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POLITICAL FRAGMENTATION AND PUBLIC DEBT DEVELOPMENT IN EUROPEAN UNION COUNTRIES*

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Abstract. This paper examines the relationship between the ideological fragmentation of government coalitions and the development of public debt in European Union countries. The study examines whether political polarisation and the ideological range of governing coalitions influence both short-term public debt dynamics and the long-term level of public debt. The empirical analysis is based on panel data from 16 EU member states covering the period 2002–2022 and uses two-way fixed-effects panel regression models with country- and year-fixed effects. Two dimensions of political fragmentation are analysed: government political polarisation (*cab_wpolar*) and the ideological range of coalition parties (*cab_preffrange*). The results indicate that political variables are not systematically associated with year-on-year changes in public debt. In contrast, several model specifications suggest that political polarisation may contribute to higher long-term public debt levels, while broader ideological coalitions may under certain conditions be associated with lower public debt. The findings suggest that political fragmentation primarily influences public finances through gradual long-term fiscal mechanisms rather than through immediate annual debt fluctuations.

Keywords: political polarization; ideological range; public debt; European Union

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1. Introduction

In recent decades, the rapid growth of public debt in advanced economies has intensified discussions on fiscal sustainability and the long-term stability of public finances (Olivella, 2020; Franchino, 2024). Alongside macroeconomic determinants, increasing attention has been devoted to the role of political factors in shaping fiscal outcomes, particularly political polarisation and ideological fragmentation within coalition governments.

Political fragmentation may complicate government decision-making, increase coordination costs, and weaken governments' ability to implement consistent fiscal strategies. The existing political economy literature does not provide a fully consistent view of the relationship between political polarisation and public debt. While some studies (Persson & Svensson, 1989; Alesina & Tabellini, 1990; Alesina & Drazen, 1991; Dziuda & Loeper, 2016) argue that increasing political polarisation contributes to higher public debt, other authors (Melki & Pickering, 2014; Piguillem & Riboni, 2015) suggest the opposite relationship.

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Despite growing interest in the political determinants of fiscal policy, existing research focuses predominantly on the long-term level of public debt, while paying considerably less attention to the distinction between short-term debt dynamics and long-term debt accumulation. Moreover, limited attention has been paid to differences between government political polarisation and the ideological range of coalition governments.

Against this background, the present study examines the relationship between political fragmentation and public debt development across 16 European Union countries during 2002–2022. The main objective of the paper is to analyse whether government political polarisation and the ideological range of coalition governments influence both short-term public debt dynamics and the long-term level of public debt.

The empirical analysis utilises panel data from the Representation and Democracy in Europe (REPDEM), Manifesto Project, and Eurostat databases. It applies two-way fixed-effects panel-data regression models with country- and year-fixed effects. The study contributes to the existing literature by distinguishing between short-term debt dynamics and long-term debt accumulation and by separately analysing two dimensions of political fragmentation: government political polarisation and the ideological range of coalition parties.

2. Theoretical background

Public debt development is influenced by a broad range of macroeconomic, fiscal, institutional, and political factors. Existing literature highlights the importance of fiscal rules, fiscal governance frameworks, and institutional settings in shaping fiscal outcomes and long-term debt sustainability (Kraemer & Lehtimäki, 2024; Locatelli, 2026). At the same time, public debt dynamics are strongly affected by external socio-economic shocks, such as financial crises, pandemics, or periods of economic instability, which may lead to increased government expenditure and fiscal imbalances (Brožek et al., 2022; Strachinaru, 2024). Previous studies also emphasise the role of discretionary fiscal policy decisions and the structure of public expenditure, particularly in areas related to public services, defence, and public safety (Vicente et al., 2024; Carnazza et al., 2025). Public debt, therefore, represents a complex and multidimensional phenomenon shaped by the interaction of economic conditions, fiscal governance, institutional frameworks, external shocks, and political factors.

The relationship between political polarisation and fiscal indicators, particularly public debt expressed as a percentage of GDP, represents a central research theme in contemporary political economy. Political polarisation, defined as increasing ideological divergence across the political spectrum, shapes the direction and effectiveness of fiscal policy.

The basic theoretical framework for understanding this relationship is provided by Alesina and Tabellini (1990), who argue that in a polarised environment, policymakers strategically utilise state debt. If ruling politicians face a high probability of being replaced in the following period by an opponent with different preferences, they tend to increase current spending and accumulate debt to limit the manoeuvring space of their successors. This concept of strategic debt is also confirmed by Persson and Svensson (1989) and Lee (2022), who demonstrate, using panel data from a sample of OECD countries between 1962 and 2015, that an increase in political polarisation statistically significantly raises the level of public debt.

Another dimension of polarisation is the so-called "gridlock" or decision-making stalemate. Greiner (2007), in a study on the European Union, emphasises that increased polarisation weakens the government's ability to make coherent fiscal decisions. At the moment when a rapid response to an economic shock is required, polarised government systems struggle to reach consensus. This phenomenon is particularly visible during periods of economic turbulence, when the necessity of austerity measures comes into direct conflict with populist demands, leading to fiscal imbalances and a deterioration in institutional quality (Economides et al., 2021; Rajaguru et al., 2021).

In addition to society-wide polarisation, the internal structure of government power, specifically the ideological range of coalition governments, plays a key role. This concept reflects the ideological distance between the parties that form the government majority.

Franchino (2024) introduces the term "executive fractionalisation" to describe the fragmentation of power within the government. Their research demonstrates that ideologically fragmented governments suffer from chronic delays in fiscal reforms. Each coalition partner tends to protect its departmental spending and satisfy its specific voter groups, leading to constant pressure to increase public expenditure (Grechyna, 2016; Vuković, 2017).

This phenomenon was already elaborated upon by Roubini and Sachs (1989), who found that shorter terms of office and fragmented party systems are directly correlated with higher deficits. In such systems, a "tragedy of the commons" often occurs, where each coalition party draws from the collective budget regardless of overall debt sustainability. Fedeli and Forte (2003) add that this problem is more pronounced in countries with proportional electoral systems, where the formation of broad, ideologically diverse coalitions is almost a necessity. Conversely, ideologically more cohesive coalitions can implement more consistent fiscal strategies and exhibit more stable debt levels (Melki & Pickering, 2021).

Although several sources (Alesina & Perotti, 1995; Greiner, 2007; Lee, 2022) confirm a positive correlation between polarisation and debt, some exceptions enrich the discussion. A study by Melki and Pickering (2021) brings an unconventional finding from a sample of OECD countries. The authors state that in certain contexts, polarisation can lead to lower debt. This occurs if voters are sensitive to short-term benefits and political parties are motivated to distinguish themselves through extreme responsibility in an effort to win over undecided voters.

This discrepancy in the literature highlights the need to distinguish between the polarisation of government elites and the polarisation of the electorate. While polarisation within the government generally leads to inefficiency and debt, polarisation among voters can, under certain institutional conditions, create pressure for more responsible fiscal management. This complexity underscores the necessity of a nuanced approach to researching the political determinants of public finance in contemporary democracies.

Summarising the results of scientific outputs, it can be concluded that while right-wing ideology and political continuity (Bonet-Morón et al., 2024) are associated with higher fiscal stability, high polarisation and a wide ideological range of coalitions, combined with weak institutions, represent a significant risk to the long-term sustainability of public finances.

Based on a review of the theoretical and empirical literature, several mechanisms can be identified through which political factors influence government fiscal behaviour. Previous studies suggest that political polarisation and the ideological fragmentation of coalitions play a significant role, especially in the long-term development of public finances. At the same time, their impact on short-term fiscal fluctuations is less clear.

The examined studies (Alesina & Tabellini, 1990; Roubini & Sachs, 1989; Greiner, 2007; Melki & Pickering, 2021; Lee, 2022) focus on the relationship between selected political variables and the level of public debt, which speaks to the long-term effects of political factors on national indebtedness. In the present study, we supplement this with a view on the influence of political variables on the year-on-year change in public debt.

Based on the theoretical and empirical literature discussed above, the present study focuses not only on political polarisation at the government level, but also on the internal ideological structure of coalition governments, particularly the ideological range of coalition parties and the degree of executive fragmentation. Previous studies suggest that ideologically fragmented governments may struggle to implement consistent fiscal policies due to competing spending priorities among coalition partners. At the same time, the empirical evidence remains mixed, especially regarding the distinction between short-term debt dynamics and long-term public debt accumulation.

Building on these theoretical arguments and empirical findings, the study formulates the following research hypotheses:

- H1a (short-term effect): Higher political polarisation of the government is associated with stronger short-term public debt dynamics.

- H1b (long-term effect): Higher political polarisation of the government is associated with a higher level of public debt as a percentage of GDP.
- H2a (short-term effect): The ideological range of the government coalition significantly affects short-term public debt dynamics.
- H2b (long-term effect): The ideological range of the government coalition significantly affects the level of public debt as a percentage of GDP.

3. Research objective and methodology

3.1 Main objective of the article and data sources

The main objective of the paper is to analyse the influence of political factors on the development of public debt in selected European Union countries, with an emphasis on distinguishing between short-term debt dynamics and the long-term level of public debt. In this context, two primary political variables are analysed: the political polarisation of the government coalition (*cab_wpolar*) and the ideological range of the governing parties (*cab_prefrange*).

Two alternative indicators of public debt dynamics are used as dependent variables in the analysis. The first is the year-on-year change in public debt (*Debt_change*), which captures short-term fiscal decisions and the government's reactions to economic conditions. The second is the level of public debt, expressed as a share of GDP, according to the Maastricht criteria (*Public_debt*), reflecting countries' long-term fiscal behaviour and the cumulative effect of political decisions.

The explanatory political variables used in this study are sourced from the REPDEM database, which provides comparable data on government composition, the ideological orientation of political parties, and characteristics of government coalitions in European countries (Hellström et al., 2025). The database is based on data from the Manifesto Project (Lehmann et al., 2025) and the Chapel Hill Expert Survey (Jolly et al., 2022), ensuring high comparability across countries and over time. The empirical analysis is based on panel data from European Union countries for the period 2002-2022. The time frame and the number of countries are determined by the availability of political variables, which are not systematically available beyond 2022. For this reason, 16 European Union countries were included in the analysis: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Latvia, the Netherlands, Poland, Portugal, Slovenia, Spain, and Sweden.

The variable *cab_wpolar* expresses the degree of ideological polarisation within the government coalition. It captures the extent to which individual coalition parties differ in their ideological positioning on the left-right axis. In accordance with the REPDEM database methodology, this variable is defined as the weighted standard deviation of the ideological positions of the parties forming the government, where the weights correspond to their share of government seats:

$$cab_wpolar_t = \sqrt{\sum_{i=1}^N w_{i,t} (p_{i,t} - \bar{p}_t)^2} \quad (1)$$

where:

- $p_{i,t}$ – the ideological position of party i in year t ;
- $w_{i,t}$ – the seat share of party i in the governing coalition;
- $\bar{p}_t = \sum w_{i,t} p_{i,t}$ – the weighted ideological mean of the cabinet.

Higher values of this variable indicate greater ideological fragmentation within the coalition and potentially higher costs of political coordination. This variable captures the ideological fragmentation within the government coalition rather than its specific ideological orientation.

The variable *cab_prefrange* expresses the ideological breadth of the governing coalition, specifically, the difference between the most left-wing and most right-wing parties in the government. Unlike the *cab_wpolar* variable, this metric does not account for the weight of individual parties; instead, it captures the range of the

ideological spectrum represented within the government. Higher values indicate a broader ideological scope for the coalition, which may signal potential programmatic conflicts, though not necessarily their intensity.

Control variables in the present study include the primary balance of public finances (Primary_balance), economic growth (GDP_growth), and interest rate (Interest_rate), which are commonly used macroeconomic and fiscal controls in the empirical literature on public debt dynamics. All data are sourced from the Eurostat database for the period 2002-2022.

3.2 Econometric specification and estimation

The empirical analysis employs two-way fixed effects (TWFE) panel models, incorporating both country- and year-fixed effects. This approach allows for controlling unobservable, time-invariant country characteristics as well as common temporal shocks affecting all countries simultaneously.

The research is based on two primary model specifications that differ in their use of political variables, with each tracking a distinct aspect of the political heterogeneity of government coalitions. The econometric analysis was conducted in Python using panel data estimation procedures.

Model 1 (Government political polarisation) includes government political polarisation (cab_wpolar) as the main explanatory variable, capturing the weighted ideological dispersion of coalition parties. This model tests whether ideologically dispersed and less coherent governments exhibit different fiscal outcomes.

Model 2 (Ideological heterogeneity - alternative operationalisation) replaces weighted polarisation with the variable cab_prefrange, which measures the range of parties' ideological positions within the coalition. The objective of this specification is to verify the robustness of the results against a different conceptualisation of political polarisation.

Both model types are estimated for two alternative dependent variables: the year-on-year change in public debt (Debt_change) and the level of public debt as a percentage of GDP (Public_debt).

The estimated model has the following structure:

$$Y_{it} = \beta_0 + \beta_1 \text{Political}_{it} + \beta_2 \text{GDP_growth}_{it} + \beta_3 \text{Primary_balance}_{it} + \beta_4 \text{Interest_rate}_{it} + \alpha_i + \lambda_t + \varepsilon_{it} \quad (2)$$

where:

i - country;

t - year;

Y_{it} - dependent variable; year-on-year change in public debt (Debt_change), or level of public debt as a percentage of GDP (Public_debt).

Political_{it} - political variable taking one of the following forms: cab_wpolar - weighted political polarisation of the government, cab_prefrange - ideological range of the governing coalition.

GDP_growth_{it} - annual GDP growth rate;

$\text{Primary_balance}_{it}$ - primary balance of public finances as a percentage of GDP;

$\text{Interest_rate}_{it}$ - long-term interest rate capturing the financial cost of public debt financing

α_i - country fixed effect;

λ_t - year fixed effect;

ε_{it} - random error term.

To mitigate simultaneity concerns and strengthen the temporal interpretation of relationships, the political variables and selected control variables are lagged by one year in the main specifications. This approach is consistent with the assumption that governments' political characteristics influence fiscal and macroeconomic outcomes with a lag. The use of lagged political variables also helps mitigate potential endogeneity concerns between political characteristics and fiscal outcomes. Consequently, three specifications were estimated for each dependent variable: a baseline model, a lagged specification, and a robustness specification including lagged public debt.

Before estimating the models, standard panel-data diagnostic tests were conducted (Table 1). The Hausman test systematically rejects the random effects specification in favour of fixed effects models, thereby justifying the use of two-way fixed effects that include both country and year effects. Further diagnostic tests confirm the presence of:

- Heteroscedasticity (Breusch-Pagan LM test),
- Serial correlation within panels (Wooldridge test),
- Cross-sectional dependence between countries (Pesaran CD test).

Table 1. Diagnostic tests for panel regressions

Dependent variable	Model	F-test pooled vs FE	Hausman FE vs RE	Breusch-Pagan LM	Wooldridge serial corr.	Pesaran CD
Debt change	Model 1 (wpolar)	1.116 (0.341)	12.568***	60.798***	-8.543***	4.124***
	Model 2 (prefrange)	1.084 (0.370)	12.592***	61.876***	-8.480***	7.059***
Public debt (% GDP)	Model 1 (wpolar)	1.132 (0.312)	18.447***	84.231***	-9.214***	6.982***
	Model 2 (prefrange)	1.107 (0.334)	17.992***	83.765***	-9.186***	7.214***

Notes: p-values for F-tests are reported in parentheses. Diagnostic tests were performed for the baseline specifications. Robustness models, including lagged public debt, yielded qualitatively similar diagnostic patterns and are therefore not reported for brevity. Breusch-Pagan LM tests indicate heteroskedasticity; Wooldridge tests indicate serial correlation; Pesaran CD tests indicate cross-sectional dependence. *** $p < 0.01$, ** $p < 0.05$.

Source: authors

For this reason, all models are estimated using robust standard errors that account for violations of classical regression assumptions. High R^2 values in models featuring the level of public debt are interpreted as reflecting strong debt persistence and the inclusion of fixed effects, rather than as a sign of model overfitting.

4. Results

4.2 Analysis of input political variables in relation to public debt

Before the econometric analysis, it is essential to examine the fundamental empirical characteristics of the relationship between the political variables and public debt (in both forms). The graphical analysis utilises scatter plots supplemented by non-linear smoothing curves (LOWESS), which allow for capturing the general nature of the relationship between variables without assuming linear dependence. This approach is particularly suitable in the context of political-economic relationships, where effects often manifest non-linearly and with significant heterogeneity across countries and time.

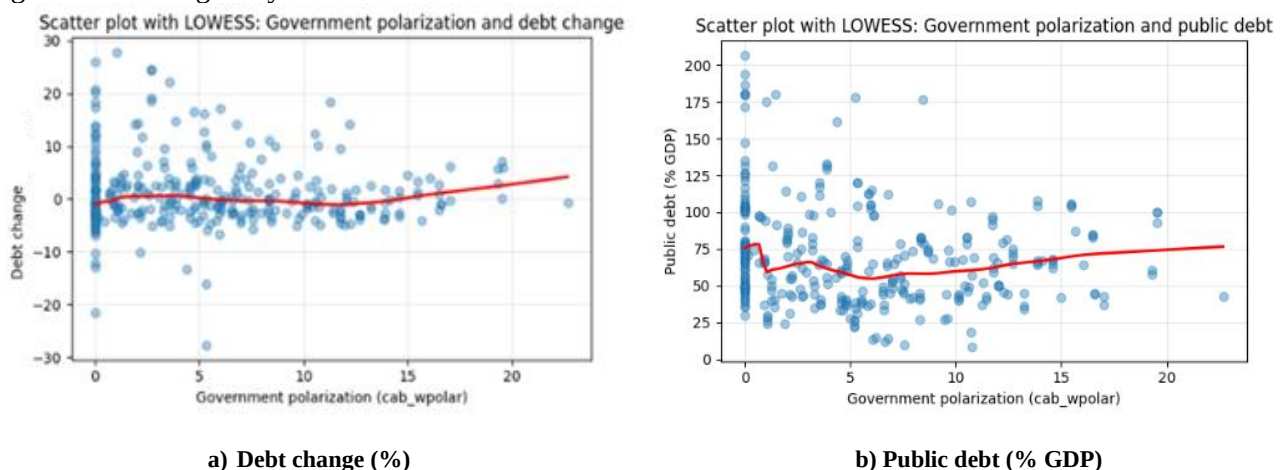


Figure 1. The relationship between government political polarisation (cab_wpolar) and fiscal indicators

Source: authors

Figures 1 a) and b) illustrate the relationship between government political polarisation (*cab_wpolar*) and selected fiscal indicators. As shown in these figures, the relationship between political polarisation and year-on-year changes in public debt appears relatively weak and partially non-linear. In contrast, a more visible positive association can be observed between government political polarisation and public debt levels. The graphical evidence therefore suggests that political polarisation may be more closely associated with the long-term accumulation of public debt than with short-term debt dynamics.

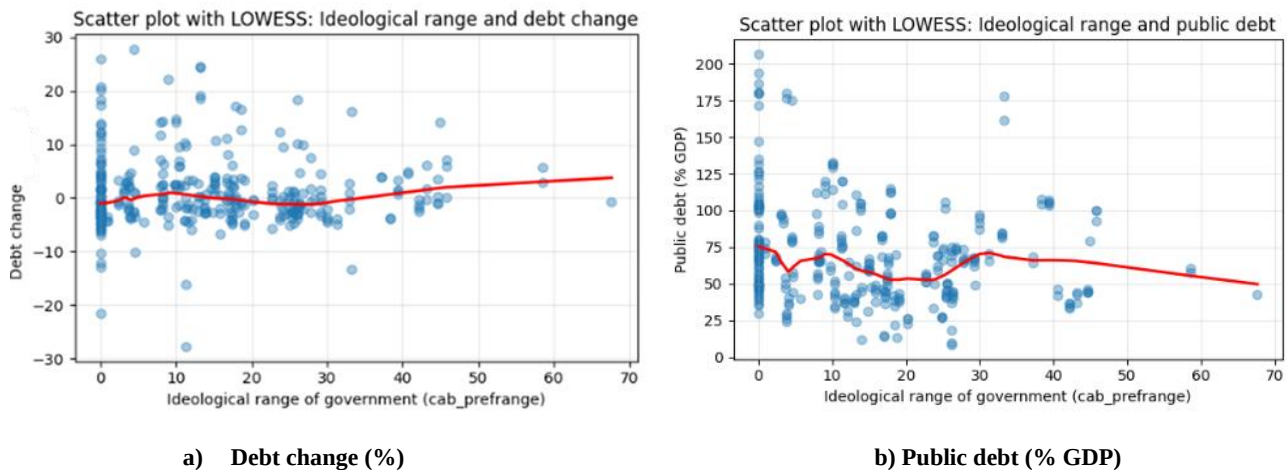


Figure 2. The relationship between the ideological range of the governing coalition (*cab_prefrange*) and fiscal indicators
Source: authors

Figures 2a) and 2b) show the relationship between the ideological range of the governing coalition (*cab_prefrange*) and selected fiscal indicators. While the relationship between the ideological range of coalition governments and year-on-year debt dynamics appears relatively weak and unstable, a slightly non-linear association can be observed in the case of the level of public debt. Overall, the graphical evidence does not indicate a clear positive relationship between broader ideological coalitions and higher public debt levels, suggesting that the fiscal effects of coalition heterogeneity may depend on additional institutional or macroeconomic factors.

4.2 Econometric analysis of the impact of political variables on short-term public debt dynamics

In the first phase, this study focuses on interpreting regression model results with the dependent variable year-on-year change in public debt (*Debt_change*). The objective is to identify the extent to which selected political factors influence the short-term dynamics of public indebtedness. All models are estimated using two-way fixed effects (country and year), with robust standard errors. The results are presented in three specifications: the baseline model, a lagged specification, and a robustness specification including lagged public debt.

Table 2 presents the results of the panel regression models. Estimates are provided for two alternative specifications of political variables: government political polarisation (*cab_wpolar*) and the ideological range of coalition parties (*cab_prefrange*).

The results across all specifications indicate that the political variables are not systematically associated with short-term changes in public debt. Although the coefficients for the *cab_wpolar* variable are negative across all estimated models, they are not statistically significant in either the baseline or the lagged specifications. These findings suggest that higher ideological polarisation within government coalitions is not associated with immediate changes in year-on-year public debt dynamics.

Table 2. Econometric analysis results for the dependent variable Debt_change

Variables	Model 1: Polarisation			Model 2: Ideological range		
	(1) Baseline	(2) Lagged	(3) Robustness	(1) Baseline	(2) Lagged	(3) Robustness
Public_debt (t-1)			-0.015** (0.007)			-0.014** (0.007)
Primary_balance	-0.786*** (0.133)			-0.790*** (0.130)		
Primary_balance (t-1)		-0.679*** (0.128)	-0.620*** (0.120)		-0.676*** (0.126)	-0.610*** (0.120)
cab_wpolar	-0.061 (0.075)					
cab_wpolar (t-1)		-0.053 (0.064)	-0.045 (0.060)			
cab_prefrange				-0.001 (0.016)		
cab_prefrange (t-1)					-0.005 (0.019)	-0.004 (0.018)
GDP_growth	-1.078*** (0.345)			-1.078*** (0.343)		
GDP_growth (t-1)		-1.207*** (0.325)	-1.100*** (0.300)		-1.202*** (0.327)	-1.080*** (0.300)
Interest_rate	-0.202 (0.362)	-0.486 (0.402)	-0.400 (0.350)	-0.345 (0.297)	-0.377 (0.312)	-0.350 (0.300)
Observations	336	320	320	336	320	320
Within R ²	0.173	0.163	0.200	0.173	0.162	0.190

Notes: Two-way fixed effects models (country and year). Robust standard errors in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.10.

Source: authors

A similar conclusion applies to the alternative measure of political heterogeneity, cab_prefrange. The ideological range of the governing coalition does not exhibit a statistically significant relationship with short-term debt dynamics, even in the lagged specifications. This suggests that the ideological diversity of coalition partners alone is not a decisive determinant of short-term fiscal developments.

From an economic perspective, the results indicate that short-term public debt dynamics are primarily driven by macroeconomic conditions and fiscal fundamentals rather than by the political composition of governments. At the same time, the robustness specifications, including lagged public debt, confirm the importance of debt persistence in explaining short-term debt developments. Consequently, the empirical findings do not provide support for hypotheses H1a and H2a.

4.3 Econometric analysis of the impact of political variables on the level of public debt

In this section, the analysis focuses on the relationship between the political characteristics of governments and the level of public debt expressed as a percentage of GDP. In contrast to the previous section, which examined short-term debt dynamics, the objective here is to identify factors associated with the long-term accumulation of public debt.

The empirical analysis is again conducted using panel regression models with country- and year-fixed effects. The results presented in Table 3 are reported for two alternative model specifications that differ in the operationalisation of political variables.

The regression results indicate that political factors are more strongly associated with the long-term level of public debt than with short-term fluctuations in public debt. In the case of government political polarisation (cab_wpolar), the baseline specification yields a positive, statistically significant coefficient, suggesting that ideologically fragmented governments are associated with higher public debt levels. This finding is consistent with theoretical arguments in political economy emphasising that politically polarised coalitions may face higher coordination costs and weaker incentives to maintain fiscal discipline.

Table 3. Econometric analysis results for the dependent variable Public_Debt

Variables	Model 1: Polarisation			Model 2: Ideological range		
	(1) Baseline	(2) Lagged	(3) Robustness	(1) Baseline	(2) Lagged	(3) Robustness
Public_debt (t-1)			0.91*** (0.02)			0.91*** (0.02)
Primary_balance	-0.029 (0.023)			-0.010 (0.023)		
Primary_balance (t-1)		-0.804*** (0.023)	-0.42*** (0.04)		-0.806*** (0.024)	-0.43*** (0.04)
cab_wpolar	0.056*** (0.016)					
cab_wpolar (t-1)		0.018 (0.016)	0.015* (0.009)			
cab_prefrange				-0.016*** (0.006)		
cab_prefrange (t-1)					-0.000 (0.006)	-0.010** (0.005)
GDP_growth (t-1)	-0.313*** (0.028)	-0.148*** (0.028)	-0.07*** (0.02)	-0.357*** (0.028)	-0.150*** (0.028)	-0.08*** (0.02)
Interest_rate (t-1)	2.397*** (0.043)	2.468*** (0.043)	1.05*** (0.09)	2.374*** (0.043)	2.468*** (0.043)	1.03*** (0.09)
Observations	336	320	320	336	320	320
Within R ²	0.886	0.886	0.950	0.886	0.886	0.950

Notes: Two-way fixed effects models (country and year). Robust standard errors in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.10.

Source: authors

However, the relationship weakens in the lagged specification and remains only weakly statistically significant in the robustness model that includes lagged public debt. This suggests that the effect of political polarisation on long-term public debt accumulation is not fully stable across all estimated specifications. Therefore, the empirical findings provide only partial support for hypothesis H1b.

A different pattern emerges for the alternative measure of political heterogeneity, cab_prefrange. The baseline and robustness specifications indicate a negative, statistically significant relationship between the ideological range of coalition parties and public debt levels. In contrast, the lagged specification yields no statistically significant results. These findings suggest that broader ideological coalitions do not necessarily lead to higher public indebtedness. On the contrary, broader coalition structures may, under certain conditions, function as a mechanism of internal checks and balances, limiting excessive fiscal expansion by individual coalition members.

Consequently, the empirical results do not support hypothesis H2b, which posits a positive relationship between ideological range and public debt levels. Instead, the estimated models suggest a potentially stabilising role for broader coalition structures in the long-term development of public finances.

5. Discussion

Our results indicate that political variables are not systematically associated with short-term public debt dynamics, whereas their relationship with the long-term level of public debt appears more pronounced. This finding is broadly consistent with the existing political economy literature, which primarily examines the cumulative and long-term effects of political fragmentation on fiscal outcomes rather than immediate annual debt fluctuations. Previous studies by Alesina and Tabellini (1990), Roubini and Sachs (1989), Greiner (2007), and Lee (2022) mainly focus on the level of public debt or long-term fiscal imbalances. In contrast, evidence regarding short-term debt dynamics remains limited and less conclusive.

Regarding hypothesis H1b, the results provide partial support for the argument that greater political polarisation is associated with higher public debt levels. The positive, statistically significant coefficient of the cab_wpolar variable in the baseline specification is consistent with the strategic debt accumulation framework proposed by

Alesina and Tabellini (1990), according to which politically polarised governments may strategically use debt in anticipation of future political turnover. Similarly, Lee (2022) finds that higher polarisation is associated with increased public debt in OECD countries due to weaker political consensus and delayed fiscal consolidation. Our findings, therefore, support the broader argument that ideologically fragmented governments may face higher coordination costs and weaker incentives to maintain fiscal discipline.

At the same time, the weakening of the estimated effect in the lagged and robustness specifications suggests that the relationship between political polarisation and public debt is not fully stable across all model specifications. This implies that the impact of political polarisation may depend on additional institutional or macroeconomic factors not fully captured by the present analysis. In this respect, our findings are also compatible with studies emphasising that the fiscal consequences of polarisation vary across institutional environments and governance structures.

The results for the ideological range variable (*cab_prefrange*) differ from the traditional expectations derived from the common pool problem literature. While Roubini and Sachs (1989), Grechyna (2016), and Vuković (2017) argue that broad and ideologically fragmented coalitions tend to increase fiscal imbalances because coalition members protect their own spending priorities, our findings point to a different mechanism. The negative coefficients for *cab_prefrange* in the baseline and robustness specifications suggest that broader ideological coalitions may, under certain conditions, contribute to lower levels of public debt.

One possible explanation is that ideologically diverse coalitions create stronger internal constraints on fiscal expansion. In such governments, coalition partners may mutually limit each other's spending demands, reducing the likelihood of unilateral fiscal expansion by individual parties. In this sense, ideological diversity may partially function as an internal system of checks and balances. This interpretation is closer to the arguments presented by Melki and Pickering (2021), who suggest that polarisation does not necessarily lead to fiscally irresponsible outcomes across all institutional contexts.

The findings also underline the importance of institutional quality in shaping the relationship between political fragmentation and fiscal outcomes. Previous studies (e.g., Calderón et al., 2012; Malik et al., 2022) emphasise that strong fiscal institutions, fiscal rules, and independent fiscal councils can mitigate the adverse fiscal consequences of political polarisation. Although institutional interactions are not explicitly modelled in this study, the mixed and partially unstable effects of political variables observed in our models indirectly support the argument that institutional settings likely moderate the fiscal consequences of political fragmentation.

From a policy perspective, the results suggest that strengthening fiscal institutions may be more important for long-term fiscal sustainability than limiting political diversity within coalition governments. Since coalition fragmentation is a common feature of many parliamentary democracies, especially within the European Union, the effectiveness of fiscal governance may depend less on the existence of political diversity itself and more on the institutional capacity to maintain fiscal discipline under politically heterogeneous governments.

Overall, the present study contributes to the existing literature by distinguishing between short-term debt dynamics and the long-term accumulation of public debt. While previous studies primarily focused on the level of indebtedness, our analysis additionally demonstrates that political fragmentation does not appear to exert a statistically significant influence on year-on-year debt fluctuations. The findings therefore suggest that political factors shape public finances mainly through gradual and cumulative long-term fiscal mechanisms rather than through immediate annual debt changes.

Conclusions

The objective of this study was to examine the relationship between the political characteristics of governments and the development of public debt in selected European Union countries, with particular emphasis on distinguishing between short-term debt dynamics and the long-term level of public debt. Using panel regression models with country- and year-fixed effects, the analysis focused on two dimensions of political fragmentation:

government political polarisation (cab_wpolar) and the ideological range of coalition governments (cab_prefrange).

The empirical findings indicate that political variables are more closely associated with the long-term level of public debt than with short-term annual fluctuations in debt. While no statistically significant effects were identified in the models explaining year-on-year changes in public debt, several specifications suggest that political fragmentation may influence the long-term accumulation of debt. In particular, government political polarisation was positively associated with public debt in the baseline specification, whereas broader ideological coalitions were in some cases associated with lower debt levels. These findings suggest that different dimensions of political fragmentation may affect fiscal outcomes through different mechanisms.

The study contributes to the political economy literature by distinguishing between short-term and long-term fiscal effects of political fragmentation. In contrast to much of the previous literature, which has focused primarily on debt levels, the present analysis also demonstrates that political variables do not appear to systematically influence immediate annual debt developments. This distinction may help improve the understanding of how political structures influence fiscal sustainability over time.

Several limitations of the study should nevertheless be acknowledged. First, the analysis relies on annual political data, which do not fully capture short-term political instability, intra-year coalition changes, or temporary government crises. Second, the selected indicators of political fragmentation simplify inherently complex political processes and cannot fully reflect the quality of coalition cooperation, bargaining dynamics, or institutional interactions within governments. Third, although lagged specifications help mitigate simultaneity concerns, the estimated relationships may still be influenced by unobserved institutional or country-specific factors that are difficult to quantify in cross-country panel data analysis.

Future research could therefore expand the analysis by incorporating alternative indicators of political fragmentation, measures of institutional quality, or variables reflecting fiscal governance and legislative effectiveness. Additional attention could also be devoted to differences across political systems, electoral frameworks, or economic cycles. A promising direction for future research is to examine whether strong fiscal institutions and fiscal rules moderate the relationship between political fragmentation and long-term public debt accumulation.

Overall, the findings suggest that the political composition and internal coherence of governments remain relevant factors in understanding the long-term sustainability of public finances in European Union countries.

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