indicates that great care is needed when formulating universal recommendations for fiscal policy in response to high public debt-to-GDP ratios. Based on this understanding and the results of our research, we believe that the SGP reform should include solutions to reduce the public debt-to-GDP ratio gradually – such as a decrease by 1/20 of the excess over 60% – rather than implementing drastic measures, like reducing debt from 80% to 60% within four years. Such measures seem unrealistic as they would require deep cuts in public spending and tax increases in a short time, which would not be accepted by citizens in those countries. In addition, it is vital to define situations in which the rules will not be applied at the stage of formulating the provisions of the SGP to prevent complete suspension, as occurred during the COVID-19 pandemic. Our next research will focus on escape clauses from public debt rules that should be incorporated into the SGP.

The article examined how the EC's proposal for SGP reform regarding the pace of public debt reduction may affect specific economic parameters of countries with different levels of public debt to GDP. The results highlight significant opportunities for effective action in this area. Since reducing debt leads to decreased consumer spending and increased taxes on production and imports while simultaneously increasing investment levels, there is potential to develop and implement a combination of strategies that will achieve the desired economic goals. From this perspective, exploring how increasing investment in response to reduced public debt is particularly interesting because low investment levels are a significant problem for many EU countries, hindering their medium- and long-term development. This issue should also be considered within the framework of economic policies implemented by the Member States and also be the subject of further research due to the economic effects it may have.

References

Ahlborn, M., Schweickert, R. (2016), *Public debt and economic growth: Economic systems matter*, "Discussion Paper", 281, Center for European Governance and Economic Development Research, Gottingen, https://hdl.handle.net/10419/129092 (accessed: 13.03.2023).

Amann, J., Middleditch, P. (2020), *Revisiting Reinhart and Rogoff after the crisis: a time series perspective*, "Cambridge Journal of Economics", 44 (2), pp. 343–370, https://doi.org/10.1093/cje/bez009

Ardagna, S., Caselli, F., Lane, T. (2007), *Fiscal Discipline and the Cost of Public Debt Service: Some Estimates for OECD Countries*, "Topics in Macroeconomics", 7, https://doi.org/10.2202/1935-1690.1417

Ash, M., Basu, D., Dube, A. (2017), *Public debt and growth: An assessment of key findings on causality and thresholds,* "UMASS Amherst Economics Working Papers", 2017–10, University of Massachusetts, Department of Economics, Amherst, https://www.econstor.eu/handle/10419/174419

Attinasi, M.G., Checherita, C., Nickel, C. (2011), *What Explains the Surge in Euro Area Sovereign Spreads During the Financial Crisis of 2007–2009?*, "Public Finance and Management", 10 (4), pp. 595–645, https://doi.org/10.1002/9781118267073.ch46

Barro, R.J. (1974), *Are Government Bonds Net Wealth?*, "Journal of Political Economy", 82 (6), pp. 1095–1117, https://doi.org/10.1086/260266

Basu, S., Bundick, B. (2017), *Uncertainty Shocks in a Model of Effective Demand*, "Econometrica", 85 (3), pp. 937–958, https://doi.org/10.3982/ECTA13960

Battaglini, M., Nunnari, S., Palfrey, T. (2019), *The Political Economy of Public Debt: A Laboratory Study*, "Journal of the European Economic Association", 18 (44), pp. 1969–2012, https://doi.org/10.1093/jeea/jvz031

Baum, A., Checherita-Westphal, C., Rother, P. (2012), *Debt and Growth: New Evidence for the Euro Area*, "ECB Working Paper", 1450, https://doi.org/10.2139/ssrn.2094998

Bentour, E.M. (2021), *On the public debt and growth threshold: one size does not necessarily fit all*, "Applied Economics", 53 (11), pp. 1280–1299, https://doi.org/10.1080/00036846.2020.1828806

Berg, G., Kirschenmann, K. (2015), *Funding Versus Real Economy Shock: The Impact of the 2007–2009 Crisis on Small Firms' Credit Availability*, "Review of Finance", 19 (3), pp. 951–990, https://doi.org/10.2139/ssrn.2418293

Blundell-Wignall, A. (2012), *Solving the Financial and Sovereign Debt Crisis in Europe*, "OECD Journal: Financial Market Trends", 2011 (2), pp. 201–224, https://doi.org/10.1787/fmt-2011-5k9cswmzsdwj

Bozorgmehr, K., Saint V., Kaasch, A., Stuckler, D., Kentikelenis, A. (2020), *COVID and the convergence of three crises in Europe*, "Lancet Public Health", 5 (5), pp. e247–e248, https://doi.org/10.1016/S2468-2667(20)30078-5

Buti, M., Friis, J., Torre, R. (2022), *How to make the EU fiscal framework fit for the challenges of this decade*, https://cepr.org/voxeu/columns/how-make-eu-fiscal-framework-fit-challenges-decade (accessed: 1.08.2023).

Caner, M., Grennes, T., Koehler-Geib, F. (2010), *Finding the Tipping Point – When Sovereign Debt Turns Bad*, "Policy Research Working Paper Series", 5391, https://openknowledge.worldbank.org/server/api/core/bitstreams/1d4d5809-e44f-501c-8034-0500d733cbaa/content (accessed: 12.03.2023).

Checherita-Westphal, C., Rother, P. (2012), *The impact of high government debt on economic growth and its channels: An empirical investigation for the euro area*, "European Economic Review", 56 (7), pp. 1392–1405, https://doi.org/10.1016/j.euroecorev.2012.06.007

Chiu, Y.-B., Lee, C.-C. (2017), *On the impact of public debt on economic growth: does country risk matter?*, "Contemporary Economic Policy", 35 (4), pp. 751–766, https://doi.org/10.1111/coep.12228

Chudik, A., Mohaddes, K., Pesaran, M.H., Raissi, M. (2017), *Is There a Debt-Threshold Effect on Output Growth?*, "Review of Economics and Statistics", 99 (1), pp. 135–150, https://doi.org/10.1162/REST_a_00593

Codogno, L., Favero, C., Missale, A., Portes, R., Thum, M. (2003), *Yield spreads on EMU government bonds*, "Economic Policy", 18 (37), pp. 505–532, https://doi.org/10.1111/1468-0327.00114_1

Eberhardt, M. (2019), *Nonlinearities in the relationship between debt and growth: (no) evidence from over two centuries*, "Macroeconomics Dynamics", 23 (4), pp. 1563–1585, https://doi.org/10.1017/S1365100517000347

Eberhardt, M., Presbitero, A.F. (2015), *Public debt and growth: Heterogeneity and non-linearity*, "Journal of International Economics", 97 (1), pp. 45–58, https://doi.org/10.1016/j.jinteco.2015.04.005

Égert, B. (2015), *Public debt, economic growth and nonlinear effects: Myth or reality?*, "Journal of Macroeconomics", 43, pp. 226–238, https://doi.org/10.1016/j.jmacro.2014.11.006

Eichengreen, B., El-Ganainy, A., Esteves, R., Mitchener, K. (2019), *Public Debt through the Ages*, "IMF Working Papers", 25494, https://doi.org/10.3386/w25494

European Commission (2022), *Communication on orientations for a reform of the EU economic governance framework*, COM (2022) 583 final, https://economy-finance.ec.europa.eu/system/files/2022-11/com_2022_583_1_en.pdf (accessed: 20.05.2023).

European Commission (2023), *Fiscal policy guidance for 2024*, COM (2023) 141 final, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2023%3A141%3AFIN (accessed: 8.03.2023).

Eurostat (n.d.), *Database*, https://ec.europa.eu/eurostat/data/database (accessed: 7.04.2023).

Ghosh, A.R., Kim, J.I., Mendoza, E.G., Ostry, J.D., Qureshi, M.S. (2013), *Fiscal Fatigue, Fiscal Space and Debt Sustainability in Advanced Economies*, "Economic Journal", 123 (566), pp. F4–F30, https://doi.org/10.1111/ecoj.12010

Gómez-Puig, M., Sosvilla-Rivero, S. (2017), *Heterogeneity in the Debt-Growth Nexus: Evidence from EMU Countries*, "International Review of Economics & Finance", 51, pp. 470–486, https://doi.org/10.2139/ssrn.2943255

Gómez-Puig, M., Sosvilla-Rivero, S. (2018), *Public Debt and Economic Growth: Further Evidence for the Euro Area*, "Acta Oeconomica", 68 (2), pp. 209–229, https://doi.org/10.2139/ssrn.3041117

Guiso, L., Herrera, H., Morelli, M., Sonno, T. (2019), *Global crises and populism: the role of Eurozone institutions*, "Economic Policy", 34 (97), pp. 95–139, https://doi.org/10.1093/epolic/eiy018

Hagen, J., von, Schuknecht, L., Wolswijk, G. (2011), *Government bond risk premiums in the EU revisited: The impact of the financial crisis*, "European Journal of Political Economy", 27 (1), pp. 36–43, https://doi.org/10.1016/j.ejpoleco.2010.07.002

Herndon, T., Ash, M., Pollin, R. (2014), *Does high public debt consistently stifle economic growth? A critique of Reinhart and Rogoff*, "Cambridge Journal of Economics", 38 (2), pp. 257–279, https://doi.org/10.1093/cje/bet075

Hogan, V. (2004), *Expansionary Fiscal Contractions? Evidence from Panel Data*, "The Scandinavian Journal of Economics", 106 (4), pp. 647–659, https://doi.org/10.1111/j.0347-0520.2004.00381.x

Konzelmann, S.J. (2014), *The political economics of austerity*, "Cambridge Journal of Economics", 38 (4), pp. 701–741, https://academic.oup.com/cje/article/38/4/701/1739112 (accessed: 7.04.2023).

Kumar, M., Baldacci, E. (2010), *Fiscal Deficits, Public Debt, and Sovereign Bond Yields*, "IMF Working Papers", 2010 (184), https://doi.org/10.5089/9781455202188.001

Kumar, M., Woo, J. (2010), *Public Debt and Growth*, "IMF Working Paper", WP/10/174, https://doi.org/10.2139/ssrn.1653188

Leão, P. (2013), *The Effect of Government Spending on the Debt-to-GDP Ratio: Some Keynesian Arithmetic*, "Metroeconomica", 64 (3), pp. 448–465, https://doi.org/10.1111/meca.12013

Lettau, M., Ludvigson, S. (2001), *Consumption, Aggregate Wealth, and Expected Stock Returns*, "Journal of Finance", 56 (3), pp. 815–849, https://doi.org/10.1111/0022-1082.00347

Panizza, U., Presbitero, A.F. (2013), *Public debt and economic growth in advanced economies: A survey*, "Swiss Journal of Economics and Statistics", 149, pp. 175–204, https://doi.org/10.1007/BF03399388

Peersman, G., Pozzi, L. (2004), *Determinants of consumption smoothing*, "Working Papers of Faculty of Economics and Business Administration", Ghent University, Ghent, https://wps-feb.ugent.be/Papers/wp_04_231.pdf (accessed: 11.02.2023).

Pescatori, A., Sandri, D., Simon, J. (2014), *Debt and Growth: Is There a Magic Threshold?*, "International Monetary Fund, Research Department, Working Paper", WP/14/34, https://doi.org/10.2139/ssrn.2407527

Pozzi, L., Heylen, F., Dossche, M. (2004), *Government Debt and Excess Sensitivity of Private Consumption: Estimates from OECD Countries*, "Economic Inquiry", 42 (4), pp. 618–633, https://doi.org/10.1093/ei/cbh085

Raczkowski, K., Postuła, M. (2022), *Managing the increase in the EU public debt risk amid the corona crisis*, "European Journal of International Management", https://doi.org/10.1504/EJIM.2022.10044750

Raczkowski, K., Schneider, F., Węgrzyn, J. (2020), *Ekonomia systemu podatkowego*, Wydawnictwo Naukowe PWN, Warszawa.

Reinhart, C.M., Rogoff, K.S. (2010), *Growth in a Time of Debt*, "American Economic Review", 100 (2), pp. 573–578, https://doi.org/10.1257/aer.100.2.573

Reinhart, C.M., Reinhart, V.R., Rogoff, K.S. (2012), *Public Debt Overhangs: Advanced-Economy Episodes since 1800*, "Journal of Economic Perspectives", 26 (3), pp. 69–86, https://doi.org/10.1257/jep.26.3.69

Sutherland, A. (1997), *Fiscal crises and aggregate demand: can high public debt reverse the effects of fiscal policy?*, "Journal of Public Economics", 65 (2), pp. 147–162, https://doi.org/10.1016/S0047-2727(97)00027-3

Yang, L., Su, J. (2018), *Debt and growth: Is there a constant tipping point?*, "Journal of International Money and Finance", 87 (C), pp. 133–143, https://doi.org/10.1016/j.jimonfin.2018.06.002

Reforma regulacji europejskich w zakresie długu publicznego – szansa i wyzwanie dla państw członkowskich UE

W kontekście planowanej reformy Paktu Stabilności i Wzrostu (PSW) autorzy artykułu podjęli próbę weryfikacji wpływu wybranych parametrów ekonomiczno-fiskalnych na stabilność finansową i fiskalną w krajach Unii Europejskiej. Przeprowadzone badania wykazały, że w przypadku krajów UE, w których dług publiczny w latach 1995–2022 przekroczył 60% PKB, reforma PSW przyniesie lepsze rezultaty w latach 2023–2025, jeśli zostaną zastosowane rozwiązania ograniczające relację długu publicznego do PKB na poziomie umiarkowanym, a nie drastycznym.
Celem artykułu jest zbadanie, jak propozycja Komisji Europejskiej dotycząca reformy PSW w zakresie tempa redukcji długu publicznego może wpłynąć na podstawowe parametry ekonomiczne, tj. PKB, poziom konsumpcji i inwestycji, a także parametry fiskalne, tj. skalę subsydiów i poziom opodatkowania produkcji i towarów w dwóch grupach państw UE: z długiem publicznym poniżej 60% w stosunku do PKB (pierwsza grupa) oraz z długiem publicznym powyżej 60% w stosunku do PKB (druga grupa).
Badanie przeprowadzone na podstawie danych Eurostatu z lat 1995–2022 oraz z wykorzystaniem modelu efektów stałych wykazuje w pierwszym etapie, że w pierwszej grupie krajów wpływ długu publicznego na wzrost gospodarczy jest statystycznie istotny (w odróżnieniu od drugiej grupy krajów).
W drugim etapie autorzy przeprowadzają szczegółową analizę oddziaływania długu publicznego na podstawowe parametry makroekonomiczne (składniki wzrostu PKB) oraz politykę fiskalną w krajach z wysokim poziomem długu publicznego, analizując na bazie przygotowanych symulacji umiarkowany oraz drastyczny wariant zmniejszenia przez nie długu publicznego w stosunku do PKB. Uzyskane wyniki pokazują, że w krajach objętych badaniem redukcja długu prowadzi do zmniejszenia wydatków konsumpcyjnych, zwiększenia poziomu inwestycji oraz wzrostu podatków od produkcji i importu.
Na podstawie osiągniętych wyników autorzy rekomendują, aby reforma PSW została ukierunkowana na redukcję relacji długu publicznego do PKB w tempie umiarkowanym, ponieważ implementacja rozwiązań drastycznych wymagałaby głębokich cięć w wydatkach publicznych i podwyżek podatków w krótkim czasie. Autorzy zwracają także uwagę na konieczność uwzględnienia wyjątkowych sytuacji, w których reguły PSW mogą być zawieszone, jak miało to miejsce w przypadku pandemii COVID-19.

Słowa kluczowe: dług publiczny, wzrost gospodarczy, reguły fiskalne, mechanizm korekcyjny, Pakt Stabilności i Wzrostu