

National elections and sub-national electoral cycles: Do strong fiscal rules matter in Europe?

Antonia Lopez Villavicencio

Hugo Oriola

2025-15 Document de Travail/ Working Paper

EconomiX - UMR 7235 Bâtiment Maurice Allais
Université Paris Nanterre 200, Avenue de la République
92001 Nanterre Cedex

Site Web : economix.fr
Contact : secreteriat@economix.fr
Twitter : @EconomixU



National elections and sub-national electoral cycles: Do strong fiscal rules matter in Europe?

Antonia López-Villavicencio^a, Hugo Oriola^a

^a*EconomiX and University of Paris Nanterre. 200, Avenue de la Republique, 92001 Nanterre cedex, France.*

Abstract

This paper investigates Political Business Cycles during national elections across European Union countries and their subnational regions from 1995 to 2022, with a focus on the role of national and supranational fiscal rules. We find robust evidence that national elections are associated with increased regional public spending and reduced income and wealth tax rates. While strong fiscal rules tend to constrain or have limited effect on spending-related PBCs, they simultaneously incentivize tax-based fiscal manipulation, indicating a shift in electoral strategies from expenditure to taxation. This pattern holds across most European countries at both national and regional levels, with variations depending on specific electoral and political systems. We also show that right-wing incumbents engage in both public spending and tax-based opportunistic PBCs, while left-wing incumbents primarily focus on tax-based manipulations. Furthermore, newly elected left-wing incumbents pursue fiscal conservatism, whereas right-wing incumbents typically maintain the fiscal *status quo*.

Keywords: Elections; Fiscal rules; Political business cycle; National and regional politics; European Union.

JEL Classification: D72; E62; H30; H71; H72; O52.

*Corresponding author: Antonia López-Villavicencio. University of Paris Nanterre. 200, Avenue de la Republique, 92001 Nanterre cedex, France. Email: alopezvi@parisnanterre.fr.

1. Introduction

Elections often influence fiscal outcomes, as governments adjust public expenditure and taxation to garner electoral support – a phenomenon widely recognized as Political Budget Cycles (PBCs). Fiscal rules, which impose legal constraints on policymakers, serve multiple purposes, such as promoting fiscal discipline, ensuring sustainability, and, in some cases, curbing electoral fiscal manipulation.

Defined as numerical constraints on fiscal policy, the adoption of fiscal rules has expanded globally, with more than 100 countries implementing measures by 2021, compared to just 20 in 1995 (IMF). The average number of fiscal rules per country also increased, rising from approximately two in the early 2000s to three by 2021, with advanced economies averaging more than 3.5 fiscal rules (IMF).¹ Within the European Union (EU), fiscal rules operate at multiple levels: sub-national, national and supranational. The Stability and Growth Pact (SGP) serves as a cornerstone of EU fiscal governance, setting limits on government deficits and debt ratios.² In addition to the SGP, member states have implemented national fiscal rules to regulate their own public finances at both the sub-national and national levels.

Despite the existence of fiscal rules in all EU countries, ongoing debates about the optimal framework persist, with frequent discussions on their enforcement and the overall quality of fiscal governance. Indeed, fiscal policies in the EU have come under intense scrutiny since the sovereign debt crisis and the COVID-19 pandemic, both of which profoundly altered public spending and debt trajectories. In response to the pandemic, EU member states adopted expansive fiscal measures, leading to a sharp increase in government spending, from an average of 47% of GDP in 2019 to 53% in 2020, before stabilizing at approximately 49% in 2023 (Eurostat).³ Public debt levels followed a similar trajectory, rising from 79% of GDP in 2019 to 91% in 2020, then easing slightly to 82% in 2023 (European Commission).⁴ These extraordinary fiscal interventions, facilitated by the temporary suspension of supranational fiscal rules, have rekindled discussions on fiscal governance and sustainability across the EU.

With the reinstatement of supranational fiscal rules in 2024, tensions over compliance and enforcement have grown. In June 2024, the European Commission issued formal reprimands to seven member states for breaching EU debt regulations, highlighting the growing pressure on national fiscal policies. These tensions have led to significant economic and political repercussions

¹These figures are drawn from the International Monetary Fund's Fiscal Rules dataset.

²The SGP aims to ensure EU countries maintain sound public finances and coordinate their fiscal policies. It introduced three key fiscal rules: capping general government deficits at 3% of GDP, keeping gross public debt below 60% of GDP, and limiting structural budget deficits to 0.5% of GDP. Reforms in 2005 and 2011 enhanced these rules by incorporating cyclically adjusted budget balances and clearer debt-reduction trajectories (see Larch et al., 2023).

³Figures represent total general government spending as a percentage of GDP based on the European System of Accounts 2010 (ESA 2010).

⁴Figures represent general government consolidated gross debt, based on ESA 2010 and provided by the Annual Macro-Economic (AMECO) database.

at the national level. In late 2024, Germany disagreements over the potential easing of the German *schuldenbremse* (debt brake) led to a political crisis within the ruling coalition.⁵ At the same time, France faced a significant budgetary crisis in the aftermath of snap elections held in June and July of the same year.⁶

The claim that fiscal rules constrain political budget cycles is recurrent in the literature. In the context of European countries, several case studies provide supporting evidence. For instance, Germany's introduction of the *schuldenbremse* in 2009 is frequently highlighted as a successful measure for fostering fiscal discipline.⁷ Evidence suggests that this rule reduced discretionary fiscal expansions during election years, limiting politicians' ability to engage in opportunistic spending. Similarly, Sweden adopted stringent fiscal rules in the 1990s following a financial crisis, including surplus targets and an expenditure ceiling. These measures have significantly reduced fiscal manipulation, even in election years, by compelling policymakers to reconcile short-term electoral motives with long-term fiscal objectives. At the supranational level, countries such as Ireland, which came under heightened scrutiny in the aftermath of the financial crisis, have exhibited diminished electoral spending cycles, driven by external pressures to adhere to fiscal rules established by the SGP.

However, a broader examination reveals that fiscal rules do not consistently constrain political budget cycles. For instance, despite operating under the SGP framework, Italy has faced persistent challenges in curbing opportunistic fiscal behavior. Election years in Italy have frequently been characterized by increased public spending and tax cuts, as domestic political pressures have overshadowed compliance with EU rules. Similarly, prior to the 2008 financial crisis, Greece, although subject to EU fiscal rules, repeatedly engaged in election-driven fiscal manipulation. France presents a comparable case, where fiscal discipline has been notably relaxed during election periods, even under the formal constraints imposed by the SGP.

The preceding examples show that EU-level fiscal rules may help curb political manipulation in fiscal policies at both the national and subnational regional levels, thereby reducing political cycles (Rose, 2006; Gootjes et al., 2021). However, these rules fall short of fully eliminating such practices (Efthyvoulou, 2012). The persistence of PBCs underscores that weak enforcement mechanisms, a lack of transparency and design loopholes have undermined their effectiveness.

Furthermore, the quality and strength of fiscal rules varies significantly across EU countries, and this variation can be a critical determinant of the extent and nature of PBCs. A key contribution of this study is its emphasis on the strength and enforcement of fiscal rules, rather than merely their existence. This distinction is crucial because, while the widespread adoption of fiscal rules is

⁵See Bertrand, B., "Germany's Fractious Government Collapses", November 6, 2024 - Wall Street Journal. <https://www.wsj.com>.

⁶See Darame, M. and Segauines, N., "'We spent a lot.' How two years of denial led to France's budget crisis", October 17, 2024 - Le Monde. <https://www.lemonde.fr/en>.

⁷This constitutional rule caps structural deficits at 0.35% of GDP for the federal government and requires balanced budgets for *länder* governments.

well documented, their effectiveness relies heavily on consistent adherence and robust institutional mechanisms to enforce compliance at all levels.

In this paper, we provide the most comprehensive evidence to date on electoral cycles in government spending and taxation for EU countries and subnational regions. This evidence is established based on detailed regional data classified under the Nomenclature of Territorial Units for Statistics (NUTS) framework. The granularity of this data enables an in-depth analysis of regional effects of national elections in the presence of fiscal rules, an under-explored topic in fiscal policy research. Even if regional governments frequently operate under the constraints of regional, national or supranational fiscal regulations, the NUTS divisions reveal significant disparities in fiscal policies and objectives, and varying fiscal adjustments during election periods.⁸ This notable cross-country and cross-region variance aligns with or diverge from traditional PBC theories. We exploit this within-country and within-region variations on a broad scale, providing a rich understanding of how national electoral dynamics influence sub-national fiscal behavior.

Some studies specifically focus on a naive definition of PBCs, examining the impact of elections on government spending and tax revenues at the national level. However, electoral cycles are highly heterogeneous in different political contexts, shaping differently regional economic behaviors during election years. Our study contributes to the literature by proposing a “mixed” approach to PBCs, recognizing that both opportunistic and partisan dynamics can coexist. Opportunistic PBCs, where policymakers manipulate fiscal policies to maximize electoral support, may operate alongside partisan PBCs, which reflects ideological priorities of newly elected politicians. This dual approach provides a more comprehensive understanding of how political factors influence fiscal behavior, particularly in regions with varying levels of fiscal autonomy and electoral characteristics, yet subject to common fiscal rules.

Our paper also explores the implementation of PBCs in two different regional fiscal instruments: public spending and taxation. By doing so, we shed light on how incumbents design regional political cycles and the potential strategic use of these two instruments.

Finally, our approach addresses a critical issue: the potential endogeneity between fiscal rules and fiscal outcomes. In fact, stricter fiscal rules may coincide with distinct fiscal pressures, which complicate causal interpretations (Gootjes et al., 2021). Moreover, a stricter fiscal rule does not imply a better fiscal situation, implying a subtle interaction (Blanchard et al., 2021). We rely on diffusion arguments to instrumentalize for the strength of fiscal rules.

Our findings confirm the existence and persistence of PBCs in regional fiscal policies within EU countries. In particular, while regional elections can influence regional spending, national elections have a broader and more systematic impact. Notably, our analysis shows that strong fiscal

⁸For example, taxes collected at the NUTS 2 level in the EU in 2021 range from 47.1 million euros in Mayotte (NUTS 2 code: FRY5) to 71 915 million euros in Île de France (NUTS 2 code: FR10), reflecting current taxes on income and wealth based on ESA 2010, provided by the [AMECO database](#).

rules may restrain spending-related cycles, prompting governments to shift their focus toward tax reductions instead. This pattern is evident at both national and regional levels, albeit with varying intensity. However, even with strong fiscal rules in place, which have contributed to greater uniformity among countries and regions, notable PBCs persist at both levels.

We also present evidence that the opportunistic motive plays a significant role in the presence of PBCs. In the case of the pre-electoral phase of PBCs, the shift from public spending to tax rate manipulation is more pronounced when incumbents are running for reelection. This reallocation is particularly significant for left-wing incumbents, whereas their right-wing counterparts tend to prioritize public spending. However, while strong fiscal rules help limit opportunistic behavior, they fail to completely eliminate it.

Partisan PBCs are generally less pronounced than opportunistic PBCs, but their nature varies significantly depending on the incumbent's tenure and partisan orientation. Newly elected left-wing incumbents tend to display reversed PBCs characterized by fiscal conservatism aimed at strengthening their economic credibility and addressing reputational concerns. In contrast, right-wing incumbents typically defend the economic *status quo* minimizing significant post-electoral fiscal adjustments. However, under strong fiscal rules, left-wing incumbents are more likely to implement regional PBCs, which combine public spending increases with tax rate reductions.

The paper proceeds as follows. Section 2 presents the main literature. Section 3 describes our data-set. Section 4 outlines the methodology implemented. Section 5 displays our benchmark results at both the average and the regional level with a particular focus on Germany and France. Section 6 presents some extensions. Finally, Section 7 concludes.

2. Literature review

2.1. Political business/budget cycles

The study of PBCs has its roots in the work of [Schumpeter \(1939\)](#) and [Kalecki \(1943\)](#). The former defines the modern concept of economic cycles, whereas the latter attributes these cycles to political origins, *i.e.*, the balance of power between the interests of workers and companies. Modern perspectives on PBCs are categorized in two main approaches: opportunistic PBC ([Nordhaus, 1975](#)) and partisan PBC ([Hibbs, 1977](#)).

2.1.1. Opportunistic approach

In his seminal work, [Nordhaus \(1975\)](#) introduced a theoretical framework where election timing influences business cycles. Incumbents strategically use economic policy to foster favorable economic conditions before the election to secure reelection. This approach predicts a pre-electoral decrease in unemployment induced by increasing public spending or discretionary monetary policy. Assuming the Phillips curve holds, pre-electoral public spending will lead to higher post-electoral inflation, prompting policy adjustments. Successive elections lead to politically-induced business cycles, *i.e.*, PBCs. This opportunistic approach remains relevant in refined versions developed by

Rogoff and Sibert (1988) or Persson and Tabellini (1990). These authors argue that even rational voters cannot accurately assess candidates' competence. Incumbents exploit this information asymmetry to signal that they are more competent than their rivals. Rogoff and Sibert (1988) emphasizes an increase in public spending, while Persson and Tabellini (1990) highlight reduced unemployment as effective competence signals. Additionally, Rogoff (1990), among others, underlines that governments can use alternative instruments to implement an opportunistic PBC. At all levels of government, incumbents can cut taxes, raise transfers or distort government spending towards highly visible items. These so-called political budget cycles aim to foster favorable economic conditions to increase reelection probability using the same theoretical reasoning as opportunistic PBCs.⁹

The literature extensively examines opportunistic PBCs since the late 1970s, validating the relevance of PBC theory across various economic contexts (Tufte, 1978; Alesina et al., 1997; Mink and de Haan, 2006; Klomp and de Haan, 2013). However, sophisticated voters may punish incumbents for excessive pre-electoral public deficits (Brender and Drazen, 2008), especially in environments with high media freedom (Gootjes et al., 2021). Therefore, it is probable that opportunistic PBCs do not appear as clearly as the theory suggests. Additionally, it is highly probable that these opportunistic PBCs also depend on the incumbent partisanship. For instance, in the US, (Douglas et al., 2024) demonstrate that only democrat governors are implementing opportunistic PBCs, diminishing the tax rate at the local level.

In line with the literature on opportunistic PBCs, we consider in this paper that these cycles are more probable when the incumbent is running for its reelection. However, the strategic political use of fiscal policy is not straightforward and it is also possible to observe different outcomes motivated by different objectives like the will to limit social conflicts (Menuet et al., 2021).

2.1.2. *Partisan approach*

The partisan approach, originating with Hibbs (1977), posits that alternation between right-wing and left-wing incumbents triggers post-electoral PBCs. Typically, right-wing parties prioritize inflation control, whereas left-wing parties focus on reducing unemployment. Frequent changes in governing parties lead to post-electoral political cycles due to shifts in primary policy objectives, *i.e.* partisan PBCs. Similar to the opportunistic approach, the partisan model holds under assumptions of rational voters. Chappell and Keech (1986) and Alesina (1987) argue that rational agents can be surprised in the short run by uncertain election outcomes. Voters form their inflation expectations as averages between expected outcomes under right-wing and left-wing victories. Consequently, a right-wing party's electoral victory may result in a lower-than-anticipated inflation rate, aligning with its inflation-focused electorate. Conversely, a left-wing victory may lead to higher inflation rates than expected, prioritizing unemployment reduction for its electorate.

⁹Throughout the paper, we employ the generic term PBC as a reference to both political business cycles and political budget cycles. More precisely, we consider that a political budget cycle can be considered as a political business cycle specifically targeting public spending and its composition.

The partisan approach has been extensively studied in the literature, with numerous studies underlining its relevance (Alesina, 1988; Hibbs, 1994; Franzese, 2002; Berlemann and Markwardt, 2007; Stone and Jacobs, 2020), especially in countries where political polarization is high (Azzimonti and Talbert, 2014). However, recent works suggest that political polarization is decreasing, particularly in periods of economic recession, which may mitigate partisan PBCs (Potrafke, 2017; Raess, 2021).

According to the theory, we consider these cycles as more probable when the incumbent is not reelected after the election. However, more complex mechanisms can involve different outcomes. For instance, Klein and Sakurai (2015) demonstrate that Brazilian mayors implement significantly different fiscal policies between their first and their second mandate. More broadly, term limits significantly influence the economic policies implemented during an incumbent's final term, often with the aim of constraining the policies of their successor (Persson and Svensson, 1989; Milesi-Ferretti and Spolaore, 1994).

2.2. Fiscal rules

Since the 1970s, many countries have experienced a persistent fiscal deficit bias. This refers to the tendency of incumbent governments to increase fiscal deficits during their tenure due to time inconsistency (Buchanan and Tullock, 1962; Diamond, 1965) and the perception of public deficits and debt as common-pool resources (von Hagen and Harden, 1995). As a result, governments often adopt a short-term perspective, prioritizing immediate gains while neglecting the potential long-term negative consequences. This bias can be reinforced by political parameters such as the desire of incumbents to ensure reelection (Alesina and Drazen, 1991), the fragmentation level of government coalitions (Fabrizio and Mody, 2006) and political instability (Debrun and Kumar, 2007), which could lead to the implementation of a PBC. Fiscal rules, *i.e.*, long-lasting constraint on fiscal policy through numerical limits on budgetary aggregates, emerged as a practical policy tool designed to limit fiscal deficit bias.

A growing number of countries have adopted fiscal rules on sub-national, national and supra-national scales with the idea that they help ensuring sound fiscal environments. According to the literature, fiscal rules tend to increase fiscal performance (Caselli and Reynaud, 2020) and fiscal credibility (Picchio and Santolini, 2020), while reducing public debt (Azzimonti et al., 2016), the likelihood of sovereign debt crises (Asatryan et al., 2018), inflation rates (Combes et al., 2018), government financing costs (Thornton and Vasilakis, 2018) and public spending (López-Villavicencio and Zoumenou, 2025). However, these beneficial effects depend on several parameters, such as the number of political parties (Grembi et al., 2016), economic and institutional context (Reuter et al., 2022), and the level of fiscal transparency (Gootjes and de Haan, 2022).

More recently, the literature has highlighted potential negative side effects of adopting fiscal rules on prominent political factors. For instance, Combes et al. (2024) show that their adoption increases income inequality, and ideological proximity between parties, while decreasing social transfers and the level of education of candidates in local elections (Nerich and Reuter, 2015).

With these political consequences in mind, it is of high importance to study potential interactions between politics and fiscal rules.

2.3. *Fiscal rules, political cycles and elections*

Dubois (2016) underscores the crucial role of institutional constraints, particularly fiscal rules, in mitigating PBCs. By limiting discretionary fiscal policies, fiscal rules are supposed to reduce political manipulations of fiscal policy in line with Kydland and Prescott (1977). Empirical evidence supports this effect, as demonstrated by studies such as Rose (2006). However, the impact of fiscal rules on fiscal policy counter-cyclicality appears to vary depending on the type of rule and their flexibility (Guerguil et al., 2017), as well as the level of compliance to these rules (Larch et al., 2021). In practice, fiscal budget targets, delegation to a strong finance minister (Clark and Hallerberg, 2000), checks and balance (Chang, 2008), or transparency measures (Shelton, 2014) have shown effectiveness in mitigating PBCs.

Moreover, governments can strike a balance between constraining and flexible fiscal rules to implement their desired fiscal policy (Yared, 2019). While fiscal rules alone may not completely eliminate PCBs, recent empirical studies illustrate their dampening effect (e.g., Gootjes et al., 2021). Even though fiscal rules are intended to dampen PBCs, theoretical works demonstrate that governments can circumvent these rules and continue to use fiscal policy for political purposes. For example, Milesi-Ferretti (2004) shows how incumbents employ creative accounting practices to bypass constraining rules and maintain their ability to implement desired fiscal policies. Creative accounting has been observed in various context, including the EU (Alt et al., 2014).

These loopholes explain the persistence of PBCs within the EU. Studies such as Mink and de Haan (2006) show evidence that fiscal policies of 12 Euro area members still exhibit electoral cycles despite the adoption of the SGP. Similarly, Efthyvoulou (2012) finds more robust PBCs in Eurozone countries than in countries that have not yet adopted the euro. Additionally, De Jong and Gilbert (2020) propose that while the Excessive Deficit Procedure effectively constrains fiscal policy among European Economic and Monetary Union (EMU) members, it does not eliminate PBCs. Furthermore, Wallsten and Fogarty (2024) indicates that fiscal rules are more effective in European countries with majoritarian electoral systems.

2.4. *National elections and regional fiscal policies*

We have strong reasons to be concerned about the impact of national elections on regional spending and taxation. The interplay between national and regional governments often leads to strategic fiscal decisions, shaped by political incentives rather than purely economic efficiency.¹⁰

¹⁰In the following paragraphs, we illustrate our claims with the implementation of political cycles through increased public spending as it is the most commonly studied fiscal instrument in this context. However, alternative fiscal policy instruments such as tax cuts could also be relevant in this framework.

First, in many countries, regional governments rely heavily on central government transfers to finance their budgets. National incumbents, seeking to sway voters, may manipulate these transfers to benefit politically strategic regions. This phenomenon is well-documented in political economy studies. For instance, [Veiga and Pinho \(2007\)](#) highlight that Portuguese municipalities receive more discretionary transfers from the central government during election years. This effect is amplified when regional leaders are politically aligned with the central government.

In addition to transfer manipulation, national incumbents may also allocate resources to specific regions based on electoral strategies, aiming to maximize their political gains. This is explainable by at least three different arguments. First, regions where elections are highly competitive tend to receive more resources, as suggested by the “swing voter” model ([Lindbeck and Weibull, 1987](#)). A good illustration of this point is observable in Spain where discretionary grants increase in politically contested regions during national election years ([Sollé-Ollé and Sorribas-Navarro, 2008](#)). Second, governments may increase spending in their stronghold regions to secure voter turnout and loyalty. In Germany, for instance, [Baskaran and Hessami \(2017\)](#) found that regions with strong political alignment with the ruling national government and high local popularity received higher transfers. Third, national incumbents who rely on regional political parties for parliamentary support may strategically allocate more funds to these regions to maintain political stability.

Third, even when regional governments have independent budgetary authority, national elections can influence their spending behavior through indirect mechanisms. Regional policymakers may anticipate national policy shifts following elections and adjust spending accordingly. For instance, [Rodden and Wibbels \(2010\)](#) analyzed seven federal countries and found that regions highly dependent on federal transfers often engage in preemptive fiscal expansions ahead of federal elections. Additionally, when regional and national governments are politically aligned, regional spending may be strategically increased to reinforce the national campaign.

Fourth, national governments can use creative accounting to increase public spending without immediate accountability, making fiscal manipulations less visible to the general public. This includes off-budget expenditures, reclassification of spending, and deferring liabilities to future budgets. [Alesina and Perotti \(1996\)](#) show that deficit concealment techniques are more prevalent in national election years, enabling governments to increase fiscal stimulus while avoiding perceptions of fiscal irresponsibility.

Finally beyond the direct mechanisms linking national elections to regional fiscal policies, several broader factors also highlight the pertinence of this relationship. Political decentralization plays a crucial role, as national governments in countries with strong regional parties may selectively devolve fiscal authority to specific regions, using it as a bargaining tool to secure electoral support. Similarly, voter expectations and policy signaling influence fiscal decisions, with national incumbents adjusting regional taxation and spending to project a commitment to broader economic priorities, either by emphasizing fiscal discipline to reassure markets or by adopting expansionary policies to attract key constituencies. Additionally, media and public perception shape how fiscal policies are interpreted by voters, with electoral cycles often leading to biased reporting that frames

government spending in a way that reinforces political narratives.

These factors demonstrate that national elections are not only about central government policies but also have significant ripple effects on regional fiscal governance. Empirical evidence from various political systems supports that nation that electoral incentives drive strategic fiscal behavior at multiple levels of government, underscoring the need for further scrutiny in policy analysis.

Consequently, studying the dampening effect of national fiscal rules on regional PBCs remains crucial, focusing particularly on the respect of national and supra-national fiscal rules and political environments.

3. Data and Descriptive statistics

In our analysis, we draw on a broad set of annual data for 25 European countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Portugal, Romania, Slovenia, Spain and Sweden.¹¹ We start our analysis in 1995 since most of the regional indicators are available starting from this year. We include data up to 2022 to capture the effects of compliance interruptions, especially during the Great Recession, the sovereign debt crisis and COVID-19 pandemic. We draw on different sources to construct economic, fiscal and election data. In the following, we describe these data.

3.1. Fiscal policy instruments and other data on economic conditions

The first set of information we use is the Annual Regional Database of the European Commission’s Directorate General for Regional and Urban Policy (ARDECO). From this source we obtained data for output (gross domestic product and gross value added), taxes, prices, and total population at the NUTS (Nomenclature of Territorial Units for Statistics) 2 level for the benchmark estimations and NUTS 3 level for additional analysis.¹² For the NUTS 2 classification, it allows us to analyze our countries subdivided into 237 “regions” out of the 267 available in this classification for our 25 countries.

PBCs generally refer to modifications of government spending and taxes, around electoral periods. For instance, opportunistic PBCs consider that public spending should increase and taxes decrease before an election in which the incumbent is running for its reelection. Therefore, we would like to use the final consumption spending of the general government (henceforth, government spending). To overcome the lack of this data at the regional level, we follow [Brueckner et al.](#)

¹¹Two countries were excluded from the dataset due to data unavailability: Malta and Slovakia. For the regional analysis, we also excluded some NUTS that have few observations.

¹²NUTS is a geocode standard for referencing the subdivisions of countries for statistical purposes. For most countries the respective NUTS level corresponds to a specific administrative division within the country. Specifically, the NUTS 2 classification splits European countries into regions inhabited by 800 000 to 3 000 000 persons and the NUTS 3 classification do the same for regions inhabited by 150 000 to 800 000 persons.

(2023) and Gabriel et al. (2023a,b) using regional gross value added (GVA) of the non-market sector as a proxy for government spending. The non-market sector consists of the following sub-sectors: “Public administration and defense”, “Education”, “Human health and social work”, “Arts, entertainment and recreation”, “Other service activities”, and “Activities of household and extra-territorial organizations and bodies”.¹³ Then, we express spending in nominal per capita terms using the regional population at the same level of aggregation provided by the ARDECO database. This allows us to calculate our variable *Growth spending* representing an approximation of the rate of regional public spending.

Taxes, in turn, correspond to current taxes on income and wealth, which include taxes on income and other current taxes. Taxes on income cover both taxes on individual or household income and taxes on the income or profits of corporations, and include taxes on holding gains. Similarly, we express tax rates in nominal per capita terms and compute its growth rate obtaining our variable *Growth tax rate*.

The rest of the economic variables are GDP growth (variable *Growth GDP*), the log of the level of real GDP per capita (variable *(log) GDP per capita*) and the growth rate of the GDP price index, *i.e.*, the inflation rate (variable *Inflation*). All of these variables are available at the regional level in the ARDECO database. Finally, we also use the general government gross debt variation expressed in percentage of GDP (variable *Gross Debt*) provided by the International Monetary Fund’s Global Debt Database (GDD). In Table 1, we present summary statistics on the main variables for our regional data.

3.2. Data on fiscal rules

In EMU countries, budgetary policies are subject to a common set of fiscal rules and country-specific arrangements despite fiscal policy remaining the responsibility of national governments. This compares with the early years of the EMU, when a large majority of rules constrained only a small fraction of the general government sector and were sometimes linked only to regional or municipal levels.

While only 11 countries adopted national fiscal rules in 2000 in the EU, this number increased to 17 by 2010, and by 2020, every European country had adopted national fiscal rules. A similar positive trend is observable for supranational fiscal rules, driven by the successive enlargement of the EU. Consequently, the average number of total fiscal rules per country among the 25 European countries considered increased from 2.44 in 2000 to 4.60 in 2010, and 6.72 in 2020.

Even if all EU countries have supranational and national fiscal rules, formal enforcement mechanisms and the monitoring of compliance with fiscal targets can vary between countries and periods.

¹³The value added of the first sub-sector, “Public administration and defense” is the value added of the general government. The next two sub-sectors, “Education” and “Human health and social work” are closely linked to the government in national accounts, while the last three linked only loosely. Brueckner et al. (2023) and Gabriel et al. (2023a) show that government spending in the national accounts is closely linked to the GVA of the non-market sector and demonstrate that the statistical properties of the two time series are very similar at the national level.

Table 1: Summary statistics at NUTS 2 level

Variable	Mean	Std. Dev.	Min.	Max.	N
Growth spending	0.041	0.06	-0.252	0.948	6 308
Growth tax	0.043	0.097	-0.996	0.844	6 308
(log) GDP per capita	9.973	0.637	7.845	11.662	6 308
Growth GDP	0.019	0.041	-0.308	0.686	6 308
Gross debt	73.236	34.695	3.765	212.449	6 308
Inflation	0.018	0.038	-0.266	0.519	6 308
FRSI	0.297	0.962	-1.04	2.722	6 308
Nat. Election	0.257	0.437	0	1	6 308
Reg. Election	0.216	0.412	0	1	6 308
Pre-Election	0.248	0.304	0	1	6 308
Post-Election	0.253	0.307	0	1	6 308
Pre-Election [run.]	0.184	0.283	0	1	6 308
Pre-Election [not run.]	0.064	0.189	0	0.946	6 308
Pre-Election [run.] R	0.1	0.225	0	1	6 308
Pre-Election [run.] L	0.067	0.193	0	0.949	6 308
Post-Election [cha.]	0.131	0.252	0	1	6 308
Post-Election [no cha.]	0.123	0.25	0	1	6 308
Post-Election [cha.] R	0.059	0.179	0	0.987	6 308
Post-Election [cha.] L	0.058	0.181	0	0.946	6 308

Note: As a reminder, the first three variables presented in the Table (*Growth spending*, *Growth tax rate* and *(log) GDP per capita*) are expressed as growth rates per capita and represent respectively the growth rate of regional public spending, tax level on income and GDP. *Growth GDP* represents the growth rate of nominal GDP, *Gross Debt* the variation of general government debt and *Inflation* the growth rate of the GDP price index. For more information on *FRSI*, the level of respect of fiscal rules, refer to [subsection 3.2](#) and for more information on our electoral measures (*Election*, *Pre-Election* and *Post-Election* and their different categorizations), refer to [subsection 3.3](#).

To analyze whether the domestic strength and quality of fiscal rules in place constrain PBCs we use data on national and supranational fiscal rules sourced from the Fiscal Rules Database, provided by the Directorate-General for Economic and Financial Affairs of the EU. This comprehensive data set documents domestic fiscal rules adopted since 1990 in EU countries. The FRSI measures the strength and quality of the fiscal rules (budget balance rule, debt rule, revenue rule, and spending rules), considering factors such as the presence of correction mechanisms for deviations and the level of flexibility inherent in the rule. More precisely, the FRSI is an average of individual scores for each fiscal rule based on criteria including: (i) legal basis, (ii) binding nature, (iii) compliance monitoring bodies and correction mechanisms, (iv) correction mechanisms, and (v) resilience to shocks. ¹⁴.

We use a national index of fiscal rule rather than regional indicators for several reasons. First, in EU countries, hierarchical fiscal constraints and central oversight mean that national fiscal rules set overall targets that constrain regional budgets. Even if regional governments have their own

¹⁴See the website of the [European Commission](#) for further details.

fiscal rules, they cannot override national regulations (*e.g.*, SGP).

Second, intergovernmental transfers and borrowing limits mean that regional governments often rely on national government transfers, which are subjects to national fiscal constraints. Additionally, national fiscal rules frequently restrict regional borrowing, limiting regional governments' ability to engage in election-driven spending manipulation, even if regional rules are more flexible.

Finally, political and institutional interactions reinforce adherence to national fiscal rules. Specifically, when the same party controls both national and regional governments, regional spending may still align with national fiscal policy and electoral strategies.

3.3. Electoral data

Traditionally, elections are analyzed using a simple dummy variable (*Nat. Election*), that equals 1 during an election year and 0 otherwise. However, using such a dummy variable can lead to significant model mis-specifications. Specifically, [Haynes and Stone \(1989\)](#) argue that such a variable does not capture nuances, especially when elections occur early or late in the year. For example, an election occurring in January 2017 would not adequately represent pre-electoral dynamics if the dummy is only active for that year. Similarly, post-electoral effects may be misinterpreted if elections occur late in the year.

To address these concerns, [Franzese \(2000\)](#) proposes an electoral index that accounts for the proportion of a given year falling within pre- or post-electoral periods, adjusted for election cycles of 12 months. In the case of a pre-electoral index, labeled *Pre-Election*, the index is computed as follows:

$$\text{Pre-Election}_{i,t} = \frac{(M - 1) + d/D}{12} \quad (1.a)$$

$$\text{Pre-Election}_{i,t-1} = \frac{12 - [(M - 1) + d/D]}{12} \quad (1.b)$$

for a given country i and year t , where M represents the month of the election, d denotes the exact day of the scrutiny, and D is the total number of days in month M .

As exemplified by [Oriola \(2023\)](#), an election that occurred on January 23, 2004, would result in an index value of 0.938 for 2003 and 0.062 for 2004, indicating that 93.8% of the one-year period before the election falls within 2003, while 6.2% falls within 2004. Similarly, a post-electoral index (*Post-Election*) is calculated by reversing this process.¹⁵ This approach distinguishes between the effects of an upcoming election (*Pre-Election*) and the aftermath of a recent one (*Post-Election*).

¹⁵For *Post-Election*, an election on January 23, 2004, would yield an index of 0.938 in 2004 and 0.062 in 2003.

Careful computation of these indexes is essential to avoid bias.¹⁶

Several considerations are necessary. First, for elections with multiple rounds, we use the exact day of the last round, as campaigns remain influential during inter-round periods. Second, in cases where multiple elections occur in the same year, only the last election in the year is considered.¹⁷ Third, if elections span consecutive years, the electoral index may exceed 1 as we would consider the sum of each election index. In such instances, the indexes take the value of 1, indicating that the entire year is within a pre-electoral or post-electoral period. Fourth, since our focus is on national elections, the type of election must align with the type of electoral regime: parliamentary or general elections for parliamentary regimes and presidential elections for presidential regimes.¹⁸ Finally, our analysis requires us to account for elections that fall outside our sample period. Specifically, a country holding an election in 2023 (1994) experiences a pre-electoral (post-electoral) period in 2022 (1995). Consequently, we include data on elections occurring outside our sample period, capturing the pre-electoral period for 2023 elections and the post-electoral period for 1994 elections.

Additionally, to ensure that our results are not biased by the coexistence of national and sub-national PBCs, we introduce an indicator variable (*Reg. Election*) capturing the occurrence of regional elections in a given region during a specific year. This control accounts for the possibility that regional fiscal policies might be influenced not only by national electoral considerations but also by regional political dynamics. The dummy variable is constructed using data provided by Schakel (2011, 2015, 2021). We updated this information with different sources. This issue is particularly relevant, as approximately 25% of our national election dummies take the value of 1 simultaneously with regional election dummies, highlighting the potential overlap between national and regional electoral cycles.

The precise election dates come from Oriola (2023), supplemented with additional data collection from the Database of Political Institutions (DPI) provided by Beck et al. (2001) and the work of Nohlen and Stöver (2010). Out of the 700 periods studied, we identify 181 national electoral periods, constituting approximately 26% of the dataset, representing an election every 4 years on average. This distribution is represented in Figure 1, which shows the annual count of national elections held within the sample.

Finally, we split elections into subcategories designed to investigate opportunistic and partisan PBCs specifically. First, to analyze opportunistic PBCs, we categorized elections based on whether the head of government participates in upcoming election. Incumbents not seeking reelection are unlikely to adjust economic policy before elections they are not contesting. Thus, we constructed

¹⁶For clarity, these electoral indexes are only computed for national elections (dummy variable *Nat. Election*), which is why we do not specify the nature of the election concerned.

¹⁷In our dataset, three countries are characterized by two elections within the same year: Bulgaria in 2021, Greece in 2012 and 2015 and Spain in 2019.

¹⁸However, in the case of Bulgaria and Estonia, which are classified as mixed regimes, parliamentary elections are considered based on DPI classification designation as “*Assembly-Elected President*” (Beck et al., 2001).

two variables: *Pre-Election [run.]* for elections where the incumbent is a candidate, and *Pre-Election [no run.]* for elections where the incumbent is not involved. These pre-electoral indexes are particularly well-suited for studying opportunistic PBCs. As theorized by Nordhaus (1975), opportunistic PBCs involve pre-electoral economic adjustments, such as reducing unemployment, to increase incumbent’s popularity. However, incumbents not running for reelection have little incentive to implement these policies.

For partisan PBCs, we categorized elections into two groups: those where the ideology of the incumbent remains unchanged after the election (variable *Post-Election [no cha.]*) and those where it changes (variable *Post-Election [cha.]*). These electoral indexes are particularly suited to study partisan PBCs because, as stated by Hibbs (1977), partisan PBCs arise when elections lead to shifts in the partisanship of the incumbent. Consequently, we expect partisan PBCs to be most pronounced when *Post-Election [cha.]* equals 1.

The distribution of national elections across subcategories is presented in Figure 1. The left-side figure categorizes electoral periods based on whether the incumbent is replaced (*New incumbent*, variable *Post-Election [cha.]*) or remains in power (*Same incumbent*, variable *Post-Election [no cha.]*). The right-side figure focuses on whether the incumbent is a candidate in the upcoming election (*Incumbent run.*, variable *Pre-Election [run.]*) or not (*Incumbent not run.*, variable *Pre-Election [not run.]*). These visualizations help to illustrate how electoral dynamics relate to changes in incumbency and candidate participation, key factors in understanding the opportunistic and partisan motivations that lead to the appearance of PBCs.

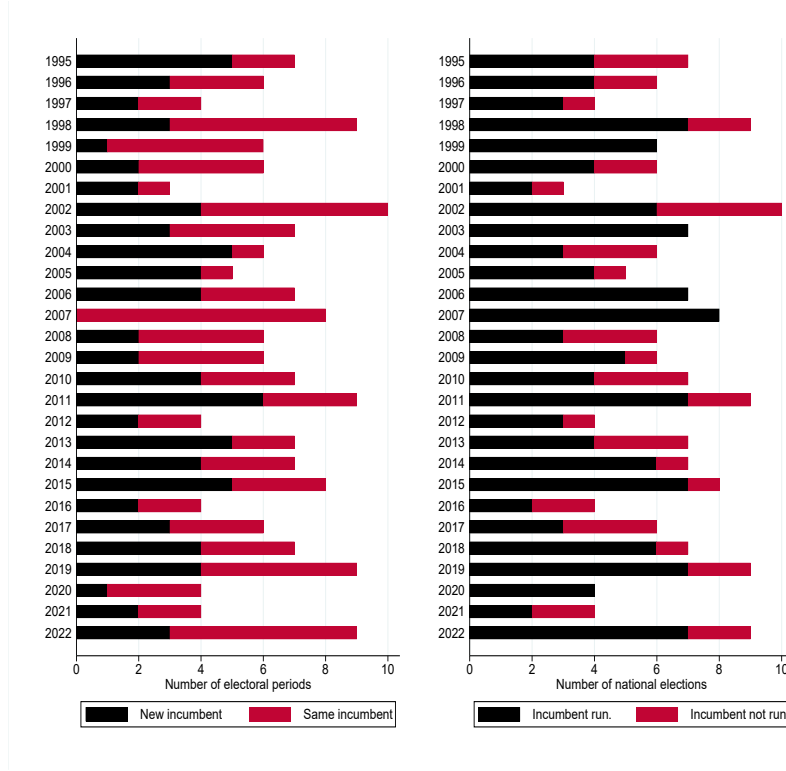
As a robustness check, we also consider a classification of our national elections according to the endogeneity of the electoral calendar. In parliamentary regimes, governments may strategically time elections – a concept known as political surfing (Inoguchi, 1981) – calling for early elections when their chances of reelection are highest. Additionally, periods of economic crisis may prompt incumbents to call early elections to mitigate potential electoral losses due to worsening economic conditions (Brender and Drazen, 2005). To address these dynamics, we created two dummy variables: *Nat. Election [exo.]* and *Nat. Election [end.]*. The former represents our electoral dummy for elections strictly scheduled according to electoral law, while the latter includes elections where timing may have been influenced by other factors.

3.4. Ideology of heads of government

To analyze our electoral results thoroughly, it is essential to gather additional information about the political context surrounding elections. For instance, a newly elected incumbent that shares the ideology of the previous one would not implement a significantly different economic policy, leading to an absence of partisan cycle. Moreover, significant differences between right-wing and left-wing incumbents may appear in terms of opportunistic behavior (Persson and Svensson, 1989; Milesi-Ferretti and Spolaore, 1994).

We collect most of the information on elections from the DPI (Beck et al., 2001). From this dataset, we extract data on political regime (variable *system*), election types (variables *legelec* and

Figure 1: Distribution of national election dummies



Note: The figure shows the distribution of our variable *Nat. Election* per year. On the left-side figure, *New incumbent* represents elections in which the incumbent is not reelected (variable *Nat. Election [cha.]* equals 1) and *Same incumbent* represents elections in which the incumbent is reelected (variable *Election [no cha.]* equals 1). On the right-side figure, *Incumbent run.* represents elections in which the incumbent is running for its reelection (variable *Nat. Election [run.]* equals 1) and *Incumbent not run.* represents elections in which the incumbent is not running (variable *Nat. Election [not run.]* equals 1).

exelec), and the ideology of the incumbent government (variable *execrlc*). When necessary, we adjusted and updated these variables to ensure their accuracy.

Subsequently, we compute our variable *Ideology* reflecting the ideology of the head of the government among 4 possibilities: right, center, left, and independent.¹⁹ Given that we have annual data, computing these variables can be complex. For clarity, we assign these variables to the head of government who held office for the longest duration within each year. We present information on the head of states in Table B1 in Appendix B with the official name of the position held by the head of government.

In many countries, the classification of the ideology of the government can be ambiguous, due to the frequent occurrence of coalition governments (Müller et al., 2016). To tackle this issue, we

¹⁹The independent category is not standard in the literature, but it is necessary in our case as a significant number of heads of government are not affiliated with any political party, particularly in Eastern European countries.

only consider the partisanship of heads of government to avoid complex measurement of right-left, right-center, or left-center coalitions. Partisanship details are presented in [Table B2](#) in [Appendix B](#).

Since our partisan classification differs from the DPI's, we provide a complete list of modifications to the World Bank classification in [Table B3](#) in [Appendix B](#).²⁰ Moreover, when the DPI has no information or the classification seemed puzzling, we used the database compiled by [Armingeon et al. \(2021\)](#) to complete our information.²¹

We present our classification of the ideology of heads of government for EU members in [Figure 2](#). Our data show a majority of right-wing head of governments (around 40%), followed by left-wing (around 35%), center (around 20%), and independent (around 5%).

While informative, we avoid directly using this classification in our estimates to reduce noise in the measure. Instead, we focus on the ideology of the head of government before and after the election to construct two ideology variables: *Pre-Ideology* and *Post-Ideology*. These variables are constructed based on the same classification as our main variable *Ideology* (i.e., right, center, left and independent) but are specifically tailored to capture the ideology of the incumbent head of government at the time of the election (*Pre-Ideology*) and the ideology of the newly elected head of government (*Post-Ideology*). This approach allows for a more precise measurement of the ideologies of heads of government directly involved in the election. However, we present the variable *Ideology* in [Figure 2](#) for clarity reasons.

4. Methodology

To further study the impact of fiscal rules strength on the implementation of PBCs, we closely follow the econometric specification proposed by [Gootjes et al. \(2021\)](#) and estimate the following equation:

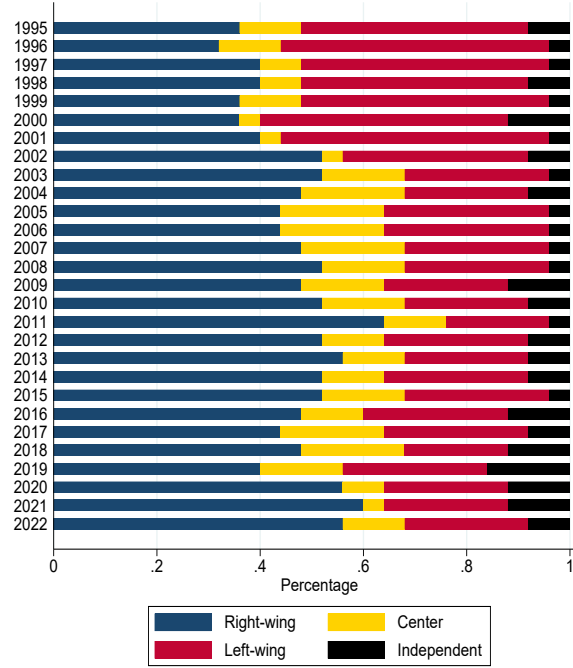
$$Y_{r,t} = \beta_1 Y_{r,t-1} + \beta_2 Y_{r,t-1}^{alt.} + \beta_3 Nat. Election_{i,t} + \beta_4 FRSI_{i,y} + \beta_5 FRSI_{i,t} \times Nat. Election_{i,t} + \beta_5 Reg. Election_{r,t} + \beta_6 X_{r,t} + \beta_7 Z_{i,t-1} + \gamma_t + \alpha_i + \varepsilon_{r,t} \quad (2)$$

where $Y_{r,t}$ is either the growth rate of government spending or taxes on income and wealth, both in per capita terms (*Growth spending* and *Growth tax rate*, respectively) for region r in year t . The

²⁰Specifically, when the DPI computes a value of "0", it indicates an absence of information, and when the DPI computes a value of "NA", it means that there is no executive power. By focusing on heads of government, we can provide a balanced measure for our variable *Ideology*, as an absence of executive power does not imply the absence of government.

²¹Specifically, two cases were problematic in terms of ideological classification: the *Liepāja Party* in Latvia and the *Freedom Movement* in Slovenia. For the first case, we considered this as a center party because it is part of the *Union of Greens and Farmers* at the national level, which is a center party. In the second case, our classification is based on several sources considering the party as a center party. Among others, the reader can refer to the [Foundation for European Progressive Studies](#) or the French journal [Le Monde](#).

Figure 2: Partisanship distribution of national heads of government



Note: The bars represent the distribution of heads of government based on their partisan affiliation. The “independent” category is included to account for the significant number of leaders who cannot be clearly classified within the traditional right-center-left spectrum.

one-year lag of the dependent variable accounts for path dependence, reflecting the tendency of governments to formulate multi-year budgetary plans for their anticipated terms in office or implement fiscal adjustments in response to budgetary pressures. $Y_{r,t-1}^{alt.}$ represent the lagged value of our other fiscal variable, (i.e., the estimation using $GrowthSpending_{r,t}$ as dependent variable include the lagged value of $Growth\ tax_{r,t}$ as a control variable and vice versa). $FRSI_{i,t}$ is the index of the quality and strength of the fiscal rule, $Nat.Election_{i,t}$ is one of our national electoral measures. $Reg.Election_{r,t}$ represents our regional election dummy, $X_{r,t}$ is a vector of control variable at regional level: the lagged log regional real GDP per capita ($(log)\ GDP\ per\ capita(t-1)$) and regional current inflation ($Inflation$).²² $Z_{i,t-1}$ is a vector of lagged control variable at the national level: the national growth rate of nominal GDP ($Growth\ GDP(t-1)$) and the national public-debt-to-GDP ratio ($Gross\ Debt(t-1)$) Finally, γ_t and α_i are time and regional fixed effects to account for general trends in fiscal variables across the EU countries and regions and $\varepsilon_{i,t}$ is the i.i.d. error term.

In this specification, the interaction term between $Nat.Election$ and $FRSI$ is expected to shed

²²In some countries where regional elections take place at the same time or close to national elections, one might suspect that the identified electoral effect is difficult to attribute solely to national elections. Thus, we add the date of the regional election to account for this effect.

light on the hypothesis that strong fiscal rules reduce PBCs. At the margin, the total effect of increasing the strength of fiscal rules can be calculated by examining the partial derivative of the fiscal variable with respect to the election variable as described in [Equation 3](#):

$$\frac{\partial Y_{r,t}}{\partial Election_{i,t}} = \beta_3 + \beta_5 FRSI_{i,t} \quad (3)$$

The coefficient β_3 represents the partial derivative of $Y_{r,t}$ with respect to $Election_{i,t}$ when $FRSI_{i,t} = 0$. In line with the literature on opportunistic PBCs, we expect β_3 to be positive and significant when considering public spending for the opportunistic PBCs and in the absence of fiscal rules. The interaction term ($FRSI_{i,t} \times Election_{i,t}$) is included to test the hypothesis that strong fiscal rules mitigate PBCs. This hypothesis implies that the marginal effect of $Election_{i,t}$ should become negative and significant at high levels of $FRSI$ in the case of an opportunistic PBC. To evaluate this, the partial derivative of $Y_{r,t}$ with respect to $Election_{i,t}$ is calculated at the maximum observed levels of $FRSI$ in the sample.²³ However, in the equation for taxes, the expected signs of the coefficients are reversed in the case of opportunistic PBCs.

In a partisan PBC, public spending is expected to decrease ($\beta_3 < 0$) under a newly elected right-wing head of government and increase ($\beta_3 > 0$) under a newly elected left-wing head of government. For taxes, these signs are expected to reverse.

An important concern is that fiscal rules are likely to be endogenous to government spending or taxation. This implies that the $FRSI$ index correlates with the error term in [Equation 2](#) leading to inconsistent estimates of the causal effect of fiscal rules on PBCs. In particular, reverse causality could arise, as higher fiscal deficits may prompt governments to implement stronger fiscal rules and conversely.

To address these endogeneity concerns, we adopt the diffusion argument proposed by [Caselli and Reynaud \(2020\)](#) and use the average $FRSI$ of economically similar countries within the EU as an instrument for domestic $FRSI$. We define three groups of countries based on comparable economic conditions.²⁴ When needed, this computation of $FRSI$ is referred to as $FRSI [instr.]$, otherwise, we consider that $FRSI$ refers to this instrumented version.

The diffusion argument assumes that the characteristics of fiscal rules in neighboring countries would positively influence the characteristic of the fiscal rules within the domestic country. The literature in social sciences explores mechanisms that might encourage countries to adopt reforms based on neighboring countries' adoption. These mechanisms can include peer pressure, peer learning, imitation effects to signal credibility to financial markets, and others (*e.g.*, [Simmons](#)

²³Standard error calculations are based on the “delta method”, an approximation suited to large samples.

²⁴The first group includes Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Luxembourg, the Netherlands, and Sweden. The second group comprises Bulgaria, Croatia, Cyprus, Czech Rep., Estonia, Hungary, Latvia, Lithuania, Poland, Romania, and Slovenia. The third group consists of Greece, Italy, Portugal, and Spain.

et al., 2007; Shipan and Volden, 2008 or Ardanaz et al., 2021).

Anecdotal evidence suggests that fiscal behavior is often influenced by the actions of neighboring nations. For instance, following the 2008 financial crisis, many Southern European countries, such as Italy, Greece, Portugal and Spain, faced scrutiny for their high debt levels and deficits. As Spain and Portugal adopted austerity measures to comply with the SGP, others in the region felt pressured to implement similar measures. This pressure stemmed from fears of isolation or exclusion from EU support mechanisms (López-Villavicencio and Zoumenou, 2025).

A similar pattern is evident in northern Europe, where Germany's strict adherence to fiscal rules has influenced other countries in the region. Germany's model of fiscal discipline inspired nations such as Austria, Finland and the Netherlands, to adopt equally stringent fiscal policies, creating a bloc of "fiscal hawks" within the EU.

In Eastern Europe, the early 2000s EU accession process prompted several countries to comply with EU fiscal rules to signal stability and readiness. For example, Poland implemented tighter fiscal measures to meet the accession criteria, prompting neighboring countries like Czechia and Slovakia to follow suit. This alignment was driven by both competition and a desire to avoid being left behind in the EU integration process.

Similarly, Nordic countries – Denmark, Finland, Norway and Sweden – have exhibited patterns of mutual fiscal influence. Despite not being part of the Euro-zone, Denmark and Sweden have often aligned their fiscal policies with Finland, an EU member. In the 1990s, Sweden's severe banking and fiscal crisis led to significant reforms, inspiring Norway and Denmark to adopt similar approaches to maintain fiscal performance comparable to their Nordic peers. This interdependence persists as these countries continue to coordinate their fiscal policies to maintain economic cohesion in the region.

We report the key estimated coefficients from the first-stage regressions of the instrumental variable models in Table A1 available in Appendix A. These estimates show that the strength and quality of domestic fiscal rules (*FRSI*) are significantly influenced by the average values observed in comparable countries within the region, reinforcing the validity of our instrumentation.

Our estimations are performed using a Two-Stage Least Squares (2SLS) estimator in which *FRSI* and *FRSI* \times *Election* are instrumented by the mean of fiscal rules strength across the three country groups presented above.

5. Benchmark results

In this section, we present and discuss our main empirical findings. First, we show the benchmark results which represent average electoral effects on a panel of NUTS 2 regions. Second, we mention some robustness checks performed on these baseline results. Third, we go one step further by exploiting the granularity of our dataset to explore the effects of fiscal rules on shaping PBCs

at the country and NUTS 1 levels. Finally, we estimate our main model using a panel of NUTS 2 data, focusing on Germany and France.

For clarity reasons, we discuss our results through different hypotheses concerning the expected outcomes.

5.1. A naive PBC in the presence of fiscal rules in Europe

Benchmark results focus on a naive definition of PBCs. We consider as a PBC any modification of public spending and tax levels during national electoral years, without explicit consideration of the motivations underlying these changes.

Under this naive definition of PBCs, we hypothesize that a high level of *FRSI* should mitigate electoral fluctuations in fiscal instruments. This mitigation occurs primarily through the promotion of sound fiscal policies and constraints on incumbent behavior. Based on this rationale, we propose the following two hypotheses:

Hypothesis 1.a (H1a): *Public spending and tax rates are significantly different in election years*

Hypothesis 1.b (H1b): *Naive PBCs are significantly reduced by strong fiscal rules, i.e., high *FRSI**

To test these hypotheses, we estimate the average impact of national elections on regional fiscal policy instruments in European regions, as specified in [Equation 2](#), using the *FRSI* variable as an instrument for fiscal rule strength (see [section 4](#)). The results of these estimations are reported in the first section of [Table 2](#). Furthermore, to assess the mitigating role of strong fiscal rules on PBCs, we estimate [Equation 3](#), focusing on the scenario where the *FRSI* variable reaches its panel maximum value. These findings underscore the potential dampening effect of strong fiscal rules on electoral fiscal manipulation and are presented in the bottom part of [Table 2](#).

In [Table 2](#), we present separate regression results for the two regional fiscal policy instruments: the growth rate of public spending per capita (*Growth spending*) and the growth rate of taxes on income and wealth per capita (*Growth tax rate*). Columns (2.1) and (2.3) include our baseline electoral measure, represented by a naive dummy variable (*Nat. Election*) that equals 1 during national election years and 0 otherwise. In columns (2) and (4), we extend the analysis by incorporating the interaction term between *Nat. Election* and our instrument of fiscal rule strength (*FRSI*).

H1a. Column (2.1) in [Table 2](#) shows that the estimated coefficient for *Nat. Election* is statistically significant at the 1% level, indicating a positive impact of national elections on regional public spending. This result supports the hypothesis, which asserts that regional fiscal policies are influenced by national elections. However, we fail to identify a significant and direct impact of national elections on regional tax rates on income and wealth. This is further supported by columns (2.2) and (2.4), which show a strongly significant coefficient of *Nat. Election* for public spending and an insignificant coefficient for tax rates. Together, these results confirm the existence

of a PBC in regional fiscal policy, characterized by an increased growth rate of regional public spending during national elections. Moreover, it aligns with the existing literature on PBCs in local fiscal policy. For example, evidence from Sweden and Finland demonstrates increased public employment at the local level in election years (Dahlberg and Mörk, 2011). Similarly, Kitsos and Proestakis (2021) show that Greek municipalities increase public spending prior to national elections, fueled by central government funding.

H1b. Examining our second hypothesis, the coefficients for *FRSI* are negative and insignificant in columns (2.1) to (2.4), highlighting an absence of direct effect of the strength of national fiscal rules on regional fiscal policies. However, the interaction terms between *FRSI* and *Nat .Election* are negative and significant at the 1% level in column (2.2). This indicates that strong national and supranational fiscal rules reduce the growth rate of regional public spending only in national election years. We interpret this result as a mitigation of regional PBCs due to spending constraints. Importantly, when fiscal rule strength reaches its observed maximum – such as in Bulgaria during the 2020–2022 period – the marginal effect of elections remains negative and significant, underscoring the restraining effect of stringent fiscal rules on electoral fiscal manipulations.

Interestingly, the interaction term between *Nat .Election* and *FRSI* for tax rates offers a different insight. The interaction term in column (2.4) is both significant and negative at the 1% level. Strong fiscal rules induce a reduction in the growth rate of regional tax rates during national election years. While stringent fiscal rules effectively curb spending manipulation, they encourage tax policy manipulation, with tax rate reductions becoming significant under strong fiscal rules. This finding is in line with research on Germany that identifies political cycles in local business tax policies, with rates reductions in election years followed by subsequent increases (Foremny and Riedel, 2014). A similar phenomenon is observed in Italian municipalities, where real estate tax rates decrease during election periods (Alesina and Paradisi, 2017). Moreover, this effect is more than twice as important at the highest level of *FRSI*, going from -0.016 to -0.039.

When tight rules restrict their ability to manipulate public spending, governments may pivot toward more politically expedient tools, such as tax reductions, which deliver immediate and visible benefits to voters. Additionally, because many fiscal rules focus primarily on expenditure ceilings rather than limiting revenue flexibility, governments often retain greater latitude to adjust tax policies. These factors suggest that stringent fiscal rules may redirect PBCs from spending to taxation. This reallocation effect is consistent with recent evidence on the political timing of tax reforms (Fuest et al., 2024; Rossel Flores et al., 2024), highlighting a form of “creative accounting” where fiscal constraints on spending lead to compensatory adjustments in tax policy.

5.2. A closer look at country and regional heterogeneity

The high granularity of our data allows for a detailed analysis of PBCs and the mitigating effect of national fiscal rules at both country and regional levels. We present the estimated average effects at the country level corresponding to the first part of Table 2 on the left-side of Figure 3. On the right-side of Figure 3, we display the estimated average effects calculated under the maximum

Table 2: Benchmark results: Naive PBC

	Government spending		Tax rate	
	(2.1)	(2.2)	(2.3)	(2.4)
Growth spending(t-1)	0.032 (0.020)	0.033* (0.020)	-0.158*** (0.042)	-0.156*** (0.042)
Growth tax(t-1)	-0.013 (0.009)	-0.012 (0.009)	-0.007 (0.025)	-0.005 (0.025)
Nat. Election	0.008*** (0.001)	0.010*** (0.002)	-0.003 (0.003)	0.002 (0.004)
Reg. Election	0.002** (0.001)	0.003** (0.001)	0.004 (0.003)	0.005* (0.003)
FRSI	-0.003 (0.005)	-0.002 (0.005)	-0.007 (0.011)	-0.004 (0.011)
Nat. Election \times FRSI		-0.006*** (0.001)		-0.015*** (0.003)
Regional controls				
(log) GDP per capita(t-1)	-0.015* (0.008)	-0.015* (0.008)	0.035 (0.026)	0.035 (0.025)
Inflation	0.302*** (0.038)	0.301*** (0.038)	0.297*** (0.062)	0.296*** (0.063)
National controls				
Growth GDP(t-1)	0.149*** (0.039)	0.154*** (0.039)	0.090** (0.045)	0.100** (0.046)
Gross debt(t-1)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000** (0.000)	-0.000** (0.000)
PBC with highest FRSI				
for Nat. Election		-0.007** (0.003)		-0.038*** (0.006)
Nbr. observations	6 078	6 078	6 072	6 072
K-P rk p-value	0.000	0.000	0.000	0.000
Hansen J statistic p-value	0.000	0.000	0.000	0.000

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Standard error (in parentheses) are robust. Estimations are performed with a two-stage least squares estimator with time fixed effects. *FRSI* and *Election \times FRSI* are instrumented by their mean across different country groups. PBC with highest fiscal rules corresponds to the sum of the coefficients of *Nat.Election* and *Nat.Election \times FRSI* evaluated at the sample maximum of the FRSI. Kleibergen-Paap (K-P) rk statistic is a test for weak identification of the instruments. Sargan-Hansen J statistic is a test for over-identification restriction.

national level of *FRSI*.²⁵ Following the same methodology, we estimate and present the average effects at the regional –NUTS 1– level in Figure B1. In these figures, darker colors represent stronger PBCs, *i.e.*, larger positive (negative) significant coefficients on the growth rate of public spending (tax rates).

²⁵Note that at the country level we consider each country's maximum *FRSI* value.

In both national and regional analyses, datasets are constructed using the NUTS 2 classification and subsequently aggregated to produce estimates at the NUTS 1 and country levels. However, some EU countries cannot be split into multiple NUTS 1 regions. This is the case of Croatia, Czech Rep., Denmark, Finland, Estonia, Ireland, Portugal and Slovenia. Furthermore, in some cases, there are insufficient observations at the NUTS 2 level to obtain robust estimates for some NUTS 1 regions. These regions appear in gray in the figures.²⁶

Overall, [Figure 3](#) supports *H1a* and evidences significant heterogeneity in fiscal policies during national election periods. Our results also confirm that strong fiscal rules generally mitigate election-driven public spending fluctuations, consistent with *H1b*. Nevertheless, PBCs continue to manifest in many European countries through tax reductions, particularly where fiscal rule strength is high.

Regarding public spending, the most pronounced national PBCs are observed in Poland, followed by Bulgaria, Croatia, Czech Rep. and Italy. In contrast, no significant PBCs are found in Belgium, France, Finland, Greece, or Romania. The rest of the countries exhibit moderate effects, with smaller yet significant coefficients aligning with hypothesis *H1a*. Under strong fiscal rules, most countries reduce electoral fluctuations in public spending, supporting *H1b*. Surprisingly, three countries show higher PBCs in public spending under strong fiscal rules: Belgium, Greece, and Spain.

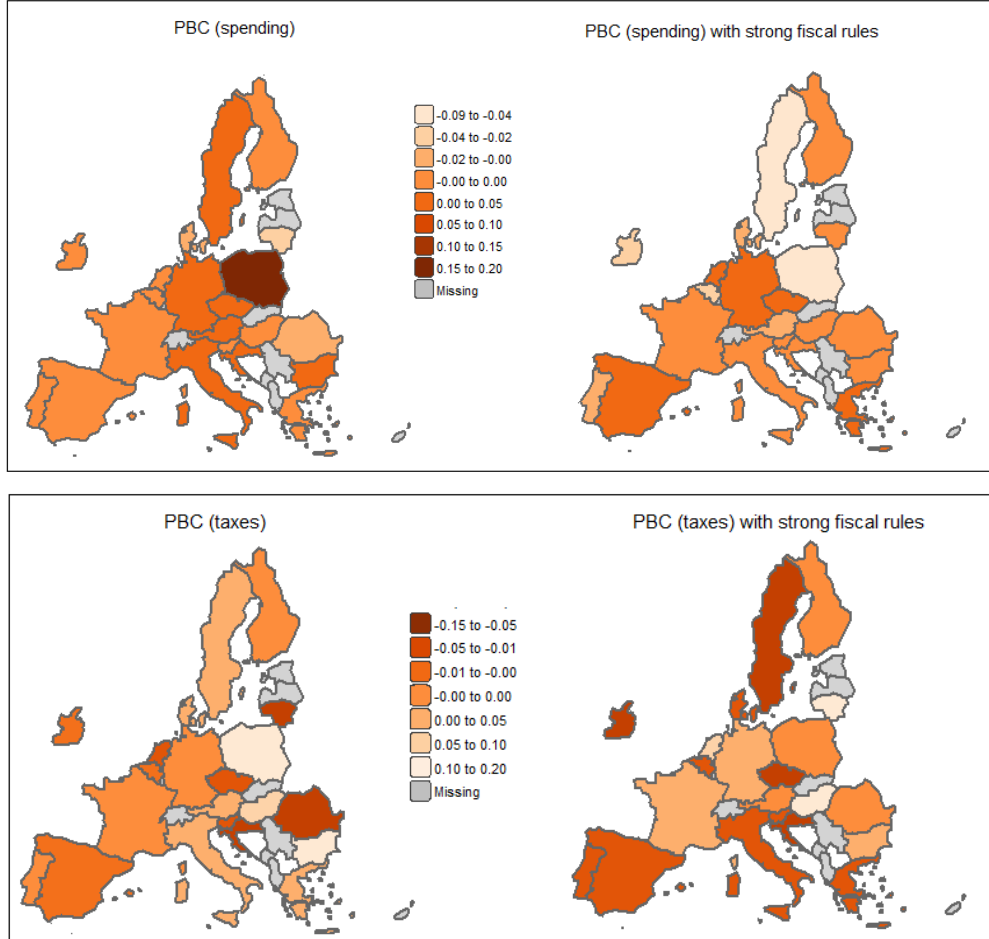
As seen in [Figure 3](#), tax rates tend to decrease significantly during election years, particularly in Romania, followed by Croatia, Czech Rep., Lithuania and the Netherlands. In countries like Romania, France, Germany and the Netherlands, strong fiscal rules reduce the extent of these tax cuts. However, in line with our average estimates (see [Table 2](#)), strong fiscal rules actually induce higher tax cuts during election years in several countries. In most of these countries, fiscal rules impose spending cuts during election years, particularly in Austria, Belgium, Greece, Italy, Poland and Sweden. This group includes both countries strongly affected by the financial crisis and those that recovered quickly. This suggests that reallocation is not necessarily more pronounced where fiscal rules constrain spending, even when the economy is strong enough to absorb tax cuts.

At the regional level, [Figure B1](#) in the Appendix confirm the importance of public spending PBCs in countries like Poland. However, the figures also highlight important intra-country heterogeneity in several countries such as France, Germany, Italy and Romania. Surprisingly, strong fiscal rules seem to accentuate regional disparities in some, highly decentralized, countries. This is particularly the case of Spain.

Even when accounting for regional disparities, most European regions show significantly higher (lower) levels of public spending (tax rates) during national election periods, supporting *H1a* and *H1b*. The reallocation effect, where tax policies are used to implement PBCs under spending

²⁶For example, *Île-de-France*, which is both a NUTS 1 and NUTS 2 region in France, consists of only 26 observations covering the period from 1995 to 2022. We excluded these regions from the analysis.

Figure 3: PBC at the country level. Public spending and taxes to households.
(Country level estimates using NUTS 2 observations)



Note: PBCs with strong fiscal rules are evaluated at the maximum level of *FRSI* of the country during the period. Darker colors indicate a higher PBC. Non-significant coefficients are set equal to zero.

constraints, is evident in regions such as the north of both Spain and Italy and quite homogeneous in all the regions of Sweden.

5.3. Robustness

Our key findings are supported by a series of robustness checks, detailed in [Table A2](#) and [Table A3](#) available in [Appendix A](#).

First, in [Table A2](#) we re-estimate our main model using a standard OLS estimator with time fixed effects, omitting the instrumentation of *FRSI*, as shows in columns (2.2)^{FE} and (2.4)^{FE}.

Second, our previous identification strategy, based on a diffusion argument, uses the average FRSI of economically similar countries in the region. However, since EU countries share common interests, particularly regarding sustainability, the relevance of this instrument is questioned. The literature highlights that national fiscal rules are crucial for ensuring better compliance with the SGP, making the neighborhood effect less obvious. Therefore, we explore an alternative approach using the five-year lagged moving average of the FRSI, assuming that fiscal rule strength tends to be persistent over time. Additionally, if current fiscal outcomes influence the strength of fiscal rules, using past rules helps mitigate this issue, as they were set before current economic conditions. The lagged strength of fiscal rules may also reflect institutional inertia, legal constraints, or past political decisions independent of current economic shocks. Results are presented in columns (2.2)^{m.a.} and (2.4)^{m.a.} in [Table A2](#).

Third, our dataset is characterized by a small T (28 periods) and large N (236 regions), making it susceptible to the bias identified by [Nickell \(1981\)](#). Moreover, as discussed earlier, endogeneity issues are a key concern within our econometric specification. To address both these issues, we estimate our main specification using the difference-GMM estimator by [Arellano and Bond \(1991\)](#) as reported in columns (2.2)^{GMM} and (2.4)^{GMM} of [Table A2](#).

Fourth, we estimate [Equation 2](#) at the NUTS 3 regional level in column (2.2)^{NUTS3}. Due to data availability, these estimations are only possible for the spending variable.

As seen in the table, the estimates align with our main results. In particular, public spending increases particularly during national election years, rather than during regional elections. This PBC is not observed in the cases of income taxes. Whereas using our previous instrumental variable, we find evidence of a decline in public spending PBC, our new proposed instruments show that the strictness of rule leaves spending related PBCs unchangeable. Importantly, the shift in electoral strategies from expenditure to taxation holds regardless of the estimation strategy.

In [Table A3](#) (see [Appendix A](#)), we provide three additional robustness checks. First, in columns (2.2)^{cen.} and (2.4)^{cen.}, we incorporate decentralization measures. We added these control variables to account for the vertical fiscal imbalance (VFI) argument. VFI represents the gap between a regional government's own revenues and its expenditure needs, which is typically filled by inter-governmental transfers. Regions with a high VFI rely heavily on central government transfers, increasing the likelihood of political manipulation, as central governments may allocate additional funds to politically significant regions to gain electoral advantage. Therefore, regions with high VFI can respond by increasing spending in anticipation of elections, thus amplifying regional PBCs. In contrast, autonomous regions with a low VFI value are less dependent on central transfers, reducing the scope for electoral manipulation and consequently weakening PBCs. This reasoning is supported by previous research (*e.g.*, [Akhmedov and Zhutavskaya, 2004](#); [Veiga and Veiga, 2007](#)).

Furthermore, VFI influences fiscal discipline and accountability. A high VFI implies that regional governments raise only a small proportion of their own revenues, which weakens voter scrutiny and increases the risk of fiscal mismanagement, particularly in election years. In a context

where voters exhibit myopia, they may reward increased public spending without accounting for future fiscal sustainability, as they do not directly associate government expenditures with taxation. This dynamic can exacerbate PBCs by encouraging excessive pre-election spending.

As a proxy for VFI, we rely on two indicators: expenditure and tax decentralization of the sub-national government. These variables capture the share of expenditures (i.e. the sum of expense and net investment in non-financial assets) or taxes of the province/region government as a proportion of general government spending or taxing (source: IMF fiscal Decentralization Dataset).²⁷

As seen in columns (2.2)^{cen.} and (2.4)^{cen.} of Table A3, higher decentralization increases regional public spending and tax collection. Importantly, the coefficients for national elections and its interaction with FRSI remain qualitatively the same as our main results remain, even when we control by decentralization measures. Furthermore, we introduce both country fixed effects and region fixed effects to control for unobserved heterogeneity at these levels. Adding these fixed effects further confirming the stability of our results.

Finally, Table A3 presents estimations of our main models distinguishing between exogenously timed endogenously timed national elections in columns (2.2)^{exo.} and (2.4)^{exo.}. The results indicate that the significant increase in regional government spending observed in Table 2 is driven exclusively by exogenous national elections. In contrast, endogenous elections are associated with a highly significant decrease in regional public spending. Interestingly, both effects become even more pronounced when considering the interaction with FRSI, particularly at its highest level. Note also that for tax rates our findings align with those presented in Table 2.

These results offer important insights into the strategic behavior of incumbents. The decrease in regional public spending during endogenous elections suggests that early elections may be called when an incumbent already benefits from favorable conditions, consistent with the concept of political surfing (Inoguchi, 1981). In this scenario, there is less need for pre-election spending to boost popularity. However, in the presence of a high FRSI, endogenous elections appear to induce an increase in regional public spending, possibly due to a lower level of accountability for the incumbent government when elections are strategically times. This distinction, however, does not apply to tax rates: in a context of increasing FRSI, regional tax rates decrease regardless of whether the election is exogenous or endogenous. A potential explanation can again be found in the lack of accountability of incumbents in the context of endogenous national elections, allowing regions to use both public spending and tax rates to implement PBCs.

6. Opportunist and partisan PBCs?

In section 5, we confirm the existence of PBCs in European countries and regions during national elections and highlight the mitigating role of strong fiscal rules, which restrain spending-related cycles while shifting the focus toward tax reductions. We also underscore the importance

²⁷ Since these indicators are not available for all regions we use it as a robustness check rather than in the benchmark specifications.

of institutions, political contexts, and partisanship in shaping regional economic behaviors during election years. This section builds on these findings by examining both partisan and opportunistic drivers of electoral cycles and their implications for PBCs.

Within the naive framework discussed in [section 5](#), the expected sign of the electoral measure cannot be determined with certainty, as it encompasses both partisan and opportunist effects – capturing different pre- and post-electoral dynamics. For example, if opportunistic PBCs dominate, we anticipate a positive coefficient for the pre-electoral measure in the public spending equation and a negative coefficient for taxes before elections as the incumbent may try to increase its popularity. An opportunistic PBC would also lead to a decrease in public spending and an increase in tax rates after the election as a way to counteract pre-electoral economic policy ([Caselli and Reynaud, 2020](#)).

The remainder of the paper focuses on distinguishing the types of regional PBCs that emerge during national electoral periods. Specifically, we separate pre-electoral and post-electoral periods using indices following the methodology of [Franzese \(2000\)](#). This approach enables us to identify opportunistic PBCs, which occur mainly prior to elections (measured by the variable *pre-election*), and partisan PBCs, which arise after elections (measured by the variable *post-election*).

Additionally, we incorporate qualitative data to capture the specific characteristics of these cycles, such as the participation of the incumbent head of government in the election, leadership transitions, and shifts in ideological orientation. On this point, the notion that left-leaning governments are inclined toward deficit spending frequently appears in political discourse. In contrast, right-wing governments choose lower taxes in order to maximize private consumption ([Müller et al., 2016](#)). This enriched framework allows for a better understanding of the mechanisms driving PBCs in the European context.

6.1. Opportunist approach

According to the opportunistic PBC theory ([Nordhaus, 1975](#)), fiscal policy typically becomes more expansionary in the period preceding an election, as incumbents seek to enhance their re-election prospects. By strategically using fiscal instruments, such as increasing public spending or lowering tax rates, incumbents aim to signal competence and create favorable macroeconomic conditions during the campaign period. In the specific context of regional fiscal policy prior to national elections, we hypothesize that public spending increases and tax rate decreases when opportunistic PBCs are in effect. These effects are captured by our variable *Pre-Election*. Based on this framework, we formulate the following hypothesis:

Hypothesis 2.a (H2a): *Public spending increases and tax rate decreases significantly in pre-electoral periods*

By definition, opportunistic PBCs are unlikely to occur if the incumbent has no chances of reelection or is not seeking reelection ([Bohn and Veiga, 2021](#)). To capture this distinction, we disaggregate the pre-electoral index into two sub-indexes: *Pre-Election [run.]*, which is equal to *Pre-Election* when the incumbent is running for reelection, and *Pre-Election [not run.]*, which is

equal to *Pre-Election* when the incumbent is not a candidate. Based on these considerations we also test the following hypothesis:

Hypothesis 2.b (H2b): Opportunistic PBCs are more pronounced when the incumbent is running for reelection

However, this effect is not straightforward. First, an incumbent not seeking for reelection may increase tax rates to implement unpopular but fiscally necessary policies as a last resort, prioritizing long-term goals over short-term popularity. This aligns with the framework proposed by [Alesina and Tabellini \(1990\)](#), which suggest that outgoing governments may use their remaining time in office to enact ideologically significant or structural reforms. This is particularly important in the European context as a significant number of countries are characterized by term limits.

Second, incumbents may strategically implement a “reversed” PBC, raising taxes to constrain the fiscal flexibility of the incoming government. This tactic, discussed by [Persson and Svensson \(1989\)](#) or [Milesi-Ferretti and Spolaore \(1994\)](#), allows outgoing governments to disadvantage their successors, particularly in politically polarized contexts. Such maneuvers could hinder the new administration’s ability to implement its policies effectively, reducing its popularity and indirectly benefiting the outgoing party in future elections.

Furthermore, the recent literature on opportunistic PBCs also highlights the potential influence of partisan motives ([Aaskoven, 2021](#)). However, as observed by ([Potrafke, 2017](#)), partisan differences in fiscal behavior have diminished in developed countries since the 1990s, largely due to the ideological convergence of traditional political parties. To address this evolution, we further refine our analysis by subdividing *Pre-Election [run.]* into two categories: *Pre-Election [run.] R*, which corresponds to elections where the incumbent represents a right-wing party, and *Pre-Election [run.] L*, which corresponds to elections where the incumbent represents a left-wing party. Our third opportunistic hypothesis is the following:

Hypothesis 2.c (H2c): Opportunistic PBCs differ significantly depending on the incumbent’s political ideology

Again, our analysis also incorporates the role of fiscal rules on opportunistic PBCs by using the variable *FRSI* and its interaction term with pre-electoral measures. This adds a further hypothesis:

Hypothesis 2.d (H2d): Opportunistic PBCs are significantly reduced by strong fiscal rules

Our findings on opportunistic PBCs are summarized in [Table 3](#).²⁸ Columns (3.1) and (3.4) analyze *H2a* by using *Pre-Election* as the main variable to assess its effects on spending and taxes, respectively. In columns (3.2) and (3.5), *H2b* is evaluated using the disaggregation of *Pre-Election* into *Pre-Election [run.]* and *Pre-Election [not run.]*. Finally, columns (3.3) and

²⁸To save space, control variables are present in the estimations but omitted from the following tables.

(3.6) investigate *H2c*, focusing on elections where the incumbent is a candidate, distinguishing between right-leaning and left-leaning incumbents (*Pre-Election [run.] R* and *Pre-Election [run.] L*, respectively). As in [Table 2](#), we evaluate the interaction effects for the highest observed value of *FRSI*, highlighting how the strength of fiscal rules modifies these opportunistic behaviors (*H2d*).

H2a. Our results confirm the existence of opportunistic PBCs in European countries. The coefficients for *Pre-Election* are significant and align with theoretical expectations: positive for public spending and negative for tax rates. These findings are consistent with the naive estimates presented in [Table 2](#) and underscore the importance of the opportunistic motive as a critical determinant of regional PBCs during national elections.

H2b. Column (3.2) confirms the presence of a PBC in public spending when the incumbent is running for reelection, consistent with the hypothesis of opportunistic PBCs. Tax rate dynamics, however, exhibit a more complex pattern in column (3.5). For elections where the incumbent is a candidate, our findings support *H2b*, as tax rates significantly decrease in the 12 months preceding the election. However, the coefficient for *Pre-Election [not run.]* is positive and significant at the 1% level, a seemingly contradictory result. While surprising, this outcome can be explained by the diminished importance of popularity for incumbents not seeking reelection. As a result, such incumbents may find it easier to implement contractionary fiscal policies, either to advance unpopular ideologically driven agendas or to constrain the behavior of their successors as discussed above.

H2c. [Table 3](#) provides insights into the potential partisan conditionality of opportunistic PBCs when the incumbent is seeking reelection. For public spending, the results indicate that right-wing incumbents exhibit broader opportunistic fiscal behavior in public spending. This is evident from the positive and highly significant coefficient for the electoral variable *Pre-Election [run.] R* in column (3.3). In contrast, left-leaning incumbents display a more limited effect, with a positive and significant coefficient only at the 10% level. For tax rates, column (3.6) shows that both right- and left-wing incumbents significantly decrease tax rates when running for reelection, although the reduction is larger for left-wing incumbents.²⁹

These opportunistic effects are more pronounced in the context of exogenously timed elections, consistent with existing literature. When election dates are fixed, incumbents are compelled to adopt preemptive fiscal measures to enhance their appeal, as they cannot strategically time elections to coincide with favorable economic conditions ([Inoguchi, 1981](#)). For clarity, these specific estimates are not included in the main text but are available upon request.

²⁹We also estimate the model for incumbents from center parties. The effects for center incumbents are largely similar to those for right-wing incumbents, except for a few instances where center governments align with left-wing behavior. This is unsurprising, as center-right and center-left incumbents tend to adopt policies that reflect their ideological leanings based on contextual factors ([Franzese, 2002](#)). Full estimation results are available upon request. Independent heads of government, who represent only about 5% of our sample, are not estimated separately due to their limited sample size.

H2d. The final panel of [Table 3](#) explores the impact of strong fiscal rules on opportunistic PBCs, highlighting notable differences based on partisan orientation. For right-wing incumbents, strong fiscal rules have minimal influence on their pre-electoral strategic behavior. These governments continue to enforce pre-electoral increases in public spending, suggesting that fiscal constraints do not deter their spending-focused electoral strategies. This is confirmed in column (3.6) where the interaction term with *FRSI* is significant and positive but becomes insignificant at the highest levels of *FRSI*.

Conversely, left-wing incumbents demonstrate a distinct adjustment under stringent fiscal rules. While they reduce public spending in pre-electoral years, they shift their strategic focus toward tax reductions. This behavior indicates a reallocation of fiscal manipulation efforts from spending to tax policy when constrained by robust fiscal rules. This is in line with the reallocation effect discussed in [section 5](#).

In conclusion, the opportunistic motive appears to be a significant driver of European regional PBCs. Right-wing incumbents tend to focus on public spending to execute these opportunistic PBCs, while left-wing incumbents prioritize tax reductions, consistent with the reallocation effect discussed in [section 5](#). Lastly, although strong fiscal rules can mitigate the intensity of these PBCs, they are insufficient to eliminate them entirely.

Table 3: Opportunistic PBCs

	Government spending			Tax rate		
	(3.1)	(3.2)	(3.3)	(3.4)	(3.5)	(3.6)
Growth spending(t-1)	0.033* (0.020)	0.033* (0.020)	0.031 (0.020)	-0.167*** (0.042)	-0.167*** (0.041)	-0.169*** (0.041)
Growth tax(t-1)	-0.014 (0.009)	-0.014 (0.009)	-0.015* (0.009)	-0.006 (0.025)	-0.009 (0.025)	-0.015 (0.025)
Pre-Election	0.009*** (0.002)			-0.018*** (0.004)		
Pre-Election [run.]		0.010*** (0.002)			-0.031*** (0.005)	
Pre-Election [not run.]		0.007 (0.005)			0.027*** (0.010)	
Pre-Election [run.] R			0.011*** (0.003)			-0.038*** (0.007)
Pre-Election [run.] L			0.006* (0.004)			-0.045*** (0.007)
FRSI	-0.002 (0.005)	-0.002 (0.005)	-0.002 (0.005)	-0.003 (0.011)	0.001 (0.011)	-0.002 (0.010)
Pre-Election \times FRSI	-0.004** (0.002)			-0.010*** (0.004)		
Pre-Election [run.] R \times FRSI		-0.004* (0.002)			0.000 (0.004)	
Pre-Election [not run.] \times FRSI		-0.003 (0.003)			-0.040*** (0.008)	
Pre-Election [run.] R \times FRSI			0.001 (0.002)			0.014*** (0.005)
Pre-Election [run.] L \times FRSI			-0.009*** (0.004)			-0.004 (0.008)
PBC with highest FRSI						
for Pre-Election	-0.001 (0.004)			-0.045*** (0.008)		
for Pre-Election, running		-0.001 (0.005)			-0.031*** (0.001)	
for Pre-Election, not running		0.000 (0.006)			-0.080*** (0.015)	
for Pre-election, running and right			0.012*** (0.005)			-0.000 (0.010)
for Pre-Election, running and left			-0.019** (0.009)			-0.055*** (0.021)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Nbr. observations	6 078	6 078	6 078	6 072	6 072	6 072
K-P rk p-value	0.000	0.000	0.000	0.000	0.000	0.000
Hansen J statistic p-value	0.000	0.000	0.000	0.000	0.000	0.000

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Standard error (in parentheses) are robust. Estimations are performed with a two-stage least squares estimator with time fixed effects. *FRSI* and *Election \times FRSI* are instrumented by their mean across different country groups. PBC with highest fiscal rules corresponds to the sum of the coefficients of *Nat.Election* and *Nat.Election \times FRSI* evaluated at the sample maximum of the FRSI. Kleibergen-Paap (K-P) rk statistic is a test for weak identification of the instruments. Sargan-Hansen J statistic is a test for over-identification restriction. Variable *Pre-Election [run.]* represents the pre-electoral index for elections in which the incumbent is running for reelection; *Pre-Election [not run.]* represents the pre-electoral index for elections in which the incumbent is not running for reelection.

6.2. Partisan approach

Partisan PBC theory argues that political cycles in fiscal policy arise from the ideological preferences of incumbent governments. According to this framework, newly elected right-wing incumbents are expected to stabilize or reduce public spending to curb inflationary pressures, aligning with their conservative fiscal stance. Conversely, newly elected left-wing incumbents are predicted to increase public spending to address unemployment and expand public services.

Regarding tax rates, partisan PBCs offer less straightforward predictions. However, it is reasonable to hypothesize that right-leaning governments would limit or decrease tax rates to promote private consumption or investment, left-wing incumbents might increase taxes to fund their spending initiatives.

Thus, under this perspective, the average post-electoral effect of partisan PBCs on public spending should be either positive or neutral, depending on whether there is an alternation of power. Similarly, for tax rates, partisan PBCs are expected to exhibit more nuanced dynamics that reflect the fiscal trade-offs faced during ideological shifts.

To investigate these partisan PBCs, we use an electoral index designed to capture the 12-month period following a national election (*Post-Election*) in line with [Franzese \(2000\)](#). Our investigation into partisan PBCs begins with a first testable hypothesis:

Hypothesis 3.a (H3a): Public spending and tax rates are more likely to increase or remain stable during post-electoral periods.

Partisan effects, however, can be contextually reversed under specific circumstances. One notable scenario arises when outgoing governments have pursued highly expansionary fiscal policies in the preceding years. In such cases, the incoming administrations may implement corrective measures to stabilize the economy after the election. As suggested by [Rogoff and Sibert \(1988\)](#), electoral manipulation often leads to fiscal distortions that necessitate subsequent adjustments to restore macroeconomic balance and ensure fiscal sustainability. For instance, if public spending was excessively increased or tax rates were lowered for electoral gain (*i.e.*, an opportunistic PBC was implemented), the new government may reverse these measures to reestablish stability.³⁰

The manifestation of partisan PBCs often hinges on whether an ideological shift occurs after an election. When the incumbent's ideology aligns with that of their predecessor, policy continuity tends to limit the scope for partisan effects. By contrast, ideological transitions typically trigger noticeable fiscal shifts, amplifying the visibility of partisan PBCs. To capture this distinction,

³⁰To examine this hypothesis further, we compute an electoral index, *Post-Election [run.]*, which equals *Post-Election* when the incumbent is running for reelection. Opportunistic PBCs are more likely under such circumstances, making corrective mechanisms particularly relevant. Results suggest that newly elected governments rarely undertake substantial fiscal corrections, particularly when outgoing administrations likely engaged in pre-electoral expansions. While these estimates are not included in the main paper, they are available upon request.

we disaggregated our post-electoral index into two variables: *Post-Election [cha.]*, which applies when the head of government changes after the election, and *Post-Election [no cha.]*, which applies when the incumbent remains unchanged.³¹ This distinction gives rise to the following hypothesis:

Hypothesis 3.b (H3b): *Partisan PBCs are more pronounced when the head of government changes after the election*

Partisan effects may also reverse when newly elected governments aim to signal fiscal prudence and establish economic credibility, particularly during ideological shifts require building trust. According to [Alesina and Tabellini \(1990\)](#), fiscal conservatism serves as a strategic tool to enhance a government's reputation for sound economic management. This strategy is especially relevant for left-leaning governments, which may face greater pressure to counter perceptions of fiscal leniency compared to their right-leaning counterparts ([Hibbs, 1977](#)). Additionally, this aligns with the theory of ideological convergence ([Potrafke, 2017](#)), whereby governments strategically adopt fiscal conservatism to appeal to a broader electorate and weaken their opponents' comparative advantage.³²

Additionally, building on partisan PBC theory which focuses on right-wing and left-wing incumbents, we further analyze transitions involving the election of a right- or left-wing head of government. These transitions are captured by the variables *Post-Election [cha.] R* and *Post-Election [cha.] L*. This leads to the formulation of the following additional hypotheses:

Hypothesis 3.c (H3c): *Partisan PBCs are more pronounced when newly elected incumbents are explicitly right- or left-wing*

Finally, we examine the effect of fiscal constraints on partisan PBCs utilizing the *FRSI* variable and its interaction term with post-electoral indexes. This motivated the following hypothesis:

Hypothesis 3.d (H3d): *Partisan PBCs are significantly reduced by high FRSI*

Our analysis of partisan PBCs is summarized in [Table 4](#). Specifically, columns (4.1) and (4.4) address *H3a*, focusing on public spending and tax rates respectively. Columns (4.2) and (4.5) examine *H3b* by distinguishing between elections where the incumbent head of government changes and those where it remains the same. Finally, columns (4.3) and (4.6) explore *H3c* by analyzing elections characterized by ideological shifts, specifically distinguishing between right-wing and left-wing newly elected incumbents. At the bottom of [Table 4](#), we report the estimated

³¹We adopt a broad definition of changes in incumbency, classifying any replacement of the head of government as a change, irrespective of ideological differences. In parliamentary systems, cases where the head of government changes within the same political party are classified as *Post-Election [no cha.]*.

³²For instance, right-wing incumbents may increase public spending to attract left-leaning voters, who traditionally prefer higher public expenditures. Conversely, left-wing incumbents may restrain public spending to project fiscal responsibility and appeal to right-leaning voters. This strategy aligns reflects the comparative advantage framework, where parties encroach on their opponents' perceived policy strengths to neutralize their electoral appeal.

interaction effects of our post-electoral measures with the the highest observed value of *FRSI*, demonstrating how the strength of fiscal rules influences partisan behaviors (*H3d*).

H3a. Table 4 shows a positive and significant coefficient of *Post-Election* for public spending in column (4.1), underlying an average partisan effect. This result aligns with our hypothesis and suggests that governments increase public spending after their election on average, likely prioritizing policies that reduce unemployment. Per capita taxes also significantly increase during post-electoral periods, as indicated in column (4.4). This finding is consistent with the expectation that partisan PBCs would produce either a positive or a non significant average effect on tax rates.

H3b. In columns (4.2) and (4.5), we differentiate post-electoral periods based on whether the head of the government remains in power or changes. Surprisingly, column (4.2) confirms the presence of a partisan PBC in regional public spending, but only when the incumbent remains in power (*Post-Election [no cha.]*). This finding aligns with the dual pressures of building trust, as discussed earlier (Alesina and Tabellini, 1990), and the electoral constraints often observed in Europe, where many national governments impose term limits, frequently restricting leaders to two terms. As a result, reelected governments in their final mandates prioritize policies that may constrain the fiscal flexibility of their successors. This behavior is consistent with theories of “policy entrenchment”, where outgoing administrations aim to bind future governments by reducing their fiscal room for maneuver (Persson and Svensson, 1989; Milesi-Ferretti and Spolaore, 1994).

Conversely, still discussing *H3b*, we find a significant coefficient for tax rates when the incumbent head of government changes (*Post-Election [cha.]*) but insignificant otherwise. Interestingly, our findings on tax rates do not align with the narrative observed on public spending. Specifically, no significant variation in tax rates occurs when the incumbent stays the same. Instead, our results suggest that newly elected governments may adjust tax rates after taking office to create fiscal space for implementing their future economic policies. For instance, a new left-leaning administration might raise taxes after assuming power to gain the financial flexibility required to enact partisan policy goals, *i.e.*, reduce unemployment through future public spending.

H3c. In columns (4.3) and (4.6) of Table 4, we disaggregated *Post-Election [cha.]* into two subcategories: elections resulting in the election of a right-wing incumbent (*Post-Election [cha.] R*) and those resulting in the election of a left-wing incumbent (*Post-Election [cha.] L*). This classification allows us to examine the fiscal behavior of newly elected incumbents with ideologies distinct from their predecessors, providing a precise test of the traditional partisan PBC framework (Hibbs, 1977). Our findings reveal that newly elected left-wing incumbents are uniquely characterized by significant post-electoral fiscal adjustments. Specifically, they decrease public spending and increase tax rates in the 12-months following their election, prioritizing fiscal consolidation to establish economic credibility (Alesina and Tabellini, 1990). This behavior suggests that left-leaning governments strategically use fiscal conservatism as a reputational tool, particularly when replacing non-left-wing predecessors. Importantly, these fiscal adjustments occur exclusively in the immediate post-election period and are not observed during “normal” times or in response to adverse economic shocks. Interestingly, newly elected left-wing governments exhibit higher regional public spending in the 12 months following a national election when strong fiscal rules

are in place. This effect becomes more pronounced under the strictest fiscal rules, although significance is limited to the 10% level. This finding contrasts with the earlier narrative, suggesting that left-wing governments may increase public spending post-election, which appears to contradict the credibility argument. One plausible explanation is that stringent fiscal rules serve as a commitment mechanism, offering a reputational boost that allows left-wing incumbents to pursue higher public spending without compromising fiscal credibility. However, further investigation is needed to validate this mechanism.

In contrast, newly elected right-wing incumbents exhibit no significant changes in fiscal policy orientation following elections, suggesting a preference for maintaining the policy *status quo* to satisfy their electoral base. This asymmetry in fiscal behavior highlights the broader dynamics of reputational strategies, particularly the higher credibility burden faced by left-leaning governments. These findings align with partisan theory, which asserts systematic differences in the fiscal objectives pursued by ideologically distinct administrations.

H3d. The mitigating influence of fiscal rule strength on partisan PBCs is examined in [Table 4](#). The results indicate that strong fiscal rules significantly constrain partisan behavior in public spending, with the coefficients of the interaction terms being negative and significant in most cases. The reallocation effect discussed in [section 5](#) is evident in post-electoral fiscal policy: both public spending and tax rates tend to decline under stringent fiscal rules, with the notable exception of left-wing administrations in the case of public spending (see column (4.3) in [Table 4](#)). This exception suggests that, while strong fiscal rules limit discretionary spending, they may also compel provide left-wing governments with a framework that enable targeted increases in public spending without undermining fiscal credibility. These findings align with the expectations outlined in *H3d*, underscoring the dual role of fiscal rules in constraining partisan fiscal policies while influencing their composition.

In summary, we find evidence of partisan PBCs in European regional fiscal policies during national election years, particularly under newly elected left-wing incumbents. Interestingly, left-wing incumbents deviate from the traditional hypothesis proposed by [Hibbs \(1977\)](#), as they appear to implement contractionary fiscal policies when elected, likely to enhance their reputation for sound economic policymaking. Furthermore, strong fiscal rules mitigate partisan PBCs in public spending but exacerbate them in tax rates as discussed in [section 5](#).

7. Conclusion

Using a very rich regional database, this paper provides fresh evidence on the interplay between fiscal rules and political budget cycles across European countries and sub national regions during the 1995-2022 period. Our findings confirm the persistence of significant PBCs related mainly to national election periods in Europe, despite the adoption of strong fiscal rules. Specifically, we observe increases in regional public spending and decreases in taxes on income and wealth in national

Table 4: Partisan PBCs

	Government spending			Tax rate		
	(4.1)	(4.2)	(4.3)	(4.4)	(4.5)	(4.6)
Growth spending(t-1)	0.026 (0.020)	0.022 (0.020)	0.029 (0.019)	-0.159*** (0.041)	-0.154*** (0.042)	-0.156*** (0.043)
Growth tax(t-1)	-0.015* (0.009)	-0.013 (0.009)	-0.013 (0.009)	-0.005 (0.025)	-0.007 (0.025)	-0.006 (0.025)
Post-Election	0.007** (0.003)			0.013*** (0.005)		
Post-Election [cha.]		-0.000 (0.003)			0.013** (0.006)	
Post-Election [no cha.]		0.016*** (0.004)			0.011* (0.006)	
Post-Election [cha.] R			-0.001 (0.005)			0.002 (0.010)
Post-Election [cha.] L			-0.011*** (0.004)			0.017** (0.007)
FRSI	0.000 (0.005)	0.000 (0.005)	-0.001 (0.005)	-0.002 (0.011)	-0.003 (0.011)	-0.009 (0.011)
Post-Election × FRSI	-0.011*** (0.002)			-0.019*** (0.004)		
Post-Election [cha.] × FRSI		-0.008*** (0.003)			-0.044*** (0.006)	
Post-Election [no cha.] × FRSI		-0.013*** (0.003)			-0.004 (0.005)	
Post-Election [cha.] R × FRSI			-0.018*** (0.006)			-0.051*** (0.013)
Post-Election [cha.] L × FRSI			0.011** (0.004)			-0.058*** (0.009)
PBC with highest FRSI						
for Post-Election	-0.021*** (0.004)			-0.040*** (0.009)		
for Post-Election and change		-0.022*** (0.006)			-0.108*** (0.015)	
for Post-Election and no change		-0.019*** (0.005)			-0.000 (0.010)	
for Post-Election, change and right			-0.051*** (0.013)			-0.136*** (0.030)
for Post-Election, change and left			0.019* (0.010)			-0.141*** (0.022)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Nbr. observations	6 078	6 078	6 078	6 072	6 072	6 072
K-P rk p-value	0.000	0.000	0.000	0.000	0.000	0.000
Hansen J statistic p-value	0.000	0.000	0.000	0.000	0.000	0.000

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Standard error in parentheses are robust. Estimations are performed with a two-stage least squares estimator with time fixed effects. *FRSI* and *Election* × *FRSI* are instrumented by their mean across different country groups. For more information, refer to [section 4](#). PBC with highest fiscal rules corresponds to the sum of the coefficients of *Nat.Election* and *Nat.Election* × *FRSI* evaluated at the sample maximum of the FRSI. Kleibergen-Paap (K-P) rk statistic is a test for weak identification of the instruments. Sargan-Hansen J statistic is a test for over-identification restriction. Variable *Pre-Election [cha.]* represents the pre-electoral index for elections in which the incumbent is not reelected; *Pre-Election [no cha.]* represents the pre-electoral index for elections in which the incumbent is reelected.

election periods. Interestingly, PBCs are more pronounced at the regional level than at the national level, raising questions about the role of fiscal rules in driving this regional-national arbitrage.

Our analysis reveals that both opportunistic and partisan motives significantly contribute to the emergence of PBCs, with their intensity varying according to electoral contexts and fiscal constraints. Opportunistic motives are particularly pronounced when incumbents seek reelection, while partisan dynamics are more evident under left-wing incumbent. Notably, right-wing incumbents tend to prioritize increases in public spending, whereas left-wing incumbents are more likely to focus on reducing tax rates.

Importantly, while strong fiscal rules can reduce PBCs, they do not fully eliminate electorally driven fiscal manipulation. Instead, they shift the tools used, reducing or not affecting expenditure-based PBCs while increasing tax-based adjustments. Furthermore, even in countries with robust fiscal constraints, some regions still show rises in government spending for electoral purposes, indicating an uneven application and enforcement of fiscal rules across Europe.

From a policy perspective, these findings underscore the limitation of relying solely on supranational and national fiscal rules to mitigate PBCs. As suggested by [Foremny \(2014\)](#), implementing sub-national fiscal rules could offer a more targeted solution. However, our results caution that stricter fiscal rules may inadvertently encourage tax-based PBCs, akin to creative accounting practices aimed at bypassing budget constraints. This underscores a critical design flaw in current fiscal frameworks and emphasizes the need for rules that address the full spectrum of fiscal instruments used for political manipulation. Further research is required to ensure that tax-rate-focused rules do not suffer from the same loopholes as those targeting public spending. Moreover, broader issues such as national sovereignty and public acceptance of fiscal rules must be integrated into the analysis, as these factors critically shape the effectiveness and enforcement of fiscal governance.

This study serves as a starting point for deeper exploration into the interaction between national elections and sub-national PBCs. Future research could examine the use of diverse fiscal instruments, such as value-added and sales taxes, in electoral contexts. Additionally, cross-country comparisons that account for institutional quality, political stability, and administrative efficiency could refine our understanding of PBC dynamics and identify conditions under which fiscal rules are most effective.

References

- Aaskoven, L., 2021. Partisan-electoral cycles in public employment: Evidence from developed democracies. *Political Studies* 69, 190–213. doi:[10.1177/0032321719874296](https://doi.org/10.1177/0032321719874296).
- Akhmedov, A., Zhutavskaya, E., 2004. Opportunistic political cycles; test in a young democracy setting. *Quarterly Journal of Economics* 119, 1301–1338. doi:[10.1162/0033553042476206](https://doi.org/10.1162/0033553042476206).
- Alesina, A., 1987. Macroeconomic policy in a two-party system as a repeated game. *Quarterly Journal of Economics* 102, 651–678. doi:[10.2307/1884222](https://doi.org/10.2307/1884222).
- Alesina, A., 1988. Credibility and policy convergence in a two-party system with rational voters. *American Economic Review* 78, 796–806.
- Alesina, A., Drazen, A., 1991. Why are stabilization delayed? *American Economic Review* 81, 1170–1177. doi:[10.3386/w3053](https://doi.org/10.3386/w3053).
- Alesina, A., Paradisi, M., 2017. Political budget cycles: Evidence from Italian cities. *Economics and Politics* 29, 157–177. doi:[10.1111/ecpo.12091](https://doi.org/10.1111/ecpo.12091).
- Alesina, A., Perotti, R., 1996. Fiscal discipline and the budget process. *American Economic Review* 86, 401–407.
- Alesina, A., Roubini, N., Cohen, G., 1997. *Political Cycles and the Macroeconomy*. MIT Press.
- Alesina, A., Tabellini, G., 1990. A positive theory of fiscal deficits and government debt. *Review of Economic Studies* 57, 403–414. doi:[10.2307/2298021](https://doi.org/10.2307/2298021).
- Alt, J.E., Lassen, D.D., Wehner, J., 2014. It isn't just about greece: Domestic politics, transparency and fiscal gimmickry in europe. *British Journal of Political Science* 44, 707–716. doi:[10.1017/S0007123414000064](https://doi.org/10.1017/S0007123414000064).
- Ardanaz, M., Cavallo, E., Izquierdo, A., Puig, J., 2021. Growth-friendly fiscal rules? Safeguarding public investment from budget cuts through fiscal rule design. *Journal of International Money and Finance* 111. doi:[10.1016/j.jimonfin.2020.1](https://doi.org/10.1016/j.jimonfin.2020.1).
- Arellano, M., Bond, S., 1991. Some tests of specification for panel data: Monte carlo evidence and an application to employment equations. *Review of Economic Studies* 58, 277–297. doi:[10.2307/2297968](https://doi.org/10.2307/2297968).
- Armingeon, K., Engler, S., Leemann, L., Weisstanner, D., 2021. Comparative political dataset 1960–2021.
- Asatryan, Z., Castellón, C., Stratmann, T., 2018. Balanced budget rules and fiscal outcomes: Evidence from historical constitutions. *Journal of Public Economics* 167, 105–119. doi:[10.1016/j.jpubeco.2018.09.001](https://doi.org/10.1016/j.jpubeco.2018.09.001).
- Azzimonti, M., Battaglini, M., Coate, S., 2016. The costs and benefits of balanced budget rules: Lessons from a political economy model of fiscal policy. *Journal of Public Economics* 136, 45–61. doi:[10.1016/j.jpubeco.2016.03.001](https://doi.org/10.1016/j.jpubeco.2016.03.001).
- Azzimonti, M., Talbert, M., 2014. Polarized business cycles. *Journal of Monetary Economics* 67, 47–61. doi:[10.1016/j.jmoneco.2014.07.001](https://doi.org/10.1016/j.jmoneco.2014.07.001).
- Baskaran, T., Hessami, Z., 2017. Political alignment and intergovernmental transfers in parliamentary systems: Evidence from Germany. *Public Choice* 171, 75–98. doi:[10.1007/s11127-016-0398-4](https://doi.org/10.1007/s11127-016-0398-4).
- Beck, T., Clarke, G., Goff, A., Keefer, P., Walsh, P., 2001. New tools in comparative political economy: the database of political institutions. *World Bank Economic Review* 15, 165–176. doi:[10.1093/wber/15.1.165](https://doi.org/10.1093/wber/15.1.165).
- Berleemann, M., Markwardt, G., 2007. Unemployment and inflation consequences of unexpected election results. *Journal of Money, Credit and Banking* 39, 1919–1945. doi:[10.1111/j.1538-4616.2007.00093.x](https://doi.org/10.1111/j.1538-4616.2007.00093.x).
- Blanchard, O., Leandro, A., Zettelmeyer, J., 2021. Redesigning eu fiscal rules: From rules to standards. *Economic Policy* 36, 195–236. doi:[10.1093/epolic/eiab003](https://doi.org/10.1093/epolic/eiab003).
- Bohn, F., Veiga, F.J., 2021. Political forecast cycles. *European Journal of Political Economy* 66. doi:[10.1016/j.ejpoleco.2020.101934](https://doi.org/10.1016/j.ejpoleco.2020.101934).
- Brender, A., Drazen, A., 2005. Political budget cycles in new versus established democracies. *Journal of Monetary Economics* 52, 1271–1295. doi:[10.1016/j.jmoneco.2005.04.004](https://doi.org/10.1016/j.jmoneco.2005.04.004).
- Brender, A., Drazen, A., 2008. How do budget deficits and economic growth affect reelection prospects? evidence from a large panel of countries. *American Economic Review* 98, 2203–2220. doi:[10.1257/aer.98.5.2203](https://doi.org/10.1257/aer.98.5.2203).
- Brueckner, M., Pappa, E., Ákos Valentinyi, 2023. Geographic Cross-Sectional Fiscal Spending Multipliers and the Role of Local Autonomy: Evidence from European Regions. *Journal of Money, Credit and Banking* 55, 1357–1396. doi:[10.1111/jmcb.12974](https://doi.org/10.1111/jmcb.12974).
- Buchanan, J., Tullock, G., 1962. *The Calculus of Consent: Logical Foundations of Constitutional Democracy*. University of Michigan Press.

- Caselli, F., Reynaud, J., 2020. Do fiscal rules cause better fiscal balances? a new instrumental variable strategy. *European Journal of Political Economy* 63. doi:[10.1016/j.ejpoleco.2020.101873](https://doi.org/10.1016/j.ejpoleco.2020.101873).
- Chang, E.C., 2008. Electoral incentives and budgetary spendin: Rethinking the role of political institutions. *Journal of Politics* 70, 1086–1097. doi:[10.1017/S0022381608081073](https://doi.org/10.1017/S0022381608081073).
- Chappell, H.W., Keech, W.R., 1986. Party differences in macroeconomic policies and outcomes. *American Economic Review* 76, 71–74.
- Clark, W.R., Hallerberg, M., 2000. Mobile capital, domestic institutions and electorally induced monetary and fiscal policy. *American Political Science Review* 94, 323–346. doi:[10.2307/2586015](https://doi.org/10.2307/2586015).
- Combes, J., Debrun, X., Minea, A., Sawadogo, P.N., Vinturis, C., 2024. On the side effects of fiscal policy: Fiscal rules and income inequality. *European Journal of Political Economy* forthcoming. doi:[10.1016/j.ejpoleco.2024.102534](https://doi.org/10.1016/j.ejpoleco.2024.102534).
- Combes, J., Debrun, X., Minea, A., Tapsoba, R., 2018. Inflation targeting, fiscal rules and the policy mix: Cross-effects and interactions. *The Economic Journal* 128, 2755–2784. doi:[10.1111/ecoj.12538](https://doi.org/10.1111/ecoj.12538).
- Dahlberg, M., Mörk, A., 2011. Is there an election cycle in public employment? separating time effects from election year effects. *CESifo Economic Studies* 57, 480–498. doi:[10.1093/cesifo/ifr003](https://doi.org/10.1093/cesifo/ifr003).
- De Jong, J.F., Gilbert, N.D., 2020. Fiscal discipline in EMU? testing the effectiveness of the excessive deficit procedure. *European Journal of Political Economy* 61, 101822. doi:[10.1016/j.ejpoleco.2019.101822](https://doi.org/10.1016/j.ejpoleco.2019.101822).
- Debrun, X., Kumar, M.S., 2007. The discipline-enhancing role of fiscal institutions: Theory and empirical evidence. *IMF Working Paper* 2007/171.
- Diamond, P.A., 1965. National debt in a neo-classical growth model. *American Economic Review* 55, 1126–1150.
- Douglas, J.W., Szmer, J., Raudla, R., 2024. Political tax cycles in the us states: Opportunism versus ideological sincerity in governors' revenue proposals. *Governance* forthcoming. doi:[10.1111/gove.12886](https://doi.org/10.1111/gove.12886).
- Dubois, E., 2016. Political business cycles 40 years after nordhaus. *Public Choice* 166, 235–259. doi:[10.1007/s11127-016-0313-z](https://doi.org/10.1007/s11127-016-0313-z).
- Efthyvoulou, G., 2012. Political budget cycles in the european union and the impact of political pressures. *Public Choice* 153, 295–327.
- Fabrizio, S., Mody, A., 2006. Can budget institutions counteract political indiscipline? *Economic Policy* 21, 690–739. doi:[10.5089/9781451863833.001](https://doi.org/10.5089/9781451863833.001).
- Foremny, D., 2014. Sub-national deficits in european countries: The impact of fiscal rules and tax autonomy. *European Journal of Political Economy* 34, 86–110. doi:[10.1016/j.ejpoleco.2014.01.003](https://doi.org/10.1016/j.ejpoleco.2014.01.003).
- Foremny, D., Riedel, N., 2014. Business taxes and the electoral cycle. *Journal of Public Economics* 115, 48–61. doi:<https://doi.org/10.1016/j.jpubeco.2014.04.005>.
- Franzese, R.J., 2000. Electoral and partisan manipulation of public debt in developed democracies: 1956–1990, in: Strauch, R., von Hagen, J. (Eds.), *Institutions, Politics and Fiscal Policy*. Kluwer Academic Press, Dordrecht. chapter 3, pp. 61–83. doi:[10.1007/978-1-4615-4555-2_3](https://doi.org/10.1007/978-1-4615-4555-2_3).
- Franzese, R.J., 2002. Electoral and partisan cycles in economic policies and outcomes. *Annual Review of Political Science* 5, 369–421. doi:[10.1146/annurev.polisci.5.112801.080924](https://doi.org/10.1146/annurev.polisci.5.112801.080924).
- Fuest, C., Gründler, K., Potrafke, N., Ruthardt, F., 2024. Read my lips? taxes and elections. *Journal of Public Economics* 236, 105149. doi:[10.1016/j.jpubeco.2024.105149](https://doi.org/10.1016/j.jpubeco.2024.105149).
- Gabriel, R.D., Klein, M., Pessoa, A.S., 2023a. The effects of government spending in the eurozone. *Journal of the European Economic Association* 21, 1397–1427. doi:[10.1093/jeea/jvad006](https://doi.org/10.1093/jeea/jvad006).
- Gabriel, R.D., Klein, M., Pessoa, A.S., 2023b. The political costs of austerity. *The Review of Economics and Statistics* , 1–45doi:[10.1162/rest_a_01373](https://doi.org/10.1162/rest_a_01373).
- Gootjes, B., de Haan, J., 2022. Do fiscal rules need budget transparency to be effective? *European Journal of Political Economy* 75. doi:[10.1016/j.ejpoleco.2022.102210](https://doi.org/10.1016/j.ejpoleco.2022.102210).
- Gootjes, B., Haan, J., Jong-A-Pin, R., 2021. Do fiscal rules constrain political budget cycles? *Public Choice* 188, 1–30. doi:[10.1007/s11127-020-00797-3](https://doi.org/10.1007/s11127-020-00797-3).
- Grembi, V., Nannicini, T., Troiano, U., 2016. Do fiscal rules matter? *American Economic Journal: Applied Economics* 8, 1–30. doi:[10.1257/app.20150076](https://doi.org/10.1257/app.20150076).
- Guerguil, M., Mandon, P., Tapsoba, R., 2017. Flexible fiscal rules and countercyclical fiscal policy. *Journal of Macroeconomics* 52, 189–220. doi:[10.1016/j.jmacro.2017.04.007](https://doi.org/10.1016/j.jmacro.2017.04.007).

- von Hagen, J., Harden, I., 1995. Budget processes and commitment to fiscal discipline. *European Economic Review* 39, 771–779. doi:[10.1016/0014-2921\(94\)00084-D](https://doi.org/10.1016/0014-2921(94)00084-D).
- Haynes, S.E., Stone, J.A., 1989. An integrated test for electoral cycles in the us economy. *Review of Economics and Statistics* 71, 426–443. doi:[10.2307/1926899](https://doi.org/10.2307/1926899).
- Hibbs, D.A., 1977. Political parties and macroeconomic policy. *American Political Science Review* 71, 1467–1487. doi:[10.2307/1961490](https://doi.org/10.2307/1961490).
- Hibbs, D.A., 1994. The partisan model of macroeconomic cycles. *Economics and Politics* 6, 1–23. doi:[10.1111/j.1468-0343.1994.tb00081.x](https://doi.org/10.1111/j.1468-0343.1994.tb00081.x).
- Inoguchi, T., 1981. Explaining and predicting japanese general elections, 1960–1980. *Journal of Japanese Studies* 7, 255–318. doi:[10.2307/132204](https://doi.org/10.2307/132204).
- Kalecki, M., 1943. Political aspects of full employment. *Political Quarterly* 14, 322–331. doi:[10.1111/j.1467-923X.1943.tb01016.x](https://doi.org/10.1111/j.1467-923X.1943.tb01016.x).
- Kitsos, A., Proestakis, A., 2021. Mediating distributive politics: Political alignment and electoral business cycle effects on municipality financing in Greece. *The Annals of Regional Science* 67, 1–26. doi:[10.1007/s00168-020-01038-7](https://doi.org/10.1007/s00168-020-01038-7).
- Klein, F.A., Sakurai, S.N., 2015. Term limits and political budget cycles at the local level: Evidence from a young democracy. *European Journal of Political Economy* 37, 21–36. doi:[10.1016/j.ejpoleco.2014.10.008](https://doi.org/10.1016/j.ejpoleco.2014.10.008).
- Klomp, J., de Haan, J., 2013. Political budget cycles and election outcomes. *Public Choice* 157, 245–267. doi:[10.1007/s11127-012-9943-y](https://doi.org/10.1007/s11127-012-9943-y).
- Kydland, F.E., Prescott, E.C., 1977. Rules rather than discretion: The inconsistency of optimal plans. *Journal of Political Economy* 85, 473–492. doi:[10.1086/260580](https://doi.org/10.1086/260580).
- Larch, M., Malzubris, J., Santacroce, S., 2023. Numerical Compliance with EU Fiscal Rules: Facts and Figures from a New Database. *Intereconomics: Review of European Economic Policy* 58, 32–42. doi:[10.2478/ie-2023-0008](https://doi.org/10.2478/ie-2023-0008).
- Larch, M., Orseau, E., van der Wielen, W., 2021. Do eu fiscal rules support or hinder counter-cyclical fiscal policy? *Journal of International Money and Finance* 112. doi:[10.1016/j.jimonfin.2020.102328](https://doi.org/10.1016/j.jimonfin.2020.102328).
- Lindbeck, A., Weibull, J.W., 1987. Balanced-budget redistribution as the outcome of political competition. *Public Choice* 52, 273–297. doi:[10.1007/BF00116710](https://doi.org/10.1007/BF00116710).
- López-Villavicencio, A., Zoumenou, J., 2025. Do Binding Fiscal Rules Enhance Fiscal Stability? Evidence from European Union Countries. *Journal of Macroeconomics* .
- Menuet, M., Villieu, P., Voia, M., 2021. Does public debt secure social peace? a diversionary theory of public debt management. *Social Choice and Welfare* 57, 475–501. doi:[10.1007/s00355-021-01332-z](https://doi.org/10.1007/s00355-021-01332-z).
- Milesi-Ferretti, G.M., 2004. Good, bad or ugly? on the effects of fiscal rules with creative accounting. *Journal of Public Economics* 88, 377–394. doi:[10.1016/S0047-2727\(02\)00076-2](https://doi.org/10.1016/S0047-2727(02)00076-2).
- Milesi-Ferretti, G.M., Spolaore, E., 1994. How cynical can an incumbent be? strategic policy in a model of government spending. *Journal of Public Economics* 55, 121–140. doi:[10.1016/0047-2727\(94\)90084-1](https://doi.org/10.1016/0047-2727(94)90084-1).
- Mink, M., de Haan, J., 2006. Are there political budget cycles in the euro area? *Europe Union Politics* 7, 191–211. doi:[10.1177/1465116506063706](https://doi.org/10.1177/1465116506063706).
- Müller, A., Storesletten, K., Zilibotti, F., 2016. The political color of fiscal responsibility. *Journal of the European Economic Association* 14, 252–302. doi:[10.1111/jeea.12154](https://doi.org/10.1111/jeea.12154).
- Nerich, C., Reuter, W.H., 2015. Fiscal Rules, Fiscal Space, and the Procyclicality of Fiscal Policy. Working Paper Series 1872. European Central Bank.
- Nickell, S., 1981. Biases in dynamic models with fixed effects. *Econometrica* 49, 1417–1426. doi:[10.2307/1911408](https://doi.org/10.2307/1911408).
- Nohlen, D., Stöver, P., 2010. Elections in Europe: A Data Handbook. Nomos.
- Nordhaus, W.D., 1975. The political business cycle. *Review of Economic Studies* 42, 169–190. doi:[10.2307/2296528](https://doi.org/10.2307/2296528).
- Oriola, H., 2023. Political monetary cycles: An empirical study. *European Journal of Political Economy* 79. doi:[10.1016/j.ejpoleco.2023.102437](https://doi.org/10.1016/j.ejpoleco.2023.102437).
- Persson, T., Svensson, L.E.O., 1989. Why a stubborn conservative would run a deficit: Policy with time-inconsistent preferences. *The Quarterly Journal of Economics* 104, 325–345. doi:[10.2307/2937850](https://doi.org/10.2307/2937850).
- Persson, T., Tabellini, G., 1990. *Macroeconomic Policy, Credibility and Politics*. Harwood Academic Publishers. doi:[10.4324/9780203714942](https://doi.org/10.4324/9780203714942).

- Picchio, M., Santolini, R., 2020. Fiscal rules and budget forecast errors of Italian municipalities. *European Journal of Political Economy* 64. doi:[10.1016/j.ejpoleco.2020.101921](https://doi.org/10.1016/j.ejpoleco.2020.101921).
- Potrafke, N., 2017. Partisan politics: The empirical evidence from OECD panel studies. *Journal of Comparative Economics* 45, 712–750. doi:[10.1016/j.jce.2016.12.004](https://doi.org/10.1016/j.jce.2016.12.004).
- Raess, D., 2021. Globalization and austerity: Flipping partisan effects on fiscal policy during (recent) international crises. *Political Studies* 71, 841–873. doi:[10.1177/00323217211015811](https://doi.org/10.1177/00323217211015811).
- Reuter, W.H., Tkačevs, O., Vilerts, K., 2022. Fiscal rules and volatility: The role of stabilising properties and compliance. *Empirica* 49, 21–52. doi:[10.1007/s10663-021-09522-9](https://doi.org/10.1007/s10663-021-09522-9).
- Rodden, J., Wibbels, E., 2010. Fiscal decentralization and the business cycle: An empirical study of seven federations. *Economics & Politics* 22, 37–67. doi:[10.1111/j.1468-0343.2009.00350.x](https://doi.org/10.1111/j.1468-0343.2009.00350.x).
- Rogoff, K., 1990. Equilibrium political budget cycles. *American Economic Review* 80, 21–36.
- Rogoff, K., Sibert, A., 1988. Elections and macroeconomic policy cycles. *Review of Economic Studies* 55, 1–16. doi:[10.2307/2297526](https://doi.org/10.2307/2297526).
- Rose, S., 2006. Do fiscal rules dampen the political business cycle? *Public Choice* 128, 407–431.
- Rossel Flores, L., Huysmans, M., Ferwerda, J., 2024. The political business cycle of tax reforms. *Public Choice* 200, 65–88. doi:[10.1007/s11127-024-01143-7](https://doi.org/10.1007/s11127-024-01143-7).
- Schakel, A.H., 2011. Congruence between regional and national elections. *Comparative Political Studies* 46, 631–662. doi:[10.1177/0010414011424112](https://doi.org/10.1177/0010414011424112).
- Schakel, A.H., 2015. Nationalisation of regional elections in Central and Eastern Europe. *East European Politics* 31, 229–247. doi:[10.1080/21599165.2015.1036034](https://doi.org/10.1080/21599165.2015.1036034).
- Schakel, A.H., 2021. Regional spillover into third-order European elections. *Governance* 34, 643–663. doi:[10.1111/gove.12434](https://doi.org/10.1111/gove.12434).
- Schumpeter, J.A., 1939. *Business Cycles: A Theoretical, Historical and Statistical Analysis of the Capitalist Process*. McGraw Hill.
- Shelton, C.A., 2014. Legislative budget cycles. *Public Choice* 159, 251–275. doi:[10.1007/s11127-012-0043-9](https://doi.org/10.1007/s11127-012-0043-9).
- Shipan, C.R., Volden, C., 2008. The Mechanisms of Policy Diffusion. *American Journal of Political Science* 52, 840–857. doi:[10.1111/j.1540-5907.2008](https://doi.org/10.1111/j.1540-5907.2008).
- Simmons, B., Garrett, G., Dobbin, F., 2007. The global diffusion of public policies: Social construction, coercion, competition, or learning? *Annual Review of Sociology* 33. doi:[10.1146/annurev.soc.33.090106.142507](https://doi.org/10.1146/annurev.soc.33.090106.142507).
- Sollé-Ollé, A., Sorribas-Navarro, P., 2008. The effects of partisan alignment on the allocation of intergovernmental transfers: differences-in-differences estimates for Spain. *Journal of Public Economics* 92, 2302–2319. doi:[10.1016/j.jpubeco.2007.06.014](https://doi.org/10.1016/j.jpubeco.2007.06.014).
- Stone, J.A., Jacobs, D., 2020. Presidential party affiliation and electoral cycles in the U.S. economy: Evidence from party changes in adjacent terms. *Journal of Macroeconomics* 64. doi:[10.1016/j.jmacro.2020.103200](https://doi.org/10.1016/j.jmacro.2020.103200).
- Thornton, J., Vasilakis, C., 2018. Fiscal rules and government borrowing costs: International evidence. *Economic Inquiry* 56, 446–459. doi:[10.1111/ecin.12484](https://doi.org/10.1111/ecin.12484).
- Tufte, E., 1978. *Political Country of the Economy*. Princeton University Press. doi:[10.2307/j.ctv15r5816](https://doi.org/10.2307/j.ctv15r5816).
- Veiga, L.G., Pinho, M.M., 2007. The political economy of intergovernmental grants: Evidence from a maturing democracy. *Public Choice* 133, 457–477. doi:[10.1007/s11127-007-9208-3](https://doi.org/10.1007/s11127-007-9208-3).
- Veiga, L.G., Veiga, F.J., 2007. Political budget cycles at the municipal level. *Public Choice* 131, 45–64. doi:[10.1007/s11127-006-9104-2](https://doi.org/10.1007/s11127-006-9104-2).
- Wallsten, K., Fogarty, E.A., 2024. Consolidation nations: Public attitudes, electoral institutions, and fiscal rules in the European Union. *Electoral Studies* 87. doi:[10.1016/j.electstud.2023.102731](https://doi.org/10.1016/j.electstud.2023.102731).
- Yared, P., 2019. Rising government debt: Causes and solutions for a decades-old trend. *Journal of Economic Perspectives* 33, 115–149. doi:[10.1257/jep.33.2.115](https://doi.org/10.1257/jep.33.2.115).

A. Additional results

Table A1: Main results - First step estimates in the IV estimation

	FRSI			
	(1) ^{1st}	(2) ^{1st}	(3) ^{1st}	(4) ^{1st}
Spending(t-1)	-0.365** (0.175)	-0.356** (0.176)	-0.365** (0.173)	-0.356** (0.174)
Tax rate(t-1)	0.158 (0.097)	0.161* (0.097)	0.150 (0.097)	0.153 (0.096)
Election	0.022* (0.012)	0.030** (0.012)	0.020* (0.012)	0.028** (0.012)
Reg. Election	-0.002 (0.012)	-0.001 (0.012)	-0.001 (0.012)	-0.000 (0.012)
FRSI (instrument)	0.041*** (0.002)	0.042*** (0.002)	0.041*** (0.002)	0.042*** (0.002)
Election × FRSI (instrument)		-0.002* (0.001)		-0.002* (0.001)
Regional controls				
(log) GDP per capita(t-1)	0.462*** (0.069)	0.462*** (0.069)	0.451*** (0.069)	0.451*** (0.069)
Inflation	0.515** (0.203)	0.518** (0.204)	0.518*** (0.202)	0.521*** (0.203)
National controls				
Growth GDP(t-1)	-0.276 (0.173)	-0.264 (0.173)	-0.267 (0.172)	-0.256 (0.173)
Gross debt(t-1)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
Nbr. observations	6 078	6 078	6 072	6 072

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Standard error in parentheses are robust. Estimations are performed with a two-stage least squares estimator with time fixed effects. *FRSI* and *Election × FRSI* are instrumented by their mean across different country groups. PBC with highest fiscal rules corresponds to the sum of the coefficients of *Nat.Election* and *Nat.Election × FRSI* evaluated at the sample maximum of the FRSI. The instrument for the FRSI correspond to the average observed in similar countries of the region.

Table A2: Robustness tests for the Naive PBCs - OLS estimator, GMM estimator, lagged instrument for *FRSI* and NUTS 3 estimate

	Government spending				Tax rate		
	(2.2) ^{FE}	(2.2) ^{m.a.}	(2.2) ^{GMM}	(2.2) ^{NUTS3}	(2.4) ^{FE}	(2.4) ^{m.a.}	(2.4) ^{GMM}
Growth spending(t-1)	0.035* (0.018)	0.035* (0.020)	0.085*** (0.023)	0.019* (0.010)	-0.152*** (0.035)	-0.155*** (0.040)	-0.185*** (0.032)
Growth tax(t-1)	-0.014 (0.010)	-0.014 (0.009)	-0.035** (0.015)		-0.008 (0.020)	-0.007 (0.025)	0.030 (0.029)
Nat. Election	0.008*** (0.001)	0.008*** (0.002)	0.009*** (0.001)	0.010*** (0.001)	-0.001 (0.004)	-0.000 (0.004)	0.003 (0.003)
Reg. Election	0.003** (0.001)	0.003** (0.001)	0.002* (0.001)	0.002** (0.001)	0.004 (0.003)	0.004 (0.003)	0.001 (0.003)
FRSI	0.005*** (0.001)		0.012*** (0.002)		0.009*** (0.002)		-0.006** (0.003)
FRSI [m.a.]		0.005** (0.002)				0.002 (0.005)	
FRSI [instr.]				0.022*** (0.001)			
Election × FRSI	-0.001 (0.001)		-0.001 (0.001)		-0.006* (0.003)		-0.006* (0.003)
Election × FRSI [m.a.]		-0.001 (0.002)				-0.007** (0.004)	
Election × FRSI [instr.]				-0.005*** (0.001)			
Regional controls							
(log) GDP per capita(t-1)	-0.013* (0.007)	-0.013* (0.008)	-0.001 (0.009)	0.010*** (0.004)	0.039*** (0.011)	0.037 (0.024)	0.076*** (0.011)
Inflation	0.303*** (0.039)	0.303*** (0.038)	0.530*** (0.031)	0.003*** (0.000)	0.298*** (0.058)	0.297*** (0.062)	1.018*** (0.047)
National controls							
Growth GDP(t-1)	0.149*** (0.032)	0.150*** (0.039)	0.133*** (0.022)	0.086*** (0.011)	0.093** (0.043)	0.094** (0.046)	0.264*** (0.051)
Gross debt(t-1)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000** (0.000)	-0.000 (0.000)
Constant	0.196** (0.076)				-0.294** (0.119)		
PBC with highest FRSI							
for Election	0.005 (0.003)	0.004 (0.003)	0.005* (0.003)	-0.003* (0.001)	-0.016** (0.006)	-0.020** (0.008)	-0.014* (0.007)
Nbr. observations	6 078	6 078	5 842	29 374	6 072	6 072	5 836
Nbr. instruments			225				225
R ²	0.234				0.164		
K-P rk p-value		0.000		0.000		0.000	
Hansen J statistic p-value		0.000	0.000	0.000		0.000	0.000
Sargan C statistic p-value			0.151				0.146

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Standard error in parentheses are robust. Estimations are performed with a standard OLS estimator with time fixed effects. In the sake of clarity, we present separately the three different measures of *FRSI* used in this table: *FRSI* the raw variable, *FRSI(t-1)* the instrumentation of *FRSI* using its past value and *FRSI [instr.]* the instrument used throughout the paper. For more information on the standard instrumentation, refer to [section 4](#). PBC with highest fiscal rules corresponds to the sum of the coefficients of *Nat.Election* and *Nat.Election × FRSI* evaluated at the sample maximum of the *FRSI*.

Table A3: Robustness tests for the Naive PBCs - Centralization measures, multiple fixed effects and endogenous election timing

	Government spending			Tax rate		
	(2.2) ^{cen.}	(2.2) ^{mul.FE}	(2.2) ^{exo.}	(2.4) ^{cen.}	(2.4) ^{mul.FE}	(2.4) ^{exo.}
Growth spending(t-1)	0.080*	0.033*	0.032	-0.135***	-0.156***	-0.156***
	(0.041)	(0.019)	(0.020)	(0.043)	(0.041)	(0.042)
Growth tax(t-1)	0.136***	-0.012	-0.013	0.004	-0.005	-0.005
	(0.018)	(0.009)	(0.009)	(0.027)	(0.025)	(0.025)
Nat. Election	0.006***	0.010***		0.002	0.002	
	(0.002)	(0.002)		(0.003)	(0.003)	
Nat. Election [exo.]			0.017***			0.003
			(0.002)			(0.004)
Nat. Election [end.]			-0.006***			0.003
			(0.002)			(0.005)
FRSI	-0.015*	-0.002	-0.002	-0.010	-0.004	-0.004
	(0.009)	(0.005)	(0.005)	(0.010)	(0.010)	(0.011)
Nat. Election × FRSI	-0.007***	-0.006***		-0.011***	-0.015***	
	(0.002)	(0.001)		(0.003)	(0.003)	
Nat. Election [exo.] × FRSI			-0.013***			-0.016***
			(0.002)			(0.004)
Nat. Election [end.] × FRSI			0.007***			-0.012**
			(0.002)			(0.005)
Spending decentralization	0.101***					
	(0.035)					
Tax revenue decentralization				0.133**		
				(0.061)		
PBC with highest FRSI						
for Nat. Election	-0.013***	-0.007***		-0.028***	-0.038***	
	(0.005)	(0.003)		(0.008)	(0.006)	
for Nat. Election, exogenous			-0.017***			-0.042***
			(0.004)			(0.007)
for Nat. Election, endogenous			0.012***			-0.030***
			(0.004)			(0.012)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Region fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	No	Yes	No	No	Yes	No
Nbr. observations	2 556	6 078	6 078	5 606	6 072	6 072
K-P rk p-value	0.000	0.000	0.000	0.000	0.000	0.000
J statistic p-value	0.000	0.000	0.000	0.000	0.000	0.000

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Standard error in parentheses are robust. Estimations are performed with a standard OLS estimator with time fixed effects. In the sake of clarity, we present separately the three different measures of *FRSI* used in this table: *FRSI* the raw variable, *FRSI(t-1)* the instrumentation of *FRSI* using its past value and *FRSI [inst.]* the instrument used throughout the paper. For more information on the standard instrumentation, refer to [section 4](#). PBC with highest fiscal rules corresponds to the sum of the coefficients of *Nat.Election* and *Nat.Election × FRSI* evaluated at the sample maximum of the *FRSI*.

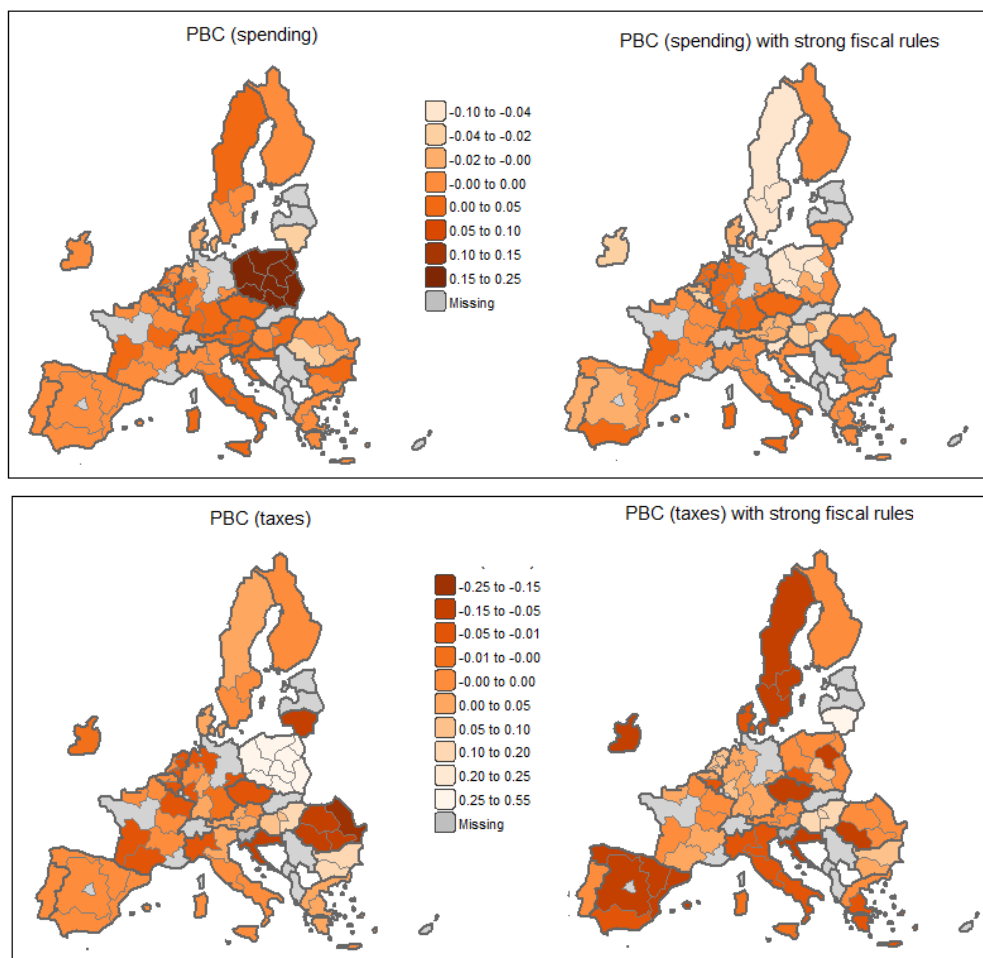
B. Online Appendix

Table B1: Political regimes and head of governments by country

Country	Regime	Head of government position
Austria	Parliamentary	Chancellor of Austria
Belgium	Parliamentary	Premier of Belgium
Bulgaria	Assembly-Elected President	Prime Minister of Bulgaria
Croatia	Presidential Parliamentary	President of the Republic of Croatia (1995-1999) President of the Government of the Republic of Croatia (2000-2023)
Cyprus	Presidential	President of the Republic of Cyprus
Czechia	Parliamentary	Prime Minister of the Czech Republic
Denmark	Parliamentary	Prime Minister of Denmark
Estonia	Assembly-Elected President	Prime Minister of Estonia Prime Minister of Estonia
Finland	Parliamentary	Prime Minister of Finland
France	Parliamentary	Prime Minister of France
Germany	Parliamentary	Federal Chancellor of the Federal Republic of Germany
Greece	Parliamentary	Prime Minister of the Hellenic Republic
Hungary	Parliamentary	Prime Minister of Hungary
Ireland	Parliamentary	<i>Taoiseach</i>
Italy	Parliamentary	President of the Council of Ministers
Latvia	Parliamentary	Prime Minister of Latvia
Lithuania	Presidential	President of the Republic of Lithuania
Luxembourg	Parliamentary	Prime Minister of Luxembourg
Netherlands	Parliamentary	Prime Minister of the Netherlands
Poland	Presidential	President of the Republic of Poland
Portugal	Parliamentary	Prime Minister of Portugal
Romania	Parliamentary	Prime Minister of the Government of Romania
Slovenia	Parliamentary	President of the Government of the Republic of Slovenia
Spain	Parliamentary	President of the Government of Spain
Sweden	Parliamentary	Prime Minister of Sweden

Political regimes are computed using variable *system* provided by the DPI database (Beck et al., 2001).

Figure B1: PBC at the regional NUTS 1 level. Public spending and taxes to households
(NUTS 1 level estimates using NUTS 2 observations)



Note: PBCs with strong fiscal rules are evaluated at the maximum level of FRSI of the country during the period. Darker colors indicate a higher PBC. Non-significant coefficients are set equal to zero.

Table B2: Political regimes and head of states

Country	Years	Head of State		
		Name	Party	<i>Id.</i> [‡]
Austria	1995-1996	Franz Vranitzky	Social Democratic Party of Austria (SPÖ)	L
	1997-1999	Viktor Klima	Social Democratic Party of Austria (SPÖ)	L
	2000-2006	Wolfgang Schäussel	Austrian People's Party (ÖVP)	R
	2007-2008	Alfred Gusenbauer	Social Democratic Party of Austria (SPÖ)	L
	2009-2015	Werner Faymann	Social Democratic Party of Austria (SPÖ)	L
	2016-2017	Christian Kern	Social Democratic Party of Austria (SPÖ)	L
	2018	Sebastian Kurz	Austrian People's Party (ÖVP)	R
	2019	Brigitte Bierlein	Independent	I
	2020-2021	Sebastian Kurz	Austrian People's Party (ÖVP)	R
	2022-2023	Karl Nehammer	Austrian People's Party (ÖVP)	R
Belgium	1995-1999	Jean-Luc Dehaene	Christian People's Party (CVP)	R
	2000-2007	Guy Verhofstadt	Flemish Liberals and Democrats (VLD)	R
	2008	Yves Leterme	Christian Democratic and Flemish (CD&V)	R
	2009	Herman Van Rompuy	Christian Democratic and Flemish (CD&V)	R
	2010-2011	Yves Leterme	Christian Democratic and Flemish (CD&V)	R
	2012-2014	Elio Di Rupo	Socialist Party (PS)	L
	2015-2020	Christian Michel	Reformist Movement (MR)	R
	2020-2023	Alexander de Croo	Open Flemish Liberals and Democrats (Open VLD)	R
Bulgaria	1995-1996	Zhan Videnov	Bulgarian Socialist Party (BSP)	L
	1997-2001	Ivan Kostov	Union of Democratic Forces (UDF)	R
	2002-2005	Simon Sakskoburggotski	National Movement Simeon II (NMS)	R
	2006-2009	Sergey Stanishev	Bulgarian Socialist Party (BSP)	L
	2010-2012	Boyko Borisov	Citizens for European Development of Bulgaria (GERB)	R
	2013-2014	Plamen Oresharski	Independent	I
	2015-2020	Boyko Borisov	Citizens for European Development of Bulgaria (GERB)	R
	2021	Stefan Yanev	Independent	I
	2022	Kiril Petkov	We Continue the Change (PP)	C
	2023	Nikolay Denkov	We Continue the Change (PP)	C
Croatia	1995-1999	Franjo Tuđman	Croatian Democratic Union (HDZ)	C
	2000-2003	Ivica Račan	Social Democratic Party (SDP)	L
	2004-2009	Ivo Sanader	Croatian Democratic Union (HDZ)	C
	2010-2011	Jaradanka Kosor	Croatian Democratic Union (HDZ)	C
	2012-2015	Zoran Milanović	Social Democratic Party (SDP)	L
	2016	Tihomir Orešković	Independent	I
	2016-2018	Andrej Plenković	Croatian Democratic Union (HDZ)	C
Cyprus	1995-2002	Glafcos Clerides	Democratic Rally (DISY)	R
	2003-2007	Tassos Papadopoulos	Democratic Party (DIKO)	R
	2008-2012	Demetris Christofias	Democratic Party of Working People (AKEL)	L
	2013-2022	Nicos Anastasiades	Democratic Rally (DISY)	R
	2023	Nikos Christodoulides	Independent	I
Czechia	1995-1997	Václav Klaus	Civic Democratic Party (ODS)	R
	1998	Josef Tošovský	Independent	I
	1999-2002	Miloš Zeman	Czech Social Democratic Party (ČSSD)	L
	2003-2004	Vladimir Špidla	Czech Social Democratic Party (ČSSD)	L
	2005-2006	Jiří Paroubek	Czech Social Democratic Party (ČSSD)	L
	2007-2008	Mirek Topolánek	Civic Democratic Party (ODS)	R
	2009-2010	Jan Fischer	Independent	I
	2011-2013	Petr Nečas	Civic Democratic Party (ODS)	R
	2014-2017	Bohuslav Sobotka	Czech Social Democratic Party (ČSSD)	L
	2018-2021	Andrej Babiš	Action of Dissatisfied Citizens (ANO 2011)	R
	2022-2023	Petr Fiala	Civic Democratic Party (ODS)	R
Denmark	1995-2001	Poul Nyrup Rasmussen	Social Democrats (SA)	L
	2002-2008	Anders Fogh Rasmussen	<i>Venstre</i> (V)	R
	2009-2011	Lars Løkke Rasmussen	<i>Venstre</i> (V)	R
	2012-2014	Helle Thorning-Schmidt	Social Democrats (SA)	L
	2015-2018	Lars Løkke Rasmussen	<i>Venstre</i> (V)	R
	2019-2023	Mette Frederiksen	Social Democrats (SA)	L

[‡] On *Ideology*; R: Right, L: Left, C: Center and I: Independent. Where applicable, party names mentioned in this table are their most recent names.

Table B2: Political regimes and head of states (continued)

Country	Years	Head of State		
		Name	Party	<i>Id.</i> [‡]
Estonia	1995-1996	Tiit Vähi	Estonian Coalition Party (KMÜ)	R
	1997-1998	Mart Siimann	Estonian Coalition Party (KMÜ)	R
	1999-2001	Mart Laar	Pro Patria Union (IL)	R
	2002	Siim Kallas	Reform Party (REF)	R
	2003-2004	Juhan Parts	Res Publica Party (RES)	R
	2005-2013	Andrus Ansip	Reform Party (REF)	R
	2014-2016	Taavi Rõivas	Reform Party (REF)	R
	2017-2020	Jüri Ratas	Centre Party (KE)	C
	2020-2023	Kaja Kallas	Reform Party (REF)	R
Finland	1995-2002	Paavo Lipponen	Social Democratic Party (SDP)	L
	2003-2009	Matto Vanhanen	Centre Party (<i>Kesk</i>)	C
	2010	Mari Kiviniemi	Centre Party (<i>Kesk</i>)	C
	2011-2013	Jyrki Katainen	National Coalition Party (Kok)	R
	2014	Alexander Stubb	National Coalition Party (Kok)	R
	2015-2018	Juha Sipilä	Centre Party (<i>Kesk</i>)	C
	2019	Antti Rinne	Social Democratic Party (SDP)	L
	2020-2022	Sanna Marin	Social Democratic Party (SDP)	L
	2023	Petteri Orpo	National Coalition Party (Kok)	R
France	1995-1996	Alain Juppé	Rally for the Republic (RPR)	R
	1997-2001	Lionel Jospin	Socialist Party (PS)	L
	2002-2004	Jean-Pierre Raffarin	Union for a Popular Movement (UMP)	R
	2005-2006	Dominique de Villepin	Union for a Popular Movement (UMP)	R
	2007-2011	François Fillon	Union for a Popular Movement (UMP)	R
	2012-2013	Jean-Marc Ayrault	Socialist Party (PS)	L
	2014-2016	Manuel Valls	Socialist Party (PS)	L
	2017-2020	Édouard Philippe	Independent	I
	2021	Jean Castex	<i>Renaissance</i> (RE)	R
Germany	2022-2023	Élisabeth Borne	<i>Renaissance</i> (RE)	R
	1995-1998	Helmut Kohl	Christian Democratic Union (CDU)	R
	1999-2005	Gerard Schröder	Social Democratic Party (SPD)	L
	2006-2021	Angela Merkel	Christian Democratic Union (CDU)	R
	2022-2023	Olaf Scholz	Social Democratic Party (SPD)	L
Greece	1995	Andreas Papandreou	Panhellenic Socialist Movement (PASOK)	L
	1996-2003	Konstantinos Simitis	Panhellenic Socialist Movement (PASOK)	L
	2004-2009	Konstantinos A. Karamanlis	New Democracy (ND)	R
	2010-2011	George A. Papandreou	Panhellenic Socialist Movement (PASOK)	L
	2012-2014	Antonis Samaras	New Democracy (ND)	R
	2015-2019	Alexis Tsipras	Coalition of the Radical Left – Progressive Alliance (<i>SYRIZA</i>)	L
	2020-2023	Kyriakos Mitsotakis	New Democracy (ND)	R
Hungary	1995-1998	Gyula Horn	Hungarian Socialist Party (MSZP)	L
	1999-2001	Vitkor Orbán	Hungarian Civic Alliance (<i>Fidesz</i>)	L
	2002-2004	Péter Medgyessy	Independent	I
	2005-2008	Ferenc Gyurcsány	Hungarian Socialist Party (MSZP)	L
	2009	Gordon Bajnai	Independent	I
	2010-2023	Viktor Orbán	Hungarian Civic Alliance (<i>Fidesz</i>)	R
Ireland	1995-1996	John Burton	<i>Fine Gael</i> (FG)	C
	1997-2007	Bertie Ahern	<i>Fianna Fáil</i> – The Republican Party (FF)	R
	2008-2010	Brian Cowen	<i>Fianna Fáil</i> – The Republican Party (FF)	R
	2011-2016	Enda Kenny	<i>Fine Gael</i> (FG)	C
	2017-2019	Leo Varadkar	<i>Fine Gael</i> (FG)	C
	2020-2022	Micheál Martin	<i>Fianna Fáil</i> – The Republican Party (FF)	R
	2023	Leo Varadkar	<i>Fine Gael</i> (FG)	C

[‡] On *Ideology*; R: Right, L: Left, C: Center and I: Independent. Where applicable, party names mentioned in this table are their most recent names.

Table B2: Political regimes and head of states (continued)

Country	Years	Head of State		
		Name	Party	<i>Id.</i> [‡]
Italy	1995	Lamberto Dini	Independent	I
	1996-1998	Romano Prodi	Democratic Party (PD)	C
	1999	Massimo D'Alema	Democratic Party (PD)	C
	2000	Giuliano Amato	Independent	I
	2001-2005	Silvio Berlusconi	Forward Italy (FI)	R
	2006-2007	Romano Prodi	Democratic Party (PD)	C
	2008-2011	Silvio Berlusconi	The People of Freedom (PdL)	R
	2012	Mario Monti	Independent	I
	2013	Enrico Letta	Democratic Party (PD)	L
	2014-2016	Matteo Renzi	Democratic Party (PD)	L
	2017	Paolo Gentiloni	Democratic Party (PD)	L
	2018-2020	Giuseppe Conte	Independent	I
	2021-2022	Mario Draghi	Independent	I
	2023	Giorgia Meloni	Brothers of Italy (FdI)	R
Latvia	1995	Māris Gailis	Latvian Way (LC)	R
	1996-1997	Andris Šķēle	Independent	I
	1998	Guntar Krasts	For Fatherland and Freedom/Latvian National Independence Movement (TB/LNNK)	R
	1999	Vilis Krištopans	Latvian Way (LC)	R
	2000-2002	Andris Bērziņš	Latvian Way (LC)	R
	2003	Elinars Repše	New Era Party (JL)	C
	2004	Indulis Emsis	Latvian Green Party (LZP)	C
	2005-2007	Aigars Kalvītis	People's Party (TP)	C
	2008	Ivars Godmanis	Latvia's First Party/Latvian Way (LPP/LC)	R
	2009-2011	Valdis Dombrovskis	New Era Party (JL)	R
	2012-2013	Valdis Dombrovskis	Unity (V)	R
	2014-2015	Laimdota Straujuma	Liepāja Party (LP)	C
	2016-2018	Māris Kučinskis	Liepāja Party (LP)	C
	2019-2023	Krišjānis Kariņš	New Unity (JV)	R
Lithuania	1995-1997	Algirdas Bazauskas	Democratic Labour Party (LDDP)	L
	1998-2002	Valdas Adamkus	Independent	I
	2003	Rolandas Paksas	Order and Justice (TT)	R
	2004-2009	Valdas Adamkus	Independent	I
	2010-2019	Dalia Grybauskaitė	Independent	I
	2020-2024	Gitanas Nausėda	Independent	I
Luxembourg	1995-2013	Jean-Claude Juncker	Christian Social People's Party (CSV)	C
	2014-2023	Xavier Bettel	Democratic Party (DP)	R
Netherlands	1995-2002	Wim Kok	Labour Party (PvdA)	L
	2003-2010	Jan Peter Balkenende	Christian Democratic Appeal (CDA)	C
	2011-2023	Mark Rutte	People's Party for Freedom and Democracy (VVD)	R
Poland	1996-2005	Aleksander Kwaśniewski	New Left (NL)	L
	2006-2009	Lech Kaczyński	Law and Justice (PiS)	R
	2010-2015	Bronisław Komorowski	Civic Platform (PO)	R
	2016-2023	Andrzej Duda	Law and Justice (PiS)	R
Portugal	1995	Aníbal António Cavaco Silva	Social Democratic Party (PPD/PSD)	R
	1996-2001	António Manuel de Oliveira Guterres	Socialist Party (PS)	L
	2002-2004	José Manuel Durão Barroso	Social Democratic Party (PPD/PSD)	R
	2005-2010	José Sócrates de Carvalho Pinto de Sousa	Socialist Party (PS)	L
	2011-2023	Pedro Manuel Mamede Passos Coelho	Social Democratic Party (PPD/PSD)	R

[‡] On *Ideology*; R: Right, L: Left, C: Center and I: Independent. Where applicable, party names mentioned in this table are their most recent names.

Table B2: Political regimes and head of states (continued)

Country	Years	Head of State		
		Name	Party	<i>Id.</i> [‡]
Romania	1995-1996	Nicolae Văcăroiu	Social Democratic Party (PSD)	L
	1997	Victor Ciorbea	Christian Democratic National Peasants' Party (PNTCD)	R
	1998-1999	Radu Vasile	Christian Democratic National Peasants' Party (PNTCD)	R
	2000	Mugur Isărescu	Independent	I
	2001-2004	Adrian Năstase	Social Democratic Party (PSD)	L
	2005-2008	Călin Popescu-Tăriceanu	National Liberal Party (PNL)	R
	2009-2011	Emil Boc	Democratic Liberal Party (PDL)	R
	2012-2015	Victor Ponta	Social Democratic Party (PSD)	L
	2016	Dacian Cioloș	Independent	I
	2017	Mihai Tudose	Social Democratic Party (PSD)	L
	2018-2019	Viorica Dăncilă	Social Democratic Party (PSD)	L
	2020	Ludovic Orban	National Liberal Party (PNL)	R
	2021	Florin Cîțu	National Liberal Party (PNL)	R
	2022	Nicolae Ciucă	National Liberal Party (PNL)	R
	2023	Marcel Ciolacu	Social Democratic Party (PSD)	L
Slovenia	1995-2002	Janez Drnovšek	Liberal Democracy of Slovenia (LDS)	R
	2003-2004	Anton Rop	Liberal Democracy of Slovenia (LDS)	R
	2005-2008	Janez Janša	Social Democratic Party (SDS)	L
	2009-2011	Borut Pahor	Social Democrats (SD)	L
	2012	Janez Janša	Social Democratic Party (SDS)	C
	2013-2014	Alenka Bratušek	Modern Center Party (SMC)	R
	2015-2019	Miror Cerar	Modern Center Party (SMC)	R
	2020-2021	Janez Janša	Social Democratic Party (SDS)	L
	2022-2023	Robert Golob	Freedom Movement (GS)	C
Spain	1995	Felipe González	Spanish Socialist Workers' Party (PSOE)	L
	1996-2003	José María Aznar	People's Party (PP)	R
	2004-2011	José Luis Rodríguez Zapatero	Spanish Socialist Workers' Party (PSOE)	L
	2012-2017	Mariano Rajoy	People's Party (PP)	R
	2018-2023	Pedro Sánchez	Spanish Socialist Workers' Party (PSOE)	L
Sweden	1995	Ingvar Carlsson	Swedish Social Democratic Party (S)	L
	1996-2006	Göran Persson	Swedish Social Democratic Party (S)	L
	2007-2014	Fredrik Reinfeldt	Moderate Party (M)	R
	2015-2021	Stefan Löfven	Swedish Social Democratic Party (S)	L
	2022	Magdalena Andersson	Swedish Social Democratic Party (S)	L
	2023	Ulf Kristersson	Moderate Party (M)	R

[‡] On *Ideology*; R: Right, L: Left, C: Center and I: Independent. Where applicable, party names mentioned in this table are their most recent names.

Table B3: Modifications of *Ideology* variable

Country	Years	Incumbent Party	<i>execrlc</i> value	Modified value
Austria	2019 2021-2022	Independent Austrian People's Party	Right missing	Independent Right
Belgium	2015-2020 2021-2022	Reformist Movement Open Flemish Liberals and Democrats (Open Vld)	"0" missing	Right Right
Bulgaria	1995-1996 2002-2005 2006-2009 2013 2014 2021-2022	Bulgarian Socialist Party (BSP) National Movement Simeon II (NMS) Bulgarian Socialist Party (BSP) Independent Independent Independent	"0" "0" "0" Right "0" missing	Left Right Left Independent Independent Independent
Croatia	1995-1999 2000 2004-2010 2016 2021-2022	Croatian Democratic Union (HDZ) Social Democratic Party (SDP) Croatian Democratic Union (HDZ) Independent Croatian Democratic Union (HDZ)	Right Right Right Right missing	Center Left Center Independent Right
Cyprus	2008 2013 2021-2022	Progressive Party of Working People (AKEL) Democratic Rally (DISY) Democratic Rally (DISY)	Right Left missing	Left Right Right
Czechia	1998 2007-2008 2009-2010 2011-2013 2014 2018-2021 2022-2022	Independent Civic Democratic Party (ODS) Independent Civic Democratic Party (ODS) Czech Social Democratic Party (ČSSD) Action of Dissatisfied Citizens (ANO 2011) Civic Democratic Party (ODS)	Right "0" "0" "0" "0" "0" missing	Independent Right Independent Right Left Right Right
Denmark	2015 2019 2021-2022	<i>Venstre</i> (V) Social Democrats (SA) Social Democrats (SA)	Left Right missing	Right Left Left
Estonia	2002 2003-2004 2005-2016 2017-2020 2021-2022	Reform Party (REF) Res Publica Party (RES) Reform Party (REF) Centre Party (KE) Reform Party (REF)	"0" "0" "0" "-999" missing	Right Right Right Centre Right
Finland	1995 2011 2015 2019 2021-2022	Social Democratic Party (SDP) National Coalition Party (Kok) Centre Party (<i>Kesk</i>) Social Democratic Party (SDP) Social Democratic Party (SDP)	Center Center Right Center missing	Left Right Center Left Left

Where applicable, party names mentioned in this table are their most recent names.

Table B3: Modifications of *Ideology* variable (continued)

Country	Years	Incumbent Party	<i>execrlc</i> value	Modified value
France	1997	Socialist Party (PS)	Right	Left
	2002	Union for a Popular Movement (UMP)	Left	Right
	2012	Socialist Party (PS)	Right	Left
	2017-2020	Independent	Left	Independent
	2021-2022	<i>Renaissance</i> (RE)	missing	Right
Germany	2021	Christian Democratic Union (CDU)	missing	Right
	2022-2022	Social Democratic Party of Germany (SDP)	missing	Left
Greece	2004	New Democracy (ND)	Left	Right
	2012	Independent	Right	Independent
	2015	Coalition of the Radical Left – Progressive Alliance (SYRIZA)	Right	Left
	2021-2022	New Democracy (ND)	missing	Right
Hungary	2002-2004	Independent	Left	Independent
	2009	Independent	Left	Independent
	2010	Hungarian Civic Alliance (<i>Fidesz</i>)	Left	Right
	2021-2022	Hungarian Civic Alliance (<i>Fidesz</i>)	missing	Right
Ireland	1995-1996	<i>Fine Gael</i> (FG)	Right	Center
	1997-2010	<i>Fianna Fáil</i> - The Republican Party (FF)	Center	Right
	2012-2019	<i>Fine Gael</i> (FG)	Right	Center
	2020	<i>Fianna Fáil</i> - The Republican Party (FF)	Center	Right
	2021-2022	<i>Fianna Fáil</i> - The Republican Party (FF)	missing	Right
Italy	1995-1996	Independent	Right	Independent
	1997-1998	Independent	Center	Left
	2000	Independent	Center	Independent
	2001	Forward Italy (FI)	Center	Right
	2006	Democratic Party (PD)	Right	Left
	2008	The People of Freedom (PdLI)	Left	Right
	2012	Independent	“-999”	Independent
	2013	Democratic Party (PD)	“-999”	Left
	2014-2017	Democratic Party (PD)	“0”	Left
	2018	Independent	“0”	Left
	2019-2021	Independent	“-999”	Independent
	2021-2022	Independent	missing	Independent
Latvia	1996-1997	Independent	Center	Independent
	2004	Latvian Green Party (LZP)	Center	Right
	2012-2013	Unity (V)	“0”	Right
	2014-2016	<i>Liepāja</i> Party (LP)	“0”	Center
	2019	New Unity (JV)	Center	Right
	2020	New Unity (JV)	“0”	Right
	2021-2022	New Unity (JV)	missing	Right

Where applicable, party names mentioned in this table are their most recent names.

Table B3: Modifications of *Ideology* variable (continued)

Country	Years	Incumbent Party	<i>execrlc</i> value	Modified value
Lithuania	1998-2002	Independent	“0”	Independent
	2003	Order and Justice (TT)	“0”	Right
	2005-2020	Independent	“0”	Independent
	2021-2023	Independent	missing	Independent
Luxembourg	2015-2020	Democratic Party (DP)	missing	Right
	2021-2023	Democratic Party (DP)	missing	Right
Netherlands	2003	Christian Democratic Appeal (CDA)	Left	Center
	2004-2010	Christian Democratic Appeal (CDA)	Right	Center
	2021-2023	People’s Party for Freedom and Democracy (VVD)	missing	Right
Poland	2011-2015	Civic Platform (PO)	Center	Right
	2021-2023	Law and Justice (PiS)	missing	Right
Portugal	2002-2004	Social Democratic Party (PPD/PSD)	Left	Right
	2007-2010	Socialist Party (PS)	Right	Left
	2016-2020	Socialist Party (PS)	Right	Left
	2021-2023	Socialist Party (PS)	missing	Left
Romania	1995-1996	Social Democratic Party (PSD)	“0”	Left
	2000	Independent	Right	Independent
	2005-2008	National Liberal Party (PNL)	“0”	Right
	2009-2011	Democratic Liberal Party (PDL)	“0”	Right
	2012-2015	Social Democratic Party (PSD)	“0”	Left
	2016	Independent	“0”	Independent
	2017-2019	Social Democratic Party (PSD)	“0”	Left
	2020	National Liberal Party (PNL)	“0”	Right
	2021-2022	National Liberal Party (PNL)	missing	Right
Slovenia	1995-2004	Liberal Democracy of Slovenia (LDS)	Left	Right
	2005-2012	Social Democratic Party (SDS)	Center	Left
	2013	Modern Center Party (SMC)	Center	Right
	2014	Modern Center Party (SMC)	Left	Right
	2015-2018	Modern Center Party (SMC)	“0”	Right
	2020	Social Democratic Party (SDS)	Center	Left
	2021	Social Democratic Party (SDS)	missing	Left
	2022-2022	Freedom Movement (GS)	missing	Center
Spain	1996	People’s Party (PP)	Left	Right
	2004	Spanish Socialist Workers’ Party (PSOE)	Right	Left
	2018	Spanish Socialist Workers’ Party (PSOE)	Right	Left
	2021-2022	Spanish Socialist Workers’ Party (PSOE)	missing	Left
Sweden	2021-2022	Swedish Social Democratic Party (S)	missing	Left
	2023	Moderate Party (M)	missing	Right

Where applicable, party names mentioned in this table are their most recent names.