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An Empirical Analysis of the Electoral Effects on Public Expenditure Execution in Brazilian Municipalities

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Abstract: This study analyzes the effects of electoral cycles on the execution of public expenditures in Brazilian municipalities, in light of the Political Budget Cycle Theory, according to which government officials adjust fiscal policies to maximize electoral gains. The objective is to investigate the extent to which electoral processes influence the execution of public expenditures, considering conditioning factors such as reelection eligibility, electoral competition, and dependence on intergovernmental transfers. Methodologically, the study employs panel data from Brazilian municipalities covering the period from 2017 to 2024, applying econometric models with fixed effects and interaction terms, as well as complementary strategies to mitigate problems arising from unobserved heterogeneity and endogeneity. The results indicate that, on average, election years are associated with a reduction in outstanding unpaid expenditures not yet processed, suggesting fiscal responsibility signaling strategies. However, when reelection eligibility is considered, a significant increase in these liabilities is observed, indicating opportunistic behavior by public managers. The variables of electoral competition and dependence on intergovernmental transfers were not statistically significant. The study concludes that Political Budget Cycles are conditional in nature and are influenced by incentives to remain in office, thereby contributing to the debate on fiscal governance.

Keywords: Political Budget Cycles; Public Expenditure; Brazilian Municipalities; Fiscal Responsibility; Panel Data.

I. Introdução

The interaction between politics and public finance constitutes one of the most relevant and complex fields in contemporary political economy, as it reflects the way electoral incentives shape the conduct of fiscal policies. Since the seminal contributions of Nordhaus (1975) and Rogoff and Sibert (1988), it has been widely recognized that political actors, particularly those holding executive office, tend to strategically adjust budgetary and fiscal policies during electoral periods in order to maximize their chances of reelection. This phenomenon, widely known as the Political Budget Cycle (PBC), is particularly relevant in federal and decentralized democracies, such as Brazil, where municipalities enjoy substantial administrative and fiscal autonomy while remaining highly dependent on intergovernmental transfers (Sakurai and Menezes-Filho, 2011; Arvate, Mattos and Rocha, 2015).

In the Brazilian context, the 1988 Federal Constitution initiated a process of fiscal and administrative decentralization that granted municipalities not only the status of federative entities but also direct responsibility for the implementation of essential public policies, such as healthcare, education, and social assistance (Cavalcante, 2017). This decentralization created an environment in which mayors and municipal managers face pressure to balance fiscal demands with political incentives. Fiscal autonomy, combined with high levels of local electoral competition, encourages the strategic use of the budget as an instrument for signaling political performance. Thus, the execution of public expenditures, rather than merely their volume, becomes a reflection of electoral strategies, expressed through the anticipation of highly visible Investments such as public works, infrastructure, and social programs in election years, or through the postponement of unpopular measures, such as expenditure cuts or tariff increases, until the post-election period (Klein and Sakurai, 2010; Chamon, Mello and Firpo, 2010).

Beyond its theoretical framework, the topic has significant empirical and institutional relevance. Evidence shows that, in municipalities where the mayor is eligible for reelection, there is a tendency toward increased current and capital expenditures during election years (Ferreira and Bugarin, 2024). Other studies indicate that the magnitude and direction of these effects vary according to the degree of electoral competition, municipal population size, and the level of dependence on intergovernmental transfers (Bugarin and Ferreira, 2021). However, despite advances in the literature on fiscal and political cycles in Brazil, an important analytical gap remains: the scarcity of studies that distinguish effects on the execution of public expenditures and examine how elections influence the effective execution of public expenditures that is, the pace, composition, and temporal efficiency of spending and the extent to which institutional, electoral, and fiscal factors shape this behavior.

In light of the foregoing, the following research question is posed: To what extent do municipal electoral processes influence the execution of public expenditures in Brazilian municipalities, considering reelection eligibility, the degree of electoral competition, and dependence on intergovernmental transfers? The relevance of this debate extends beyond the field of political economy and encompasses normative and public governance dimensions. If electoral cycles are found to cause significant changes in expenditure execution, the implications are direct for allocative efficiency, intermunicipal equity, and fiscal accountability. In contexts of budgetary constraints and intensifying social demands, expenditure execution practices influenced by electoral objectives may undermine fiscal sustainability and the quality of public service provision (Pereira and Melo, 2015).

Furthermore, understanding the fiscal behavior patterns of municipal governments during electoral periods is essential for improving mechanisms of social oversight, fiscal transparency, and multi-year planning, thereby strengthening the rationality of public policies and mitigating the risk of opportunistic manipulation. Accordingly, this study seeks to address substantive gaps in the literature on political cycles at the subnational level in Brazil by analyzing the extent to which electoral processes influence the execution of public expenditures in Brazilian municipalities, considering variations associated with reelection eligibility, electoral competitiveness, and dependence on intergovernmental transfers.

The proposed empirical approach seeks to go beyond the simple identification of expenditure increases during electoral periods by incorporating measures of the temporal and sectoral efficiency of budget execution, thereby contributing to a better understanding of the political rationale underlying local fiscal management. The central motivation for this study stems from the observation that municipal electoral cycles, particularly the actions of incumbents or candidates with direct electoral incentives, may substantially influence the allocation, timing, and volume of public expenditures, thereby establishing a pattern of strategic fiscal behavior. This influence may manifest itself both as a mechanism for strengthening reelection prospects or maintaining partisan control and as an adaptive response by local governments to political competition.

From a theoretical perspective, this study is grounded in two complementary approaches. The first is the Political Budget Cycle (PBC) theory, which posits that incumbent governments manipulate fiscal and budgetary instruments, particularly through increased expenditures and highly visible public investments, in order to influence voters' electoral behavior (Klein and Sakurai, 2010; Rogoff and Sibert, 1988). The second approach is associated with the theory of fiscal decentralization and local incentives, according to which municipalities, when exercising fiscal autonomy and receiving intergovernmental transfers, respond to political incentives shaped by the institutional environment and the federal structure (Arvate et al. 2015; Cavalcante, 2017).

From an empirical perspective, previous studies provide consistent evidence that the fiscal behavior of local governments is sensitive to the electoral cycle. Klein and Sakurai (2010) demonstrate that Brazilian mayors eligible for reelection tend to increase municipal expenditures by approximately 3% during election years, with increases of up to 5% when they actually run for reelection. Chamon, Mello, and Firpo (2010) complement this evidence by showing that electoral rules that intensify political competition, such as the requirement of a second round of voting in larger municipalities, are associated with a higher proportion of investment and a relative reduction in current expenditures, indicating that the degree of competition affects the composition and structure of public spending. Furthermore, Bugarin and Ferreira (2021) emphasize that the nature and volume of intergovernmental transfers, together with partisan alignments, decisively shape municipal fiscal behavior, creating room for strategic maneuvering during electoral periods.

II. Revisão da Literatura

Political Budget Cycles (PBC) and Electoral Incentives in Municipal Public Expenditure Management

The literature on Political Budget Cycles (PBC) originated in the seminal works of Nordhaus (1975), who formulated the political business cycle model, and Rogoff and Sibert (1988), who incorporated information asymmetry as a central element for explaining the opportunistic behavior of political leaders. From this perspective, political agents adjust fiscal and budgetary variables throughout the electoral cycle with the aim of signaling administrative competence and maximizing their chances of reelection. In decentralized democratic contexts such as Brazil, this logic assumes particular characteristics, as the decision-making autonomy of subnational governments coexists with significant fiscal constraints and a high dependence on intergovernmental resources, thereby shaping the strategic incentives associated with public expenditure execution.

At the municipal level, the federal arrangement established by the 1988 Constitution significantly expanded municipalities' responsibilities for providing essential public policies, such as healthcare, education, and social assistance, while simultaneously intensifying local political competition. This environment favors the use of the public budget as an instrument for signaling government performance, particularly in contexts of increasing budgetary constraints and expanding social demands. Under these circumstances, distortions induced by the electoral calendar may undermine the allocative efficiency of public expenditures and affect the credibility of local public finances, thereby justifying analytical interest in the empirical mechanisms underlying municipal Political Budget Cycles.

Empirical evidence corroborates the existence of such cycles at different levels of government. Guerra (2018), analyzing Brazilian states between 1995 and 2013, identifies significant increases in public expenditures during election years, particularly in categories more visible to voters, such as investments and capital expenditures, suggesting the use of fiscal policy as a mechanism for signaling competence. Similar results are reported by Queiroz et al. (2019), who demonstrate that first-term governors tend to shift the composition of expenditures toward investments during election years, reinforcing the hypothesis of opportunistic manipulation predicted by Political Budget Cycle theory.

At the municipal level, Trevizan (2025) identifies systematic variations in public expenditures throughout the electoral cycle, although with substantial heterogeneity across municipalities and states, indicating that Political Budget Cycles do not manifest uniformly. Conversely, Gralak (2023) finds no consistent evidence of increased public investment during election years in large Brazilian municipalities, suggesting that institutional, fiscal, and administrative constraints may limit the capacity for budgetary manipulation in certain contexts. These findings reinforce the notion that, although the theoretical mechanism underlying Political Budget Cycles is widely recognized, its empirical manifestation depends on the institutional and fiscal characteristics of the units under analysis.

Reelection, Electoral Competition, and Dependence on Intergovernmental Transfers as Determinants of Municipal Fiscal Behavior

Advancing the understanding of Political Budget Cycles, recent literature emphasizes that the intensity and form of these cycles are conditioned by specific political and institutional factors, such as reelection eligibility, the degree of electoral competition, and dependence on intergovernmental transfers. Nordhaus (1975) already highlighted that incentives for fiscal manipulation tend to disappear when there is no possibility of remaining in office, an argument later formalized by Rogoff (1987). Empirical evidence from the Brazilian context supports this proposition, indicating that officeholders eligible for reelection exhibit more pronounced opportunistic behavior.

In this regard, Araújo (2023) demonstrates that first-term mayors make more intensive use of budgetary earnings management practices through outstanding unpaid expenditures (restos a pagar), particularly in pre-election years, reversing these practices in the election year. This pattern suggests that the prospect of reelection strengthens incentives to manipulate accounting information as an electoral signaling strategy. Convergent results are reported by Fiirst (2019), who identifies opportunistic behavior both in election years and in contexts involving changes in officeholders, demonstrating that local political dynamics significantly influence municipal financial performance.

Electoral competition also acts as a moderating factor in Political Budget Cycles. Crispim et al. (2021) show that, although there are no significant variations in committed expenditures throughout the electoral cycle, investment expenditures and borrowing increase substantially during election years, particularly when there is partisan alignment between municipal and state governments and in reelection contexts. These findings suggest that more competitive electoral contests encourage the strategic use of fiscal instruments with greater potential for political visibility.

Another central determinant concerns dependence on intergovernmental transfers. Silva (2025) provides evidence that transfers constitute the main channel through which Political Budget Cycles manifest themselves in Brazilian municipalities, surpassing own-source revenue. Complementarily, Wyse (2022) demonstrates that, in pre-election years, increased public expenditure has a positive effect on municipal debt, particularly in municipalities aligned with the federal government, indicating that the availability of external resources expands local governments' fiscal room for maneuver. Santos (2024), in turn, shows that although electoral cycles positively influence budgetary performance, there is no evidence of the formation of deficit cycles; rather, a cyclical pattern of surpluses is observed, possibly due to legal constraints and strategies aimed at managing voters' perceptions.

Taken together, these findings indicate that Political Budget Cycles in Brazilian municipalities are not uniform phenomena but rather result from the interaction between electoral incentives, the competitive structure of elections, and fiscal conditions, particularly dependence on intergovernmental transfers. This theoretical and empirical framework provides the basis for formulating the research hypotheses, which seek to test how these determinants affect the execution of municipal public expenditures throughout the electoral cycle (see Table 1).

Table 1: Summary of Studies on Political Budget Cycles

Author/Year	Unit of Analysis	Period	Method	Main Finding
Gralak (2023)	Large Brazilian municipalities (>500,000 inhabitants)	2005-2016	Panel regression (POLS, FE, RE)	No consistent evidence of electoral cycles in municipal public investment
Araújo (2023)	Brazilian municipalities	2015–2020	Balanced and unbalanced panel	Evidence of opportunistic earnings management through outstanding unpaid expenditures during electoral periods
Silva (2025)	Brazilian municipalities	2011–2021	Fixed-effects panel	Peak in current expenditures in the second year of the term; transfers are the main channel of the cycle
Wyse (2022)	Municipalities in Rio Grande do Sul	2005–2016	Unbalanced panel (FE)	Expenditures in pre-election years increase municipal public debt
Guerra (2018)	Brazilian states	1995–2013	Panel (FE/RE)	Robust evidence of political business cycles, particularly in highly visible expenditures
Trevizan (2025)	Brazilian municipalities	2013–2021	Fixed-effects panel (OLS)	The electoral cycle affects expenditures and varies according to state and operating results
Rogoff (1987)	Theoretical model	—	Dynamic microeconomic model	Reelection incentives generate fiscal manipulation under information asymmetry
Fiirst (2019)	Municipalities in Paraná	2013–2016	Panel regression	Opportunistic behavior in election years and during changes in officeholders
Santos (2024)	Brazilian municipalities	2013–2022	Unbalanced panel	The cycle does not generate deficits but alters the pattern of budget surpluses
Araújo (2023)	Brazilian municipalities	2015–2020	Econometric panel	Positive accruals in the pre-election period and reversal in the election year

Political Budget Cycles (PBC) and Electoral Incentives in Municipal Public Expenditure Management

Since Nordhaus (1975), who formulated the political business cycle model, and Rogoff and Sibert (1988), who introduced the informational dimension into politicians' fiscal behavior, the hypothesis that governments adjust fiscal and budgetary variables to maximize the probability of reelection has become well established. When applied to decentralized democracies such as Brazil, this analytical framework becomes more complex due to the coexistence of fiscal autonomy and dependence on intergovernmental transfers, characteristics that shape the strategic incentives of mayors and council members (Sakurai and Menezes-Filho, 2011).

The post-1988 federal arrangement granted municipalities broad responsibilities for essential public policies, including healthcare, education, and social assistance, while simultaneously intensifying local political competition and creating an environment conducive to the strategic use of the public budget as an instrument for signaling government performance (Cavalcante, 2017). In a context of increasing budgetary constraints and expanding social demands, distortions driven by electoral calendars may undermine the effectiveness of public policies and institutional confidence in local public finances (Pereira and Melo, 2015). Accordingly, this study seeks not only to elucidate the empirical mechanisms underlying municipal Political Budget Cycles but also to provide insights for improving multi-year planning, fiscal governance, and social oversight practices, thereby making a substantive contribution to strengthening democratic institutions in Brazil.

Queiroz et al. (2019) deepened the understanding of how political factors, particularly electoral mandates, influence public expenditure behavior at the Brazilian state level, focusing on Political Budget Cycles. The study analyzed state government expenditures from 2003 to 2014 using panel data and found that first-term governments tend to shift the composition of expenditures toward investments during election years, consistent with the political cycle theory, which predicts opportunistic manipulation to enhance electoral visibility. However, the study was limited to public expenditure variables classified by economic nature, such as investments and current expenditures, without exploring potential effects on less visible expenditure categories, which could broaden the understanding of the complexity of Political Budget Cycles.

Crispim et al. (2021) examined the presence of Political Budget Cycles in Brazilian municipalities with populations exceeding 50,000 inhabitants over the period from 2000 to 2016 using panel data. The findings indicate that there are no changes in committed expenditures before, during, or after the electoral period, regardless of partisan alignment or the use of a two-round electoral system. Regarding investment expenditures and borrowing during electoral periods, however, the study suggests average increases of 9% and 68%, respectively, with greater intensity when there is partisan alignment between municipal and state governments, particularly in reelection contexts.

Gralak (2023) investigated the existence of Political Budget Cycles in public investment expenditures in large Brazilian municipalities using a quantitative approach based on panel data. The sample comprises municipalities with populations exceeding 500,000 inhabitants over the period from 2005 to 2016, with data obtained from IBGE, TSE, and Finbra/STN. The dependent variable is municipal public investment per capita, while municipal and federal election years constitute the main regressors, controlling for fiscal, political, and socioeconomic factors. The econometric analysis employs pooled ordinary least squares (POLS), fixed-effects, and random-effects models. The results provide no consistent evidence of increased investment during election years, contradicting the classical Political Budget Cycle hypothesis. This suggests that, in large municipalities, investment decisions may be more strongly constrained by institutional and fiscal factors than by short-term electoral incentives.

Araújo (2023) analyzed the influence of electoral cycles on budgetary earnings management through outstanding unpaid expenditures (restos a pagar) in Brazilian municipalities, adopting a quantitative approach based on panel data. The sample includes municipalities with consistent budgetary information for the period from 2015 to 2020, using data from IBGE and official budget execution databases. The dependent variable consists of discretionary budgetary accruals, measured based on outstanding unpaid expenditures, while the independent variables include election years, pre-election years, term of office, and reelection. The econometric analysis reveals robust evidence of opportunistic behavior, indicating that municipal managers manipulate the presentation of fiscal results during electoral periods, particularly in first-term contexts, reinforcing the presence of political cycles associated with accounting information management.

Silva (2025) examined the presence of Political Budget Cycles in current expenditures in Brazilian municipalities between 2011 and 2021, covering three electoral cycles. Using a quantitative approach and documentary data, the sample comprises all municipalities with available information from SICONFI, TSE, and IBGE. Municipal current expenditure per capita constitutes the dependent variable, while electoral mandate years, partisan alignment, and a dummy variable for the pandemic period constitute the explanatory variables. The fixed-effects models reveal a peak in expenditures in the second year of the term relative to the final year and indicate that intergovernmental transfers represent the primary channel through which the Political Budget Cycle operates, surpassing own-source revenue. These findings reinforce the structural and multifaceted nature of the cycle in the Brazilian municipal context.

Wyse (2022) assessed the influence of political cycles on municipal public expenditures and their effects on public debt in municipalities in Rio Grande do Sul, using unbalanced panel data from 2005 to 2016. The sample includes municipalities in Rio Grande do Sul with data available from Finbra/STN, IBGE, and electoral courts. The dependent variables are total public expenditures and municipal public debt, while pre-election and election years are the main explanatory variables. The results indicate that, in pre-election years, the effect of public expenditures on municipal debt is positive and statistically significant, suggesting an intensification of indebtedness as a strategy associated with the political cycle. Furthermore, partisan alignment with the federal government increases expenditures and tends to raise debt, highlighting the interaction between electoral incentives and intergovernmental coalitions.

Guerra (2018) analyzed the existence of political business cycles in Brazilian states from 1995 to 2013 using a quantitative approach based on panel data. The sample comprises the 26 states and the Federal District, with data obtained from STN, TSE, and TREs. The dependent variables include different categories of public expenditure, such as total, current, and capital expenditures and investments, while the explanatory variables include electoral dummies, reelection, and party ideology. The results provide consistent evidence of political business cycles, with significant increases in expenditures during election years, particularly in expenditures more visible to voters. The findings suggest that state governments use fiscal policy as a mechanism for signaling competence, although the intensity of the cycle varies according to the type of expenditure and the state analyzed.

Trevizan (2025) investigated the effects of Political Budget Cycles on expenditure decisions in Brazilian municipalities, considering geographic location and current operating results. The analysis covers the period from 2013 to 2021 and includes all Brazilian municipalities, using fixed-effects panel regressions estimated by ordinary least squares (OLS). The dependent variables include total expenditures, investments, and current expenditures, while the explanatory variables encompass the electoral calendar, regional characteristics, and fiscal conditions. The results indicate that municipal fiscal behavior varies systematically throughout the electoral cycle and exhibits heterogeneity across states, while also being conditioned by current operating performance, reinforcing the non-uniform nature of Political Budget Cycles in Brazil.

Rogoff (1987) developed a theoretical model of Political Budget Cycles based on information asymmetry between governments and voters. Through a dynamic microeconomic model, the author demonstrates that governments manipulate fiscal instruments, such as expenditures and taxes, before elections to signal administrative competence. The model shows that, in equilibrium, competent governments distort fiscal policy during electoral periods, generating budgetary cycles even in the absence of real economic shocks. Furthermore, the study demonstrates that such cycles disappear when reelection is not possible, highlighting the central role of electoral incentives in the emergence of opportunistic behavior.

Fiirst (2019) analyzed the influence of political characteristics on the financial performance of municipalities in Paraná in light of Political Cycle Theory, using data from 377 municipalities for the period from 2013 to 2016. The study adopts a quantitative approach based on panel data and multiple linear regression. Municipal financial performance, measured as the difference between financial assets and financial liabilities, constitutes the dependent variable, while election year, change in officeholder, and first-term status are the explanatory variables. The results confirm opportunistic behavior by government officials during election years and in contexts involving changes in government, indicating that political factors significantly affect municipal financial performance.

Santos (2024) examined how electoral cycles influence the budgetary performance of Brazilian municipalities from 2013 to 2022, using a sample of 4,962 municipalities. The dependent variable is budgetary performance, measured as the ratio of collected revenue to committed expenditure, while pre-election, election, and post-election years constitute the explanatory variables. The analysis, conducted using an unbalanced panel regression, indicates that all stages of the electoral cycle positively influence budgetary performance. No deficit cycle was identified; instead, a cyclical pattern of budget surpluses was observed. The findings suggest that government officials avoid deficits during electoral periods, possibly due to legal constraints and strategies aimed at signaling fiscal responsibility to voters.

Araújo (2023) further investigated electoral cycles by examining budgetary earnings management through outstanding unpaid expenditures in Brazilian municipalities between 2015 and 2020. Using panel data and econometric models, the author identifies positive discretionary budgetary accruals in pre-election years and their reversal in election years, characterizing a complete budgetary cycle. The results indicate that first-term government officials are more likely to engage in these practices, reinforcing the association between electoral incentives, information asymmetry, and accounting information management in the public sector.

Based on this theoretical framework, the research hypotheses presented in Table 2 are formulated. The table summarizes the set of research hypotheses guiding the investigation into the electoral effects on the execution of municipal public expenditures, linking the theoretical assumptions and empirical evidence supporting each proposition. The hypotheses are grounded in the literature on Political Budget Cycles, which posits that governments tend to adjust fiscal behavior according to the electoral calendar in an effort to maximize political and electoral gains (Nordhaus, 1975; Rogoff and Sibert, 1988).

In light of the theoretical framework of Political Budget Cycles, the research hypotheses guiding this study are formulated to capture the effects of electoral incentives on the execution of municipal public expenditures. Grounded in classical models of opportunistic behavior by government officials, these hypotheses assume that the electoral calendar constitutes a central element in shaping the fiscal strategies adopted by public managers, particularly in contexts characterized by information asymmetry and the pursuit of maximized political support (Nordhaus, 1975; Rogoff and Sibert, 1988).

The first hypothesis (H1) posits that municipal public expenditures tend to increase significantly during election years, particularly in the periods immediately preceding elections. This proposition is grounded in the classical mechanism of fiscal manipulation, according to which incumbent governments increase highly visible expenditures in order to signal administrative competence and positively influence voters' perceptions (Rogoff and Sibert, 1988).

The second hypothesis (H2) introduces a relevant institutional dimension by considering the incentives associated with reelection eligibility. It is argued that mayors eligible to seek reelection are more likely to adopt strategic fiscal behavior, intensifying the use of the public budget as an instrument to consolidate political support and maximize their chances of remaining in office. This proposition is supported both by Nordhaus's (1975) theoretical formulation and by empirical evidence from the Brazilian context, such as that reported by Sakurai and Menezes-Filho (2011), who identify a higher incidence of opportunistic behavior among government officials with prospects for reelection.

Table 2: Proposed Research Hypotheses

Item	Research Hypothesis	Theoretical and Empirical Foundation
H1	Municipal public expenditure execution increases significantly during election years, particularly in the months preceding elections.	Derived from the Political Budget Cycle model (Rogoff and Sibert, 1988; Klein and Sakurai, 2010), according to which incumbents manipulate highly visible expenditures to signal competence and influence voters.
H2	Municipalities in which the mayor is eligible for reelection exhibit more pronounced expenditure execution patterns during election years than municipalities whose mayors are not eligible for reelection.	Based on the theory of reelection incentives (Nordhaus, 1975; Sakurai and Menezes-Filho, 2011), which suggests that eligibility strengthens the motivation to strategically use the budget.
H3	The degree of electoral competition moderates the electoral effect on public expenditure execution: the greater the competition, the greater the propensity to intensify expenditures.	Based on Chamon, Mello, and Firpo (2010), who demonstrate that greater electoral competitiveness leads to greater fiscal effort to attract voters.
H4	Dependence on intergovernmental transfers amplifies the electoral effects on expenditure execution due to the fiscal flexibility provided by external resources.	Supported by Arvate, Mattos, and Rocha (2015) and Bugarin and Ferreira (2021), who indicate that municipalities dependent on transfers tend to adjust expenditures in response to political incentives.
H5	Electoral effects on expenditure execution are concentrated in expenditure categories with greater public visibility, such as investments and public works, at the expense of operating or administrative expenditures.	Consistent with empirical evidence of prioritization of expenditures with higher political returns (Ferreira and Bugarin, 2024).

The third hypothesis (H3) incorporates the role of electoral competition as a moderating factor in Political Budget Cycles by suggesting that the degree of electoral competitiveness influences the intensity of strategic fiscal behavior. Specifically, it is expected that more competitive electoral environments will increase incentives for higher public expenditure, as government officials seek to differentiate themselves and attract voters in contexts of greater electoral uncertainty. This relationship is consistent with the findings of Chamon, Mello, and Firpo (2010), who provide evidence that more closely contested elections are associated with greater fiscal effort by public officials.

The fourth hypothesis (H4) emphasizes the relevance of municipalities' fiscal structure by considering dependence on intergovernmental transfers as a determinant of electoral cycles. The underlying argument is that municipalities with a higher proportion of revenues derived from transfers have greater budgetary flexibility and, consequently, greater room for maneuver to adjust the level and composition of expenditures in response to political incentives. This proposition is supported by Arvate, Mattos, and Rocha (2015) and Bugarin and Ferreira (2021), who demonstrate that transfers play a central role in the dynamics of municipal fiscal behavior during electoral periods.

Finally, the fifth hypothesis (H5) directs the analysis toward the composition of public expenditure by suggesting that electoral effects are not distributed uniformly across different expenditure categories. In particular, it is argued that Political Budget Cycles tend to be concentrated in expenditures with greater visibility and electoral appeal, such as infrastructure investments and public works, at the expense of administrative or operating expenditures. This proposition is consistent with the empirical evidence provided by Ferreira and Bugarin (2024), who highlight the prioritization of expenditures with greater political returns as an electoral persuasion strategy.

In summary, the set of hypotheses formulated integrates the main theoretical mechanisms and empirical evidence from the literature, enabling a comprehensive and multidimensional analysis of electoral effects on the execution of municipal public expenditures by considering both the direct effect of the electoral calendar and its institutional, political, and fiscal determinants.

III. Methodological Procedures

The study aimed to analyze the extent to which electoral processes influence the execution of public expenditures in Brazilian municipalities, considering variations associated with reelection eligibility, electoral competitiveness, and dependence on intergovernmental transfers. To this end, the study adopted as its sample the municipalities listed in Table 3.

The sample was selected using a stratified random sampling procedure, with fixed allocation by stratum and federative unit, in order to ensure the representation of different regional and demographic contexts. This methodological strategy allows for greater control over population heterogeneity, thereby contributing to the robustness and validity of the results obtained.

Municipalities were classified according to population size, based on the criteria established by Trevisan (2025). Accordingly, municipalities with populations of up to 20,000 inhabitants were classified as micro-municipalities; those with populations between 20,000 and 100,000 inhabitants as small municipalities; those with populations between 100,000 and 500,000 inhabitants as medium-sized municipalities; and those with populations exceeding 500,000 inhabitants as large municipalities. Accordingly, the final sample consisted of 103 valid municipalities.

The temporal scope adopted for sample selection covered the period from 2017 to 2024, encompassing a recent and sufficiently broad timeframe for analyzing fiscal and institutional dynamics at the municipal level. Regarding the variables used for data collection, the following were considered: Federative Unit (UF), Municipality (Mun), Population (Pop), Period (Year), Expenditure Function (Exp_Fun), Committed Expenditures (Exp_Com), Liquidated Expenditures (Exp_Liq), Paid Expenditures (Exp_Paid), Processed Outstanding Payables (RPP), Unprocessed Outstanding Payables (RPNP), Election Year (Election), and Reelection (Reel). These variables were selected based on their analytical relevance to the investigation of public expenditure behavior and potential effects associated with the political-electoral cycle.

The statistical method adopted to analyze the data collected through the aforementioned variables was a panel-data framework, integrating fiscal and political-institutional information from municipalities over time. Given this characteristic, as well as the presence of unobserved heterogeneity and potential endogeneity issues, the empirical strategy was based on the use of robust econometric models widely established in the political economy and public finance literature (Silva, 2025).

Table 3: Research Sample - Municipalities by Population Size

State	Micro <20,000 inhabitants	Small - 20,001 to 100,000 inhabitants	Medium - 100,001 to 500,000 inhabitants	Large >500,001 inhabitants
AC	Marechal Thaumaturgo	Sena Madureira	Cruzeiro do Sul	Rio Branco
AL	Água Branca	Delmiro Gouveia	Arapiraca	Maceió
AM	Itapiranga	Carauari	Manacapuru	Manaus
AP	Vitória do Jari	Porto Grande	Santana	Macapá
BA	Santa Brígida	Riacho de Santana	Barreiras	Salvador
CE	Capistrano	Uruburetama	Itapipoca	Fortaleza
ES	Ponto Belo	Jaguaré	Vitória	Serra
GO	Campinaçu	Bom Jesus de Goiás	Trindade	Aparecida Goiânia
MA	Paraibano	São Bernardo	Timon	São Luís
MG	Ingaí	Três Marias	Divinópolis	Belo Horizonte
MS	Jaraguari	Itaporã	Dourados	Campo Grande
MT	Nova Olímpia	Campo Verde	Sorriso	Cuiabá
PA	Piçarra	Canaã dos Carajás	Itaituba	Ananindeua
PB	Sumé	Cajazeiras	Santa Rita	João Pessoa
PE	Jurema	Tabira	Paulista	Recife
PI	Canto do Buriti	São Raimundo Nonato	Parnaíba	Teresina
PR	Mariópolis	Ibaiti	Pinhais	Curitiba
RJ	Duas Barras	Iguaba Grande	Resende	Nova Iguaçu
RN	Umarizal	Apodi	Parnamirim	Natal
RO	Cabixi	Alta Floresta D'Oeste	Ariquemes	Porto Velho
RR	Amaraji	Pacaraima	Not found	Boa Vista
RS	Marcelino Ramos	Sarandi	Viamão	Porto Alegre
SC	Meleiro	Gaspar	Criciúma	Florianópolis

SE	Stª Luzia do Itanhy	Estância	Itabaiana	Aracaju
SP	Charqueada	Guararema	Pindamonhangaba	Osasco
TO	Pequizeiro	Guaraí	Araguaína	Palmas

As the initial specification (baseline), a fixed-effects panel-data regression model was adopted, allowing for the control of time-invariant characteristics specific to each observational unit, as formalized in Equation (1).

$$Y_{it} = \beta_0 + \beta_1 Election_{it} + \beta_2(Election_{it} \times Reelection_{it}) + \beta_3(Election_{it} \times Competition_{it}) + \beta_4(Election_{it} + \beta_2 \times Transferon_{it}) + \gamma X_{it} + \alpha_i + \delta_t + \varepsilon_{it} \qquad \text{(eq1)}$$

em que:
Y_{it} = represents the execution of public expenditures in municipality during perio t;
$Election_{it}$ = is a dummy variable that takes the value of 1 in election years and 0 otherwise;
$Reelection_{it}$ = indicates the mayor's eligibility for reelection;
$Competition_{it}$ = measures the degree of electoral competitiveness;
$Transferon_{it}$ = represents dependence on intergovernmental transfers;
X_{it} = corresponds to a vector of control variables, such as the economic, fiscal, and demographic characteristics of the municipalities;
α_i = controls for municipality fixed effects; and
δ_t = time fixed effects.

The main advantage of this model lies in its ability to control for time-invariant unobserved heterogeneity, thereby allowing for more consistent estimates of electoral effects. This approach makes it possible to assess how electoral effects vary according to reelection eligibility, the degree of electoral competition, and dependence on transfers, constituting a relevant contribution by highlighting the heterogeneous nature of Political Budget Cycles.

Considering potential endogeneity issues, a panel instrumental variables model (FE-2SLS) was additionally employed, structured in two stages. In the first stage, the potentially endogenous variable (such as intergovernmental transfers) is explained by exogenous instruments; in the second stage, its predicted value is used to estimate its effect on the dependent variable. This strategy allows for the identification of more robust causal relationships, for example, by using revenue-sharing rules as instruments. As a complementary causal identification strategy, a difference-in-differences (DiD) model was applied, particularly suitable for analyzing the effect of reelection eligibility, as specified in Equation (eq2).

$$Y_{it} = \beta_0 + \beta_1 Election_t + \beta_2 Treatment_i + \beta_3(Election_t \times Treatment_i) + \varepsilon_{it} \qquad \text{eq2}$$

The main advantage of this method is its ability to isolate the effect of the electoral cycle by comparing treated and control groups over time. Additionally, dynamic panel models, such as the System GMM estimator, were considered (see eq3).

$$Y_{it} = \beta Y_{it-1} + \beta_1 Election_{it} + \gamma X_{it} + \varepsilon_{it} \qquad \text{eq3}$$

This approach captures the temporal persistence of public expenditures while simultaneously addressing endogeneity issues, making it particularly suitable for fiscal analyses. Finally, it should be emphasized that inappropriate specifications, such as simple OLS models or panel models without fixed effects and time controls, should be avoided, as they may produce biased estimates. Thus, the combination of fixed-effects models, interaction terms, instrumental variables, difference-in-differences, and dynamic models constitutes a robust methodological strategy aligned with best practices in the literature, enabling a consistent analysis of the effects of electoral processes on the execution of municipal public expenditures.

The final model adopted consists of a fixed-effects panel-data regression with interaction terms (see Equation 1), which allows for the estimation not only of the average effect of Political Budget Cycles on the execution of municipal public expenditures but also of how this effect varies according to reelection eligibility, the degree of electoral competition, and dependence on intergovernmental transfers. This specification provides a robust analytical framework aligned with best practices in the literature, enabling a comprehensive and consistent assessment of the political and institutional determinants of municipal fiscal behavior (Silva, 2025).

The terms a_i and λ_t represent, respectively, municipality-specific fixed effects and time fixed effects, allowing for control of both time-invariant unobserved heterogeneity and common shocks affecting all municipalities in specific periods. The term ε_{it} corresponds to the idiosyncratic error term. The inclusion of interaction terms between the electoral period and institutional variables makes it possible to capture conditional effects, allowing the analysis of how the impacts of Political Budget Cycles on public expenditure execution vary according to reelection eligibility, the level of political competition, and dependence on intergovernmental resources. Thus, the model not only estimates the average effect of Political Budget Cycles but also incorporates their heterogeneous and context-dependent nature.

The proposed econometric model uses a measure of municipal public expenditure execution as the dependent variable, explained by political and institutional variables related to the electoral cycle, as well as fiscal and socioeconomic control variables. Accordingly, the dependent variable in the model is: (i) municipal public expenditure execution (Y_{it}) - representing the level of budget execution of municipality *i* in period *t.* In this study, it is operationalized through unprocessed outstanding payables (RPNP), which reflect commitments assumed but not yet liquidated and constitute a relevant proxy for capturing the intertemporal behavior of public expenditure execution. Alternatively, the measure may be expressed in per capita terms or in logarithmic form to reduce problems of skewness and heteroscedasticity.

The main independent variables are associated with electoral cycles and their determinants. These interaction terms make it possible to analyze how the effect of the electoral period on public expenditure execution varies according to political incentives and the fiscal conditions of municipalities:

- Election Year ($Election_t$): a dummy variable that takes the value of 1 in municipal election years and 0 in other periods. This variable captures the average effect of the Political Budget Cycle on public expenditure execution.
- Reelection Eligibility ($Reelection_{it}$): a dummy variable indicating whether the mayor of municipality i in period tis eligible for reelection. This variable captures the political incentive associated with remaining in office.
- Electoral Competition ($Competition_{it}$): a continuous variable measuring the degree of electoral competitiveness, which may be operationalized using indicators such as the electoral margin of victory or the effective number of candidates. This variable reflects the level of competitive pressure faced by the incumbent.
- Dependence on Intergovernmental Transfers ($Transferon_{it}$): a continuous variable representing the proportion of revenues derived from transfers, such as the Municipalities Participation Fund (FPM) and the state VAT revenue-sharing transfers (ICMS), relative to total municipal revenue. This variable captures fiscal autonomy and the budgetary room for maneuver available to the government.

To avoid omitted-variable bias, the model includes a vector of control variables, such as:

- Municipal population: a proxy for municipal size and administrative complexity.
- GDP per capita: an indicator of the level of local economic development.
- Municipal own-source revenue: a measure of local revenue-raising capacity.
- Current and capital expenditures: controls for the structure of public spending.
- Additional fiscal indicators: such as indebtedness or the primary balance, when available.

Regarding fixed effects:

- Municipality fixed effects (α_i): control for time-invariant characteristics, such as political culture and institutional capacity.
- Time fixed effects (λ_t): capture common shocks affecting all municipalities, such as macroeconomic or institutional changes.

Finally β_1 represents the average effect of the electoral cycle (H1), β_2 represents the additional effect associated with reelection eligibility (H2), β_3 represents the moderating effect of electoral competition (H3), and β_4 represents the amplification effect associated with intergovernmental transfers (H4).

IV. Discussion and Data Analysis

The descriptive analysis of the data (see Table 4) reveals substantial heterogeneity among Brazilian municipalities, both in demographic and fiscal terms. Regarding the population variable, the mean is approximately 445,000 inhabitants, accompanied by a standard deviation exceeding 650,000, indicating considerable data dispersion. The substantial difference between the mean (444,893) and the median (138,978) reveals a right-skewed distribution, characterized by the presence of large municipalities that increase the sample mean. This pattern is consistent with the Brazilian federal structure, marked by the coexistence of a large number of small municipalities and a limited number of highly populous urban centers.

Table 4: Descriptive Analysis

Variable	Observations	Mean	Standard Deviation	Minimum	Median	Maximum
Population	44,910	444,893	653,316	2,632	138,978	2,578,483
RPNP	26,148	4,648,776	29,334,190	-227,951,200	188,048	1,386,136,000
RPP	27,591	2,411,364	14,418,510	-23,417,650	106,694	890,791,900

In fiscal terms, unprocessed outstanding payables (RPNP) and processed outstanding payables (RPP) exhibit even more pronounced levels of dispersion. The standard deviation of RPNP (BRL 29.3 million) is substantially higher than its mean (BRL 4.6 million), a pattern also observed for RPP, whose standard deviation (BRL 14.4 million) likewise considerably exceeds its mean (BRL 2.4 million). Furthermore, the substantial discrepancy between the mean and median, particularly for RPNP, whose median is only BRL 188,000, indicates strong positive skewness and a concentration of values among a small number of municipalities with high levels of outstanding payables. This pattern is reinforced by the presence of extremely high maximum values, exceeding BRL 1.3 billion, indicating the existence of relevant outliers in the dataset.

Another important aspect concerns the presence of negative values in the RPNP and RPP variables. Although these values may result from accounting adjustments, cancellation of expenditure commitments, or budget revisions, their occurrence suggests potential particularities in the accounting treatment of outstanding payables, which may affect the economic interpretation of these variables. Therefore, analytical caution is warranted, together with the adoption of additional data treatment procedures, such as winsorization or logarithmic transformation, to mitigate the influence of extreme values.

Additionally, variation is observed in the number of observations across variables, with fewer observations for RPNP and RPP compared with population. This indicates the presence of missing data, which may introduce selection bias if not properly addressed at the econometric stage.

In summary, the descriptive analysis reveals a dataset characterized by substantial heterogeneity, pronounced skewness, and the presence of extreme values, characteristics that are typical of municipal fiscal datasets. These findings reinforce the need to adopt robust econometric strategies, such as fixed-effects panel models and appropriate variable transformations, in order to ensure greater reliability and consistency in estimating the effects of Political Budget Cycles.

Table 5 presents the estimation results of the initial econometric model using the ordinary least squares (OLS) method, employed as an exploratory step to investigate the determinants of municipal public expenditure execution, operationalized through unprocessed outstanding payables (RPNP). Overall, the results indicate that the explanatory variables considered exert statistically significant effects on the dependent variable, although the specification adopted presents limitations inherent to the absence of more comprehensive structural controls.

Table 5: Econometric Results

Initial Estimated Model – OLS as an Approximation

Dependent Variable: RPNP

Variable	Coefficient	Standard Error	t-value	p-value
Constant	-418.500	239.000	-1.75	0.080
Population	4.361	0.257	16.96	0.000***
RPP	1.163	0.011	103.55	0.000***

Note: $R^2 = 0.372$. N = 19,942 observations.

The population variable exhibits a positive and statistically significant coefficient at the 1% level ($\beta = 4.361$; $p < 0.01$), indicating that municipalities with larger populations tend to present higher volumes of unprocessed outstanding payables. This result can be interpreted in light of the greater administrative, budgetary, and operational complexity associated with larger municipalities, where public expenditure execution tends to involve a greater number of programs, contracts, and obligations, thereby increasing the likelihood of delays in expenditure liquidation.

Consistently, the processed outstanding payables (RPP) variable also presents a positive and highly significant coefficient ($\beta = 1.163$; $p < 0.01$), indicating a direct and robust relationship between the different components of budgetary liabilities. This finding suggests the presence of fiscal persistence, whereby municipalities with higher volumes of liquidated but unpaid expenditures also tend to accumulate higher amounts of committed expenditures that have not yet been liquidated, reflecting an intertemporal dynamic of financial obligation accumulation.

Conversely, the constant term is not statistically significant at conventional levels ($p = 0.080$), indicating that, in the absence of the explanatory variables included in the model, there is no statistical evidence of a baseline level of the dependent variable that differs from zero. Although this result does not compromise the interpretation of the main coefficients, it reinforces the dependence of the dependent variable on the explanatory factors considered.

The model presents a coefficient of determination (R^2) of 0.372, indicating that approximately 37.2% of the observed variation in unprocessed outstanding payables is explained by the variables included in the regression. This level of explanatory power can be considered moderate, suggesting that a substantial portion of the variation in the dependent variable remains unexplained by the specification, possibly due to the omission of more complex political-institutional and fiscal factors, such as those associated with electoral cycles and local governance conditions.

Despite its usefulness as a preliminary exercise, the use of the OLS estimator presents important limitations in the context of this study. In particular, the absence of controls for unobserved heterogeneity across municipalities may generate omitted-variable bias, since structural characteristics such as administrative capacity, institutional quality, and fiscal history are not explicitly incorporated into the model. Moreover, the possibility of endogeneity between the explanatory variables and fiscal behavior cannot be ruled out, which compromises the causal interpretation of the estimated coefficients.

Therefore, the results should be interpreted with caution, and the adoption of more robust econometric strategies, such as panel-data models with fixed effects and interaction terms, is recommended. These models are capable of accounting for unobserved heterogeneity and conditional effects associated with political and institutional incentives. Such approaches are particularly relevant to the analysis of Political Budget Cycles, in which the fiscal behavior of public officials is influenced by electoral, institutional, and contextual factors.

In summary, the initial results indicate that structural factors, such as population size and the dynamics of outstanding payables, play a relevant role in determining the execution of municipal public expenditures. However, the evidence also points to the need to incorporate political and institutional variables and more sophisticated econometric methodologies in order to capture more accurately and comprehensively the determinants of fiscal behavior in the context of Political Budget Cycles.

Table 6 presents the estimation results of the panel-data econometric model specified with time fixed effects and interaction terms, with the purpose of capturing the conditional nature of Political Budget Cycles in Brazilian municipalities. Overall, the results indicate the existence of heterogeneous electoral effects on public expenditure execution, although these findings are accompanied by relevant limitations concerning the statistical significance of certain variables and the explanatory power of the model.

Table 6: Econometric Model Results

Panel with Time Fixed Effects + Interaction Terms

Dependent Variable: RPNP

Variable	Coefficient	Standard Error	p-value
Election	-2,184,000	880,000	0.013**
Election × Reelection	5,643,000	1,270,000	0.000***
Election × Competition	-1.98e+10	1.46e+10	0.177
Election × Transfers	-27.65	75.38	0.714
Time Fixed Effects	Yes	-	-

Note: N = 19,942; R^2 = 0.002.

The coefficient associated with the Election variable is negative and statistically significant at the 5% level (β = -2,184,000; p = 0.013), indicating that, on average, unprocessed outstanding payables (RPNP) tend to decrease in election years. This evidence contrasts with the traditional prediction of the Political Budget Cycle literature, which suggests expenditure expansion during electoral periods. This finding may indicate alternative political signaling strategies, whereby government officials prioritize demonstrating fiscal discipline or resort to accounting reclassification mechanisms in an effort to convey an image of responsible management of public resources to voters.

However, incorporating the institutional dimension through the interaction between Election and Reelection reveals a substantially different pattern. The estimated coefficient for this interaction is positive, large in magnitude, and highly significant (β = 5,643,000; $p < 0.01$), indicating that mayors eligible for reelection tend to significantly increase outstanding payables during electoral periods. This finding consistently supports the theoretical and empirical literature on Political Budget Cycles by demonstrating that incentives for opportunistic behavior are intensified when there is a possibility of remaining in office. Thus, the findings reinforce the notion that electoral effects are not uniform but are conditioned by the incentive structure faced by public officials.

In contrast, the interactions involving electoral competition and dependence on intergovernmental transfers were not statistically significant. In the case of electoral competition (β = -1.98×1010; p = 0.177), although the estimated coefficient is substantial, its high variance compromises inferential precision, suggesting potential measurement problems or instability in the variable employed. Similarly, the transfers variable (β = -27.65; p = 0.714) provides no evidence of a statistically significant effect on the fiscal behavior analyzed, which may reflect limitations in the proxy adopted or the need for more refined econometric specifications to adequately capture this mechanism.

A critical aspect of the model concerns its limited explanatory power, as evidenced by the coefficient of determination ($R^2 = 0.002$). This result indicates that the specification explains only a minimal fraction of the observed variation in the dependent variable, suggesting the omission of relevant factors, particularly those of a fiscal, institutional, and administrative nature. Given the complexity of municipal budget execution, such a limitation is not unexpected; however, it reinforces the need for more comprehensive models.

Additionally, the exclusive inclusion of time fixed effects, without controlling for municipality-specific fixed effects, constitutes a relevant limitation of the specification. The absence of such controls prevents adequate consideration of unobserved heterogeneity across units, such as differences in administrative capacity, institutional quality, and fiscal history, which may generate omitted-variable bias and compromise the robustness of the estimates.

Despite these limitations, the results provide relevant evidence regarding the conditional nature of Political Budget Cycles. In particular, they highlight the central role of reelection eligibility as a determinant of opportunistic fiscal behavior, consistent with the theoretical models of Nordhaus (1975) and Rogoff (1987), as well as with empirical evidence from the Brazilian context. In this regard, the findings indicate that the electoral calendar alone is insufficient to explain the fiscal behavior of government officials; it is essential to consider the institutional incentives associated with remaining in office.

From a theoretical perspective, greater electoral competitiveness is expected to intensify incentives for the strategic use of the budget, while greater dependence on transfers is expected to expand fiscal room for maneuver. The lack of empirical confirmation of these effects may result both from limitations in the measurement of these variables and from specific characteristics of the dataset analyzed.

In summary, the results demonstrate that Political Budget Cycles in Brazilian municipalities are essentially conditional in nature and are strongly influenced by incentives associated with reelection. However, the model's low explanatory power and the lack of statistical significance of theoretically relevant variables indicate the need for methodological improvements, including the incorporation of municipality fixed effects, additional control variables, and more precise proxies for institutional factors. Such improvements are essential for deepening the understanding of the mechanisms governing public expenditure execution in the context of electoral cycles and for strengthening the empirical robustness of the analysis.

Discussion of the Results

The empirical results presented in the panel model with time fixed effects and interaction terms (see Table 6) reveal a pattern that, at first glance, challenges the classical prediction of Political Budget Cycle theory. The negative coefficient of the Election variable indicates a reduction in unprocessed outstanding payables (RPNP) during election years, suggesting more restrictive fiscal behavior. This finding directly contrasts with the seminal formulation of Nordhaus (1975) and the information asymmetry model of Rogoff and Sibert (1988), according to which governments tend to increase expenditures during electoral periods to signal competence.

However, when considered in light of the more recent literature, this result can be reinterpreted. Studies such as Santos (2024) and Silva (2025) indicate that, in the Brazilian context, fiscal manipulation may occur not necessarily through direct expenditure expansion but through fiscal signaling strategies, such as improving budgetary performance or reducing apparent liabilities. In this regard, the reduction in RPNP may reflect an "accounting clean-up" strategy, whereby government officials seek to demonstrate greater budget execution capacity and fiscal responsibility to voters rather than simply increasing expenditures.

However, when the Election × Reelection interaction is incorporated, a robust, positive, and highly significant result emerges, indicating that mayors eligible for reelection significantly increase RPNP during election years. This finding strongly converges with the theory of political incentives (Nordhaus, 1975; Rogoff, 1987), as well as with national empirical evidence, such as Klein and Sakurai (2010) and Araújo (2023), which demonstrate a greater propensity toward opportunistic behavior when there is a possibility of remaining in office.

This pattern demonstrates that Political Budget Cycles are conditional in nature, being activated primarily when direct electoral incentives are present. Thus, the results directly align with Rogoff (1987) by reinforcing the argument that fiscal manipulation disappears or diminishes when reelection incentives are absent but emerges significantly when such incentives are present.

Regarding the moderating variables, the non-significant results for electoral competition and intergovernmental transfers partially diverge from the literature. Studies such as Chamon, Mello, and Firpo (2010) and Bugarin and Ferreira (2021) suggest that greater competition and greater dependence on transfers increase incentives for the strategic use of the budget. The absence of statistical significance in this study may be attributed to measurement limitations, high variance in the variables, or the econometric specification itself, particularly the absence of municipality fixed effects, as appropriately highlighted by the authors.

Additionally, the model's low R^2 (0.002) reinforces that public expenditure execution is a highly complex phenomenon influenced by multiple institutional, administrative, and fiscal factors not captured by the specification. This finding is consistent with Trevizan (2025) and Gralak (2023), who emphasize the heterogeneity of fiscal cycles in Brazil and their dependence on local contexts.

In summary, the empirical results partially confirm the existing literature: there is no evidence of a uniform average electoral cycle, but there is strong evidence of cycles conditional on reelection eligibility. This represents a relevant contribution by refining the understanding of the mechanisms underlying Political Budget Cycles at the municipal level.

V. Conclusions

The findings of this study indicate that electoral effects on the execution of municipal public expenditures in Brazil are not homogeneous but are conditioned by institutional factors, particularly reelection eligibility. While the average effect of election years indicates a reduction in unprocessed outstanding payables, suggesting fiscal responsibility signaling strategies, the presence of reelection incentives substantially changes this behavior, resulting in a significant expansion of these liabilities.

These results corroborate the theoretical literature on Political Budget Cycles by demonstrating that opportunistic behavior by public officials depends on the structure of political incentives. Furthermore, the lack of evidence regarding the role of electoral competition and intergovernmental transfers suggests the need for methodological refinement and improved operationalization of these variables.

From an empirical perspective, the study contributes by demonstrating that public expenditure execution, rather than merely the volume of expenditures, constitutes a relevant channel through which electoral cycles manifest themselves. From a normative perspective, the findings indicate that control and transparency mechanisms should consider not only expenditure levels but also their intertemporal execution. Finally, the study concludes that Political Budget Cycles in Brazilian municipalities are essentially conditional and strategic, reinforcing the importance of institutions capable of mitigating opportunistic behavior and promoting greater efficiency in fiscal management.

The study presents several limitations that should be considered when interpreting the results. From an econometric perspective, the low explanatory power of the estimated model, reflected in its low R^2, indicates that a substantial portion of the variation in public expenditure execution was not captured by the variables included in the model, suggesting the possible omission of relevant institutional, administrative, and fiscal factors. Furthermore, the absence of municipality fixed effects in the main specification limits the control of unobserved heterogeneity across municipalities and may generate omitted-variable bias.

In light of these limitations, future research may advance in several directions. The incorporation of more robust models, such as two-way fixed effects (municipality and time), dynamic models (System GMM), and more refined causal identification strategies is recommended to mitigate endogeneity problems. In addition, future studies should improve the proxies used, particularly for electoral competition and dependence on transfers, and incorporate institutional variables such as management quality, administrative capacity, and governance indicators. Future research may also explore disaggregated measures of budget execution by expenditure function or economic category, making it possible to identify which expenditure categories are most sensitive to electoral cycles.

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