University of Minho
School of Economics, Management and Political Science

Sara da Conceição Maciel da Silva

Unmasking Opportunism: Political Business Cycles in Portuguese Municipalities

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Unmasking Opportunism: Political Business Cycles in Portuguese Municipalities

Master's Dissertation

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Conducted under the supervision of

Professor Francisco Veiga

and

Professora Fabio Padovano*

* as part of the double degree associated to the *International Master in Public Policies*, at University of Rennes

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Abstract

This dissertation analyses the existence, determinants, and electoral outcome of political business cycles in Portuguese municipalities over the period 2002–2021. Using a panel data framework with municipality fixed effects, the analysis is structured along three dimensions: the existence of electoral cycles in fiscal policy, their economic effects, and their electoral implications.

The results provide robust evidence of political business cycles. Municipalities systematically increase expenditure in election years, indicating the presence of opportunistic fiscal behaviour. However, these dynamics are not uniform. Fiscal constraints play a disciplining role, as more indebted municipalities exhibit weaker electoral expansions, while political alignment with the central government tends to amplify these effects. In addition, electoral spending persists following the introduction of the 2013 fiscal framework, suggesting that municipalities may have adapted their behaviour to tighter institutional constraints rather than eliminating opportunistic practices.

Regarding economic effects, the findings suggest that electoral fiscal expansions generate limited and short-term impacts. Election years are associated with temporary improvements in labour market conditions, while no consistent effects are found for broader measures of economic performance.

Most importantly, the results indicate that opportunistic fiscal behaviour does not translate into electoral gains. While some specifications suggest a negative association between opportunistic expenditure and re-election probabilities, these effects are not robust across models.

Overall, the findings show that, although political business cycles persist and generate some short-term economic effects, they do not produce systematic electoral benefits, pointing to a disconnect between political incentives and voter behaviour.

Keywords: Political Business Cycles • Local Governments • Elections • Portugal

Resumo

Esta dissertação analisa a existência, os determinantes e o retorno eleitoral dos ciclos políticos económicos nos municípios portugueses no período 2002–2021. Utilizando um modelo de dados em painel com efeitos fixos ao nível do município, a análise estrutura-se em três dimensões: a existência de ciclos eleitorais na política fiscal, os seus efeitos económicos e as suas implicações eleitorais.

Os resultados fornecem evidência robusta da existência de ciclos políticos económicos. Os municípios aumentam sistematicamente a despesa em anos eleitorais, evidenciando a presença de comportamento fiscal oportunista. No entanto, estas dinâmicas não são uniformes. As restrições fiscais desempenham um papel disciplinador, sendo que municípios mais endividados apresentam expansões eleitorais mais reduzidas, enquanto o alinhamento político com o governo central tende a amplificar estes efeitos. Adicionalmente, a despesa eleitoral persiste após a introdução Decreto-Lei n.º 73/2013, sugerindo que os municípios poderão ter adaptado o seu comportamento a restrições institucionais mais exigentes, em vez de eliminarem práticas oportunistas.

Relativamente aos efeitos económicos, os resultados sugerem que as expansões fiscais eleitorais geram impactos limitados e de curto prazo. Em particular, os anos eleitorais estão associados a melhorias temporárias nas condições do mercado de trabalho, não se encontrando efeitos consistentes em medidas mais abrangentes de desempenho económico.

Por fim, os resultados indicam que o comportamento fiscal oportunista não se traduz em ganhos eleitorais. Embora algumas especificações sugiram uma associação negativa entre a despesa oportunista e a probabilidade de reeleição, estes efeitos não são robustos entre modelos.

Em suma, os resultados mostram que, embora os ciclos políticos económicos persistam e gerem alguns efeitos económicos de curto prazo, não produzem benefícios eleitorais sistemáticos, evidenciando uma dissociação entre incentivos políticos e o comportamento dos eleitores.

Palavras-chave: Ciclos político-orçamentais • Governos Locais • Eleições • Portugal

Para si, Padrinho

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1. Introduction

Political business cycles (PBC) are one of the central topics in political economy, reflecting the interaction between electoral incentives and fiscal policy decisions. A large body of literature shows that incumbent governments may strategically adjust fiscal instruments around elections to increase their probability of re-election (Nordhaus, 1975; Rogoff, 1990). These dynamics are particularly relevant at the local level, where public policies are highly visible and closely observed by voters.

Despite extensive empirical evidence documenting the existence of PBCs, important questions remain regarding their effectiveness and underlying mechanisms. In particular, it is still unclear to what extent these cycles are constrained by fiscal and institutional conditions, whether they generate meaningful economic effects, and whether they translate into electoral gains for incumbents. While the literature has extensively examined the existence of PBCs, less attention has been devoted to their economic consequences and electoral implications, especially at the municipal level.

Portuguese municipalities provide a particularly relevant setting to address these questions. Local governments are responsible for the provision of highly visible public goods, such as infrastructure and urban services, and operate within a relatively homogeneous institutional framework. Moreover, municipal elections are held simultaneously, meaning that most of the fiscal year unfolds within an electoral context, which may intensify incentives for opportunistic behaviour. At the same time, the period under analysis includes important institutional changes, most notably the introduction of stricter fiscal rules under Law 73/2013. These features make Portugal an ideal case to examine how electoral incentives interact with fiscal constraints and institutional reforms.

This dissertation contributes to the literature along three main dimensions. First, it provides updated evidence on the existence of political business cycles in portuguese municipalities over the period 2002–2021, with explicit consideration of fiscal constraints and political conditioning factors. Second, it extends the analysis beyond fiscal behaviour by examining the short-term economic consequences of electoral fiscal cycles. Third, it evaluates whether opportunistic fiscal behaviour is rewarded by voters, directly addressing the question of electoral returns, which remains inconclusive.

Using a panel data framework with municipality fixed effects, the results provide strong evidence of PBC. Municipalities systematically increase expenditure in election years, although the magnitude of these cycles varies with fiscal and political conditions. Higher levels of municipal debt reduce the intensity of electoral spending, while political alignment with the central government amplifies these dynamics. Moreover, the post-2013 fiscal framework appears to have altered the form of opportunistic behaviour rather than eliminating it.

The results also suggest that the economic and electoral effects of these cycles are limited. While some evidence points to short-term improvements in labour market conditions, no consistent effects are found for broader measures of economic performance. Moreover, opportunistic fiscal behaviour does not appear to systematically translate into higher probabilities of re-election.

Taken together, these findings point to a disconnect between political incentives and voter responses. While incumbents continue to engage in opportunistic fiscal behaviour, these strategies do not appear to generate systematic economic or electoral benefits. This challenges standard models based on voter myopia and suggests that the persistence of these cycles may instead reflect institutional inertia or limited adaptation to changing electoral environments.

The remainder of the dissertation is structured as follows. Section 2 reviews the relevant literature on political business cycles and their economic and electoral implications. Section 3 presents the institutional context of Portuguese municipalities. Section 4 describes the data and empirical methodology. Section 5 reports the main empirical results, including the analysis of fiscal behaviour, economic effects, and electoral outcomes. Section 6 discusses the main findings and their policy implications. Finally, Section 7 concludes.

2. Literature Review

2.1 PBC: Theoretical Foundations

Political Business Cycles refer to systematic changes in fiscal policy around elections, driven by the incentives of incumbent politicians to increase their probability of re-election (Rogoff, 1990; Shi and Svensson, 2006). In contrast to the traditional view of governments as benevolent social planners, the political economy literature models politicians as self-interested agents whose primary objective is to remain in office (Downs, 1957). Within this framework, fiscal policy becomes

an instrument through which incumbents attempt to influence voter perceptions and electoral outcomes.

The theoretical foundations of PBCs originate in the seminal contribution of Nordhaus (1975), who developed the first formal model of political business cycles. In this framework, incumbents exploit the short-term trade-off between inflation and unemployment to generate favourable economic conditions before elections. A key assumption underlying this model is that voters are myopic and form expectations adaptively, placing greater weight on recent economic performance. As a result, governments can implement expansionary policies prior to elections to temporarily improve economic conditions, thereby increasing electoral support, while postponing the associated costs to the post-election period.

The assumption of voter myopia is central to early PBC models (Nordhaus, 1975). Although voters are not necessarily irrational, they are assumed to have limited information processing capacity and short memory, which prevents them from fully internalizing the intertemporal consequences of fiscal policy. This creates scope for systematic electoral manipulation, as incumbents can generate temporary economic improvements that are rewarded at the ballot box (Dubois, 2016).

However, subsequent research questioned the realism of this assumption, particularly considering the rational expectations revolution. Second-generation models introduced rational and forward-looking voters, while preserving the possibility of political business cycles through information asymmetries between politicians and voters. In the models developed by Rogoff and Sibert (1988) and Rogoff (1990), voters are rational but cannot perfectly observe the competence of incumbents. Politicians use fiscal policy as a signalling device, increasing visible expenditure or shifting spending toward more salient categories prior to elections to signal competence. In this setting, electoral spending behaviour arises not from voter irrationality, but from imperfect information.

Further contributions reinforce this perspective. Shi and Svensson (2006) show that all politicians, regardless of their type, have incentives to increase voter-friendly expenditures before elections, particularly in environments characterized by weaker institutions, higher political rents, and lower levels of voter information. Similarly, Drazen and Eslava (2010) demonstrate that even in contexts with relatively well-informed voters, manipulation can persist through targeted changes in the composition of public spending toward goods that are more valued and visible to the voters.

Underlying these theoretical approaches is a common assumption regarding political behaviour: politicians are rational agents who seek to maximize their utility, primarily through re-election. This perspective is rooted in the work of Downs (1957), who models political actors as vote-maximizing agents. Where the fiscal policy is used strategically to influence voter perceptions and electoral outcomes, rather than being determined solely by welfare-maximizing considerations.

This evolution highlights the central role of informational and institutional conditions in shaping the existence and magnitude of political business cycles, as emphasized in the literature (Dubois, 2016; Veiga et al., 2019).

2.2 Fiscal Constraints and Conditioning Factors

While electoral incentives create the potential for opportunistic fiscal behaviour, the extent to which the cycles materialize depends on a range of institutional and fiscal factors. A large body of literature emphasizes that PBCs are not uniform across contexts, but rather vary with the institutional, political, and informational environment (de Haan and Klomp, 2013; Veiga et al., 2019).

Early contributions to the literature focused primarily on macroeconomic outcomes, such as inflation and unemployment (Alesina, 1987; Alesina and Roubini, 1992). Over time, the focus of the literature shifted toward fiscal policy instruments, public expenditure and deficits (Dubois, 2016).

Fiscal transparency is widely regarded as an important factor influencing opportunistic behaviour. Higher levels of transparency are associated with more disciplined fiscal outcomes, as they reduce information asymmetries between governments and voters and may increase the political cost of fiscal manipulation (Alt and Lassen, 2006). With a similar perspective, Repetto (2019) provides evidence that increased disclosure of fiscal information can reduce pre-electoral investment cycles at the municipal level, particularly in environments with greater media penetration.

Fiscal rules also play a relevant role in shaping government behaviour. By constraining deficits and debt accumulation, these rules may limit the scope for opportunistic fiscal expansions. Empirical evidence suggests that stronger fiscal frameworks are associated with weaker political business cycles, particularly in more recent periods characterized by tighter fiscal discipline (Gootjes, de Haan, and Jong-A-Pin, 2021). More generally, the literature highlights that institutional

settings may influence both the magnitude and the expression of electoral fiscal behaviour (Veiga et al., 2019).

Public debt represents another relevant conditioning factor. Higher levels of debt are typically associated with reduced fiscal space and greater pressure for consolidation, which may constrain the ability of governments to expand spending before elections. In this sense, debt can be interpreted both as an outcome of past fiscal behaviour and as a factor that may influence the extent of future opportunistic policies.

In addition to institutional and fiscal constraints, political factors may also play a role in shaping fiscal behaviour. Early contributions such as Downs (1957) and Hibbs (1977) emphasize that political actors respond to electoral incentives and may adopt different policy strategies depending on ideological positioning and voter preferences. Subsequent research suggests that these political dimensions may interact with opportunistic behaviour, although empirical evidence on their role in PBC remains mixed, particularly at the subnational level.

Beyond ideology, the literature also highlights that political environments may condition opportunistic behaviour through factors such as political competition, incumbency incentives, and alignment across levels of government, which may affect coordination and access to resources (Veiga et al., 2019).

In contrast, the role of non-traditional political actors, such as independent candidates, is less clearly established in the literature. While most studies focus on party-based political competition, differences in political incentives across institutional contexts suggest that candidates operating outside traditional party structures may face distinct accountability mechanisms and electoral strategies (Besley and Case, 1995). However, direct empirical evidence on the behaviour of independent politicians in the context of PBC remains limited, particularly at the municipal level.

Overall, the literature suggests that political business cycles are not automatic outcomes of electoral competition but depend on the interaction between political incentives and contextual constraints. These factors may influence both the extent to which governments engage in opportunistic fiscal behaviour and the forms that such behaviour may take.

2.3 Economic Consequences of PBC

The existence of PBC and their institutional determinants is well documented, significantly less attention has been devoted to their economic consequences. Most empirical studies focus on whether incumbents manipulate fiscal policy, rather than on whether such manipulation translates into measurable changes in economic outcomes.

From a theoretical perspective, the economic effects of PBC are ambiguous. If pre-electoral increases in spending are directed toward productive investments, they may stimulate local economic activity through demand effects, employment creation, or improvements in infrastructure. However, if spending is reallocated toward more visible but less productive projects, the impact on economic performance may be limited or short-lived. In this context, Rogoff (1990) argues that incumbents have incentives to prioritize the visibility of expenditures as a signalling device, which may come at the expense of efficiency.

Empirical evidence on the economic consequences of political business cycles remains relatively limited, particularly at the subnational level. Some studies provide evidence of short-term effects on real variables. For instance, Coelho, Veiga, and Veiga (2006) find that employment increases prior to elections in Portuguese municipalities, suggesting that electoral fiscal expansions may have temporary labour market effects. However, broader evidence on outcomes such as economic growth is scarce and not fully conclusive.

The literature provides limited and inconclusive evidence on whether the PBC generate meaningful improvements in economic performance. This gap is particularly relevant in the context of local governments, where fiscal policy may have direct but potentially transitory effects on economic outcomes.

2.4. Electoral Returns of PBC

A central question in the PBC literature is whether opportunistic fiscal behaviour translates into electoral gains for incumbents. While theoretical models often predict that such strategies may increase the probability of re-election, empirical evidence remains mixed and highly context dependent.

From a theoretical perspective, rational opportunistic models predict that incumbents may improve their electoral prospects by manipulating fiscal policy in visible ways. In the framework

developed by Rogoff (1990), politicians increase expenditure or shift spending toward highly observable categories to signal competence to voters under conditions of asymmetric information. If voters interpret higher pre-electoral spending as an indicator of ability or performance, incumbents may be rewarded at the polls.

Empirical evidence, however, does not provide a clear consensus. Some studies find that pre-electoral fiscal expansions are associated with improved electoral outcomes. For instance, Repetto (2019) shows that higher municipal investment before elections is associated with higher re-election probabilities in Italian municipalities, suggesting that voters may respond positively to visible public spending. Similarly, Aidt, Veiga and Veiga (2011) provide evidence that opportunistic fiscal behaviour can, in some contexts, translate into electoral advantages, particularly in competitive political environments.

Nevertheless, empirical evidence on the electoral returns of political business cycles is mixed and far from conclusive. While some studies find that opportunistic fiscal expansions may improve electoral outcomes, others show that such strategies do not systematically translate into higher probabilities of re-election. Brender and Drazen (2008) provide evidence that election-year fiscal expansions, especially through deficits, do not lead to improved electoral performance, particularly in more developed and established democracies.

These findings suggest that the effectiveness of opportunistic fiscal behaviour is not guaranteed and may depend on context-specific factors. In particular, the visibility of fiscal instruments appears to play a role, as suggested by Rogoff (1990). While increases in highly visible expenditures may influence voter perceptions, less transparent instruments, such as deficits or debt accumulation, are less likely to generate electoral rewards. Empirical evidence is broadly consistent with this distinction (Alesina and Paradisi, 2017; Veiga and Veiga, 2007).

Overall, the literature suggests that the electoral returns of political business cycles are far from guaranteed. This ambiguity highlights the importance of empirical analysis in specific contexts, particularly at the municipal level, where both visibility and proximity to voters may shape the electoral impact of fiscal manipulation.

2.5. PBC at the Municipal Level

Although early studies focused on national governments, a growing body of research shows that are particularly prominent at the subnational level. Municipal governments constitute an especially suitable setting for studying electoral fiscal behaviour because they control highly visible expenditures, such as infrastructure and local public services, which are directly observed by voters. In addition, local elections are typically held at fixed dates, facilitating identification of electoral effects (Veiga and Veiga 2007).

Importantly, this literature also emphasizes that electoral fiscal behaviour operates not only through changes in the level of expenditure, but also through its composition, with incumbents reallocating resources toward more visible categories of spending, such as infrastructure and public works (Rogoff, 1990; Veiga and Veiga, 2007).

The predictions of rational opportunistic models are particularly relevant in this context. Rogoff (1990) argues that incumbents have incentives to shift spending toward visible items that signal competence to voters. At the municipal level, such as roads, public works, and urban improvements, are highly salient, making local governments a natural environment for electoral fiscal manipulation.

Empirical evidence across countries confirms the presence of PBC in municipalities. Veiga and Veiga (2007) provide strong evidence for Portuguese municipalities, showing that incumbents increase expenditures and reallocate spending toward visible investment categories in election years. Similar patterns are observed in other institutional contexts. Alesina and Paradisi (2017) find that Italian municipalities reduce property tax rates as elections approach, while Repetto (2019) documents significant increases in municipal investment prior to elections, which are mitigated when fiscal information becomes more transparent.

This literature indicates that municipal governments are particularly prone to electoral fiscal manipulation due to the visibility of their policies and the proximity between voters and policymakers.

2.6 Evidence from Portuguese Municipalities

Portugal provides a particularly relevant case for studying political business cycles at the municipal level. Portuguese municipalities enjoy a degree of fiscal autonomy and are responsible for the provision of local public goods, including infrastructure and urban services, which are highly visible to voters.

Empirical evidence consistently documents the existence of political business cycles in Portuguese municipalities. Early evidence by Baleiras and Costa (2004) provided one of the first empirical analyses of local PBC in Portugal, identifying pre-electoral increases in municipal investment. This evidence was later reinforced by Veiga and Veiga (2007), who, using a comprehensive dataset for Portuguese municipalities, find clear evidence of opportunistic behaviour by mayors. Municipalities increase total expenditure and reallocate spending toward highly visible investment categories prior to elections, consistent with the predictions of rational opportunistic models.

Further evidence on the real effects of these cycles is provided by Coelho, Veiga, and Veiga (2006), who show that employment increases before elections, particularly in municipalities where political incentives are stronger, such as when incumbents run for re-election or hold political support in local institutions. These findings suggest that electoral fiscal behaviour may extend beyond budgetary aggregates and affect local economic conditions, at least in the short term.

More recent evidence indicates that political business cycles persist over time but have evolved in response to changing institutional conditions. Using data covering Portuguese municipalities from 2002 to 2021, Veiga and Veiga (2023) show that fiscal behaviour differs across subperiods. Before the financial crisis, election years were associated with higher deficits and increases in debt. In the subsequent period, characterized by stronger fiscal discipline and consolidation, municipalities tend to run overall surpluses and reduce debt; however, election years are associated with smaller surpluses or slower debt reduction. This suggests that fiscal constraints may alter the form of political business cycles without eliminating the underlying electoral incentives.

In addition to documenting fiscal behaviour, the literature also provides evidence on the interaction between opportunistic policies and electoral outcomes. Aidt, Veiga and Veiga (2011) show that opportunistic fiscal distortions and electoral performance are jointly determined. Their results indicate that opportunistic behaviour is associated with larger electoral margins, while incumbents facing closer electoral competition have stronger incentives to engage in opportunistic fiscal policies. These findings are consistent with the predictions of rational political business cycle models, in which fiscal policy is used strategically to influence electoral outcomes.

These findings motivate the empirical analysis of this dissertation, which examines not only the existence of political business cycles but also their economic consequences and electoral implications.

3. Institutional Context: Portuguese Municipalities

Portugal is a unitary and centralised country, with 308 municipalities, 278 in mainland Portugal and 30 in the autonomous regions of the Azores and Madeira. All municipalities are subject to the same legal and institutional framework, which ensures uniformity in policy instruments, financial regulations, and administrative responsibilities. This institutional homogeneity provides an ideal setting for testing PBC theories, especially through panel data analysis.

Each municipality is governed by two representative bodies: the Municipal Council (Câmara Municipal), which exercises executive power, and the Municipal Assembly (Assembleia Municipal), which performs a deliberative function. Both are elected by universal suffrage for concurrent four-year terms. Elections are held simultaneously across all municipalities on exogenously fixed dates, and mandates are distributed using the d'Hondt method. Municipal elections typically take place in October, meaning that most of the calendar year corresponds to the electoral period. This timing is particularly relevant for the empirical analysis, as fiscal decisions observed in election years largely reflect pre-electoral behaviour.

The head of the most-voted list for the Municipal Council becomes the mayor (Presidente da Câmara), who presides over the executive and holds considerable autonomy in the management of human resources, public contracts, licensing, and, crucially, the prioritisation and timing of investment projects.

The Municipal Assembly approves the budget and financial accounts proposed by the Council but cannot alter them. Since 2013, elected officials have been subject to a three-term limit, whereas no such constraint existed before. This change may have affected the incentives and strategic behaviour of incumbents, particularly concerning fiscal manipulation near elections.

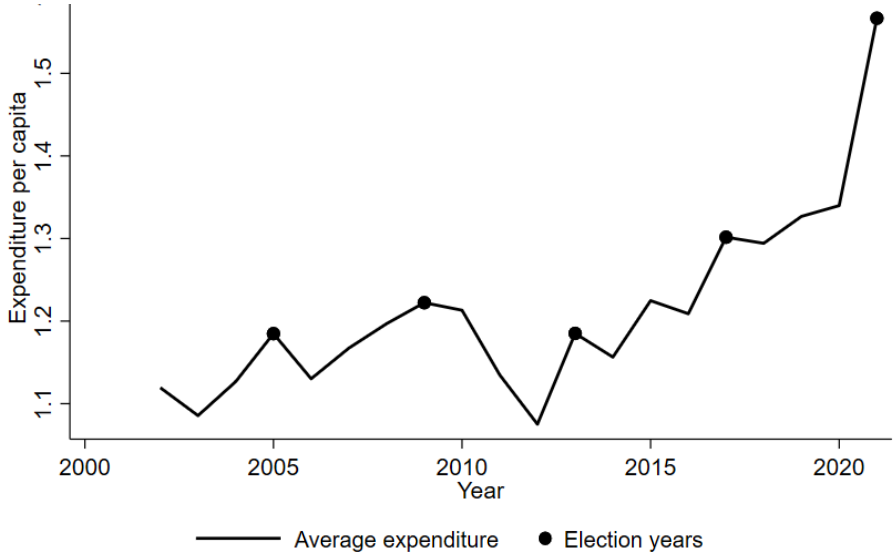
Municipalities are financially autonomous but operate within a legal framework defined and monitored by central government institutions. Over the past decades, there has been a gradual decentralisation of competences, from basic infrastructure to education, healthcare, and social services, matched by an increasing reliance on both central transfers and own revenues. 4 However, the regulatory environment governing municipal finances has changed significantly over time, especially with the passage of three successive Local Finance Laws: Law 42/1998, Law 2/2007, and Law 73/2013.

The most transformative of these was Law 73/2013, approved during Portugal's Economic Adjustment Programme (2011–2014), a period of fiscal consolidation driven by international oversight. This law introduced a much stricter framework for budgetary discipline and debt control. It expanded the definition of gross municipal debt to include not only direct liabilities but also the obligations of municipal enterprises, associations, and foundations, as well as any public or private entities in which the municipality holds a significant stake. More importantly, it imposed a legal ceiling on municipal gross debt: a maximum of 150% of the average current revenues from the previous three years. In addition, municipalities were required to present balanced budgets (or surpluses) and to comply with annual reporting and monitoring standards.

The impact of this legal reform was significant. In the years following its implementation, the number of municipalities exceeding the debt limit declined, and municipal debt began to decrease. These constraints appear to have moderated opportunistic behaviour among highly indebted municipalities but did not eliminate it. The results suggest that opportunistic fiscal expansions persisted in the post-2013 period, indicating that municipalities adapted their behaviour to the new institutional framework.

Despite these constraints, informational asymmetries between elected officials and voters remained. While visible policies are easily observed and rewarded, fiscal imbalances are less transparent. This environment allows electoral spending behaviour without immediate electoral penalty, consistent with the theoretical predictions of Rogoff and Sibert (1988) and Rogoff (1990).

Figure 1- Real Municipal Expenditure per Capita in Portuguese municipalities and election years (2002–2021)

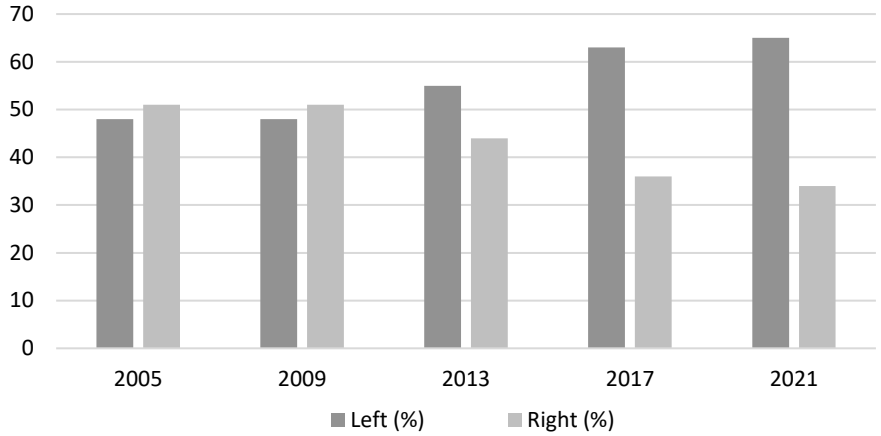


Notes: Real values (CPI, 2021=100). Expenditure per capita = total expenditure / population. Election years: 2005, 2009, 2013, 2017, 2021.Sources: DGAL, INE, MAI, and author's calculations

The figure 1 shows an overall upward trend in municipal expenditure, with several election years coinciding with relatively high levels of spending. However, this descriptive pattern should be interpreted with caution, as it does not isolate electoral effects from broader fiscal, institutional, or macroeconomic trends. The formal empirical analysis below therefore examines whether expenditure systematically increases in election years after controlling for municipal characteristics, fiscal constraints, and time-related factors.

In addition, the presence of female mayors and independent candidates remains relatively limited in Portuguese municipalities throughout the period under analysis. This reflects the dominance of traditional party structures in local politics and may have implications for empirical analysis, particularly when assessing the role of political characteristics. In practice, the reduced variation in these dimensions may limit their statistical relevance in explaining fiscal behaviour or electoral outcomes.

Figure 2- Share of Left- and right-wing municipalities, 2005-2021



Notes: The figure reports the percentage of municipalities governed by left- and right-wing parties in each election year. Source: Author's calculations based on MAI data.

Figure 2 illustrates the evolution of the share of left- and right-wing municipalities across election years. The relatively balanced distribution over time suggests that ideological composition does not exhibit strong structural shifts, supporting the inclusion of political variables without concerns of systematic dominance by a single ideological group.

Given this institutional context and the observed alignment between debt dynamics and election cycles, the next section presents the empirical strategy used to formally test political business cycle's presence and fiscal conditionality.

4. Data and Methodology

4.1. Data and Sources

The empirical analysis is based on an annual panel dataset covering Portuguese municipalities over the period 2002–2021. The unit of observation is the municipality-year, which makes it possible to examine fiscal behaviour, political conditions, and socioeconomic developments at the local level over time. The dataset was constructed by merging several administrative and statistical sources and includes detailed information on municipal public finances, electoral outcomes, demographic characteristics, and local economic conditions.

It is important to take into consideration that the number of observations varies across specifications due to data availability and model design. Some variables are not available for the entire period and for all municipalities. This leads to a reduction in the sample size in specifications

that include these variables. Additionally, models focusing on electoral outcomes are estimated using a restricted dataset that includes only election years, as the dependent variable is only defined in those periods.

Fiscal data were obtained primarily from the Direção-Geral das Autarquias Locais (DGAL), which provides annual municipal financial accounts. These accounts include detailed information on municipal expenditure, revenues, financial charges, and debt indicators, and constitute the backbone of the fiscal analysis.

Political and electoral information was collected from the Ministério da Administração Interna (MAI), which publishes the official results of municipal elections in Portugal. These data make it possible to identify election years, the political affiliation of mayors, the parties winning each election, the continuity of political power across electoral cycles and mayors' gender.

Socioeconomic and demographic indicators were retrieved mainly from Statistics Portugal (INE), while unemployment data were obtained from the Instituto do Emprego e Formação Profissional (IEFP). Data on the Development Index were obtained from Marktest. These sources provide information on population structure, labour-market conditions, and indicators of local economic performance. Their inclusion makes it possible both to control for differences in municipal conditions and to evaluate the possible economic consequences of electoral fiscal expansions.

All monetary variables are expressed in real terms by deflating nominal values with the Consumer Price Index (CPI), using 2021 as the base year. Whenever appropriate, fiscal variables are also expressed in per capita terms by dividing municipal financial aggregates by the resident population in the corresponding municipality-year. This transformation improves comparability across municipalities of different sizes and reduces scale-related heteroskedasticity.

To mitigate potential endogeneity concerns and ensure the correct temporal ordering between explanatory variables and outcomes, all time-varying control variables are included in lagged form (t−1), unless otherwise specified. This approach reduces reverse causality and aligns fiscal, political, and socioeconomic conditions with subsequent outcomes. Variables defined as outcomes, such as expenditure and economic indicators, are kept in contemporaneous form.

4.1.1. Fiscal Variables

The central fiscal variables are derived from the municipal financial accounts and are used to test whether municipal governments systematically expand spending around elections.

The variable *Exp* denotes real total municipal expenditure and aggregates all categories of municipal spending. It provides a comprehensive measure of local fiscal activity and serves as the main dependent variable in the PBC models.

The variable *Capexp* corresponds to real capital expenditure and in the empirical specifications, this variable is included in lagged form. This category includes public investment items such as infrastructure, construction, and other long-term municipal assets. Capital expenditure is frequently used in the PBC literature as an indicator of electorally motivated fiscal manipulation.

The variable *Currev* measures real current revenues and in the empirical specifications, this variable is included in lagged form. These include taxes, intergovernmental transfers, fees, and other recurrent municipal sources of income. The variable *Finch* represents real financial charges, including interest payments and other debt-related financial costs, and captures the fiscal burden associated with indebtedness.

Municipal indebtedness is measured by *DebtLevel*, defined as the ratio between medium- and long-term financial municipal debt and the average current revenues of the previous three years. Medium- and long-term debt is used because it is the only consistent measure available for all municipalities across the full sample period. The construction of the variables follows the literature on PBC in portuguese municipalities (Veiga and Veiga, 2023)

This measure reflects the fiscal constraints faced by municipalities under the Portuguese legal framework. Law 73/2013 establishes that municipal debt cannot exceed 1.5 times the average current revenues of the previous three years. Accordingly, the variable provides an economically meaningful indicator of the extent to which municipalities approach, or are constrained by, the legal debt limit. In the empirical specifications, this variable is included in lagged form.

To capture potential nonlinear effects of fiscal constraints, an additional variable, *HighDebt*, is constructed as a binary indicator equal to one when a municipality's lagged debt level is above

the sample median, and zero otherwise. This variable allows the analysis to distinguish between municipalities facing relatively high and low levels of indebtedness and to test whether political business cycles are moderated by tighter fiscal constraints.

4.1.2. Political and Electoral Variables

The political variables capture the institutional and electoral environment in which municipal fiscal decisions are made.

The variable *ElectionYear* is a binary indicator equal to one in municipal election years (2005, 2009, 2013, 2017, and 2021) and zero otherwise. The variable is used to test whether fiscal behaviour changes systematically when elections occur.

Throughout the analysis, the relevant incumbent is the mayor elected at the beginning of each electoral mandate. However, not all mayors complete the full term in office. In some municipalities, the elected mayor leaves office before the end of the mandate due to resignation, death, incompatibility, or appointment to another political position. In such cases, a substitute mayor assumes office for the remainder of the term. To account for this institutional feature, the dataset includes the variable *SubstTerm*, which identifies mandates in which the originally elected mayor did not complete the term. This distinction is important because electoral incentives are theoretically associated with the elected incumbent rather than with a substitute officeholder.

The analysis also accounts for electoral outcomes using the binary variable *PartyReelected*. This variable takes the value one when the party holding the mayoralty before the election remains in office after the election, and zero otherwise. This measure captures party continuity rather than the continuity of the individual mayor. This distinction is particularly relevant in the Portuguese municipal context, where electoral competition is largely party-based and local political dynamics are strongly shaped by party organizations rather than purely individual candidates.

The variable *AlignGov* identifies whether the mayor's party coincides with the party controlling the central government each year. Political alignment is defined on a yearly basis according to the party of the Prime Minister in office for most of that year.

The variable *Runs* is a binary indicator equal to one if the incumbent mayor runs for re-election, and zero otherwise. This variable also captures an important dimension of political incentives, as incumbents who choose to run may behave differently from those who do not seek

another term. However, the decision to run is inherently strategic and may depend on expected electoral prospects and local political conditions. As such, the variable may also reflect selection effects and should not be interpreted as an exogenous measure of incumbency incentives.

To account for political heterogeneity, the analysis includes the variable *Indep*, a binary indicator equal to one when the mayor is not affiliated with a major political party, and zero otherwise. This variable allows the analysis to capture potential differences in fiscal behaviour between party-affiliated and independent local leaders.

In addition, the variable *LeftMayor* identifies whether the mayor belongs to a left-wing political party. This variable is used to explore whether ideological orientation influences fiscal policy choices and electoral dynamics, as suggested in the political economy literature.

In addition, the variable *FemaleMayor* identifies the female mayor. This variable is included to explore whether individual characteristics of political leaders are associated with differences in fiscal behaviour or electoral outcomes.

Finally, *Post2013* captures the institutional environment following the 2013 reform of the Portuguese municipal fiscal framework.

4.1.3 Socioeconomic Variables

In addition to fiscal and political variables, the analysis includes indicators of local economic performance. These variables serve both as controls and as outcomes in models examining the economic consequences of electoral fiscal behaviour.

The variable *Unemp* is measured as the number of registered unemployed individuals at the municipal level. To reduce skewness and allow for a more consistent interpretation, this variable is transformed into logarithmic form, *LnUnemp*. Unemployment growth, *UnempGrowth*, is then computed as the first difference of the logarithm, approximating the annual growth rate of unemployment.

These variables are intended to proxy the economic conditions faced by voters when assessing incumbent performance. However, the computation of unemployment growth requires consecutive observations, which reduces the sample size. As a result, specifications including this variable are estimated on a more restricted sample and should be interpreted accordingly.

The dataset also includes *GVA_growth*, which measures the growth rate of Gross Value Added at the municipal level. This variable serves as a proxy for local economic activity and makes it possible to assess whether opportunistic fiscal expansions are associated with short-term fluctuations in output. It should be noted, however, that *GVA* data is only available from 2013 onwards. Consequently, regressions including this variable are estimated over a shorter sample period, which may limit comparability with baseline specifications.

In addition, the analysis considers broader socioeconomic characteristics at the municipality through the Municipal Development Index, *Dev_index*. This variable is included as a control to assess whether voter responses to fiscal opportunism vary across different levels of local development.

4.1.4 Demographic and Structural Variables

The analysis also includes demographic and structural controls designed to capture persistent differences across municipalities.

The variable *Populationunder14* measures the share of the population aged under 14. This variable captures differences in demographic structure that may influence municipal spending patterns, particularly in areas such as education and social services.

The variable *WageEarners* represents the number of wage earners and serves as a proxy for local income conditions and fiscal capacity. Including this variable helps ensure that observed fiscal patterns are not simply driven by underlying socioeconomic differences across municipalities. However, this variable is only available from 2001 onwards and contains some missing observations in subsequent years. As a result, its inclusion leads to a reduction in the sample size in specifications where it is used.

4.1.5 Constructed Opportunism Indices

To quantify the extent of opportunistic fiscal behaviour, an opportunism index is constructed to capture deviations in municipal spending in the year immediately preceding an election relative to the typical spending pattern observed during the same mandate.

Let Exp_{it} denote municipal expenditure in municipality i and year t, and let t_e denote the election year. The opportunism index measures the relative deviation of expenditure in the election

year from the average level of expenditure observed in the remaining non-election years of the same mandate. Formally, the index is defined as:

Equation 1 - Opportunism index (Expenditure-Based)

$$\text{OppIndex}_{i,t_e} = \frac{\text{Exp}_{i,t_e-1} - \bar{\text{Exp}}_{i,-e}}{\bar{\text{Exp}}_{i,-e}},$$

where

Equation 2 – Benchmark Expenditure (Within-Mandate Average)

$$\bar{\text{Exp}}_{i,-e} = \frac{1}{T-1} \sum_{t \in M_i,\, t \neq t_e-1} \text{Exp}_{it}.$$

In this expression, $\bar{\text{Exp}}_{i,-e}$ represents the average level of expenditure in municipality i during the non-pre-election years of the same mandate. The index therefore measures the proportional deviation of spending in the pre-election year relative to the municipality's typical fiscal behaviour during that electoral cycle. Positive values indicate that spending in the pre-election year exceeds the mandate average, which is consistent with opportunistic fiscal expansion prior to elections. Negative values indicate relatively lower spending in that period.

Three variants of the opportunism index are considered. The first, *OppIndex_Exp*, is based on total municipal expenditure, while the second, *OppIndex_Capexp*, focuses on capital expenditure. The third, *OppIndex_Def*, is based on fiscal deficits and captures electoral spending behaviour through budget imbalances. This distinction allows the analysis to differentiate between overall fiscal expansions, opportunistic behaviour concentrated in investment-related spending, and less visible forms of fiscal manipulation.

Both indices are constructed at the mandate level. To reduce the influence of extreme values, they are winsorized at the 1st and 99th percentiles before entering the electoral-payoff regressions. The construction of the opportunism indices follows a mandate-based approach, which requires information from a full preceding mandate to establish a benchmark level of fiscal behaviour. Due to data availability constraints, it is not possible to construct the index for the 2005 election, as information from the previous mandate is unavailable. Consequently, 2009 constitutes the first valid reference year for the index. Given that the empirical specifications rely on lagged values of the index, the corresponding regressions begin in 2013.

A summary table with a brief explanation of all the variables in this study can be found in the Annexes (Annex A).

Table 1 shows the descriptive statistics of the main variables used in the empirical work.

Table 1 - Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Real total municipal expenditure per capita (Exp)	5,779	1.209	0.567	0.217	7.628
Real capital expenditure per capita (Capexp)	5,780	0.417	0.300	0.000	6.762
Real current revenues per capita (Currev)	5,490	775.713	359.438	128.099	2,821.198
Municipal debt level (DebtLevel)	4,586	0.720	0.635	-0.086	8.503
High-debt municipality (HighDebt)	4,586	0.500	0.500	0	1
Real Financial Charges per capita (Finch)	5,780	0.016	0.024	0	0.382
Election year (ElectionYear)	6,180	0.250	0.433	0	1
Post-2013 fiscal rule period (Post2013)	6,180	0.400	0.490	0	1
Political alignment with central government (AlignGov)	6,180	0.268	0.443	0	1
Female mayor (FemaleGender)	6,180	0.066	0.248	0	1
Independent mayor (Indep)	6,180	0.023	0.149	0	1
Left wing mayor (LeftMayor)	6,180	0.507	0.500	0	1
Substitution during mandate (SubstTerm)	6,180	0.022	0.147	0	1
Log unemployment (LnUnemp)	6,084	6.476	1.288	0.693	10.417
Unemployment growth (Unemp_Growth)	5,757	-0.004	0.189	-1.253	1.259
Gross Value Added growth (GVA_growth)	2,312	0.058	0.141	-2.275	1.262
Development index (Dev_index)	5,557	3.599	9.133	0.170	176.750
Wage earners (WageEarners)	4,614	159.904	68.564	31.033	567.684
Population under 14 (%) (Populationunder14)	5,491	13.402	2.689	5.412	25.532
Opportunism Index Expenditure (OppIndex_Exp)	1,445	0.011	0.155	-0.779	1.351
Opportunism Index Capital Expenditure (OppIndex_Capexp)	1,445	0.016	0.424	-0.939	5.609
Opportunism Index Deficit (OppIndex_Def)	1,445	-0.119	0.125	-0.481	0.165
Party reelected (PartyReelected)	1,445	0.838	0.268	0	1
Incumbent runs for re-election (Runs)	1,445	0.712	0.453	0	1

4.2. Methodology

The empirical strategy follows the methodological approach commonly adopted in the PBC literature and builds on the framework developed by Veiga and Veiga for Portuguese municipalities.

Their work provides the main benchmark for identifying electoral fiscal cycles in the Portuguese local government context and motivates the specification of the baseline econometric models employed in this thesis.

The analysis is structured in three sequential steps. First, it tests for the existence of PBC in municipalities. Second, it evaluates whether such electoral behaviour generates short-term economic effects. Third, it examines whether opportunistic fiscal behaviour translates into electoral gains.

Given the panel structure of the dataset, the main panel specifications are estimated using fixed effects (FE). This approach controls for time-invariant unobserved heterogeneity across municipalities, such as institutional quality, political culture, or long-standing economic conditions, which may influence both fiscal behaviour and electoral outcomes. The FE estimator exploits within-municipality variation over time, thereby reducing omitted-variable bias (Wooldridge, 2010).

As an additional diagnostic check, Hausman specification tests were conducted for the main panel specifications. The results reject the null hypothesis of no systematic difference between fixed effects and random effects estimators in all cases. This supports the use of fixed effects, indicating that unobserved municipality-specific characteristics are correlated with the explanatory variables. The results are reported in Appendix B.

The specification of fixed effects varies across model types. In the PBC models, municipality fixed effects are combined with mandate fixed effects, which capture institutional and electoral-cycle dynamics while avoiding collinearity with the election-year indicator. In the economic models, municipality and year fixed effects are included to control for common macroeconomic shocks affecting all municipalities simultaneously. In the electoral models, the dataset is restricted to election years, and election-year fixed effects are included to account for common electoral-cycle influences. In all specifications, standard errors are clustered at the municipal level.

In the Portuguese institutional context, municipal elections take place in October, implying that most of the fiscal year unfolds prior to the electoral outcome. This timing assumption is crucial, as it ensures that fiscal policy decisions implemented during the election year are observable by voters and can therefore influence electoral behaviour.

4.2.1 PBC Model

The first empirical exercise tests for the presence of PBC in municipal fiscal policy. Following the standard approach in the literature, fiscal outcomes are modelled as a function of electoral timing and fiscal constraints.

The dependent variable is Exp_i and the key explanatory variable is the election-year indicator $ElectionYear_{it}$ which captures the timing of municipal elections.

The specification also includes a lagged measure of municipal debt, $DebtLevel_{it-1}$, to account for fiscal constraints faced by municipalities. Additional lagged control variables capture local economic and demographic conditions, as described in Section 4.1.

The baseline specification is:

Equation 3 - Baseline PBC Model

$$Expl_{it}=\alpha_i+\beta_1 ElectionYear_{it}+\beta_2 DebtLevel_{it-1}+\beta_3 X_{it-1}+\gamma_t+u_{it}$$

where X_{it-1} is a vector of lagged control variables, α_i denotes municipality fixed effects, $\gamma_t$represents mandate fixed effects, and u_{it} is the error term.

To further explore the political determinants of PBC, the analysis also estimates specifications that incorporate political variables such as political alignment with the central government, substitution during the mandate, ideology, independent status, mayoral gender and post-2013. These variables are introduced both directly and, when relevant, through interactions with the election-year dummy, to assess whether political and institutional characteristics shape opportunistic fiscal behaviour.

The extended specification is:

Equation 4 – Extended Specification PBC Model

$$Exp_{it}=\alpha_i+\beta_1 ElectionYear_{it}+\beta_2 (ElectionYear_{it}\times Z_{it})+ \delta Z_{it}+\beta_3 DebtLevel_{i,t-1}+\beta_4 X_{i,t-1}+\gamma_t+u_{it}$$

where Z_{it} represents the vector of political and institutional variables.

In addition to total expenditure, the analysis also considers alternative fiscal outcomes, namely capital expenditure, to assess whether electoral manipulation is concentrated in specific components of municipal budgets.

4.2.2. Economic Consequences of PBC

The second stage of the empirical analysis evaluates whether electoral fiscal expansions generate measurable short-term economic effects at the municipal level. In particular, the study examines whether opportunistic fiscal behaviour influences labour-market conditions or local economic activity.

Two indicators of economic performance are considered: changes in registered unemployment (*Unemp*) and growth in municipal Gross Value Added (*GVA*), capturing different dimensions of local economic dynamics.

These outcomes are modelled as functions of fiscal policy variables and electoral timing. Attention is given to capital expenditure and financial charges, as these categories are often associated with opportunistic fiscal strategies. Lagged values of expenditure variables are included to capture the delayed effects of fiscal policy on economic performance (Veiga and Veiga, 2023).

The general specification is:

Equation 5 - Economic Effects of PBC

$$Y_{it}=\alpha_i+\beta_1 ElectionYear_{it}+\beta_2 Fiscal_{it-1}+\beta_3(ElectionYear_{it}\times Fiscal_{it-1})+\beta_4 X_{it-1}+\gamma_t+u_{it}$$

Where Y_{it} represents an economic outcome, $Fiscal_{it-1}$ denotes lagged fiscal variables, X_{it-1} is the vector of control variables, γ_t denotes year fixed effects, and u_{it} is the error term.

Where Y_{it} represents the economic outcome, namely *Unemp_growth* or *GVA_growth* capturing short-term dynamics in labour market conditions and output.

The term $Fiscal_{it-1}$ denotes lagged fiscal variables, including capital expenditure and total expenditure, both lagged. Capital expenditure is emphasised as it represents a more visible and discretionary component of municipal spending and is more directly linked to local economic activity. Accordingly, capital expenditure is used as the main fiscal variable in the specifications for unemployment and business dynamics. In contrast, both total and capital expenditure are

considered in the GVA models, as output growth may reflect both demand-side effects and investment-driven dynamics. These variables are used to capture the short-term transmission of fiscal policy to local economic outcomes.

The interaction between *ElectionYear* and lagged fiscal variables allows the analysis to assess whether the effectiveness of fiscal policy differs during electoral periods, making it possible to evaluate whether spending undertaken in election years generates distinct short-term economic effects.

All specifications include municipality fixed effects and year fixed effects, controlling for time-invariant municipal characteristics and common macroeconomic shocks. Standard errors are clustered at the municipal level.

4.2.3. Electoral Consequences of PBC

The final stage of the empirical analysis evaluates whether opportunistic fiscal expansions translate into electoral gains. To do so, this section relies on the vote popularity function (VPF) framework commonly used in political economy (Nannestad and Paldam, 1994).

Within this framework, electoral outcomes are assumed to depend on both economic performance and policy decisions observed by voters prior to elections. The idea that voters reward or punish incumbents based on economic conditions is central to the literature on political accountability (Hibbs, 1977; Nordhaus, 1975). More generally, vote popularity functions relate electoral support to economic outcomes, government policy choices, and institutional determinants of voting behaviour. As emphasized by Nannestad and Paldam (1994), this approach builds on the responsibility hypothesis, according to which voters attribute economic outcomes to incumbent governments and adjust their electoral support accordingly.

In general terms, the vote popularity function can be written as:

Equation 6 - Vote Popularity Function Framework

$$V_{it}=f(V_{it},\ P_{it},\ Z_{it}),$$

where V_{it} represents electoral support for the incumbent in municipality i at election t, V_{it} captures economic conditions observed by voters, P_{it} denotes policy decisions implemented by the incumbent government, and Z_{it} includes additional political and institutional determinants of voting behaviour.

Building on this framework, the empirical analysis focuses on whether fiscal behaviour implemented during the election year affects the probability that the incumbent party remains in office. This specification is particularly appropriate in the Portuguese institutional context, as municipal elections take place in October, meaning that most of the fiscal year unfolds under electoral incentives.

To implement this strategy, the empirical design departs from the baseline municipality-year framework and adopts an election-year perspective. The dataset is therefore restricted to municipal election years, so that each observation corresponds to a single electoral outcome. This transformation allows for a direct mapping between electoral-year fiscal behaviour and subsequent electoral results.

The dependent variable is *PartyReelectedi,* is a binary indicator equal to one when the incumbent party is reconducted after the election and zero otherwise.

The empirical analysis considers alternative measures of opportunistic fiscal behaviour to capture different dimensions of electoral fiscal manipulation. Three indicators of opportunism are used: an expenditure-based index, a capital expenditure-based index, and a deficit-based index.

The expenditure-based opportunism index captures deviations in total municipal expenditure during election years relative to non-electoral periods within the same mandate. The capital expenditure-based opportunism index focuses specifically on investment-related spending, which is typically more visible to voters and therefore more likely to be used strategically by incumbents. Finally, the deficit-based opportunism index measures electoral fiscal expansions through fiscal imbalances, capturing the extent to which electoral spending is financed by increased budget deficits.

In addition to fiscal and economic variables, the empirical specification includes political controls related to incumbency. Whether the incumbent mayor runs for re-election is included as a relevant electoral determinant. In some specifications, this variable is also interacted with the opportunism index to assess whether the electoral effect of opportunistic fiscal behaviour depends on the incumbent's candidacy status.

The baseline empirical specification is:

Equation 7- Electoral Payoff Model

$$PartyReelected_{it}=\alpha+\beta_1 OppIndex_{it}+\beta_2 Unemp_{i,t-1}+\beta_3 Runs_{it}+\gamma_t+\varepsilon_{it},$$

where $OppIndex_{it}$ captures the intensity of opportunistic fiscal expansion in the electoral period, $Unemp_{i,t-1}$ measures labour-market conditions in the municipality prior to the election, $Runs_{it}$ is a binary indicator equal to one if the incumbent mayor runs for re-election., $\gamma_t$represents election-year fixed effects, and ε_{it} is an idiosyncratic error term. Alternative specifications incorporate a municipal development index and its interaction with the opportunism index to explore heterogeneous electoral responses.

Given the binary nature of the dependent variable, the empirical analysis uses both linear probability models (LPM) and logit specifications. The LPM facilitates the interpretation of coefficients as marginal effects, while the logit model provides a non-linear framework for binary outcomes. In the logit specification, the probability that the incumbent party remains in office can be written as:

Equation 8- Logit Specification of Electoral Outcomes

$$\Pr(PartyReelected_{it}=1|W_{it})=\Lambda\left(\alpha+\beta_1 OppIndex_{it}+\beta_2 Unemp_{i,t-1}+\beta_3 Runs_{it}+\gamma_t\right),$$

Where $\Lambda(.)$ denotes the logistic cumulative distribution function and W_{it} represents the vector of explanatory variables included in the model.

5. Results

5.1. Existence of PBC

5.1.1. Baseline Model

Table 2 reports the baseline results for the existence of PBCs in Portuguese municipalities. Across most specifications, the coefficient on the election year dummy is positive and statistically significant, indicating that municipalities systematically increase expenditure in election years.

In the baseline specification, election years are associated with an increase of approximately 0.092 units in real expenditure per capita, statistically significant at the 1% level. This effect remains economically meaningful and relatively stable across alternative specifications, with estimated coefficients ranging between 0.044 and 0.115, generally significant at the 1% level, although declining to 0.075, significant at the 5% level, in one specification. In the most saturated model, the coefficient on the election-year dummy becomes statistically insignificant. However, in

this specification the electoral effect is conditional on the interaction terms included, so the baseline coefficient should not be interpreted in isolation.

The log specification (reported in Appendix C) further supports these findings, indicating that election years are associated with an increase in expenditure of approximately 6 to 7 percent, consistent with economically meaningful electoral expansions.

The role of fiscal constraints appears to be more nuanced. When debt is introduced as a continuous variable, the interaction between election years and lagged debt levels is not statistically significant, suggesting that a linear specification does not adequately capture the moderating effect of indebtedness.

However, when debt is modelled using a high debt dummy equal to 1, the results change substantially. The interaction is negative and statistically significant at the 5% level with a coefficient of -0.040, indicating that highly indebted municipalities exhibit weaker electoral expenditure cycles. Importantly, the election year effect remains positive and statistically significant (up to 0.115, 1% level) in this specification, suggesting that fiscal constraints limit, but do not eliminate the opportunistic fiscal dynamics,

Institutional changes also play a relevant role. The interaction between election years and the post-2013 period is positive and statistically significant at the 1% level, with coefficients ranging between 0.095 and 0.108. This suggests that the magnitude of electoral expenditure increases differs in the post-2013 period. However, this result should be interpreted with caution, as it may reflect changes in expenditure composition, timing, or broader institutional adjustments rather than a direct intensification of opportunistic behaviour. It suggests that municipalities may have adapted their fiscal strategies to the new institutional environment, maintaining, or even intensifying, electoral spending within tighter fiscal constraints.

Overall, the results provide strong and robust evidence that the electoral fiscal expansion in Portuguese municipalities is systematically influencing the municipal fiscal policy, with fiscal and institution constraints shaping, but not fully eliminating it.

Table 1- Political Business Cycles (PBCs)

	(1) Exp	(2) Exp	(3) Exp	(4) Exp	(5) Exp
ElectionYear	0.092***	0.075**	0.115***	0.044***	0.006
	(0.008)	(0.030)	(0.009)	(0.014)	(0.044)
DebtLevel (lagged)	-0.041	-0.047		-0.039	-0.049
	(0.028)	(0.034)		(0.028)	(0.034)
ElectionYear × DebtLevel (lagged)		0.025			0.046
		(0.046)			(0.046)
HighDebt			0.031**		
			(0.012)		
ElectionYear × HighDebt			-0.040**		
			(0.015)		
Post2013				-0.016	-0.018
				(0.023)	(0.023)
ElectionYear × Post2013				0.095***	0.108***
				(0.022)	(0.032)
Currev (lagged)	0.001***	0.001***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
WageEarners (lagged)	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Populationunder14	0.004	0.005	0.004	0.004	0.005
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Observations	4286	4286	4286	4286	4286
Within R-squared	0.2407	0.2413	0.2398	0.2467	0.249

Standard errors in parentheses

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

Additional estimations using alternative political incentives are reported in Appendix D. It uses a variable capturing whether the incumbent runs for reelection (*Runs*). The results are weaker and less consistent than those obtained in the baseline specification, reinforcing the central role of election timing in driving opportunistic fiscal behaviour.

5.1.2. Political Determinants of PBC

Table 3 presents the results on the political determinants, exploring whether electoral incentives and political characteristics shape opportunistic fiscal behaviour.

Consistent with the baseline findings, the coefficient on the election-year dummy remains positive and statistically significant across most specifications. The estimated effect ranges between approximately 0.055 and 0.093, being statistically significant at the 1% level in the preferred specifications with 0.093 as coefficient and becoming statistically insignificant with the coefficient of 0.004 in the most saturated model. This pattern does not indicate the disappearance of PBC but suggests that the election effect becomes conditional.

Among the political variables considered, alignment between the municipal government and the central government emerges as one of the most relevant factors. The interaction between election years and political alignment is positive and statistically significant at the 5% level (0.054), indicating that aligned municipalities increase expenditure more strongly during electoral periods. This result is consistent with the idea that political alignment may facilitate access to resources, improve coordination across levels of government, or reduce political and financial constraints, thereby amplifying opportunistic fiscal dynamics. However, the effect is not fully robust across all model variations.

Electoral incentives related to incumbency are further examined by analysing whether incumbent mayors choose to run for re-election. The results show that municipalities where incumbents run tend to exhibit higher levels of expenditure, with a positive coefficient of 0.030 that is statistically significant at the 10% level. This finding is consistent with the literature, suggesting that incumbents who actively seek re-election have stronger incentives to increase spending to influence electoral outcomes.

In contrast, other political characteristics provide limited additional explanatory power. The coefficients associated with independent mayors, -0.003, ideological orientation, left-wing with the confident of 0.007, and female mayor with 0.005 are not statistically significant at conventional levels. However, this absence of statistical significance should be interpreted with caution. Independent mayors represent a relatively small share of municipalities, ideological differences are not consistently emphasized in the PBC literature, and female mayors remain underrepresented in the sample. Therefore, these results should be interpreted as indicating the absence of robust patterns rather than definitive evidence of no effect. Finally, the inclusion of substitution terms capturing mid-term replacements of mayors does not reveal statistically significant effects. Neither the direct effect nor the interaction with election years is statistically significant. This result should

also be interpreted with caution, as mid-term substitutions are relatively rare in the dataset, which may limit the statistical power to detect meaningful effects.

Consistent with the baseline findings, the interaction between election years and the post-2013 period remains positive and statistically significant at the 1% level with a coefficient of 0.100. While the coefficient suggests stronger electoral effects after 2013, it does not necessarily imply that fiscal constraints increased electoral fiscal expansions.

Log-linear specifications of the political models (see Appendix E) yield qualitatively consistent results. In particular, the election-year coefficient remains positive and statistically significant, ranging between approximately 3.6% and 6.7%, depending on the specification. The interaction between election years and the post-2013 period also remains positive and statistically significant (0.065), while the interaction with political alignment is positive and significant (0.024). These findings confirm that the main political mechanisms identified in model are robust when expenditure is measured in percentage terms.

Additional results (reported in Appendix F) suggest that local development may also play a moderating role in PBC. More developed municipalities tend to exhibit lower levels of expenditure and weaker electoral fiscal expansions. Although this dimension is not central to the analysis, this evidence is consistent with the idea that higher levels of economic development may be associated with stronger fiscal discipline or more informed voters, thereby constraining PBC.

Table 2- Political Determinants of PBCs

	(2) Exp	(3) Exp	(6) Exp	(7) Exp
ElectionYear	0.055 (0.037)	0.093*** (0.00797)	0.093*** (0.008)	0.004 (0.046)
DebtLevel (lagged)	-0.048 (0.034)	-0.041 (0.028)	-0.042 (0.028)	-0.049 (0.034)
ElectionYear x DebtLevel (lagged)	0.028 (0.046)			0.046 (0.046)
AlingGov	0.007 (0.011)			0.005 (0.012)
Currev (lagged)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
WageEarners (lagged)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Populationunder14 (lagged)	0.005	0.005	0.005	0.005

	(0.007)	(0.007)	(0.007)	(0.007)
ElectionYear x AlingGov	0.054**			0.024
	(0.026)			(0.021)
Runs		0.030*		
		(0.017)		
Indep				-0.003
				(0.037)
LeftMayor				0.007
				(0.016)
FemaleMayor				0.005
				(0.028)
SubsTerm		0.034	0.034	0.026
		(0.028)	(0.028)	(0.029)
ElectionYear x SubsTerm		-0.049	-0.046	-0.021
		(0.054)	(0.054)	(0.056)
Post2013				0.016
				(0.025)
ElectionYear x Post2013				0.100***
				(0.029)
Observations	4286	4286	4286	4286
Within R-squared	0.2437	0.2460	0.2408	0.2494

Standard errors in parentheses

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

Additional political specifications and alternative model combinations are reported in Appendix G.

The results obtain indicate that PBC are shaped by specific institutional and political conditions. Partisan alignment and electoral incentives emerge as key drivers, while other political characteristics appear to play a more limited role.

5.1.3. Robustness Checks

This section assesses the robustness of the findings above by exploring alternative specifications and additional controls.

First, the baseline model is re-estimated excluding the wage variable to increase the sample size and assess whether the results depend on this control. The coefficient on the election-year dummy remains positive with a coefficient of 0.074 and statistically significant at the 5% level, while the interaction between election years and lagged debt remains statistically insignificant. Although

the direct effect of lagged debt becomes weakly significant at the 10% level with a coefficient of -0.056, the overall pattern of results remains unchanged.

Second, the sample is restricted to municipalities with non-negative values of lagged debt. This addresses the possibility that extreme or economically less meaningful debt observations may affect the estimates. The results remain very similar to the baseline specification with the coefficient on the election-year dummy is positive and statistically significant, while the interaction between election years and lagged debt remains statistically insignificant.

Third, an additional specification includes the development index as a further socio-economic control. Once again, the coefficient on the election-year dummy remains positive and statistically significant at the 5% level with a coefficient of 0.071, and the interaction between election years and lagged debt remains insignificant. The development index itself enters with a negative and statistically significant coefficient, suggesting that more developed municipalities tend to display lower expenditure levels, but without altering the core result.

Table 3- Robustness: PBC

	(1) Exp	(2) Exp	(3) Exp
ElectionYear	0.073**	0.076**	0.071**
	(0.030)	(0.030)	(0.029)
DebtLevel (lagged)	-0.056*	-0.047	-0.048
	(0.033)	(0.034)	(0.035)
ElectionYear x DebtLevel (lagged)	0.029	0.025	0.030
	(0.047)	(0.046)	(0.046)
Currev (lagged)	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)
Populationunder14 (lagged)	0.006	0.005	-0.004
	(0.006)	(0.006)	(0.007)
WageEarners (lagged)		-0.000	-0.000
		(0.000)	(0.000)
Development index			-0.003**
			(0.002)
Observations	4584	4283	4125
Within R-squared	0.2457	0.2410	0.2492

Standard errors in parentheses

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

To further assess the identification strategy, placebo tests are conducted by assigning false election years to post-electoral periods. If the estimated effects were driven by general time trends or model misspecification, similar patterns would be expected in these placebo years.

The results do not support this interpretation. The coefficients associated with placebo election years are small and unstable, ranging from -0.034 and significant at the 10% level to -0.019 also significant at the 5% level, and becoming statistically insignificant in the specification interacting placebo years with the post-2013 period. Importantly, these coefficients do not replicate the positive election-year effects found in the baseline models.

Additional interaction terms reinforce this conclusion. While the interaction between placebo years and lagged debt is not statistically significant, the interaction between placebo years and the post-2013 period is negative and statistically significant at the 1% level with a coefficient of -0.064, in contrast with the positive interaction observed in the main specifications.

This divergence in both magnitude and sign suggests that the post-2013 electoral effect identified in the baseline models is not driven by general time trends or post-crisis dynamics. Instead, it appears to be specifically associated with actual election timing.

It is possible to conclude that the placebo analysis strengthens the credibility of the empirical strategy. Although some placebo coefficients are statistically significant, they are not consistent in magnitude or sign and do not reproduce the main pattern of the baseline results. This suggests that the positive expenditure increases identified in the core models are associated with actual election years rather than with generic temporal dynamics.

All specifications replicate the baseline models, including the full set of control variables and fixed effects.

Table 4- Placebo Test: PBC

	(1) Exp	(2) Exp	(3) Exp
Placebo ElectionYears	-0.019** (0.009)	-0.034* (0.019)	0.013 (0.015)
Placebo ElectionYear x DebtLevel		0.019 (0.033)	
Placebo ElectionYear x Post2013			-0.064*** (0.017)

Currev (lagged)	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)
Populationunder14 (lagged)	-0.006	-0.006	-0.006
	(0.007)	(0.007)	(0.007)
Wage earners (lagged)	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)
Observations	4286	4286	4286
Within R-squared	0.2205	0.2209	0.2232

Standard errors in parentheses

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

Additional placebo specifications, including alternative timing definitions, are reported in Appendix H. These should be interpreted with caution, since pre-election years may still reflect fiscal dynamics associated with the electoral cycle.

5.2. Economic Effects

5.2.1. Baseline Model

This section examines whether electoral fiscal expansions translate into short-term economic effects at the municipal level. Table 6 reports the baseline results for unemployment dynamics, while Table 7 focuses on output effects.

The results indicate that election years are associated short-term with improvements in labour market outcomes, as reflected in lower unemployment growth. In particular, the coefficient on the election year dummy is negative and statistically significant at the 1% level across both unemployment specifications, with values of -0.154 and -0.144, respectively. This pattern is consistent with the idea that electoral fiscal expansions are associated with short-term improvements in local economic

The interaction results further nuance this interpretation. The interaction between election years and lagged capital expenditure is negative and statistically significant in one specification with the value of −0.036. This suggests that higher levels of prior investment spending may reinforce the short-term reduction in unemployment during election years.

Table 5 -Economic Effects: Unemployment Rate

	(1) Unemp_Growth	(2) Unemp_Growth
ElectionYear	-0.154*** (0.015)	-0.144*** (0.017)
Capexp (lagged)		0.010 (0.013)
ElectionYear × Capexp (lagged)	-0.026 (0.021)	-0.036*** (0.009)
Lagged Current Revenues	0.000* (0.000)	0.000** (0.000)
Lagged Wage Earners	0.001*** (0.000)	0.001*** (0.000)
Lagged Population under 14 (%)	0.012*** (0.002)	0.012*** (0.002)
Observations	4438	4438
Within R-squared	0.4683	0.4686

Standard errors in parentheses

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

Table 7 presents the results for GVA growth. The coefficient on the election year dummy is positive and statistically significant at the 1% level in both specifications, with values of 0.081 and 0.105, indicating that electoral periods are associated with higher short-term output growth, although these results should be interpreted cautiously given the shorter sample period.

However, the underlying transmission mechanisms are less clear. In the specification including lagged total expenditure, the interaction term is only weakly significant at the 10% level with a coefficient of 0.023, suggesting limited evidence that higher pre-existing spending amplifies these effects. In the specification including lagged capital expenditure and the interaction are not statistically significant, indicating that investment does not appear to play a systematic role in driving output dynamics during electoral periods.

These results are not strongly linked to the composition or persistence of fiscal policy. This contrasts with the findings for unemployment that points to the possibility that electoral expansions generate temporary or demand-driven effects that do not translate into sustained improvements in economic performance.

Table 6 - Economic Effects: Output (GVA)

	(1) GVA_growth	(2) GVA_growth
ElectionYear	0.081***	0.105***
	(0.029)	(0.023)
Exp (lagged)	0.005	
	(0.011)	
ElectionYear x Exp (lagged)	0.023*	
	(0.013)	
Capexp (lagged)		0.006
		(0.011)
ElectionYear x Capexp (lagged)		0.015
		(0.018)
Currev (lagged)	0.000*	0.000**
	(0.000)	(0.000)
Populationunder14 (lagged)	-0.006	-0.005
	(0.009)	(0.009)
Dev_index	-0.001	-0.001
	(0.001)	(0.001)
Observations	2224	2224
Within R-squared	0.1950	0.1932

Standard errors in parentheses

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

Additional specifications including financial variables and fiscal constraints are reported in Appendix I and confirm the robustness of these findings.

Taken together, the results point to a differentiated pattern. Electoral periods are associated with lower unemployment growth and higher output growth. However, GVA data are only available from 2013 onwards, implying a shorter sample and fewer electoral cycles within a specific post-crisis institutional context.

5.2.2. Robustness and Alternative Specifications

This section reassesses the baseline findings using alternative specifications and additional robustness checks. Table 8 reports the main robustness results, while Table 9 presents placebo tests based on false election years.

The results in Table 8 remain strongly consistent with the baseline analysis. The coefficient on the election year dummy is negative and statistically significant at the 1% level in the

unemployment specification with a value of -0.145, confirming that electoral periods are associated with reductions in unemployment growth.

In contrast, the results for output (GVA) show a positive and statistically significant coefficient at the 1% level with a coefficient of 0.113, suggesting that electoral periods are associated with increases in aggregate economic activity. However, these results should be interpreted with caution given the shorter post-2013 sample.

Lagged capital expenditure is not statistically significant across specifications, indicating that the timing of fiscal policy, rather than its level, is the key mechanism shaping economic outcomes.

The inclusion of financial variables does not materially alter the results. Lagged financial charges are not statistically significant, and their interaction with election years is only significant in the unemployment specification at the 5% level with a value -0.493, providing limited evidence of a debt-related channel.

Table 7- Robustness: Economic Effects

	(1) Unemployment	(2) GVA
ElectionYear	-0.145*** (0.015)	0.113*** (0.022)
Capexp	0.006 (0.012)	0.010 (0.011)
Finch (lagged)	0.055 (0.111)	0.017 (0.146)
ElectionYear × Finch (lagged)	-0.493** (0.241)	0.226 (0.246)
Currev (lagged)	0.000** (0.000)	-0.000 (0.000)
WageEarners (lagged)	0.001*** (0.000)	-0.001** (0.000)
Populationunder14 (lagged)	0.015*** (0.002)	-0.008 (0.008)
Observations	4613	2312
Within R-squared	0.470	0.209

Standard errors in parentheses

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

Additional specifications are reported in Appendix J and confirm the stability of the main results.

Table 9 presents placebo tests to assess whether the estimated effects are driven by spurious timing patterns. The results indicate that placebo election years are also associated with statistically significant effects, particularly in the unemployment specification, where the coefficient is negative and highly significant with a value of -0.180. In the GVA specification, the coefficient is positive but smaller in magnitude, 0.040, and statistically significant at the 5% level.

At first glance, the presence of statistically significant placebo effects may raise concerns regarding the identification strategy. However, several important considerations mitigate this interpretation. First, placebo years do not correspond to actual electoral events or institutional incentives and therefore do not capture the political mechanisms underlying electoral fiscal cycles. As such, these estimates should not be interpreted as evidence of PBC.

Second, and more importantly, placebo effects do not exhibit a consistent or theoretically coherent pattern across specifications. In contrast to the baseline results, which are stable and aligned with the predictions of the political business cycle literature, placebo estimates vary in magnitude, sign, and significance depending on the specification and outcome considered.

Third, the absence of robust interaction effects with fiscal and institutional variables in the placebo specifications further weakens the interpretation of these results as reflecting systematic behaviour. Instead, they are more likely capturing residual temporal dynamics or broader macroeconomic fluctuations that are not fully absorbed by the model.

The evidence remains consistent with the interpretation that electoral periods are associated with short-term economic effects, even if placebo tests suggest that some residual timing dynamics remain.

Table 8- Placebo Tests: Economic Effects

	(1)	(2)
	Unemployment	GVA
Placebo ElectionYear	-0.180***	0.040**
	(0.012)	(0.017)
Capexp (lagged)	0.006	
	(0.011)	
Currev (lagged)	0.000**	-0.000
	(0.000)	(0.000)
WageEarners (lagged)	0.001***	-0.000**
	(0.000)	(0.000)

Populationunder14 (lagged)	0.015***	-0.005
	(0.002)	(0.009)
Dev_index		-0.001
		(0.001)
Observations	4613	2312
Within R-squared	0.469	0.193

Standard errors in parentheses

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

Supplementary placebo tests are provided in Appendix K.

5.3. Electoral Returns of PBC

5.3.1. Baseline Model

This section examines whether opportunistic fiscal behaviour translates into electoral gains for incumbent parties. It assesses whether municipalities that engage more intensively in electoral expenditure cycles are more likely to re-elect the incumbent political party.

Table 10 reports the baseline results using both linear probability models (LPM) and logistic specifications. The key explanatory variables are alternative measures of opportunistic fiscal behavior, including expenditure-based, capital expenditure-based, and deficit-based indices.

The results provide no robust evidence that opportunistic fiscal behaviour is rewarded at the ballot box. Across all specifications, the coefficient on the opportunism indexes is consistently negative, but not statistically significant at the 10% level. The estimated coefficients range from −0.092 to −0.025 in the linear models and reach −0.708 in the logit specification. Although these values suggest a negative association between opportunistic spending and the probability of re-election, the lack of statistical significance indicates that this relationship is not robust.

A similar pattern emerges for capital expenditure opportunism. The estimated coefficients are small, negative, and not statistically significant at the 10% level, with values around −0.025 in the linear model and −0.170 in the logit specification. These results indicate that the composition of expenditure does not meaningfully affect electoral outcomes.

The interaction between opportunistic expenditure and incumbency status is also not statistically significant at the 10% level. The estimated coefficient of −0.097 suggests that the electoral impact of opportunistic fiscal dynamics does not differ systematically depending on whether the incumbent runs for re-election.

In contrast, the variable capturing whether the incumbent runs for re-election is negative and highly statistically significant at the 1% level across all specifications. The estimated coefficients range between −0.163 and −0.155 in the linear models and are approximately −1.625 in the logit specifications. This result should be interpreted with caution, as the decision to run is inherently endogenous. Incumbents may self-select into candidacy based on their perceived probability of success, particularly in more challenging electoral environments, while stepping aside may occur when parties expect stronger performance with alternative candidates. As a result, the estimated coefficient may capture underlying selection dynamics rather than a causal effect of candidacy on electoral outcomes. This interpretation is consistent with the negative and statistically significant coefficient estimated for the Runs variable.

Pre-election unemployment is also consistently negative and statistically significant at the 1% level. The estimated coefficient is approximately −0.117 in the linear models and around −0.93 in the logit specifications. This indicates that local economic conditions play a more relevant role in shaping electoral outcomes than opportunistic fiscal behaviour.

Regarding election-year fixed effects, the coefficient for the 2017 election is negative and statistically significant at the 1% level across all specifications, with values around −0.101 in the linear models and −0.71 in the logit specifications. By contrast, the estimated effects for the 2013 and 2021 elections are not statistically significant.

The negative effect observed in 2017 is consistent with institutional changes affecting electoral competition. In particular, the introduction of term limits in 2013 restricted the ability of incumbent mayors to run for re-election, increasing competition and reducing re-election probabilities in subsequent elections.

Table 9- Electoral Return of PBC

	(1) LPM PartyReelected	(2) LPM PartyReelected	(3) LPM PartyReelected	(4) LPM PartyReelected	(5) Logit PartyReelected	(6) Logit PartyReelected
OppIndex_Exp	-0.092 (0.069)		-0.025 (0.088)		-0.708 (0.512)	
OppIndex_Cap		-0.025 (0.025)				-0.170 (0.169)
OppIndex_Exp. × Runs			-0.097 (0.117)			

Runs	-0.163***	-0.163***	-0.155***		-1.625***	-1.626***
	(0.022)	(0.022)	(0.023)		(0.271)	(0.271)
Unempl (lagged)	-0.117***	-0.116***	-0.117***	-0.119***	-0.932***	-0.933***
	(0.028)	(0.028)	(0.028)	(0.028)	(0.227)	(0.228)
ElectionYear 2013	-0.018	-0.020	-0.017	-0.019	-0.199	-0.202
	(0.035)	(0.035)	(0.035)	(0.035)	(0.308)	(0.308)
ElectionYear 2017	-0.101***	-0.100***	-0.101***	-0.108***	-0.718***	-0.706***
	(0.032)	(0.032)	(0.032)	(0.032)	(0.233)	(0.235)
ElectionYear 2021	-0.028	-0.033	-0.027	-0.033	-0.226	-0.268
	(0.031)	(0.029)	(0.031)	(0.031)	(0.267)	(0.259)
Observations	1156	1156	1156	1137	1156	1156
R^2	0.069	0.068	0.069	0.069		
Pseudo R^2					0.086	0.085

Standard errors in parentheses

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

Additional specifications of the baseline models are reported in Appendix M.

Table 11 reports additional specifications that incorporate alternative measures of opportunistic fiscal behaviour, including deficit-based indices and joint models that simultaneously account for different fiscal instruments.

When electoral spending behaviour is measured using the deficit-based index alone, the estimated coefficients are negative but statistically insignificant in both the linear and logit specifications. These results indicate that opportunistic fiscal expansions financed through budget imbalances do not appear to influence electoral outcomes.

The results change slightly when expenditure-based and deficit-based opportunism are included jointly. In these specifications, the coefficient on the deficit-based index remains negative and statistically insignificant in both models. This provides limited evidence that higher levels of opportunistic spending may be associated with lower probabilities of re-election. In contrast, the coefficient on the expenditure-based opportunism index becomes negative and marginally statistically significant at the 10% level in both the linear and logit specifications, with estimated values of −0.097 and −0.573, respectively.

These findings suggest that, among alternative forms of opportunistic fiscal behaviour, only expenditure-based opportunism shows limited electoral relevance. Moreover, the negative sign of

the coefficient indicates that higher levels of opportunistic spending are associated with a lower probability of re-election. However, given the weak statistical significance, this evidence should be interpreted with caution.

Consistent with the baseline results, the variable capturing whether the incumbent run for re-election remains negative and statistically significant at the 1% level, while pre-election unemployment is also negative and statistically significant at the 1%t level. These results reinforce the importance of electoral competition and local economic conditions in shaping electoral outcomes.

Table 10- Electoral Effects of Alternative Measures of Opportunism

	(1) LPM PartyReelected	(2) Logit PartyReelected	(3) LPM PartyReelected	(4) Logit PartyReelected
OppIndex_Def	-0.026 (0.101)	-0.270 (0.866)	-0.089 (0.108)	-0.653 (0.904)
OppIndex_Exp			-0.097* (0.049)	-0.573* (0.314)
Runs	-0.165*** (0.022)	-1.641*** (0.272)	-0.163*** (0.022)	-1.632*** (0.273)
Unemp (lagged)	-0.119*** (0.028)	-0.953*** (0.229)	-0.117*** (0.028)	-0.947*** (0.230)
ElectionYear 2013	-0.017 (0.036)	-0.184 (0.310)	-0.021 (0.035)	-0.209 (0.309)
ElectionYear 2017	-0.102*** (0.032)	-0.716*** (0.233)	-0.097*** (0.032)	-0.687*** (0.235)
ElectionYear 2021	-0.045 (0.037)	-0.377 (0.331)	-0.046 (0.037)	-0.382 (0.329)
Observations	1156	1156	1156	1156
R^2	0.068		0.072	
Pseudo R^2		0.084		0.086

Standard errors in parentheses

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

Additional specifications including political and ideological controls are reported in Appendix L and M and do not alter the main conclusions.

Overall, the results indicate that opportunistic fiscal behaviour does not generate systematic electoral gains. While some specifications provide weak evidence of a negative electoral effect, these findings are not sufficiently robust to support strong conclusions.

5.3.2. Heterogeneity in Electoral Responses

This section examines whether the electoral effects of opportunistic fiscal behaviour vary across municipalities with different socioeconomic characteristics. It evaluates whether the level of local development influences how voters respond to opportunistic fiscal policies.

Table 12 reports the results from specifications that include an interaction between the expenditure-based opportunism index and the municipal development index. The specification without the interaction term shows that the coefficient on the opportunism index is negative and statistically significant at the 5% level, with an estimated value of −1.436. This result indicates that higher levels of opportunistic spending are associated with a lower probability of re-election.

When the interaction term is introduced, the coefficient on opportunistic expenditure remains negative, with an estimated value of −0.939, and is statistically significant at the 10% level. Importantly, the interaction between opportunistic spending and the level of development is also negative and statistically significant at the same level, with an estimated coefficient of −0.168.

These results indicate that the electoral impact of opportunistic fiscal behaviour is not homogeneous across municipalities. The negative interaction term implies that the marginal effect of opportunistic spending becomes more negative as the level of development increases. In other words, opportunistic fiscal behaviour is more strongly penalized in more developed municipalities.

This pattern suggests that voters in more developed municipalities may be better informed or more responsive to fiscal policy distortions, and therefore more likely to sanction opportunistic behaviour at the ballot box. By contrast, the direct effect of the development index is not statistically significant, indicating that development does not independently affect re-election probabilities but instead plays a moderating role.

Pre-election unemployment remains negatively associated with the probability of re-election and is statistically significant at the 10% level in the interaction specification. This result reinforces the importance of local economic conditions in shaping electoral outcomes.

While opportunistic fiscal behaviour does not generate electoral rewards on average, it is more strongly penalized in more developed municipalities, where voters are likely to exhibit higher levels of political awareness and fiscal sensitivity.

Table 12 - Heterogeneity in Electoral Responses to Opportunistic Fiscal Behaviour

	(1) PartyReelected	(2) PartyReelected
OppIndex_Exp	-1.436** (0.612)	-0.939* (0.542)
Dev_index	0.021 (0.019)	0.018 (0.020)
OppIndex_Exp × Dev_index		-0.168* (0.092)
Unemp (lagged)	-0.158* (0.091)	-0.166* (0.094)
Observations	1,156	1,156
R-squared	0.072	0.075

Standard errors in parentheses

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

5.3.3. Robustness and Alternative Specifications

This section assesses the robustness of the main findings by considering alternative measures of opportunistic fiscal behaviour, estimation methods, and model specifications.

Table 13 reports the main robustness results using alternative measures of opportunism within a logistic framework. The findings suggest that expenditure-based opportunism is the only dimension with some electoral relevance. When considered in isolation, its coefficient is negative and marginally significant at the 10% level with a coefficient of −0.505. When included jointly with deficit-based opportunism, the coefficient remains negative and marginally significant, with an estimated value of −0.573.

By contrast, capital expenditure and deficit-based opportunism remain statistically insignificant across all specifications, indicating that these dimensions do not meaningfully influence electoral outcomes. This suggests that voters primarily respond to more visible fiscal instruments, such as total expenditure, rather than less transparent fiscal components.

The results are also robust across estimation methods. Logistic specifications yield conclusions consistent with the linear probability models presented in the baseline analysis, confirming that the findings are not driven by the choice of functional form.

Additional robustness checks including alternative specifications, interaction terms, and sample adjustments, do not alter the main conclusions. In all cases, opportunistic fiscal behaviour either has no statistically significant effect or is associated with a lower probability of re-election. Detailed results for these additional specifications are reported in Appendix N and O.

Overall, the evidence indicates that opportunistic fiscal behaviour does not generate electoral rewards. Some specifications suggest a weak negative association, but the direction of the results is broadly consistent across estimation methods.

Table 11- Robustness: Alternative Measures of Opportunistic Fiscal Behaviour

	(1) Logit PartyReelected	(2) Logit PartyReelected	(3) Logit PartyReelected	(4) Logit PartyReelected
OppIndex_Exp	-0.505* (0.285)			-0.573* (0.304)
OppIndex_Cap		-0.129 (0.084)		
OppIndex_Def			-0.270 (0.866)	-0.653 (0.904)
Runs	-1.625*** (0.271)	-1.627*** (0.271)	-1.641*** (0.272)	-1.632*** (0.273)
Unemp (lagged)	-0.939*** (0.227)	-0.937*** (0.228)	-0.953*** (0.229)	-0.947*** (0.230)
ElectionYear 2013	-0.185 (0.309)	-0.195 (0.309)	-0.184 (0.312)	-0.209 (0.312)
ElectionYear 2017	-0.706*** (0.234)	-0.697*** (0.235)	-0.716*** (0.232)	-0.687*** (0.234)
ElectionYear 2021	-0.251 (0.255)	-0.280 (0.250)	-0.377 (0.326)	-0.382 (0.324)
Observations	1,156	1,156	1,156	1,156

	(1) Logit PartyReelected	(2) Logit PartyReelected	(3) Logit PartyReelected	(4) Logit PartyReelected
Pseudo R^2	0.086	0.085	0.084	0.086

Standard errors in parentheses

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

6. Discussion of Results and Policy Implications

The findings of this dissertation provide a comprehensive assessment of political incentives at the local level and their implications for fiscal governance and economic performance. By jointly examining the existence of political business cycles (PBCs), their economic effects, and their electoral consequences, the analysis offers an integrated perspective on opportunistic fiscal behaviour in portuguese municipalities.

The evidence confirms the presence of PBCs: municipalities systematically increase expenditure in election years, in line with previous findings (Veiga and Veiga, 2007; 2023). However, these dynamics are not uniform. Fiscal constraints play a disciplining role, as more indebted municipalities exhibit weaker electoral expansions. At the same time, political alignment with the central government amplifies these dynamics, highlighting the importance of intergovernmental relationships. Institutional reforms also matter. The post-2013 fiscal framework did not eliminate opportunistic behaviour but appears to have altered its timing or composition.

In contrast, the economic effects of these cycles are limited and short-lived. Electoral periods are associated with lower unemployment growth, suggesting temporary labour market improvements (Coelho, Veiga and Veiga, 2006). However, the empirical framework does not allow strong conclusions regarding persistent or long-term effects. Moreover, the evidence on broader economic performance should be interpreted with caution, particularly because GVA data are only available for the shorter post-2013 period. More generally, these findings should be interpreted carefully, as the empirical strategy is not designed to establish strict causal relationships, and residual endogeneity may still affect the estimates.

One of the most notable findings concerns electoral outcomes. Despite systematic increases in expenditure, opportunistic fiscal behaviour does not translate into higher probabilities of re-election. While some specifications suggest a weak negative relationship, these effects are not

robust across models. This disconnect between fiscal behaviour and electoral outcomes challenges the standard predictions of opportunistic models (Nordhaus, 1975; Rogoff, 1990) and differs from part of the empirical literature that finds positive electoral returns in specific institutional contexts.

Several mechanisms may account for this result. First, the composition of expenditure may prioritise visibility over efficiency. The limited and somewhat inconsistent economic effects suggest that pre-electoral spending is not sufficiently productive to generate meaningful improvements in local economic conditions. Second, the institutional and macroeconomic context is likely relevant. The period under analysis includes the aftermath of the sovereign debt crisis and the introduction of stricter fiscal rules, which may have increased voter sensitivity to fiscal discipline.

More broadly, the findings point to a misalignment between political incentives and voter responses. While incumbents continue to engage in opportunistic fiscal behaviour, these strategies do not appear to yield systematic electoral benefits. This raises a central question: why does such behaviour persist?

Traditional PBC models rely on voter myopia, whereby voters fail to fully observe or interpret fiscal manipulation. The evidence presented here is only partially consistent with this mechanism. The absence of robust electoral rewards, and the presence of weak negative effects in some specifications, suggests that voters may have become more attentive to fiscal discipline. Increased transparency and greater awareness of fiscal sustainability, particularly after the sovereign debt crisis, may have reduced the effectiveness of opportunistic strategies.

At the same time, the persistence of political business cycles suggests that political actors may not have fully adjusted to this changing environment. One plausible explanation is the presence of institutional inertia, whereby fiscal practices established in earlier periods continue to shape behaviour even when their electoral effectiveness declines. In addition, opportunistic fiscal behaviour may reflect party-level dynamics rather than purely individual strategies. Political parties operate across multiple municipalities and may rely on standardised electoral strategies or heuristics, applying similar fiscal patterns regardless of local electoral feedback. In this context, opportunistic behaviour may persist not because it is optimal in each municipality, but because it reflects broader organisational routines, imperfect learning, or limited adaptation to heterogeneous local conditions.

This interpretation suggests that the source of bounded rationality may have shifted: rather than voters being systematically myopic, politicians or political organisations may rely on outdated expectations about electoral incentives. This inversion of the standard framework constitutes a key conceptual contribution of this dissertation.

From a policy perspective, several implications emerge. Fiscal constraints, particularly high levels of debt, play a relevant role in limiting opportunistic behaviour, but are not sufficient to eliminate it. This suggests that policy interventions should not only constrain aggregate fiscal behaviour but also address the incentives underlying the composition and timing of expenditure. Enhancing transparency and access to fiscal information may further strengthen voter oversight and reduce the scope for manipulation. Finally, improving the efficiency of public spending remains essential to ensure that fiscal policy translates into meaningful economic outcomes.

Overall, the results highlight that political business cycles are not merely a function of electoral incentives, but reflect a complex interaction between institutional constraints, political behaviour, and evolving voter responses.

7. Conclusions, Limitations and Future Research

This dissertation examined the presence, determinants, and consequences of political business cycles in Portuguese municipalities over the period 2002–2021. The empirical analysis provides strong evidence that electoral fiscal cycles persist at the local level but also reveals important limitations in their effectiveness.

While municipalities systematically increase expenditure in election years, these dynamics are shaped by fiscal and institutional conditions, particularly municipal indebtedness and political alignment with the central government. However, they generate only modest and short-term economic effects, most notably temporary improvements in labour-market conditions, without translating into consistent gains in broader economic performance. At the same time, these fiscal expansions do not result in higher probabilities of re-election. While some specifications suggest a weak negative relationship, these effects are not robust across models. This combination of findings challenges the standard predictions of the political business cycle literature and points to a disconnect between political incentives, economic outcomes, and voter responses.

The results suggest that opportunistic fiscal behaviour may persist not because it is systematically effective, but because it reflects institutional inertia, party-level dynamics, or outdated expectations about electoral incentives. In this sense, the findings contribute to the literature by highlighting that the existence of political business cycles does not necessarily imply their economic or electoral success.

Despite these contributions, the dissertation is subject to several limitations. First, data constraints affect the analysis of economic outcomes, particularly in the case of output (GVA), which is only available for a shorter time. This reduces comparability across specifications and limits the ability to draw strong conclusions regarding long-term economic effects. More generally, the empirical framework is not designed to capture long-term impacts, which depend on structural dynamics beyond the scope of the analysis.

Second, the dataset does not include detailed information on certain political dimensions, such as governing coalitions at the municipal level or explicit measures of incumbent eligibility. While these variables are commonly considered in the literature and may influence both fiscal behaviour and electoral incentives, the analysis incorporates key political factors. Nevertheless, the absence of more granular indicators may limit the ability to fully capture the complexity of the local political environment.

In addition, the variable capturing whether the incumbent runs for re-election may be subject to endogeneity. While it reflects incumbency incentives, the decision to run is itself a strategic choice that depends on expected electoral prospects, political costs, and local conditions. As a result, this variable may capture not only eligibility or incentives but also selection effects, as incumbents may be more likely to run in less favourable electoral environments or withdraw when electoral prospects are weaker. This may bias the estimated relationship between incumbency and electoral outcomes, particularly given the negative coefficient estimated for the Runs variable, which may reflect selection into candidacy rather than a true negative effect of incumbency on electoral performance.

Third, the measurement of opportunistic fiscal dynamics relies on constructed indices which, although grounded in the literature, may not fully capture all dimensions of fiscal manipulation. In addition, the use of aggregate expenditure measures may mask important differences in spending composition, particularly the reallocation toward more visible categories emphasized in the literature (Rogoff, 1990; Veiga and Veiga, 2007). Finally, despite the use of fixed

effects and lagged controls, the results should be interpreted as identifying associations rather than strict causal relationships, as residual endogeneity and time-varying factors may still influence the estimates.

Finally, the measurement of electoral outcomes could be further refined. The use of party re-election as the main dependent variable captures political continuity but may mask important individual-level dynamics, particularly in cases of candidate substitution within the same party. In addition, incorporating variables related to voter turnout, such as the abstention rate, could provide further insights into electoral behaviour, allowing for a more comprehensive understanding of how voter participation interacts with opportunistic fiscal strategies.

Future research could address these limitations in several ways. Extending the analysis to longer time periods or incorporating additional data sources would allow for a more comprehensive assessment of economic effects, particularly in terms of long-term growth and investment dynamics. Methodologically, the use of alternative econometric approaches could help address endogeneity concerns and strengthen causal interpretation.

A further step would be to validate the empirical results and assess their robustness across alternative specifications and datasets. Once a more robust identification of these effects is established, it would be important to examine whether additional factors condition these relationships, such as institutional, political, or socio-economic characteristics at the municipal level. It would also be important to assess whether the patterns identified are specific to the Portuguese context or reflect broader institutional dynamics.

Finally, if these results are confirmed, an important avenue for future research lies in understanding the underlying mechanisms driving this behaviour, particularly why politicians continue to engage in opportunistic fiscal strategies despite their limited economic and electoral effectiveness.

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Appendix

Appendix A – Definition of Variables

Variable	Definition
Expit	Real total municipal expenditure per capita
Capexp	Real capital expenditure per capita
Currev	Real current revenues per capita
DebtLevel	Ratio of municipal debt to average current revenues of previous three years
HighDebt	Dummy equal to 1 if municipality has above-median debt level
Finch	Real financial charges per capita
ElectionYear	Dummy equal to 1 in municipal election years (2005, 2009, 2013, 2017, 2021)
Post2013	Dummy equal to 1 for years after the 2013 fiscal reform
AlignGov	Dummy equal to 1 if mayor's party aligns with central government
MayorGender	Dummy equal to 1 if the mayor is female
Indep	Dummy equal to 1 if mayor is from an independent list
SubstTerm	Dummy equal to 1 if the originally elected mayor did not complete the mandate
LeftMayor	Dummy equal to 1 if mayor is from a left party
LnUnemp	Logarithm of registered unemployment
UnempGrowth	Growth rate of unemployment
GVA_growth	Growth rate of Gross Value Added
Dev_index	Municipal development index
Wage earners	Number of wage earners per capita
Population under 14	Share of population aged under 14
OppIndex_Exp	Opportunism index based on total expenditure
OppIndex_Capexp	Opportunism index based on capital expenditure
OppIndex_Def	Opportunism index based on deficit
PartyReelected	Dummy equal to 1 if incumbent party remains in office
Runs	Dummy equal to 1 if incumbent mayor runs for re-election

Appendix B – Hausman Specification Tests: Fixed Effects vs. Random Effects

Model	Hausman χ^2	p-value
Baseline PBC model	397.73	0.0000
PBC with debt interaction	396.50	0.0000
Economic effects: unemployment growth	54.39	0.0000
Economic effects: GVA growth	10.71	0.0300

Appendix C – Log Specification of the Model for testing the Existence of PBCs

	(1) ln(Exp)	(2) ln(Exp)
ElectionYear	0.069*** (0.005)	0.076*** (0.011)
DebtLevel (lagged)	-0.024** (0.011)	-0.022* (0.013)
ElectionYear × DebtLevel (lagged)		-0.010 (0.017)
Currev (lagged)	0.00036*** (0.00003)	0.00036*** (0.00003)
WageEarners (lagged)	0.00029 (0.00022)	0.00029 (0.00022)
Populationunder14 (lagged)	-0.008 (0.005)	-0.008 (0.005)
Observations	4286	4286
Within R-squared	0.2990	0.2993

Standard errors in parentheses

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

Appendix D – Additional Estimation Results for Testing the Existence of PBCs

	(1) Exp	(2) CapExp	(3) Exp
Runs	0.029* (0.017)	0.022 (0.016)	-0.070 (0.060)
DebtLevel (lagged)	0.011 (0.034)	-0.011 (0.034)	-0.083*** (0.028)
Runs × DebtLevel (lagged)			0.157 (0.099)
Currev (lagged)	0.001*** (0.000)	0.000 (0.000)	0.001*** (0.000)
WageEarners (lagged)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Populationunder14 (lagged)	0.004 (0.012)	-0.014 (0.012)	0.002 (0.014)
Observations	1151	1151	1151
Within R-squared	0.3373	0.0422	0.3573

Standard errors in parentheses

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

Appendix E – Log Specifications of the Model for Testing the Political Determinants of PBC

	(1) LnExp	(2) LnExp
ElectionYear	0.0360*** (0.0075)	0.0669*** (0.0134)
DebtLevel (lagged)	-0.0227** (0.0111)	-0.0230* (0.0129)
ElectionYear x DebtLevel (lagged)		-0.007 9(0.0166)
Post2013	0.00594 (0.0172)	
ElectionYear x Post2013	0.0653*** (0.0102)	
AlingGov		0.0252** (0.0098)
ElectionYear x Aling Gov		0.0239** (0.0103)
SubstTerm		0.00604 (0.0259)
ElectionYear x SubstTerm		-0.0348 (0.0369)
Indep		0.00571 (0.0285)
LeftMayor		-0.0121 (0.0120)
Currev (lagged)	0.000352*** (0.0000313)	0.000353*** (0.0000322)
WageEarners (lagged)	0.000228 (0.000218)	0.000250 (0.000219)
Populationunder14 (lagged)	-0.00814 (0.00518)	-0.00772 (0.00526)
Observations	4286	4286
Within R-squared	0.3069	0.3033

Standard errors in parentheses

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

Appendix F – Additional Specification of the Model for Testing the Political Determinants of PBC - Development Index

	(1) Business_Growth	(2) Exp
Dev_index	-0.00074 (0.00076)	-0.00465*** (0.00094)
Election Year		0.10043*** (0.00914)
ElectionYear × Dev_index		-0.00224** (0.00087)
Currev (laaged)	0.00003** (0.00001)	0.00074*** (0.00004)
WageEarners (lagged)	0.00029*** (0.00007)	-0.00008 (0.00027)
Populationunder14 (lagged)	0.00539*** (0.00184)	-0.00741 (0.00588)
Observations	4438	4438
Within R-squared	0.2230	0.2564

Appendix G – Additional Estimation Results for Testing the Political Determinants of PBC

	(1) Exp	(2) Exp	(3) Exp
ElectionYear	0.0755** (0.0294)	0.0754** (0.0296)	0.0755** (0.0294)
DebtLevel (lagged)	-0.0475 (0.0344)	-0.0473 (0.0343)	-0.0475 (0.0343)
ElectionYear x DebtLevel (lagged)	0.0252 (0.0458)	0.0250 (0.0459)	0.0252 (0.0458)
AlignGov	0.0204* (0.0120)		0.0224 (0.0146)
Indep		-0.0014 (0.0373)	-0.0018 (0.0369)
LeftMayor		0.0139 (0.0133)	-0.0039 (0.0155)
FemaleMayor			0.0044 (0.0279)
Currev (lagged)	0.000723*** (0.0000468)	0.000727*** (0.0000462)	0.000723*** (0.0000469)
WageEarners (lagged)	-0.000133 (0.000317)	-0.000104 (0.000316)	-0.000137 (0.000316)
Populationunder14 (lagged)	0.00546 (0.00674)	0.00528 (0.00674)	0.00535 (0.00674)
Observations	4286	4286	4286
Within R-squared	0.2420	0.2415	0.2420

Standard errors in parentheses

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

Appendix H – Additional Placebo Tests Using Pre-Election Timing

	(1) Exp	(2) Exp
Placebo ElectionYears	-0.0587*** (0.00724)	-0.0411* (0.0237)
Placebo ElectionYear × DebtLevel (lagged)		-0.0252 (0.0398)
DebtLevel (lagged)	-0.0552** (0.0261)	-0.0484** (0.0196)
Currev (lagged)	0.000774*** (0.0000474)	0.000773*** (0.0000474)
WageEarners (lagged)	-0.000020 (0.000315)	-0.000014 (0.000317)
Populationunder14 (lagged)	-0.0127** (0.00624)	-0.0129** (0.00622)
Observations	4286	4286
Within R-squared	0.2288	0.2295

Standard errors in parentheses

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

Appendix I – Additional Estimation Results for Testing the Economic Impact of PBC – VAB

	(1) VAB	(2) VAB	(3) VAB
ElectionYear	0.114*** (0.022)	0.114*** (0.022)	0.113*** (0.022)
Exp (lagged)	0.005 (0.011)		
Election year × Exp (lagged)	0.023* (0.013)		
Capexp (lagged)		0.010 (0.011)	0.010 (0.011)
ElectionYear × Capexp (lagged)		0.014 (0.018)	0.015 (0.018)
Finch (lagged)			0.017 (0.146)
ElectionYear × Finch (lagged)			0.225 (0.246)
Currev (lagged)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
WageEarners (lagged)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)
Populationunder14 (lagged)	-0.008 (0.008)	-0.008 (0.008)	-0.008 (0.008)
Dev_index	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Observations	2,312	2,312	2,312
Within R-squared	0.195	0.209	0.209

Standard errors in parentheses

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

Appendix J – Additional Specifications of Placebo: Economic Effects

	(1) Unemployment	(2) Unemployment	(3) VAB
ElectionYear	-0.146*** (0.015)	-0.145*** (0.015)	0.114*** (0.022)
Capexp (lagged)	0.001 (0.010)	0.005 (0.011)	0.010 (0.011)
Finch (lagged)		0.066 (0.114)	
ElectionYear × Finch (lagged)		-0.493** (0.241)	
Currev (lagged)	0.000* (0.000)	0.000* (0.000)	-0.000 (0.000)
WageEaners (lagged)	0.001*** (0.000)	0.001*** (0.000)	-0.001** (0.000)
Populationunder14 (lagged)	0.015*** (0.002)	0.015*** (0.002)	-0.008 (0.008)
Observations	4,613	4,613	2,312
Within R-squared	0.468	0.468	0.209

Standard errors in parentheses

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

Appendix K – Additional Placebo Test

	(1) Unemployment	(2) Business
Placebo ElectionYear	-0.190*** (0.012)	-0.025*** (0.007)
Capexp (lagged)	0.006 (0.011)	0.009 (0.007)
Currev (lagged)	0.000** (0.000)	0.000** (0.000)
WageEarners (lagged)	0.001*** (0.000)	0.000*** (0.000)
Populationunder14 (lagged)	0.015*** (0.002)	0.006*** (0.002)
Observations	4613	4438
Within R-squared	0.469	0.223

Standard errors in parentheses

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

Appendix L — Additional Specifications: Electoral Returns of PBC

	(1) PartyReelected	(2) PartyReelected	(3) PartyReelected	(4) PartyReelected	(5) PartyReelected	(6) PartyReelected
OppIndex_Exp	-0.092		-0.025	-0.708		-0.544*
	(0.069)		(0.088)	(0.512)		(0.298)
OppIndex_Cap		-0.025			-0.170	
		(0.025)			(0.169)	
OppIndex_Exp. × Runs			-0.097			-0.112
			(0.117)			(0.121)
Runs	-0.163***	-0.163***	-0.155***	-1.625***	-1.626***	-1.602***
	(0.022)	(0.022)	(0.023)	(0.271)	(0.271)	(0.274)
Unemp (lagged)	-0.117***	-0.116***	-0.117***	-0.932***	-0.933***	-0.928***
	(0.028)	(0.028)	(0.028)	(0.227)	(0.228)	(0.229)
ElectionYear 2013	-0.018	-0.020	-0.017	-0.199	-0.202	-0.210
	(0.035)	(0.035)	(0.035)	(0.308)	(0.308)	(0.309)
ElectionYear 2017	-0.101***	-0.100***	-0.101***	-0.718***	-0.706***	-0.702***
	(0.032)	(0.032)	(0.032)	(0.233)	(0.235)	(0.234)
ElectionYear 2021	-0.028	-0.033	-0.027	-0.226	-0.268	-0.240
	(0.031)	(0.029)	(0.031)	(0.267)	(0.259)	(0.268)
Observations	1,156	1,156	1,137	1,156	1,156	1,137
R^2	0.069	0.068	0.069			
Pseudo R^2				0.086	0.085	0.087

Standard errors in parentheses

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

Appendix M — Political and Ideological Controls

	(1) PartyReelected	(2) PartyReelected	(3) PartyReelected
ElectionYear	0.076** (0.030)	0.076** (0.030)	0.004 (0.046)
DebtLevel (lagged)	-0.047 (0.034)	-0.048 (0.034)	-0.050 (0.034)
ElectionYear × DebtLevel (lagged)	0.025 (0.046)	0.025 (0.046)	0.046 (0.046)
Indep	-0.001 (0.037)	-0.002 (0.037)	-0.003 (0.037)
LeftMayor	0.014 (0.013)	-0.004 (0.016)	0.005 (0.016)
Currev (lagged)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
WageEarners (lagged)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Populationunder14 (lagged)	0.005 (0.007)	0.005 (0.007)	0.005 (0.007)
FemaleMayor		0.004 (0.028)	0.005 (0.028)
AlignGov		0.023 (0.015)	0.005 (0.013)
Post2013			0.018 (0.025)
ElectionYear × Post-2013			0.100*** (0.029)
ElectionYear × AlignGov			0.024 (0.021)
SubstTerm			0.026 (0.029)
ElectionYear × SubstTerm			-0.021 (0.056)
Observations	4,286	4,286	4,286
Within R -squared	0.242	0.242	0.249

Standard errors in parentheses

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

Appendix N - Additional Specifications of Robustness – Electoral Outcome

	(1) LPM PartyReelected	(2) LPM PartyReelected	(3) LPM PartyReelected	(4) Logit PartyReelected	(5) Logit PartyReelected	(6) Logit PartyReelected
OppIndex_Exp	-0.092 (0.069)			-0.505* (0.285)		
OppIndex_Cap		-0.025 (0.025)			-0.129 (0.084)	
OppIndex_Def			-0.026 (0.101)			-0.270 (0.866)
Runs	-0.163*** (0.022)	-0.163*** (0.022)	-0.165*** (0.022)	-1.625*** (0.271)	-1.627*** (0.271)	-1.641*** (0.272)
Unemp (lagged)	-0.117*** (0.028)	-0.116*** (0.028)	-0.119*** (0.028)	-0.939*** (0.227)	-0.937*** (0.228)	-0.953*** (0.228)
ElectionYear 2013	-0.018 (0.035)	-0.020 (0.035)	-0.021 (0.036)	-0.185 (0.309)	-0.195 (0.309)	-0.184 (0.312)
ElectionYear 2017	-0.101*** (0.032)	-0.100*** (0.032)	-0.102*** (0.032)	-0.706*** (0.234)	-0.697*** (0.235)	-0.716*** (0.232)
ElectionYear 2021	-0.028 (0.031)	-0.033 (0.029)	-0.045 (0.037)	-0.251 (0.255)	-0.280 (0.250)	-0.377 (0.326)
Observations	1,156	1,156	1,156	1,156	1,156	1,156
R^2	0.069	0.068	0.067			
Pseudo R^2				0.086	0.085	0.084

Standard errors in parentheses

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

Appendix O - Additional Specifications of Robustness: Alternative Measures of Opportunistic Fiscal Behaviour – Electoral Outcome

	(1) Logit PartyReelected	(2) Logit PartyReelected	(3) Logit PartyReelected	(4) Logit PartyReelected
OppIndex_Exp	-0.505*			-0.643**
	(0.285)			(0.314)
OppIndex_Cap		-0.129		
		(0.084)		
OppIndex_Def			-0.001	-0.002
			(0.001)	(0.001)
Runs	-1.625***	-1.627***	-1.646***	-1.634***
	(0.271)	(0.271)	(0.272)	(0.273)
Unemp (lagged)	-0.939***	-0.937***	-0.962***	-0.952***
	(0.227)	(0.228)	(0.229)	(0.230)
ElectionYear 2013	-0.185	-0.195	-0.217	-0.246
	(0.309)	(0.309)	(0.310)	(0.309)
ElectionYear 2017	-0.706***	-0.697***	-0.720***	-0.696***
	(0.234)	(0.235)	(0.233)	(0.235)
ElectionYear 2021	-0.251	-0.280	-0.567*	-0.562*
	(0.255)	(0.250)	(0.331)	(0.329)
Observations	1,156	1,156	1,156	1,156
Pseudo R^2	0.086	0.085	0.085	0.088

Standard errors in parentheses

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