

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

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- 3 Main Results - Naive PBC Definition
- 4 Robustness
- 5 Opportunistic or Partisan PBC?
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The adoption of fiscal rules has expanded considerably over the past 30 years (*IMF Fiscal Rules dataset*)

- From **20** countries in 1995 to **more than 100** en 2021
- The average number of rules per country increased from $\simeq 2$ in the early 2000s to $\simeq 3$ in 2021 (> 3.5 in advanced economies)

In 2024, the European Union reinstated its supranational fiscal rules, reigniting tensions over their enforcement and compliance

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- June 2024: Official reprimands issued to **7** member states for exceeding the EU debt threshold
- October-December 2024: **France** plunged into a budget crisis
- November-December 2024: Political crisis in **Germany** linked to internal disputes over the relaxation of regional fiscal rules

These events have reignited debates over the strategic use of fiscal policy for electoral purposes – a phenomenon commonly referred to as **Political Business Cycles** (PBCs):

European fiscal rules aim to limit such practices at both the national and subnational levels

→ [Rose \(2006\)](#); [Gootjes *et al.* \(2021\)](#)

Yet, these rules have not succeeded in fully eliminating PBC-related behavior

→ [Efthyvoulou \(2012\)](#)

Governments can exploit political loopholes to implement PBCs without being sanctioned (e.g. creative accounting)

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⇒ Subnational PBCs during national election years **Why?**

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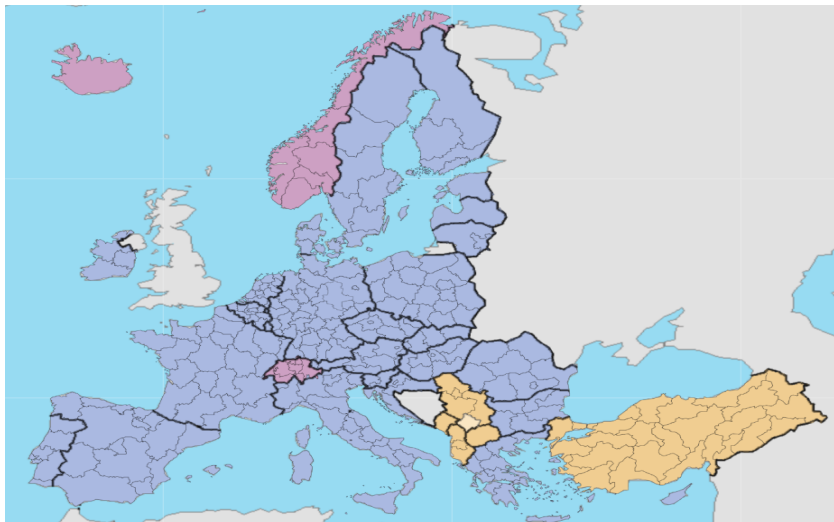
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Annual data for 25 European countries (excluding Malta and Slovakia) from 1995 to 2022, at the **NUTS 2** level:

- 237 “regions”, each with between 800 000 and 3 000 000 inhabitants
- 6 308 region-year observations



Source : [European Commission Statistical Atlas](#)

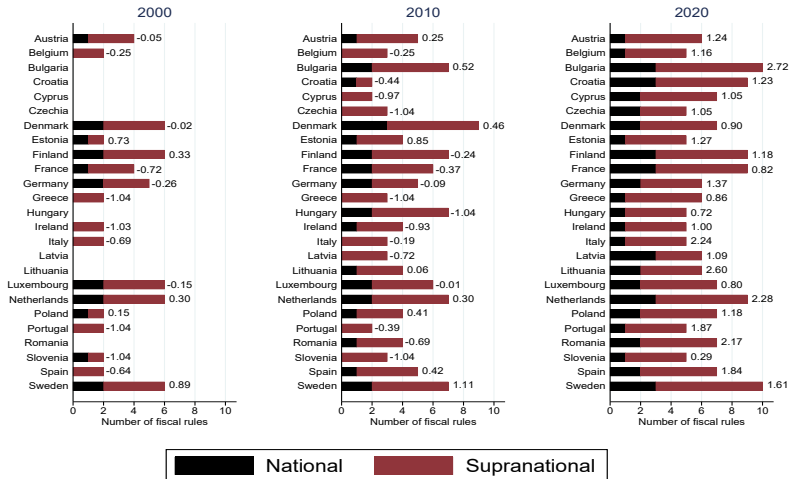


- Regional **fiscal policy** is approximated using regional data from the *ARDECO* database:
 - Growth spending: growth of gross value added per capita in the non-market sector
→ [Brueckner et al. \(2023\)](#); [Gabriel et al. \(2023a,b\)](#)
 - Growth tax: growth of personal income tax and other current taxes per capita

- The **strength of fiscal rules** is measured using the European Commission's *Fiscal Governance Database*
 - FRSI: Fiscal Rules Strength Index [Details](#)

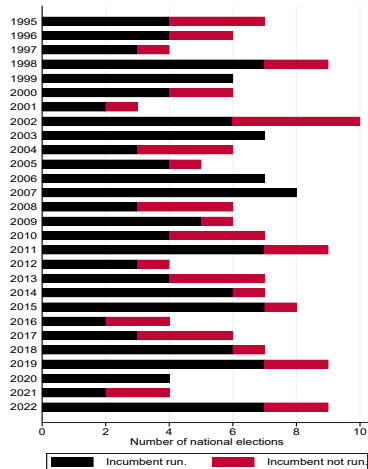
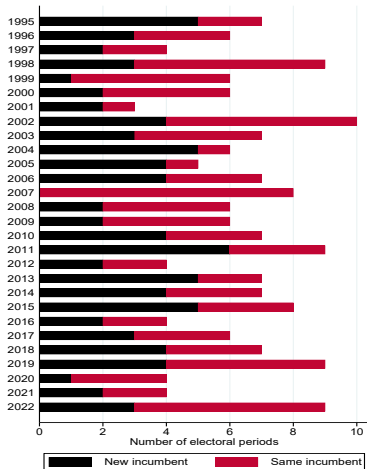
To address issues of **endogeneity** (Caselli et Reynaud, 2020), the *FRSI* is instrumented using its average within three country groups

[Groups](#)



Dummy variables for **election years** are constructed from national sources and existing datasets:

- Nat. Election: 1 in years of national presidential/legislative elections
→ Beck *et al.* (2001); Nohlen et Stöver (2010); Oriola (2023)
- Reg. Election: 1 in years of regional elections
→ Schakel (2011, 2015, 2021)



The empirical model includes a set of lagged and contemporaneous control variables:

- lagged value of the other fiscal instrument
- lagged national public debt (% of GDP)
- lagged national GDP growth
- lagged regional GDP per capita (log)
- regional inflation (GDP deflator)

Summary Statistics

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We estimate the following model using two-stage least squares (2SLS), instrumenting *FRSI* with its country group average :

$$Y_{r,t} = \beta_1 Y_{r,t-1} + \beta_2 Y_{r,t-1}^{alt.} + \beta_3 Nat. Election_{i,t} + \beta_4 FRSI_{i,t} \\ + \beta_5 FRSI_{i,t} \times Nat. Election_{i,t} + \beta_6 Reg. Election_{r,t} \\ + \beta_7 Infl._{r,t} + \beta_8 X_{r,t-1} + \beta_9 Z_{i,t-1} + \gamma_t + \alpha_i + \varepsilon_{r,t}$$

- r : region; i : country
- $X_{r,t-1}$, $Z_{i,t-1}$: control variables
- γ_t : time fixed effects
- α_i : regional fixed effects
- $\varepsilon_{i,t}$: error term

Main Results - Naive PBC Definition

	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 × FRSI		-0.006*** (0.001)		-0.015*** (0.003)
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Nbr. observations	6 078	6 078	6 072	6 072

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Evidence of a **significant PBC in regional public spending** during **national election years**

No significant PBC in regional tax rates on average

No direct or significant effect of fiscal rule strength (*FRSI*) on regional spending or taxation

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When interacting *FRSI* with national election years:

- PBCs in **regional public spending** are **constrained** by stronger rules
- PBCs in **regional taxation** become **significant**

⇒ strict national fiscal rules push manipulation toward regional tax policy, which is less closely monitored ⇒ **reallocation mechanism**

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[...] PBC with highest FRSI for Nat. Election		-0.007** (0.003)		-0.038*** (0.006)
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⇒ For the **highest level of FRSI**, these effects are even more pronounced

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We confirm the results across multiple dimensions:

- ✓ Country-by-country estimates Maps
- ✓ Alternative instrumentation of *FRSI* (5-year moving averages)
+ no instrumentation
- ✓ *GMM* estimator (Arellano et Bond, 1991)
- ✓ Estimates at NUTS 3 level
- ✓ Inclusion of decentralization measures (sub-national spending and taxation)
- ✓ Adding country fixed effects
- ✓ Distinguishing exogenous vs. endogenous elections

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According to the literature, two main motivations justify the existence of PBCs:

- **Opportunistic motivation:** the incumbent government manipulates fiscal policy before elections to improve its chances of reelection
→ [Nordhaus \(1975\)](#)
- **Partisan motivation:** the newly elected government implements an economic policy reflecting the preferences of the voters who supported it
→ [Hibbs \(1977\)](#)

To study these phenomena, we construct two indices for national electoral periods: *Pre-Election* and *Post-Election* (Franzese, 2000)

- if t represents the electoral period:

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

- $\text{Post-Election}_{i,t+1} = \frac{(M-1)+d/D}{12}$;
 $\text{Post-Election}_{i,t} = 1 - \frac{(M-1)+d/D}{12}$

We also construct a complete classification of each national political party's ideology on a left-center-right scale (Beck *et al.*, 2001; Armingeon *et al.*, 2021) Classification

Our analysis highlights the role of **opportunistic motivations**:

- regional public spending significantly increases in the 12 months preceding a national election, even when controlling for *FRSI*
- right-wing governments tend to increase regional public spending before national elections
- left-wing governments prioritize reducing regional taxes – consistent with the reallocation effect

We also find evidence of the relevance of **partisan motivations**:

- left-wing governments often adopt a restrictive regional fiscal policy in the 12 months following a national election
→ contrary to the traditional hypothesis (Hibbs, 1977) ⇒ signal of **responsability**
- fiscal rules constrain partisan cycles in regional public spending but may accentuate partisan variations in taxation

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Main results:

- national elections are associated with increases in regional public spending and decreases in income and wealth taxes
- fiscal rules reduce the magnitude of PBCs but do not eliminate them
- there exists a regional-national trade-off in fiscal manipulation, linked to the strictness of national/supranational fiscal rules
- European fiscal rules are applied unevenly \Rightarrow loopholes in regional fiscal governance

Policy implications:

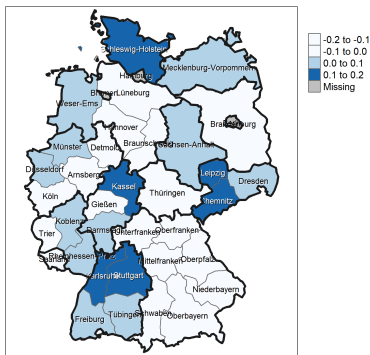
- should fiscal rules be extended to the sub-national level in all EU countries?
- should fiscal rules include revenue-side measures, not just expenditure?

And what about municipal elections? political alignment?

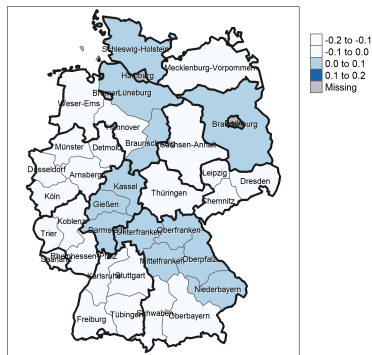
And what about municipal elections? political alignment?

Average Municipal PBCs in Germany (NUTS 3 level)

Business taxes in election years



Business taxes in election years with political alignments



Thank you for your attention!

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Why are national and supranational fiscal rules important for regional fiscal policies?

- hierarchical constraints and central supervision mean that national fiscal rules set binding overall targets for regional budgets \Rightarrow regions cannot bypass national regulations
- regional governments often depend on transfers from the central state, which itself is subject to national fiscal rules
- national fiscal rules often restrict regional borrowing, limiting the ability of regional governments to engage in PBCs
- political and institutional interactions reinforce compliance with national fiscal rules

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Specifically, the *FRSI* index aggregates several characteristics of national and supranational fiscal rules adopted in European countries:

- legal basis
- binding strength of the rule
- existence of monitoring bodies
- existence of corrective mechanisms
- resilience to shocks

As an example, here are the modalities of the first criterion:

- Criterion 1: Legal basis of the rule
 - 3: Constitutional (including norms superior to ordinary law)
 - 2: Ordinary law
 - 1: Coalition agreement (including a government program voted in parliament, or an intergovernmental agreement without legal force)
 - 0: Political commitment (central or local government, finance minister) or annual budget law

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1 AU, BE, DE, FI, FR, GE, IR, LU, NE, SW

2 BU, CR, CY, CZ, ES, HU, LA, LI, PO, RO, SL

3 GR, IT, PO, SP

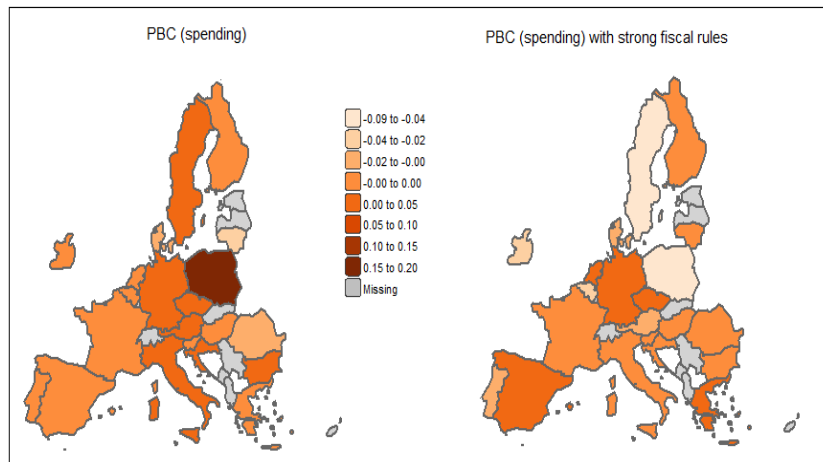
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Descriptive Statistics (NUTS 2 level)

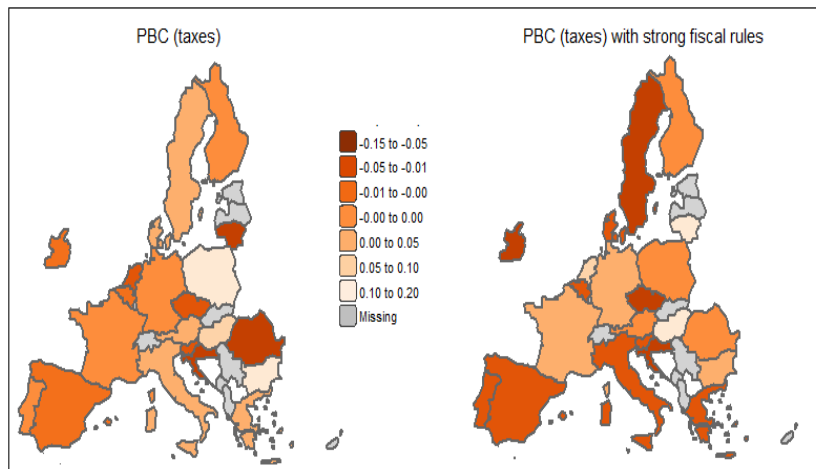
Variable	Mean	Std. Dev.	Min.	Max.	N
Growth spending	0.041	0.06	-0.252	0.948	6 308
Growth tax	0.043	0.097	-0.996	0.844	6 308
(log) GDP per capita	9.973	0.637	7.845	11.662	6 308
Growth GDP	0.019	0.041	-0.308	0.686	6 308
Gross debt	73.236	34.695	3.765	212.449	6 308
Inflation	0.018	0.038	-0.266	0.519	6 308
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

Retour

Regional Public Spending at the National Level



Regional Taxation at the National Level

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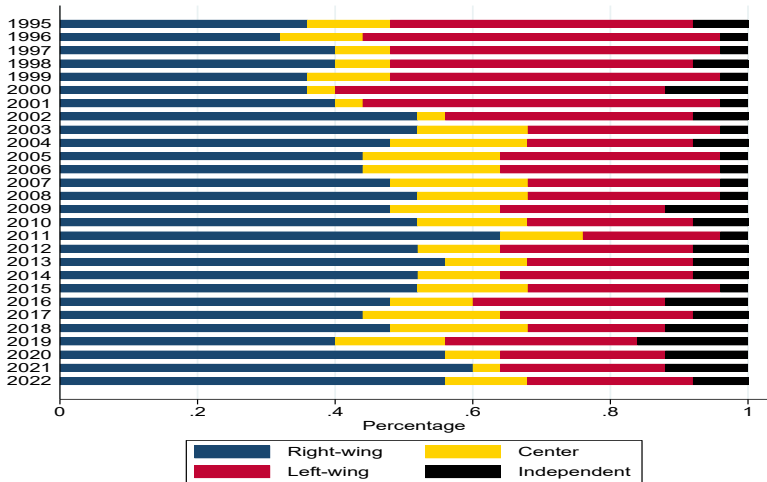
$$\begin{aligned}
 Y_{r,t} = & \beta_1 Y_{r,t-1} + \beta_2 Y_{r,t-1}^{alt.} + \beta_3 \text{Nat. Election}_{i,t} + \beta_4 \text{FRSI}_{i,t} \\
 & + \beta_5 \text{Nat. Election}_{i,t} \times \text{FRSI}_{i,t} + \beta_6 \text{Reg. Election}_{r,t} \\
 & + \beta_7 \text{Infl.}_{r,t} + \beta_8 X_{r,t-1} + \beta_9 Z_{i,t-1} + \gamma_t + \alpha_i + \varepsilon_{r,t}
 \end{aligned}$$

As a result:

$$\frac{\partial Y_{r,t}}{\partial \text{Election}_{i,t}} = \beta_3 + \beta_5 \text{FRSI}_{i,t}$$

⇒ taking into account the highest level of *FRSI* in the sample

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