

Volume 46, Issue 2

Votes and levies: The political economy of property taxation in Belgian provinces

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Abstract

This paper studies the impact of electoral cycles on property tax rates across Belgian provinces. Variations in tax rates are particularly observed around election periods. Analysing literature, which suggests that politicians strategically adjust tax rates to influence voter behaviour—lowering them in the pre-election and election years and raising them afterward—this research aims to analyse whether similar phenomena exist in Belgian provinces. Using panel data covering multiple election cycles, we elaborated a fixed effects model to estimate the effect of election cycles on property tax rates, focusing on the year before, during, and after elections. Two key control variables identified in the literature were included despite using fixed effects: population size and the tax base, proxied by the average primary income per household. The findings confirm a significant drop in property tax rates during election years and an increase in the year following elections, which corroborate theoretical expectations. However, contrary to much of the existing literature, the results for the year preceding elections are not statistically significant, suggesting a weaker anticipatory tax-cutting behaviour among Belgian provinces. These results highlight the influence of electoral incentives on fiscal policy and the importance of contextual factors in shaping these dynamics.

Citation: Julien Vandernoot and Camille Wallemacq, (2026) "Votes and levies: The political economy of property taxation in Belgian provinces", *Economics Bulletin*, Volume 46, Issue 2, pages 801-815

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Submitted: August 18, 2025. **Published:** June 30, 2026.

Submitted: August 18, 2025.

1. Introduction

There are large variations in the rates of property tax within the Belgian provinces. When you look more closely at these rates, it seems that these variations occur particularly during election years.

Indeed, according to the scientific literature, electoral cycles play a role in influencing various tax rates around the world. Generally, we notice that politicians tend to lower the tax rate in an election year but also in the year before an election. Voters are tax averse, so they hope to manipulate them and get their votes to maximize their chances of re-election. The year after the elections, however, politicians tend to raise interest rates to compensate for the past decline and thus the deficits that have been incurred. Obviously, the authors highlight that electoral cycles can be either amplified or weakened depending on certain characteristics specific to the jurisdiction studied, such as population size and tax base.

Given the structure of the distribution of powers and funding across the different levels of government in Belgium, this article aims to examine a level that has received relatively little attention in the literature, the provinces.

The objective was to verify whether this mechanism could also be applied to Belgian provinces through a quantitative study. We built a model to determine the impact of elections on real estate tax rates by analysing the year before, during and after an election. Even though fixed effects were included in the research, we also included two control variables that seemed central to the literature: population size and taxable base via average primary income per household.

This study confirmed some of the observations in the literature review. Rates tend to decrease in an election year and increase the following year. On the other hand, the results are contradictory with respect to the year before an election, as these are not significant.

2. Literature review

The influence of political choices in elections has already been covered in the field of public management. The foundations of electoral political cycle theory have already been developed by Downs (1957), Key (1966) and Kramer (1971). The electoral political cycle has been described as a periodic fluctuation in policies leading to mandate renewals (Binet and Pentecôte, 2006). These cycles can be justified through information asymmetries according to Rogoff and Sibert (1988), Bee and Moulton (2015) and Cassette and al (2011). The agents are uninformed on the principals' interests (Grossman and Hart, 1983) and this theory has been designed to observe interactions between these two types of actors. Even if the principal-agent theory has been developed in an economic perspective, it can also be used to analyse political problems because principal-agent asymmetries are one of the most frequent problems occurring in democracies. It is mainly because the actions of an actor (agent) depend on the actions of another one (principal). Cassette and al (2011), Rogoff and Sibert (1988) consider that this asymmetric information can make it difficult for voters to choose their political representatives. In this way, electoral cycles have been elaborated to analyse how elections affect representative actors' decisions (Nordhaus, 1975).

Manipulations may occur in the hands of politicians and according to Coimbra, Costa and Carvalho (2001), they use electoral cycles to determine their tax rates. The stimulus produces information, which is then eliminated through post-election austerity measures that lead to contractions and increased unemployment (Alesina et al., 1992). Given the importance of taxation and the fact that taxes and transfers can be handled more quickly and easily than

unemployment (Dubois, 2016), there has been a strong interest in the strategic use of tax reform to drive electoral gains.

Gérard, Jayet and Paty (2010) as well as Bordignon, Cerniglia and Revelli (2004) note an opportunistic behaviour of politicians with notably a reduction in tax rates years before an election. This is because, according to Mikesell (1978), it is imperative to avoid unpopular decisions on the eve of elections. These decisions are unpopular in the sense that voters do not like taxes (Berry and Berry, 1994). However, the year after an election is the most favourable for a tax increase according to this author. Rossel Flores, Huysmans and Ferwarda (2024) argue that a good way to reduce taxes would be to hold elections every year. To be more precise, Rossel Flores, Huysmans and Fewerda (2024) identify the 1-3 months before elections and 4-6 months after elections as the most important periods because politicians take advantage of these timeframes to implement reforms and campaign promises. The change in policy at the beginning of a term ensures that these changes are forgotten by the population ready for the next election. This is why most tax reforms occur during the first 6 to 12 months of a mandate. Furthermore, if a new government is elected, according to Strobl and al (2021), it will be able to justify its tax increase through the misdeeds of the previous government.

Elections are, in fact, an important time (Downs, 1957) when voters will either punish or reward a government in place (Buchanan and Tullock, 1975), which encourages politicians to announce well-received reforms and thus gain votes (Nordhaus et al, 1989).

Similarly, Rossel Flores, Huysmans and Fewerda (2022) argue that tax reforms are less likely in the months leading up to elections.

Other elements will amplify the effect of election cycles. First, political cycles are more noticeable in smaller cities as well as in cities with a large tax base according to Alesina and Paradisi (2017). Electoral cycles, on the other hand, seem to lose their influence when deficits increase. On the other hand, Persson and Tabellini (2002) argues that political cycles only influence taxes during presidential elections while Brender and Drazen (2005) identify it solely in new democracies. The older ones with a higher level of maturity are not affected. Vegh and Vuletin (2015) show that taxes are acyclic in developed economies but procyclical in developing economies. For their part, David and Sever (2022) show that electoral cycles are weaker in countries with stronger institutions. On the other hand, Rossel Flores, Huysmans and Fewerda (2022) argue that party membership has no influence on tax rates.

Numerous studies have already been carried out around the world to determine the impact of electoral cycles on taxation, especially in Canadian provinces (Kneebone and McKenzie, 2001), in Colombian municipalities (Drazen and Eslava, 2005), in German cities (Foremmy and Riedel, 2014), in Russian provinces (Akhmedov and Zhuravskaya, 2004), and finally in Portuguese cities (Veiga and Veiga, 2007).

Voters, on the other hand, will not always react in the expected way to these manipulations. According to Peltzman (1992), the Americans are averse to spending increases and do not reward such behaviour which has also been also observed in Israel by Brender (2003). In Colombia, Drazen and Eslava (2005) even noted that citizens would condemn such manipulations as well as in Chile as identified by Cerda and Vergara (2007). However, such manipulations have had the expected effects in Russian provinces (Akhmedov and Zhuravskaya, 2004) as well as in Latin America where citizens are not accustomed to democracy and can therefore be easily manipulated (Sakurai and Menezes-Filho, 2024).

3. Research methodology

3.1 Research context

Belgium is a federal country made up of four levels of government. Provinces are the third level just before municipalities. Even if this level of government is not deemed as essential in Belgium, provinces also determine citizens taxation. Unlike municipalities, which apply both supplements to personal income tax and withhold tax on real estate, the provinces only withholding tax on real estate.

For Belgian provinces, the majoritarian source of regular income is additional percentages on property tax. These revenues depend on cadastral revenue which is indexed based on function inflation rates. Other elements also account for provincial regular income such as the Provincial Fund and regional offsets, residual transfer revenues, benefit revenues or debt service revenues. (Province du Hainaut, 2023).

3.2 Sample and Data Collection

We decided for each data, to collect it over a thirty-year period (1995-2024) which allow us to cover five electoral periods.

For the tax rates concerning property tax, data has been collected by contacting each province by email. Provinces have the data at their disposal in their own archives. Some provinces provided us data for the whole period but in some cases, the more recent data was not communicated. To complete the database, we contacted the “Service Publique de Wallonie” which is responsible for all public services in the Walloon region to obtain more recent data and cover the thirty-years period.

We identified through the literature review, two control variables (Alesina & Paradisi, 2017) that amplify or decrease the effect of electoral cycles when it comes to tax rates. The first variable is the height of the jurisdiction. In this case, we decided to search the number of inhabitants in each province. This piece of information could be found in a database completed by Statbel.

The second control variables required for this test was the tax base itself. As the tax base is not readily available, we decided to use primary household income to approach it. In fact, primary revenue is the base for taxation. We found this data in Eurostat ¹for each province and for the entire period.

3.3 Research model and variables description

Electoral cycle analysis is based on common correlations. In this instance, we analysed the variation of property tax rates throughout the year focusing specifically on three types of year: the year before elections, the year of elections and the year after elections. For this reason, a variable named Var_Pri was created to represent the variation of these tax rates between a year considered and the previous year. This variable was elaborated and inspired from the model as designed by Bee and Moulton (2015):

$$(1) \text{Var_Pri} = \log \text{Pri}_{ct} - \log \text{Pri}_{ct-1} = \beta_0 + \beta_1 \text{Election}_{ct} + \varepsilon_{ct}$$

Where Pri is the property tax rates observed for a year considered (t) in a given province (c).

¹ The Statistical Office of the European Union

The use of logarithms was introduced to be as meaningful as possible but also to capture scale effects and to reduce variance.

Time variables were also created to determine the impact of elections on a dependent variable. Most studies only look into the year preceding elections. Here, we expand the research horizon, and we also created two additional dummies: one for the year of elections and one for the year after elections. These variables are described in the model but Election_{ct} .

In this study, we decided to introduce fixed effects in the model because large heterogeneity is observed between provinces. It allows us to concentrate on time effect and election timing and not on the impact of provincial characteristics on tax rates. In fact, provinces can be characterized through several elements such as political, demographic and economic elements which can also influence electoral cycles in a major or minute way. For this reason, we include several control variables: population height (POP), household primary income (PI), GDP per capita (GDP), unemployment rate (UR), productive structure (PS), ideology (I) and majoritarian party (M). These variables have been introduced in a logarithmic format to equally capture variance and scale effect.

Ideology and majoritarian party are two dummies used in this model:

- Ideology (I) has value 1 if the majoritarian party is right-wing and 0 if not.
- Majoritarian party (M) has value 1 if it's a coalition and 0 if it is an absolute majority.

The model can, therefore, be written as follows:

$$(2) \text{Pri}_{ct} - \text{Pri}_{ct-1} = \beta_0 + \beta_1 \text{Election}_{ct} + \text{POP} + \text{PI} + \text{GDP} + \text{UR} + \text{PS} + \text{I} + \text{M} + \varepsilon_{ct}$$

This model shows up the variation in property tax rates over several years in different context (before, during or after elections).

Three hypotheses have been elaborated from this mode:

- ***H1: Property tax rates tend to decrease during election year***
- ***H2: Property tax rates tend to decrease the year before election***
- ***H3: Property tax rates tend to increase the year after election***

Descriptive statistics are reported in Table 1.

Table I: Descriptive statistics²

<i>Variables</i>	<i>Observations</i>	<i>Mean</i>	<i>Standard deviation</i>
<i>Property tax rate</i>	300	922.18	676.49
<i>Year before elections</i>	300	0.167	0.373
<i>Year of elections</i>	300	0.167	0.373
<i>Year after elections</i>	300	0.163	0.370
<i>Population height</i>	300	974,630.1	463,014.9
<i>Primary income</i>	290	22,408.87	12,866.01
<i>GDP per capita</i>	300	0.045	0.043
<i>Population density</i>	300	371.55	264.64
<i>Unemployment rate</i>	300	6.76	3.027
<i>Productive structure</i>	300	19,134.86	13,983.47
<i>Political ideology</i>	300	0.72	0.449
<i>Coalition VS majority</i>	300	0.98	0.140
<i>Observations</i>	3590		

4. Results

As shown in **Appendix 1**, we firstly tested if variation in property tax rates occurred the year of election. As indicated in the results table, the coefficient for election year is negative which indicates that tax rates tend to decrease the year of election. This result appears even if we include or exclude fixed effects. In addition, this observation is significative in both cases.

H1 validated: Tax rates tend to decrease the year of election

Nevertheless, differences are observed concerning the impact of population height and households' primary income. We can see than population height has a negative and significant impact on the importance of electoral cycles and primary income has a positive and non-significant impact.

We can also see that GDP per capita has a negative impact on the effect of electoral cycles when population density and unemployment rate have a positive impact on this effect but the effect of GDP per capita is not significant which can be due to the invalidated hypothesis.

Political ideology has a positive impact on the effect, but coalition and productive structure have negative impact on the importance of electoral cycles. None of those effects is significant.

² We only included 290 observations for the primary income. This can be explained as the data are only published two years after a studied year.

Table II: Results for the year of elections

Dependent variable	Coefficient	Standards errors	P-Value
The year of election	-0.0286	0.0334	0.087*
Population height	-3.4508	1.0385	0.01***
Primary income	0.6861	0.4690	0.145
GDP per capita	-0.4007	0.3468	0.249
Population density	0.2876	0.7755	0.02**
Unemployment rate	0.5113	0.0830	0.001***
Productive structure	-0.0566	0.0770	0.463
Political ideology	0.1025	0.0814	0.209
Coalition VS majority	-0.0851	0.0852	0.319
Other control variables	Yes		
R-Square	0.3950		

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

In **Appendix 2**, we notice that results for the year before elections is positive, which confirms the literature, but the results are significant.

H2 validated: Tax rates are significantly impacted the year before elections

Here also, we can observe that population height has a negative and significant impact on electoral cycles whereas primary income has a positive and non-significant impact.

For the year before elections, the hypothesis of GDP per capita is invalidated due to a positive impact on the effect electoral cycles while population density and unemployment rate have a positive and significant impact as expected.

The hypotheses for productive structure and ideology are validated but are not significant except for political ideology. The hypothesis for coalition VS majority is not validated.

Table III: Results for the year before elections

Dependent variable	Coefficient	Standards errors	P-Value
The year before election	-0.0598	0.0564	0.098*
Population height	-0.6808	0.3292	0.069*
Primary income	0.0519	0.0453	0.282
GDP per capita	1.0773	0.3500	0.002***
Population density	0.2696	0.8090	0.001***
Unemployment rate	0.9010	0.0861	0.015**
Productive structure	-0.1258	0.1287	0.328
Political ideology	-0.3888	0.0853	0.002***
Coalition VS majority	-0.1115	1.1379	0.391
Other control variables	Yes		
R-Square	0.2893		

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Finally, as is seen in **Appendix 3**, tax rates are positively impacted the year after election which demonstrates the tendency for politicians to increase tax rates just after elections. In addition, this impact is significant which confirms what was observed in the literature.

H3 validated: Tax rates tend to increase the year after elections.

For the impact of population height and primary income, the coefficient of population height becomes positive and the one of primary income becomes negative, and both impacts are significant.

In this case, GDP per capita also increases the effect of electoral cycles in a significant way which is contradictory with literature, but population density and unemployment rate also impact positively electoral cycles as expected.

Productive structure, political ideology and coalition reduce the effect of electoral cycles, but this effect is not significant for the productive structure.

Table IV: Results for the year after elections

Dependent variable	Coefficient	Standards errors	P-Value
The year after election	0.0308	0.0527	0.025**
Population height	1.0014	0.5472	0.064*
Primary income	-1.7712	0.5907	0.003***
GDP per capita	0.6941	0.3795	0.067*
Population density	0.2582	0.0868	0.01***
Unemployment rate	0.8858	0.0870	0.012**
Productive structure	-0.1523	0.1204	0.206
Political ideology	-0.3010	0.0885	0.001***
Coalition VS majority	-0.2847	0.0785	0.0047***
Other control variables	Yes		
R-Square	0.3838		

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Robustness test: Introduction of electoral margins

A robustness test will be conducted to take into consideration electoral margins. In this order, we realised the same regression, adding this time a new control variable reflecting this electoral margin. This variable is a dummy elaborated in this way: “1” if less than 2 seats between 1st and 2nd party and “0” if not.

The result for the regression using this control variables are as following:

Table V: Results including electoral margins

Dependent variable	Coefficient	Standards errors	P-Value
The year before elections	-0.0525	0.0336	0.101
The year of elections	-0.0249	0.0562	0.091*
The year after elections	0.0322	0.0345	0.034**
Electoral margins	-0.0832	0.0480	0.083*

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

As shown in this table, coefficients stay stable when including electoral margins into the regression. This test enables to take into consideration situation presenting very small electoral margins and therefore validate those results in such situations considering political ideology of the governing party.

Endogeneity test: Event study

An event study allows testing whether the variables of interest evolve before the election: if the pre-electoral coefficients are zero, this suggests the absence of a pre-trend and reinforces the causal interpretation of the observed cycle. It also allows visualizing the complete dynamics around the election (before, during, after), which is particularly convincing in the face of endogeneity concerns.

A classic example in political science is Drazen and Eslava (2010), who use a dynamic approach to analyse budget cycles in Colombia, showing how public spending evolves around local elections.

Table VI: Results of event study

Dependent variable	Coefficient	Standards errors	P-Value
3 years before elections	-54.8	10.05	0.145
2 years before elections	-87.25	18.34	0.098*
1 year before elections	0		
Year of elections	-28.6	33.4	0.087*
1 year after elections	30.78	52.72	0.025**
2 years after elections	15.21	8.29	0.031**

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

To test the possible endogeneity of the electoral calendar, we carried out an event study analysis, examining the evolution of real estate tax rates three years before and two years after the elections. The coefficients for years three and two before the election are negative but not significant or only marginally significant, indicating the absence of marked pre-trends. This suggests that the provinces do not systematically adjust the property tax in anticipation of elections, limiting the risks that tax decisions are endogenous to the electoral calendar.

The coefficient for the election year is slightly negative and marginally significant, showing that tax adjustments during the election year remain limited. On the other hand, the coefficients after the election are positive and significant, indicating a moderate increase in property tax rates after the poll.

These results therefore suggest that the electoral calendar can be considered approximately exogenous for the identification of electoral effects, while recognizing that modest post-electoral adjustments could reflect political incentives.

5. Discussion

As observed, some elements identified in the literature review were confirmed by this study. Property tax rates tend to decrease in the year of the elections, which can be interpreted as a strategic manipulation by policymakers aimed at maximizing their chances of re-election. They know that most voters are tax-averse and exploit this behaviour to gain an electoral advantage (Nordhaus, 1975). From a theoretical point of view, this behaviour is consistent with the principal-agent framework: (principal) voters cannot observe perfectly the fiscal intentions of politicians (agents), which creates space for opportunistic adjustments in tax policy (Jensen & Meckling, 1976). This mechanism is replicable in any context where there is an information asymmetry between citizens and politicians, offering a general framework for analysing fiscal electoral cycles (Rogoff, 1990).

Withholding tax rates tend to increase in the year following elections. This post-election increase can be interpreted as a compensatory mechanism, whereby politicians implement necessary but potentially unpopular tax measures after the poll has taken place. This dynamic can be formalized as a dynamic optimization problem: politicians choose tax policy F_t to maximize a balanced combination of current electoral gains and future budgetary constraints, considering voters' tax aversion and institutional timing (Persson & Tabellini, 2002). This model predicts that post-election tax increases are more likely when pre-election cuts temporarily reduced revenues (Shi & Svensson, 2006).

The test for the year preceding the election shows an insignificant effect. This suggests a temporal precision in the electoral cycle: the manipulations focus mainly on the election year and not before. This observation can be theoretically explained by the alignment between policy implementation windows and voters' memory (Drazen, 2001): too early tax cuts have a limited impact on voting behaviour. Formally, one can model the memory of voters as a degrowth function $R(t) = e^{-\lambda t}$, where t represents the number of years before the election and λ the rate of forgetting. This framework provides a testable hypothesis for other contexts: only adjustments close to the election significantly influence voter behaviour.

The control variables also provide insights into the mechanisms. Regarding population size, we find evidence of economies of scale in the provision of public services: as population increases, the marginal cost per capita decreases, reducing the incentive for politicians to strategically adjust taxes. Population density positively influences the magnitude of electoral cycles, suggesting that politicians target densely populated areas where the impact of a fiscal adjustment on voters is more significant, which is consistent with an electorally rational and spatialized strategy (Oates, 1972).

For primary income, the results are not significant for the year before elections and the year of elections, which indicates that, in the context of the Belgian provinces, pre-election tax manipulations are not strongly conditioned by the average level of wealth of voters. On the other hand, the results are significant for the year after elections indicating that provinces only increase their tax rates when population can pay them. This may reflect institutional constraints or redistributive norms that stabilize fiscal behaviour in wealthier provinces (Atkinson & Stiglitz, 1976).

The unemployment rate has a positive and significant effect, which can be interpreted as a political signal mechanism: post-election fiscal measures may aim to stimulate employment,

particularly in economically vulnerable provinces, where the interventions are less likely to be sanctioned electorally (Hibbs, 1977).

GDP per capita is negative in the year of the election but not significant, suggesting that richer provinces experience attenuated opportunistic behaviour due to institutional maturity or pre-existing fiscal margins. The productive structure is never significant when ideology significance varies according to the years, which reflects the political and economic heterogeneity between provinces: in some, the dominant party or coalition has a greater margin for fiscal manoeuvre, while in others, coalition agreements or statutory constraints limit opportunistic behaviour.

Finally, for the variable coalition vs majority, the results are insignificant and contradictory with the literature, which suggests that the type of government formation does not systematically condition electoral fiscal cycles and that other institutional factors, such as tax rules or intergovernmental transfers, can play a more determining role than partisan composition (Persson and Tabellini, 2002).

Overall, these results support a formalized framework in which electoral fiscal cycles are determined by three main mechanisms:

- The asymmetry of information between voters and politicians, which allows opportunistic adjustments close to elections (Nordhaus, 1975).
- The degrowth of voters' memory, which concentrates the manipulations in the election year (Drazen, 2001).
- Economic and institutional heterogeneity, which modulates the magnitude and direction of tax adjustments (Oates, 1972).

By explicitly linking empirical schemes to these theoretical mechanisms, our analysis provides a replicable framework for the study of electoral tax cycles in other contexts. Future studies can operationalize these mechanisms using dynamic panel models, spatialized regressions or specifications based on the degrowth of voters' memory, to test the robustness of these phenomena in different countries or levels of government.

6. References

- [1] Akhmedov, A., & Zhuravskaya, E. (2004). Opportunistic political cycles: Test in a young democracy setting. *The Quarterly Journal of Economics*, 119(4), 1301–1338. <https://doi.org/10.1162/0033555304>
- [2] Alesina, A., Cohen, G. D., & Roubini, N. (1992). Macroeconomic policy and elections in OECD democracies. *Economics & Politics*, 4(1), 1–30. <https://doi.org/10.1111/j.1468-0343.1992.tb00052.x>
- [3] Alesina, A., & Paradisi, M. (2017). Political budget cycles: Evidence from Italian cities. *Economics & Politics*, 29(2), 157–177. <https://doi.org/10.1111/ecpo.12091>
- [4] Atkinson, A. B., & Stiglitz, J. E. (1976). The design of tax structure : Direct versus indirect taxation. *Journal of Public Economics*, 6(1), 55-75. [https://doi.org/10.1016/0047-2727\(76\)90041-4](https://doi.org/10.1016/0047-2727(76)90041-4)
- [5] Bee, C. A., & Moulton, S. R. (2015). Political budget cycles in U.S. municipalities. *Economics of Governance*, 16, 379–403.
- [6] Berry, F. S., & Berry, W. D. (1994). The politics of tax increases in the states. *American Journal of Political Science*, 38(3), 855–859.
- [7] Binet, M.-E., & Pentecôte, J.-S. (2006). Structure de l'impôt et cycle électoral au plan municipal. *Économie et Prévision*, 174, 113–127.
- [8] Bordignon, M., Cerniglia, F., & Revelli, F. (2004). Yardstick competition in intergovernmental relationships: Theory and empirical predictions. *Economics Letters*, 83(3), 325–333.
- [9] Brender, A., & Drazen, A. (2005). Political budget cycles in new versus established democracies. *Journal of Monetary Economics*, 52(7), 1271–1295.
- [10] Buchanan, J. M., & Tullock, G. (1975). Polluters' profits and political response: Direct controls versus taxes. *The American Economic Review*, 65(1), 139–147.
- [11] Cassette, A., Farvaque, E., Héricourt, J., & Jean, N. (2011). Dépenses « visibles » et perspectives de réélection dans un scrutin à deux tours : Le cas des élections municipales françaises. *Revue d'Économie Politique*, 121, 435–486.
- [12] Cerda, R., & Vergara, R. (2007). Business cycle and political election outcomes: Evidence from the Chilean democracy. *Public Choice*, 132(1–2), 125–136. <https://doi.org/10.1007/s11127-006-9>
- [13] Coimbra, M., Costa, J., & Carvalho, A. (2011). A concorrência fiscal entre os municípios portugueses. *Revista Portuguesa de Estudos Regionais*, 28, 27–38.
- [14] Downs, A. (1957). An economic theory of political action in a democracy. *Journal of Political Economy*, 65(2), 135–150. <https://doi.org/10.1086/257897>
- [15] Drazen, A. (2001). The Political Business Cycle after 25 Years. In *NBER Macroeconomics Annual 2000, Volume 15* (p. 75-138). National Bureau of Economic Research, Inc. <https://EconPapers.repec.org/RePEc:nbr:nberch:11055>
- [16] Drazen, A., & Eslava, M. (2005). Electoral manipulation via voter-friendly spending: Theory and evidence. *NBER Working Paper No. 11085*.

- [17] Drazen, A., & Eslava, M. (2010). Electoral manipulation via voter-friendly spending : Theory and evidence. *Journal of Development Economics*, 92(1), 39-52.
- [18] Dubois, É. (2016). Political business cycles 40 years after Nordhaus. *Public Choice*, 166(1–2), 235–259. <https://doi.org/10.1007/s11127-016-0313-z>
- [19] Electoral cycles in tax reforms. (n.d.). Consulté le 18 avril 2025, à l'adresse <https://www.imf.org/en/Publications/WP/Issues/2022/11/04/Electoral-Cycles-in-Tax-Reforms-525442>
- [20] Gérard, M., Jayet, H., & Paty, S. (2010). Tax interactions among Belgian municipalities: Do interregional differences matter? *Regional Science and Urban Economics*, 40(5), 336–342. <https://doi.org/10.1016/j.regsciurbeco.2010.03.010>
- [21] Gómez-Reino, J. L., Lago-Peñas, S., & Martínez-Vazquez, J. (2023). Evidence on economies of scale in local public service provision : A meta-analysis. *Journal of Regional Science*, 63(4), 793-819. <https://doi.org/10.1111/jors.12640>
- [22] Grossman, S. J., & Hart, O. D. (1983). An analysis of the principal-agent problem. *Econometrica*, 51(1), 7–45.
- [23] Hibbs, D. A. (1977). Political Parties and Macroeconomic Policy*. *American Political Science Review*, 71(4), 1467-1487.
- [24] Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm : Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- [25] Key, V. O. (1966). *The responsible electorate: Rationality in presidential voting, 1936–1960*. Belknap Press of Harvard University Press.
- [26] Kneebone, R., & McKenzie, K. (2001). Electoral and partisan cycles in fiscal policy: An examination of Canadian provinces. *International Tax and Public Finance*, 8, 753–774.
- [27] Kramer, G. H. (1971). Short-term fluctuations in U.S. voting behavior, 1896–1964. *American Political Science Review*, 65(1), 131–143.
- [28] Mikesell, J. L. (1978). Election periods and state tax policy cycles. *Public Choice*, 33(3), 99–106.
- [29] Shi, M., & Svensson, J. (2006). Political budget cycles : Do they differ across countries and why? *Journal of Public Economics*, 90(8-9), 1367-1389.
- [30] Nordhaus, W. D. (1975). The political business cycle. *The Review of Economic Studies*, 42(2), 169–190.
- [31] Nordhaus, W. D., Alesina, A., & Schultze, C. L. (1989). Alternative approaches to the political business cycle. *Brookings Papers on Economic Activity*, 1989(2), 1–68.
- [32] Oates, Wallace E. 1972. *Fiscal Federalism*. NY: Harcourt Brace Jovanovich
- [33] Persson, T., & Tabellini, G. (2002). *Political economics: Explaining economic policy*. MIT Press.
- [34] Rossel Flores, L., Huysmans, M., & Ferwerda, J. (2024). The political business cycle of tax reforms. *Public Choice*, 200(1–2), 65–88. <https://doi.org/10.1007/s11127-024-01143-7>

- [35] Rogoff, K. (1990). Equilibrium Political Budget Cycles. *The American Economic Review*, 80(1), 21-36.
- [36] Rogoff, K., & Sibert, A. (1988). Elections and macroeconomic policy cycles. *The Review of Economic Studies*, 55(1), 1–16.
- [37] Sakurai, S. N., & Menezes-Filho, N. A. (2008). Fiscal policy and reelection in Brazilian municipalities. *Public Choice*, 137(1–2), 301–314.
- [38] Strobl, D., et al. (2021). Electoral cycles in government policymaking: Strategic timing of austerity reform measures in Western Europe. *British Journal of Political Science*, 51(1), 331–352. <https://doi.org/10.1017/S0007123419000073>
- [39] Vegh, C. A., & Vuletin, G. (2015). How is tax policy conducted over the business cycle? *American Economic Journal: Economic Policy*, 7(3), 327–370.